# Technical Memorandum

## Revised Work Plan
## Operable Unit No. 7 — Present Landfill (IHSS 114) and Inactive Hazardous Waste Storage Area (IHSS 203)

## Volume IV—Appendices L–N

Draft Report

April 15, 1994

U.S. Department of Energy
Rocky Flats Site
Golden, Colorado

ADMIN RECORD

A-OU07-000229

# NOTICE:

## INCOMPLETE DOCUMENT

The following document appears to be missing pages. This document was distributed in an incomplete state, and the microform copy is representative of the paper copy. If replacement pages are distributed, they will be microfilmed and included in the Administrative Record file.

The Adminstrative Record Staff

# Appendix L

# Histograms

**Surface Soils**

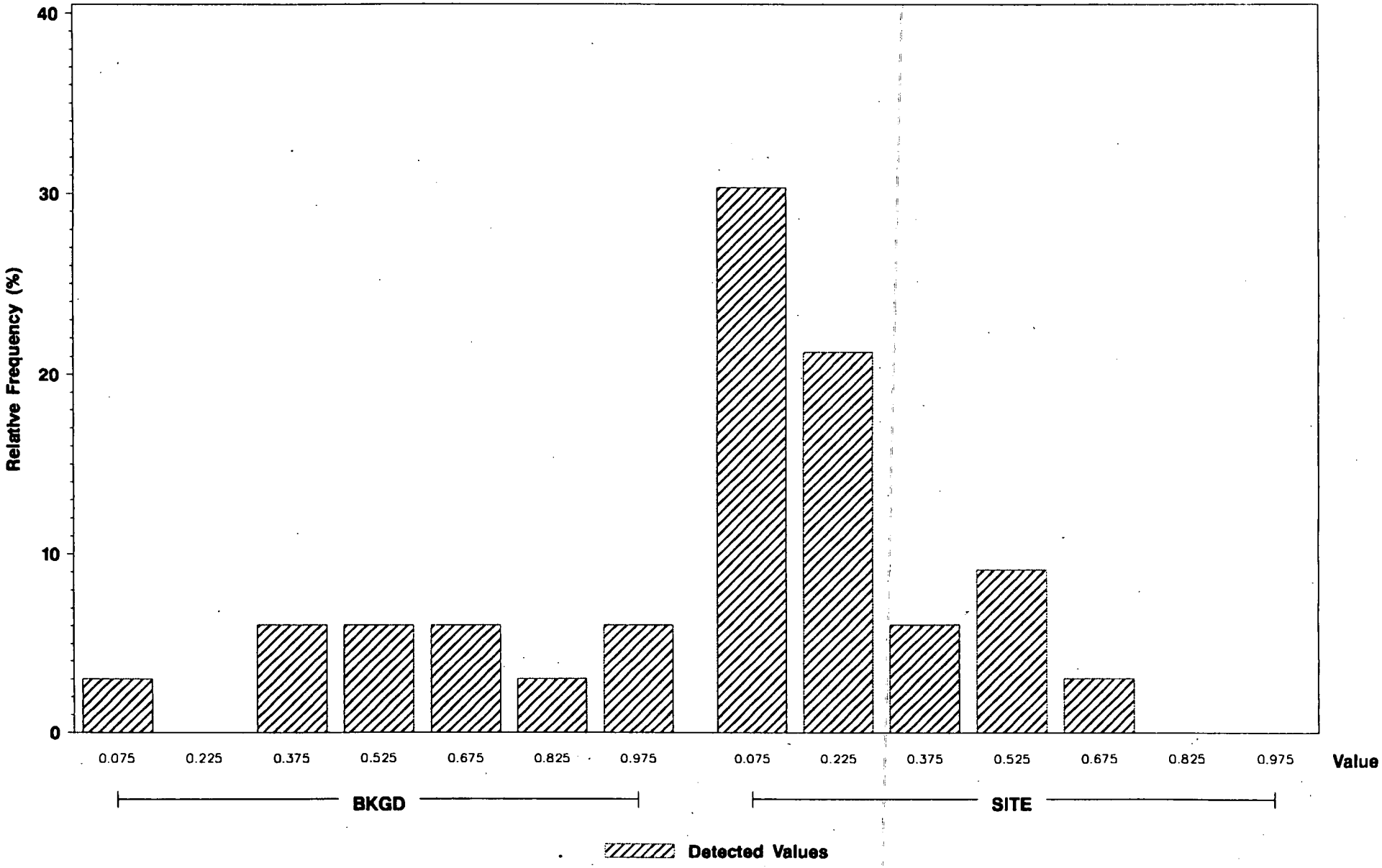
**Background vs. IHSS 203**

**(0 to 2 inches)**

# Background vs IHSS 203 Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Surface Soils (0 – 2 inches)

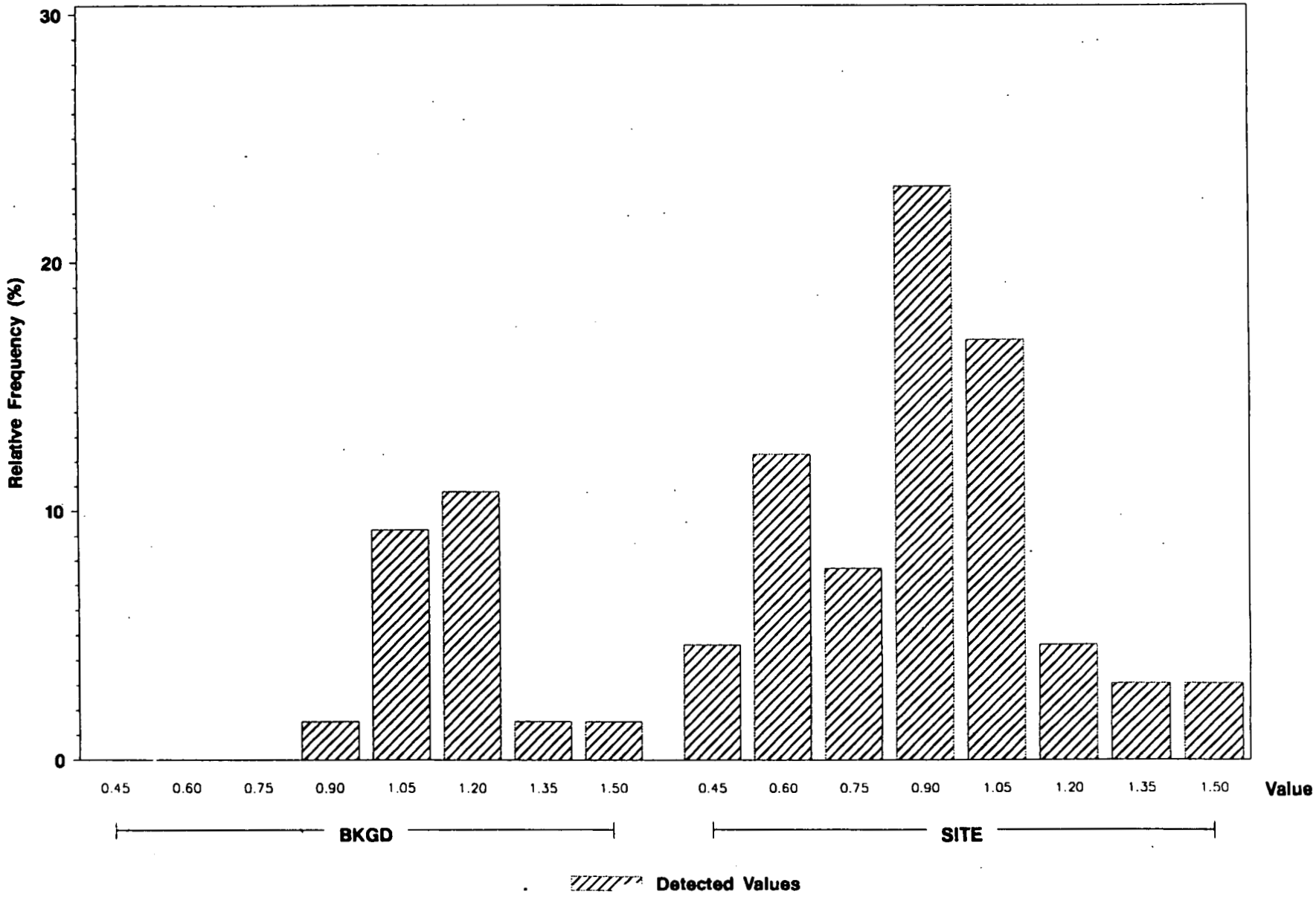
ANALYTE = STRONTIUM – 89,90



# Background vs IHSS 203 Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Surface Soils (0 – 2 inches)

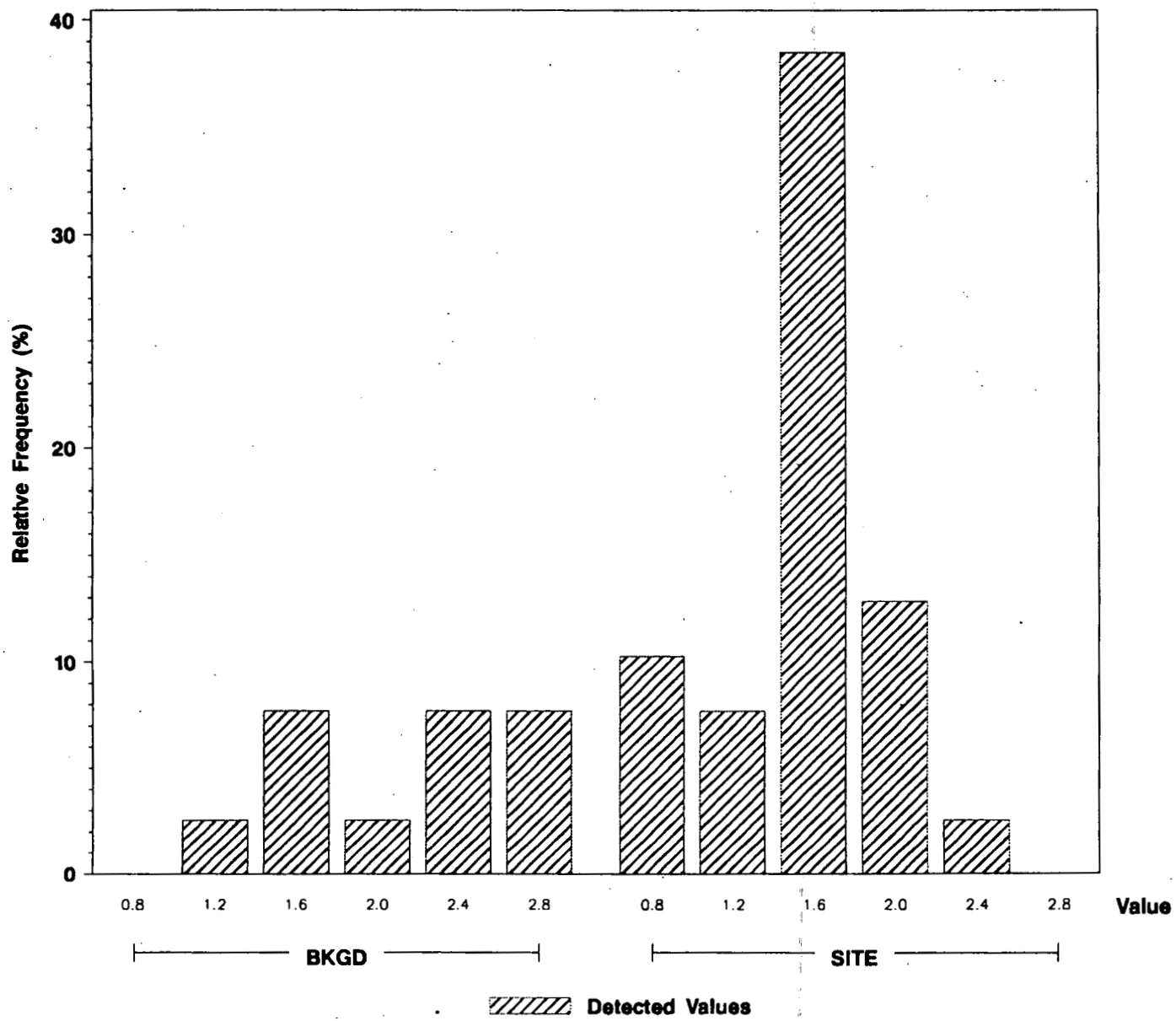
ANALYTE = URANIUM – 233, – 234



# Background vs IHSS 203 Frequency Histogram

## RADIUM-228 (pCi/g) in Surface Soils (0-2 inches)

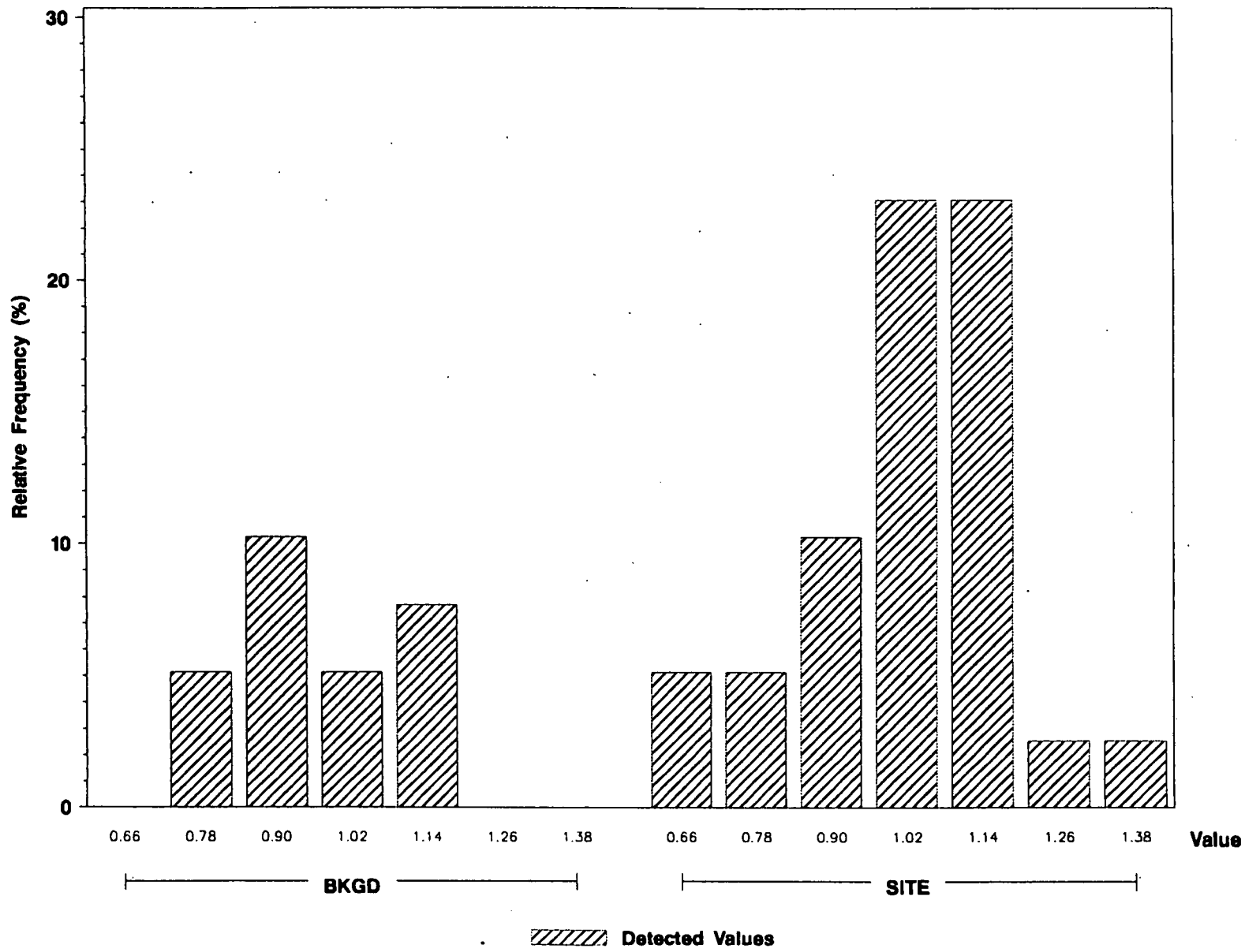
ANALYTE = RADIUM-228



# Background vs IHSS 203 Frequency Histogram

## RADIUM-226 (pCi/g) in Surface Soils (0-2 inches)

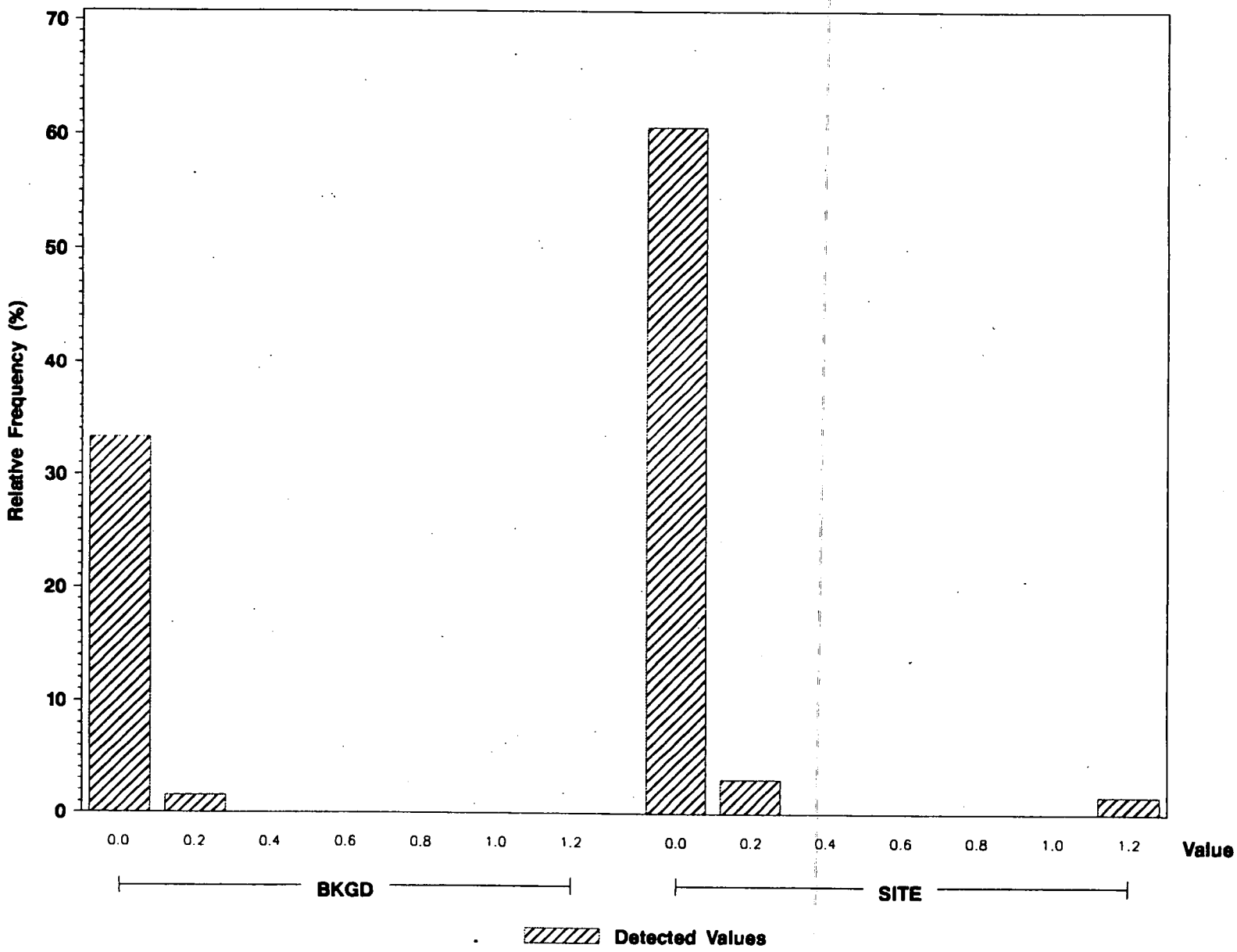
ANALYTE = RADIUM-226



# Background vs IHSS 203 Frequency Histogram

## PLUTONIUM – 239/240 (pCi/g) in Surface Soils (0 – 2 inches)

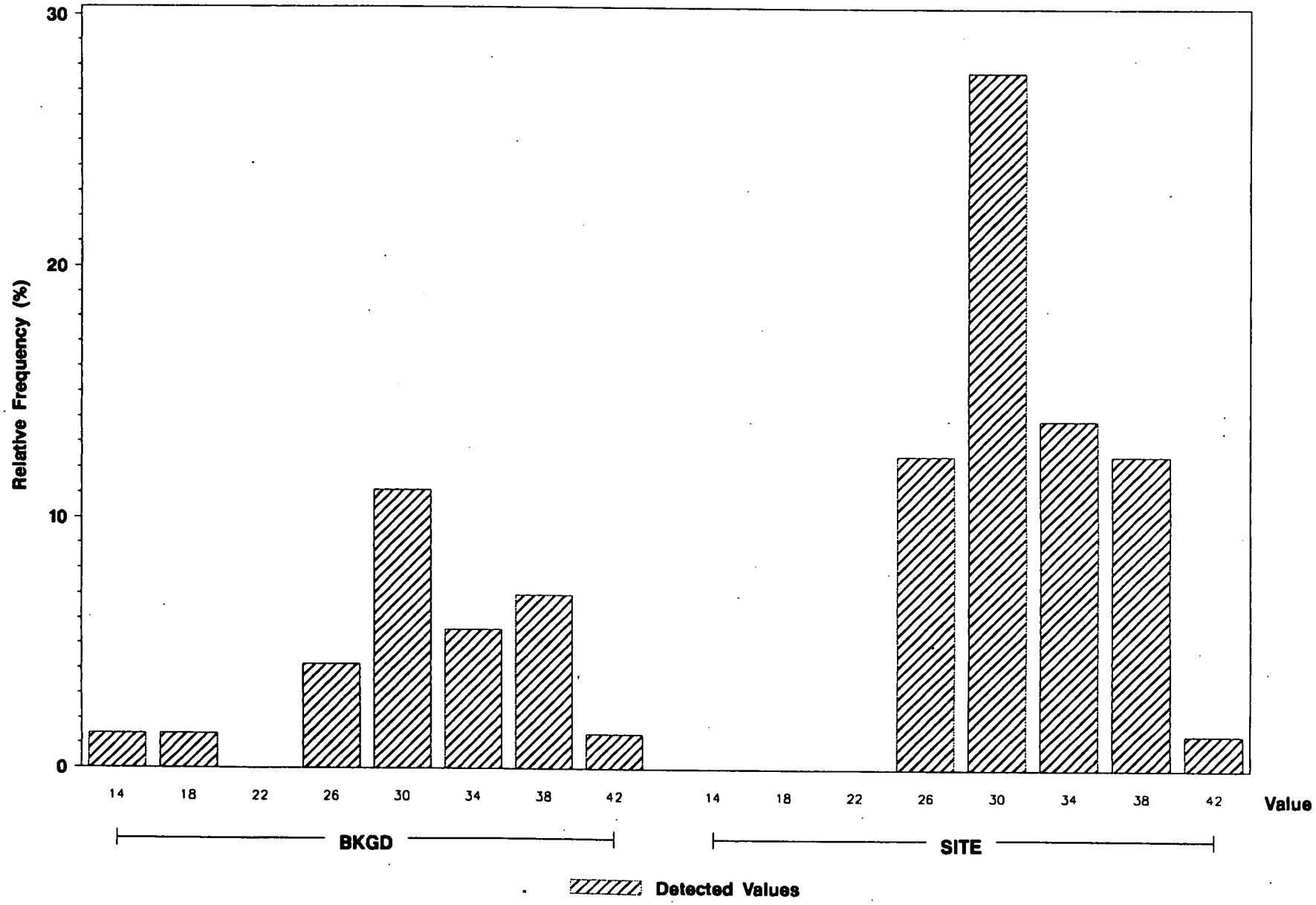
ANALYTE = PLUTONIUM – 239/240



# Background vs IHSS 203 Frequency Histogram

## GROSS BETA (pCi/g) in Surface Soils (0 – 2 inches)

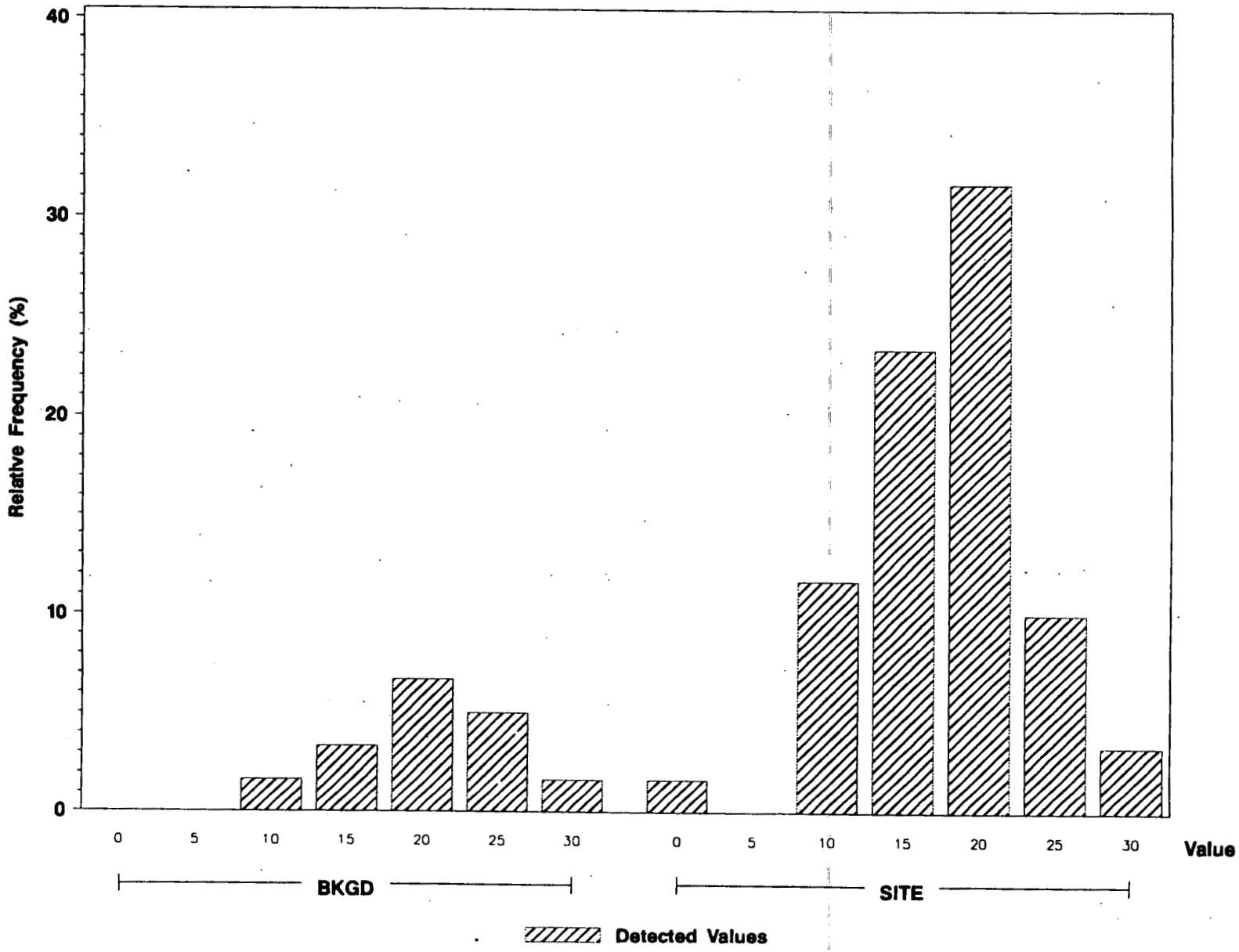
ANALYTE = GROSS BETA



# Background vs IHSS 203 Frequency Histogram

## GROSS ALPHA (pCi/g) in Surface Soils (0 – 2 inches)

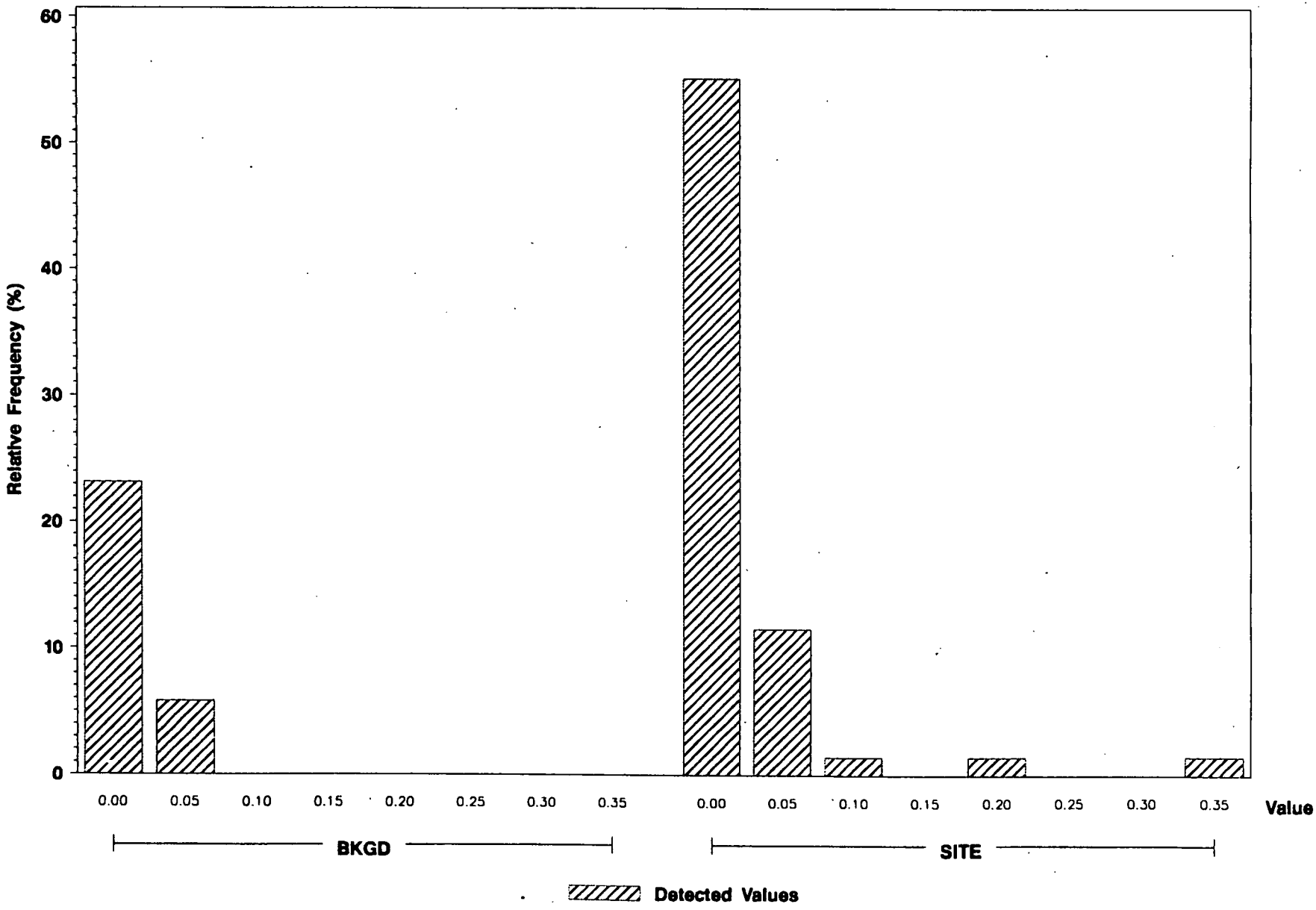
ANALYTE = GROSS ALPHA



# Background vs IHSS 203 Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Surface Soils (0 – 2 inches)

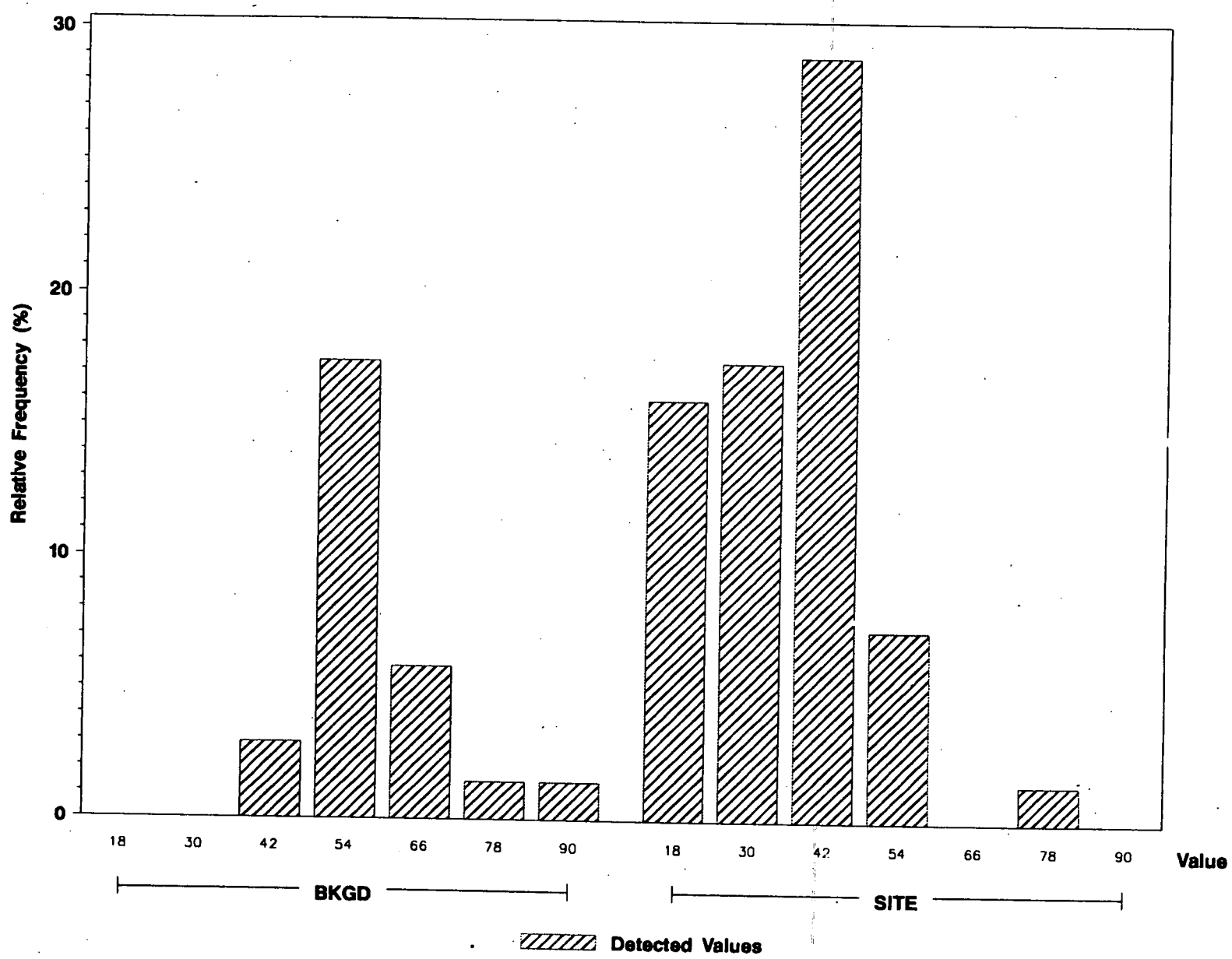
ANALYTE = AMERICIUM – 241



# Background vs IHSS 203 Frequency Histogram

## ZINC (mg/Kg) in Surface Soils (0 – 2 inches)

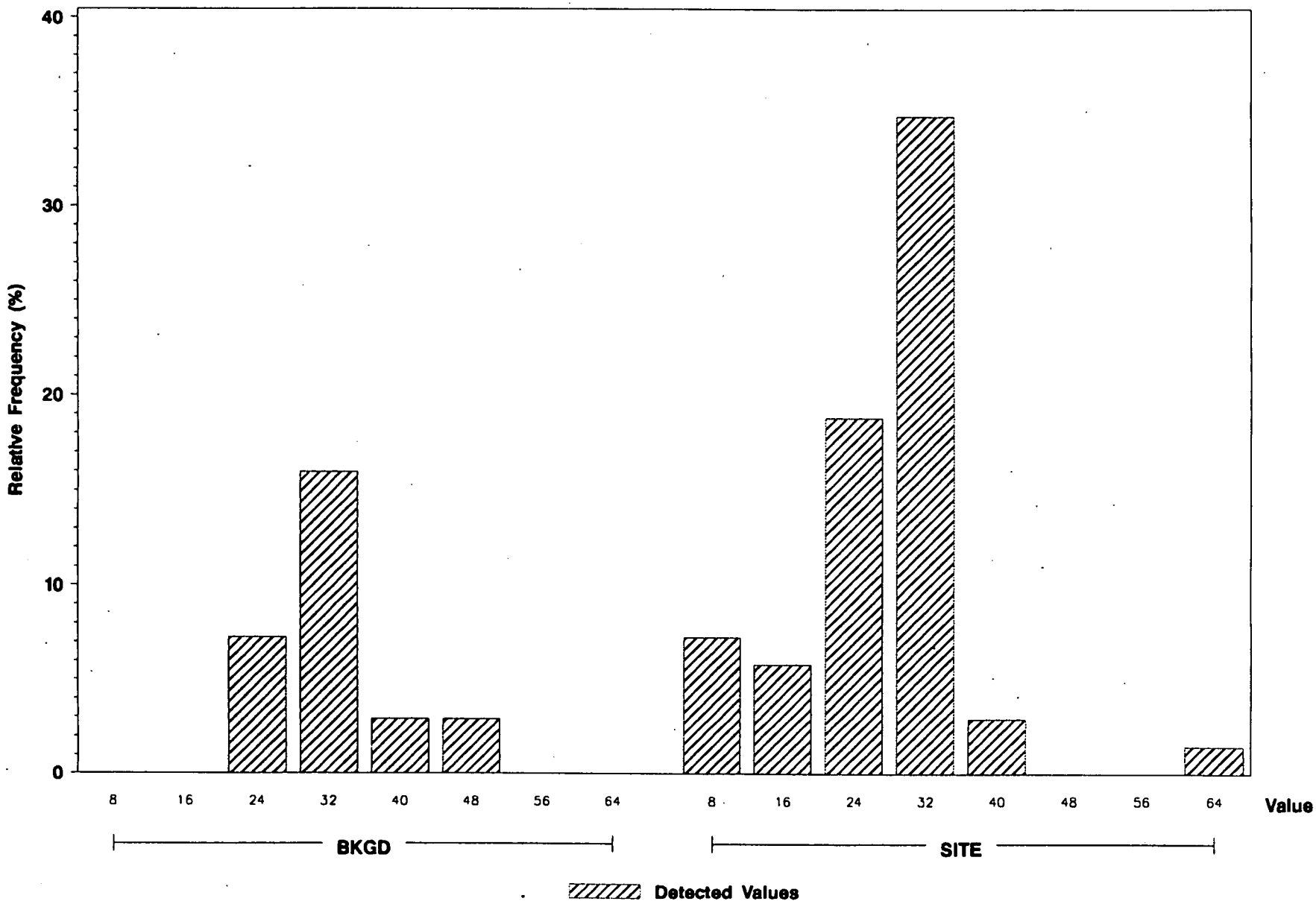
ANALYTE = ZINC



# Background vs IHSS 203 Frequency Histogram

## VANADIUM (mg/Kg) in Surface Soils (0 – 2 inches)

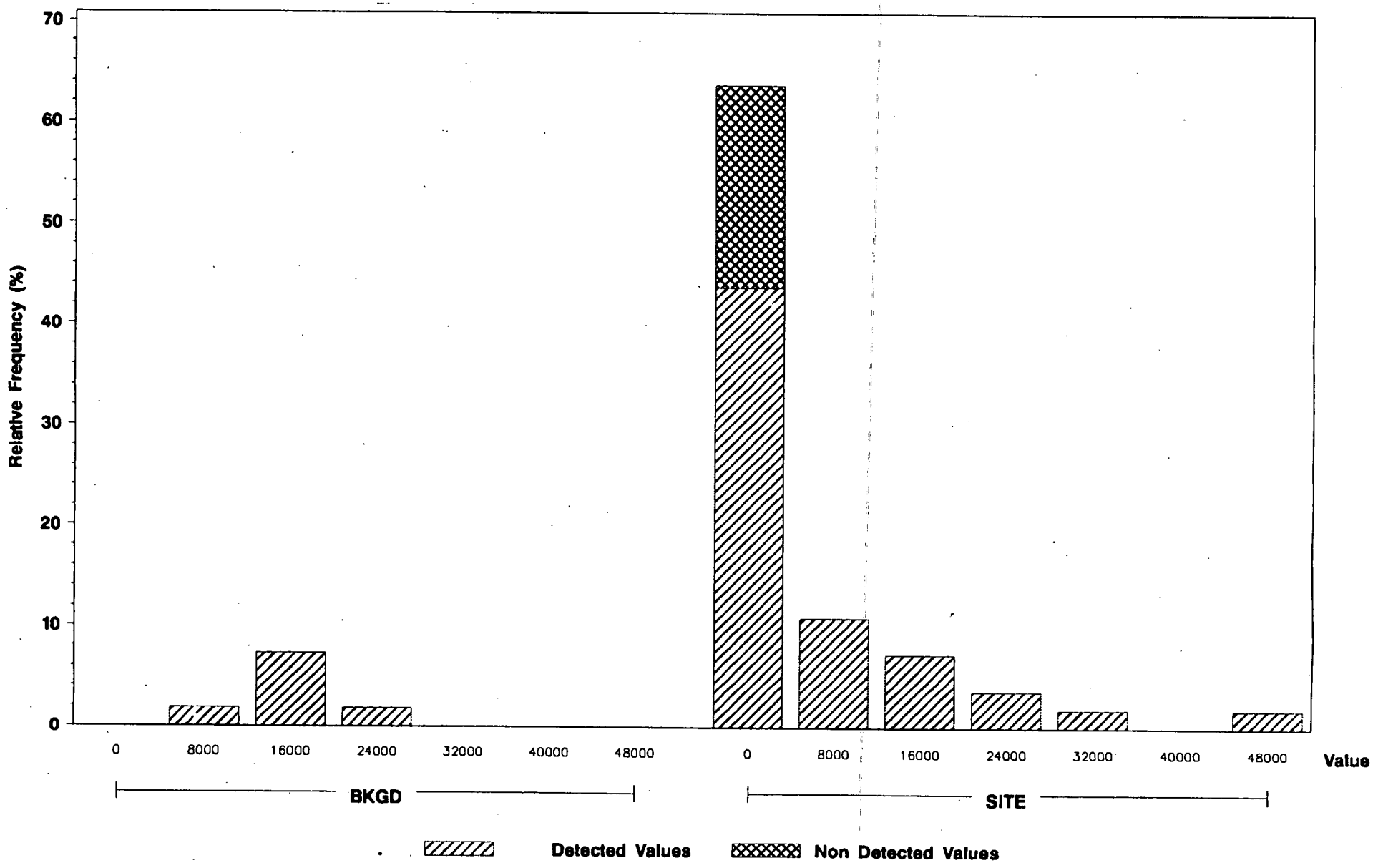
ANALYTE = VANADIUM



# Background vs IHSS 203 Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Surface Soils (0 – 2 inches)

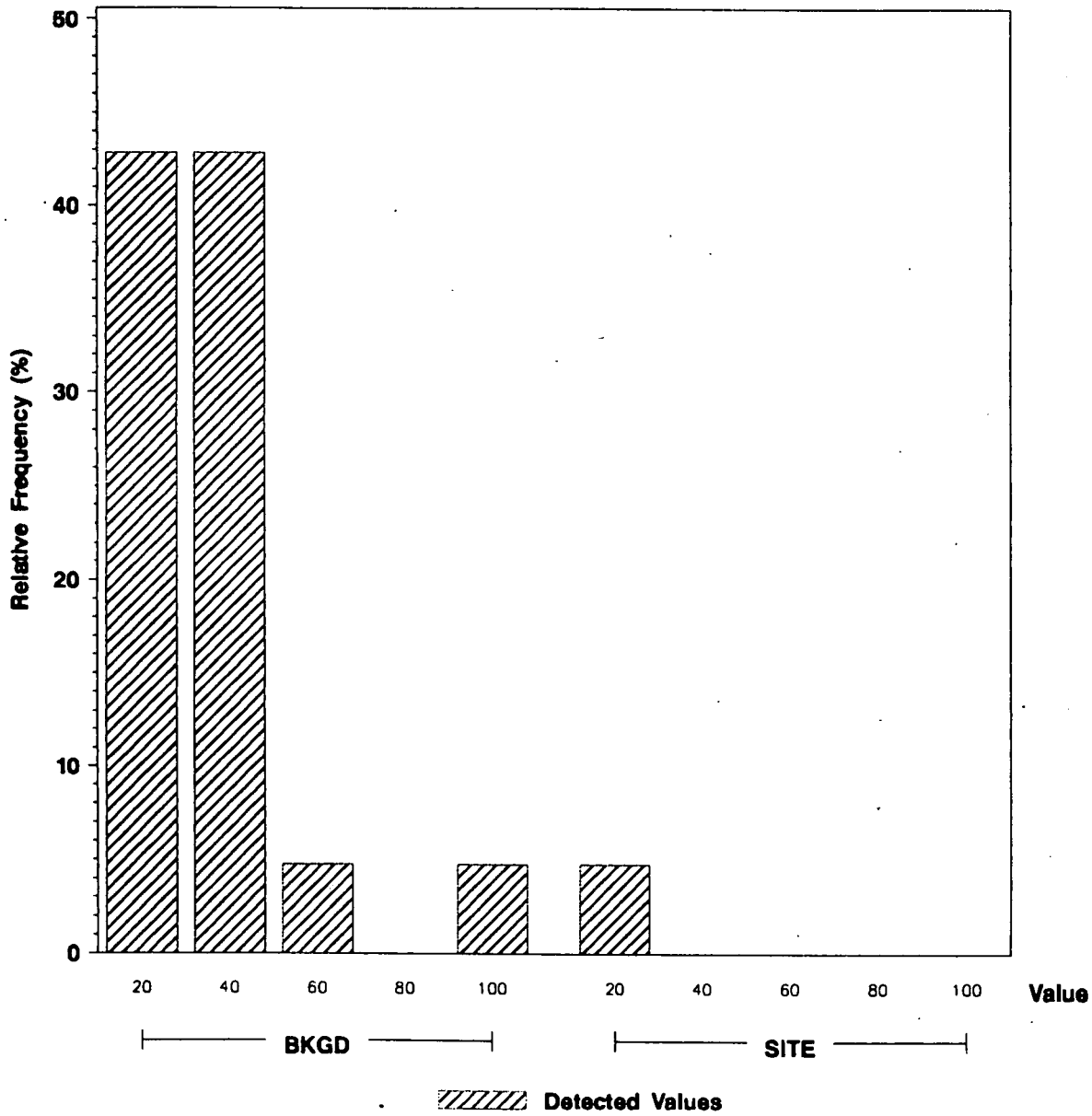
ANALYTE = TOTAL ORGANIC CARBON



# Background vs IHSS 203 Frequency Histogram

## STRONTIUM (mg/Kg) in Surface Soils (0 – 2 inches)

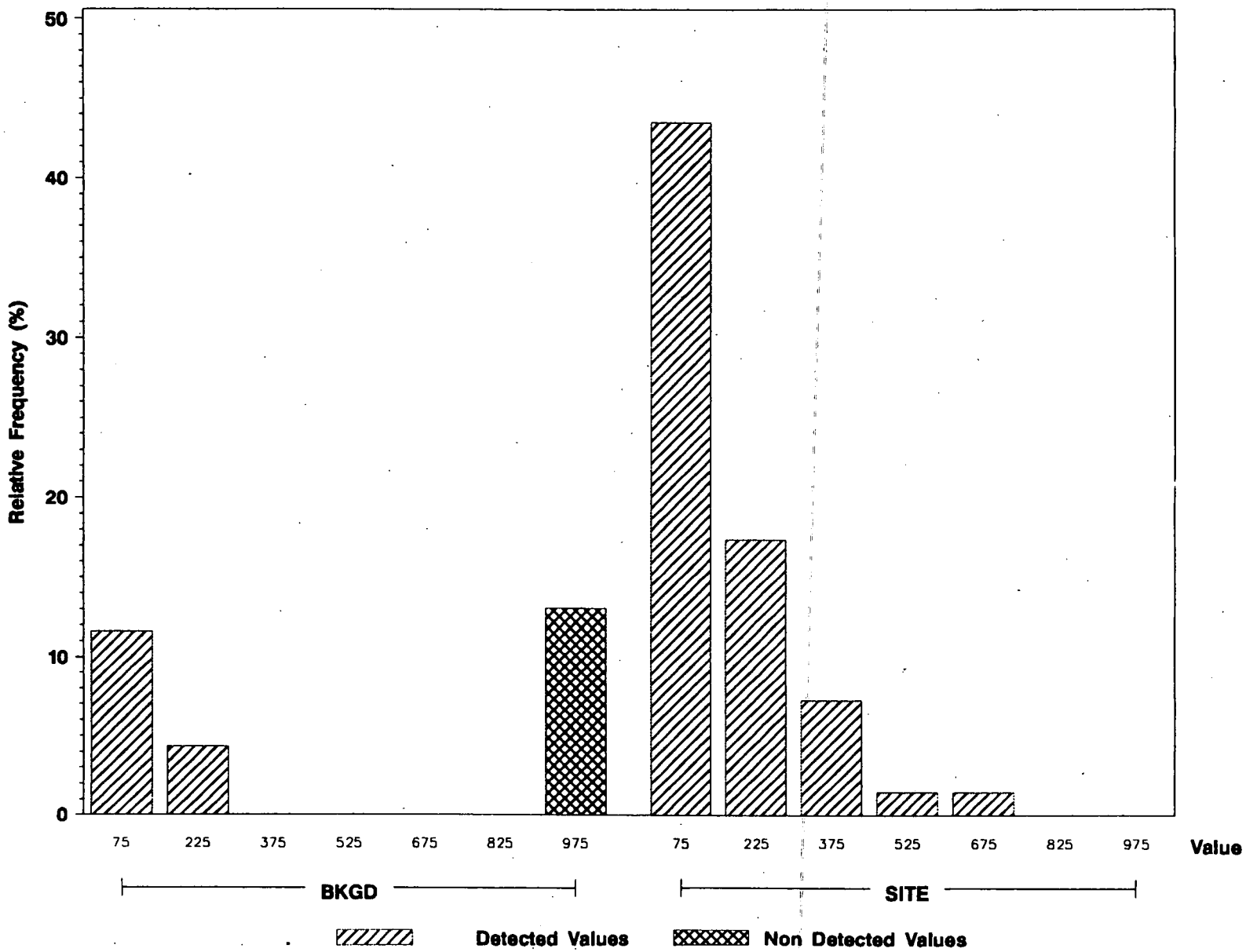
ANALYTE = STRONTIUM



# Background vs IHSS 203 Frequency Histogram

## SODIUM (mg/Kg) in Surface Soils (0 – 2 inches)

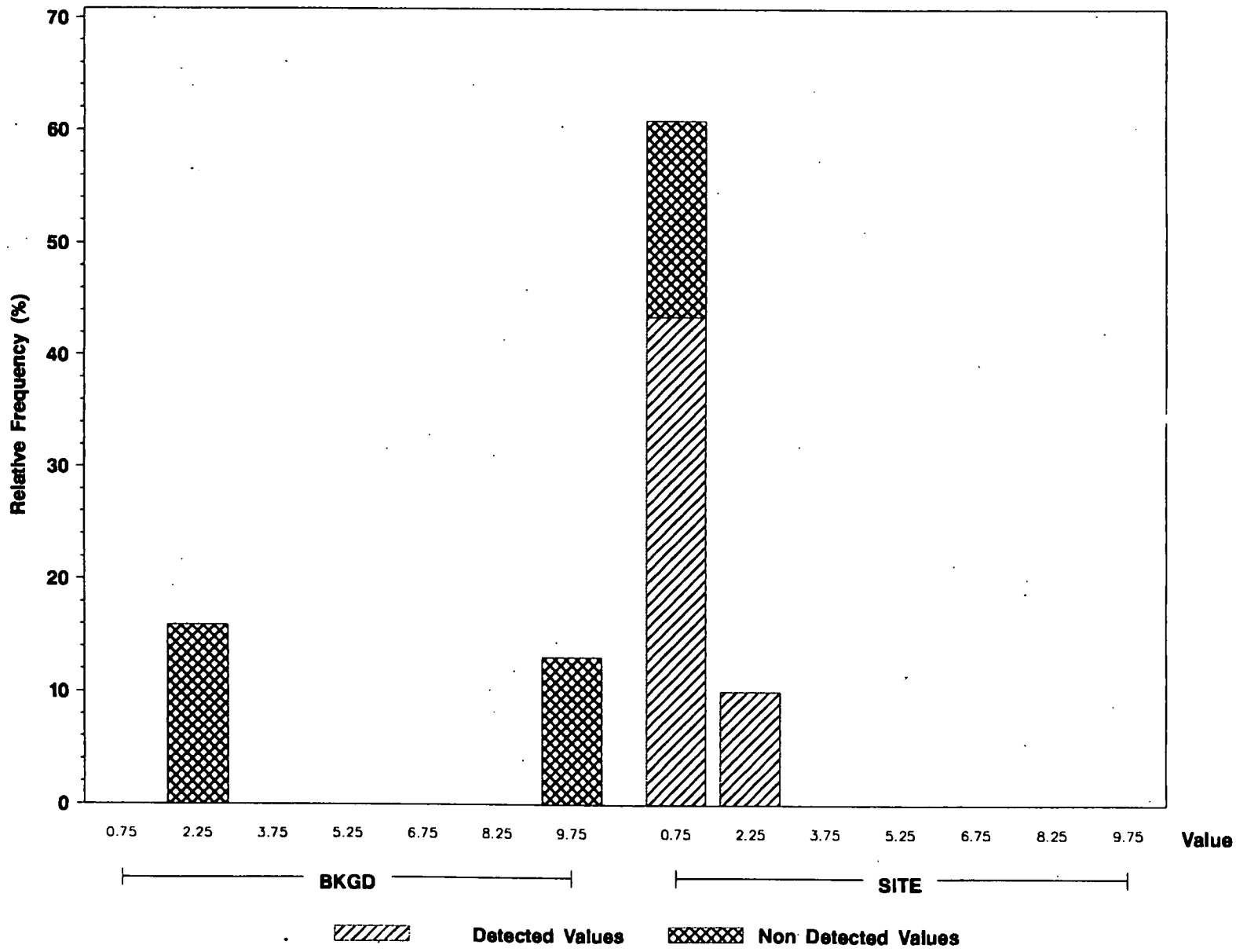
ANALYTE = SODIUM



# Background vs IHSS 203 Frequency Histogram

## SILVER (mg/Kg) in Surface Soils (0–2 inches)

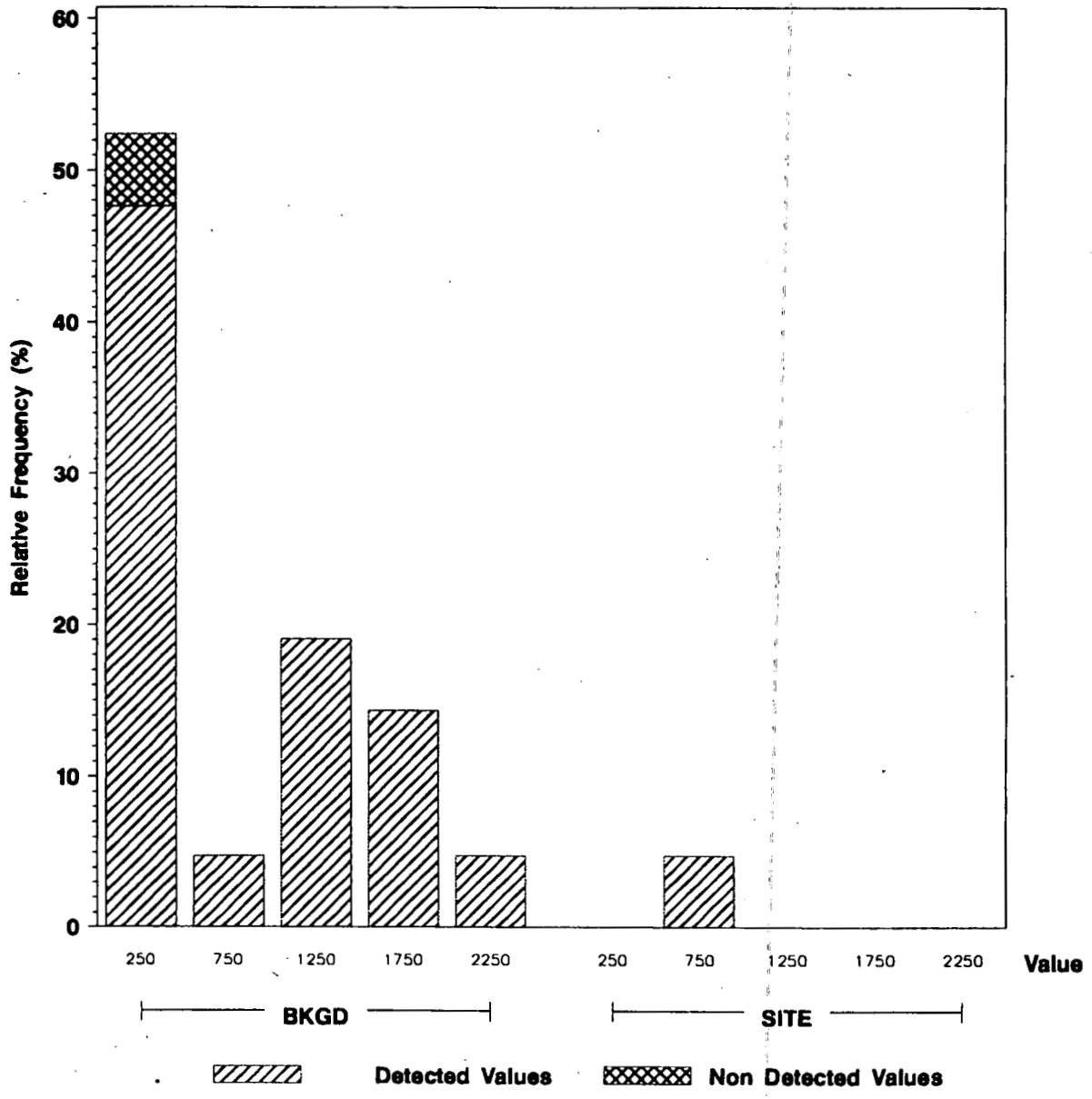
ANALYTE=SILVER



# Background vs IHSS 203 Frequency Histogram

## SILICON (mg/Kg) in Surface Soils (0 – 2 inches)

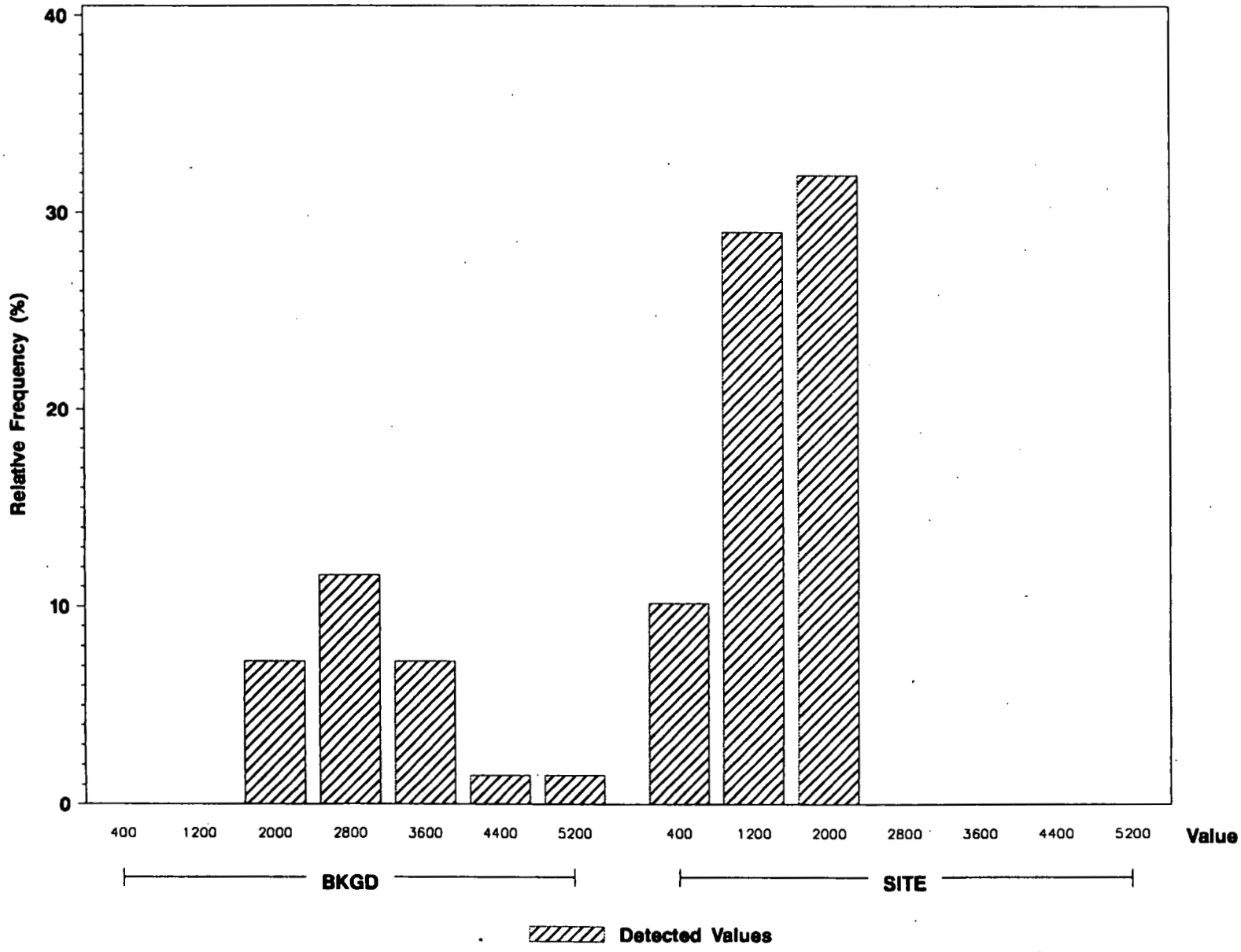
ANALYTE = SILICON



# Background vs IHSS 203 Frequency Histogram

## POTASSIUM (mg/Kg) in Surface Soils (0 – 2 inches)

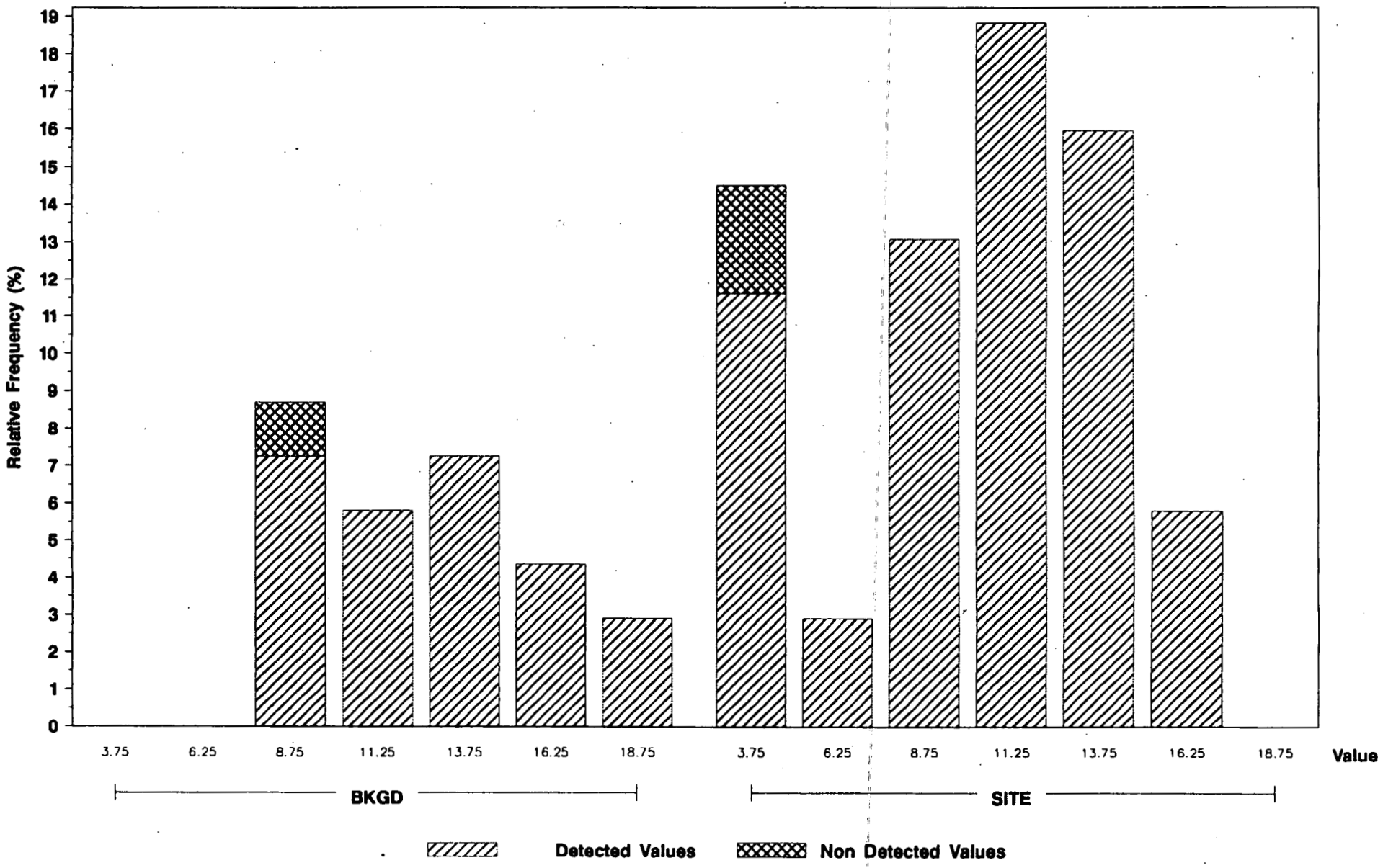
ANALYTE = POTASSIUM



# Background vs IHSS 203 Frequency Histogram

## NICKEL (mg/Kg) in Surface Soils (0 – 2 inches)

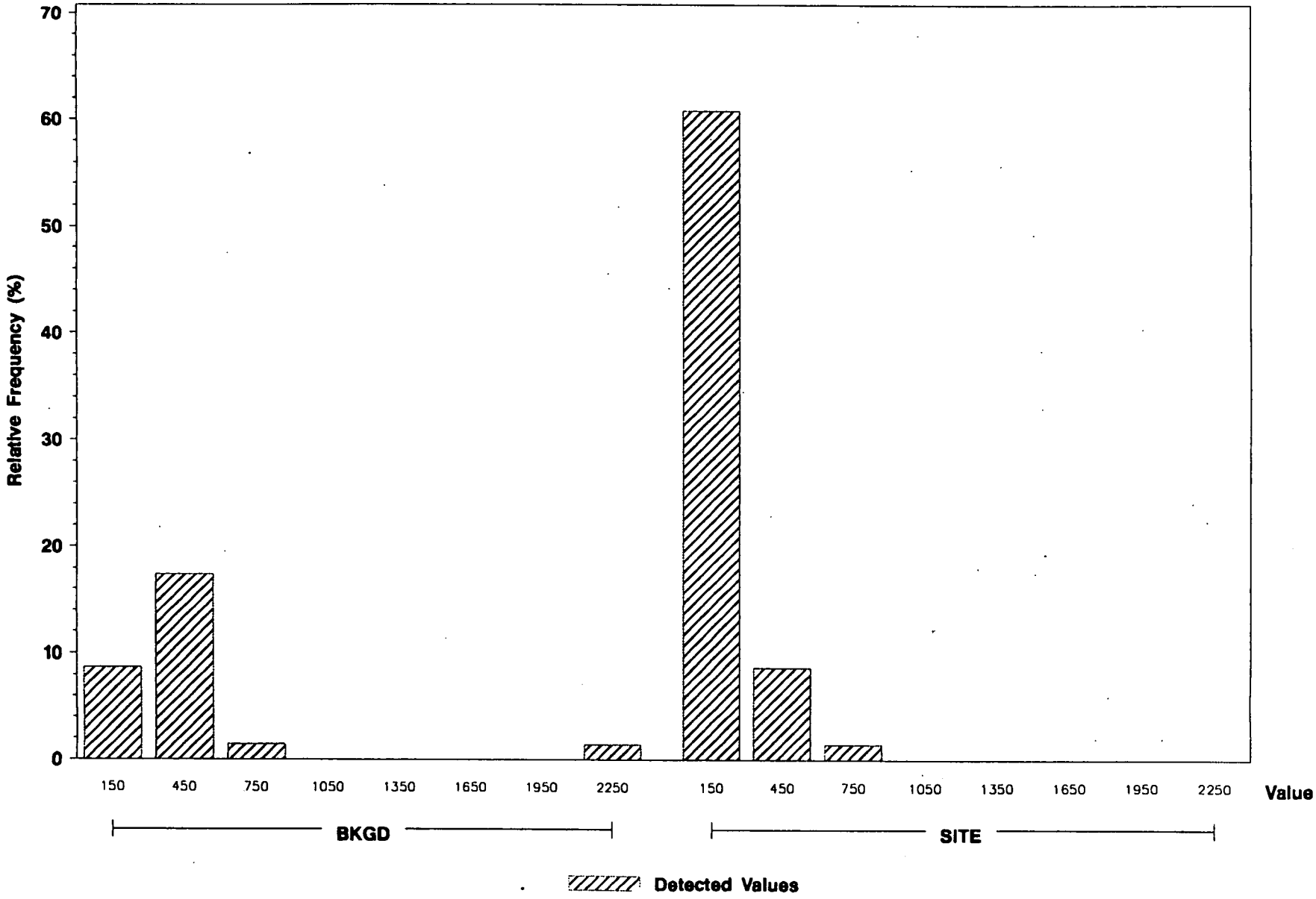
ANALYTE = NICKEL



# Background vs IHSS 203 Frequency Histogram

## MANGANESE (mg/Kg) in Surface Soils (0 – 2 inches)

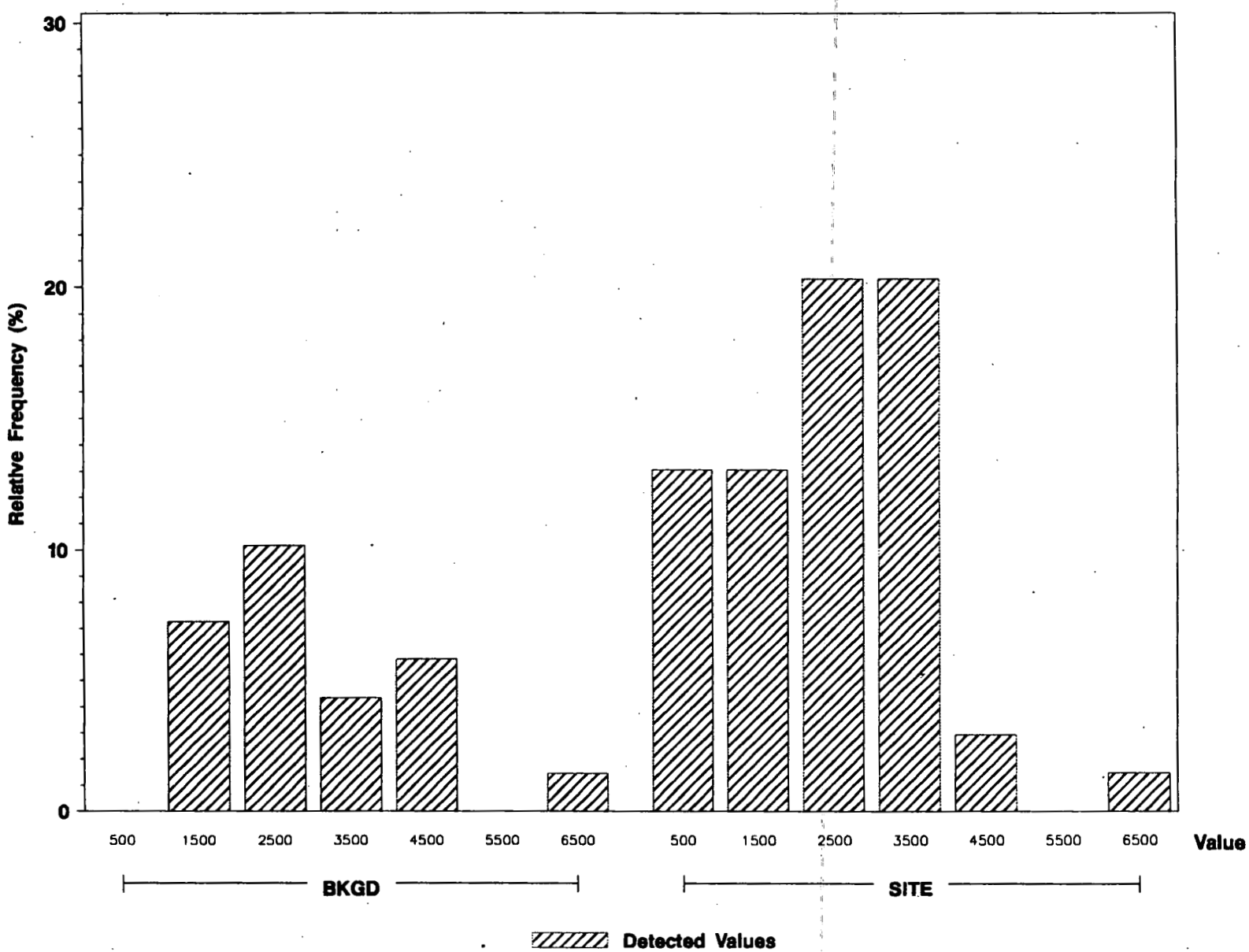
ANALYTE = MANGANESE



# Background vs IHSS 203 Frequency Histogram

## MAGNESIUM (mg/Kg) in Surface Soils (0 – 2 inches)

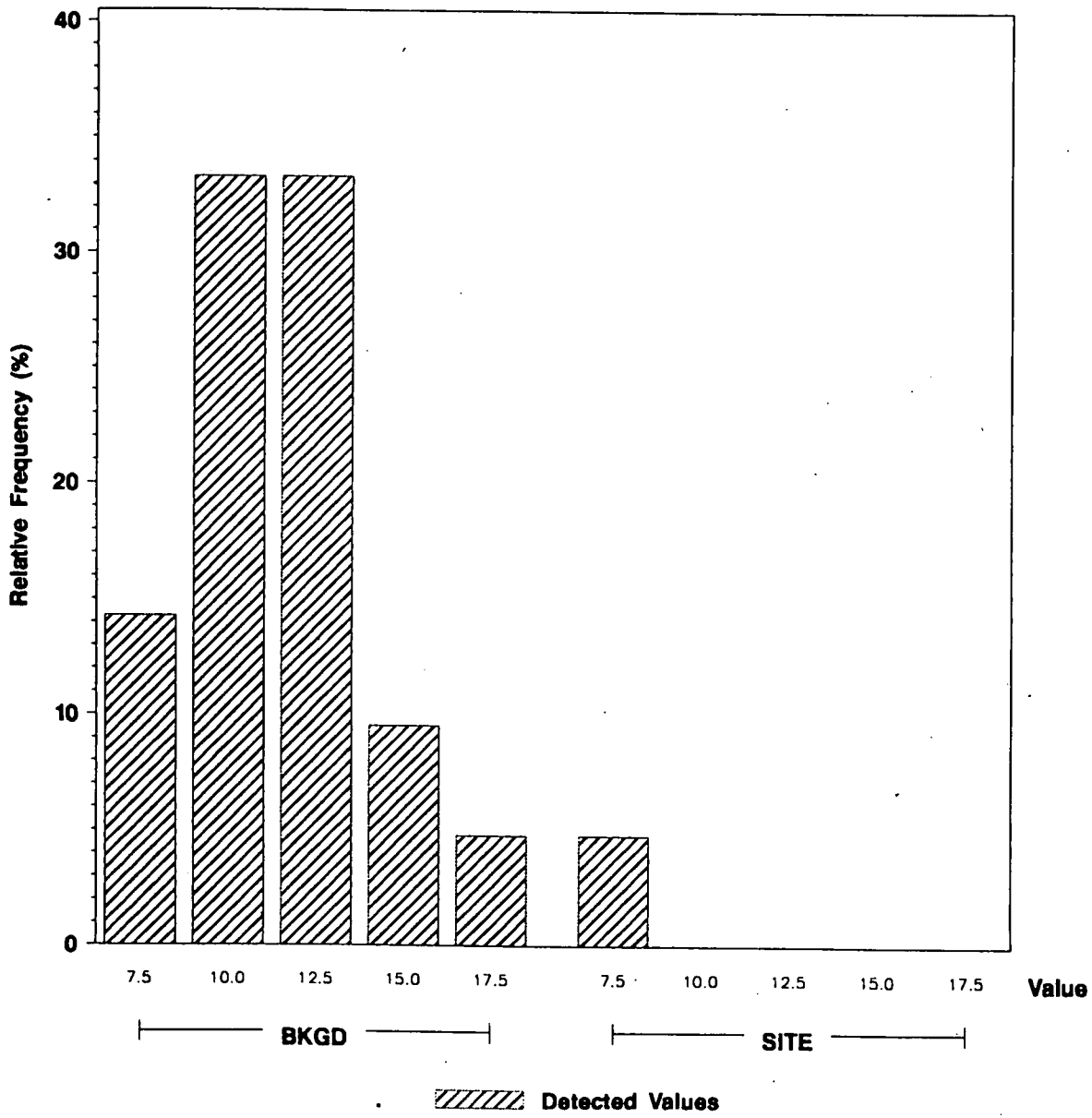
ANALYTE = MAGNESIUM



# Background vs IHSS 203 Frequency Histogram

## LITHIUM (mg/Kg) in Surface Soils (0 – 2 inches)

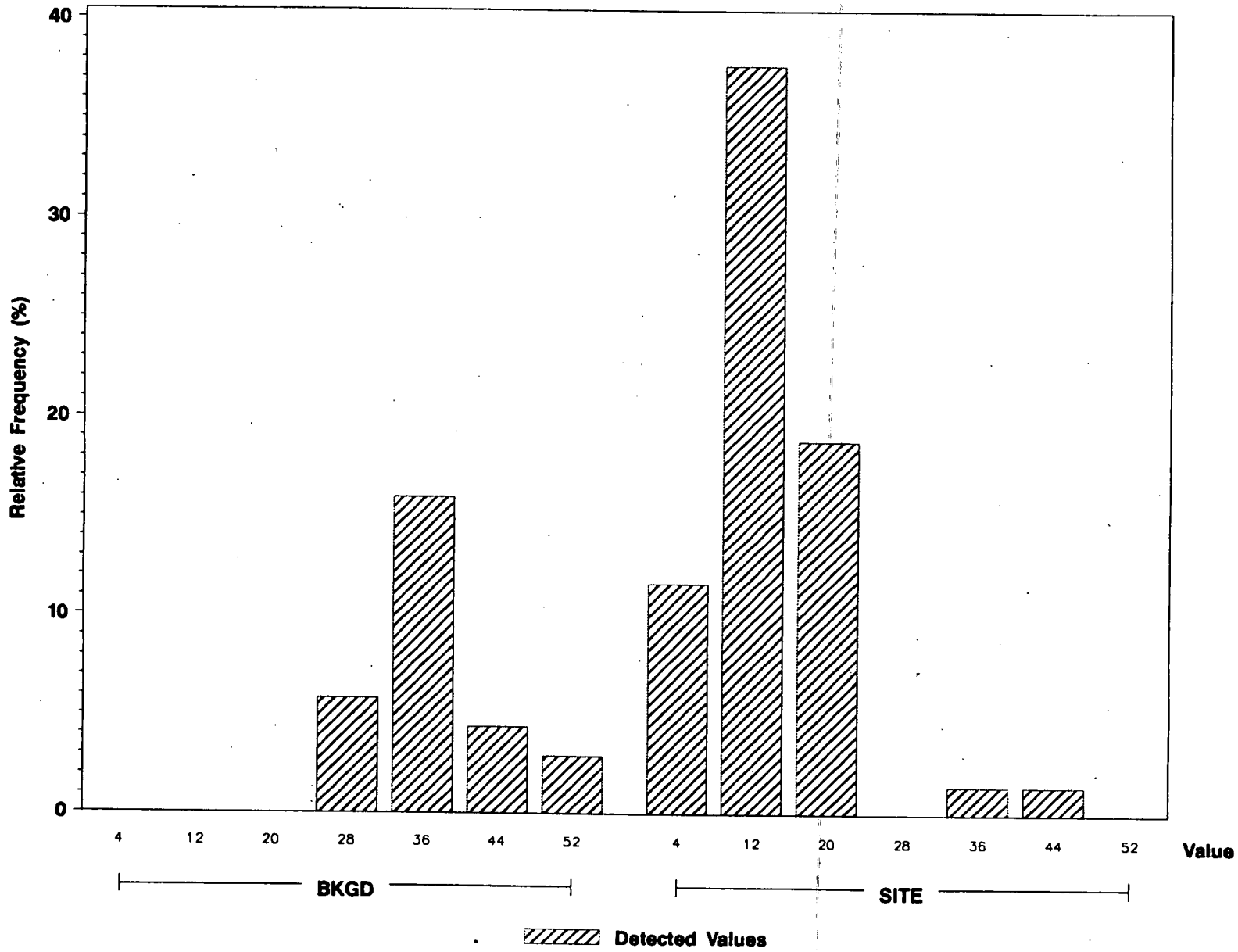
ANALYTE = LITHIUM



# Background vs IHSS 203 Frequency Histogram

## LEAD (mg/Kg) in Surface Soils (0–2 inches)

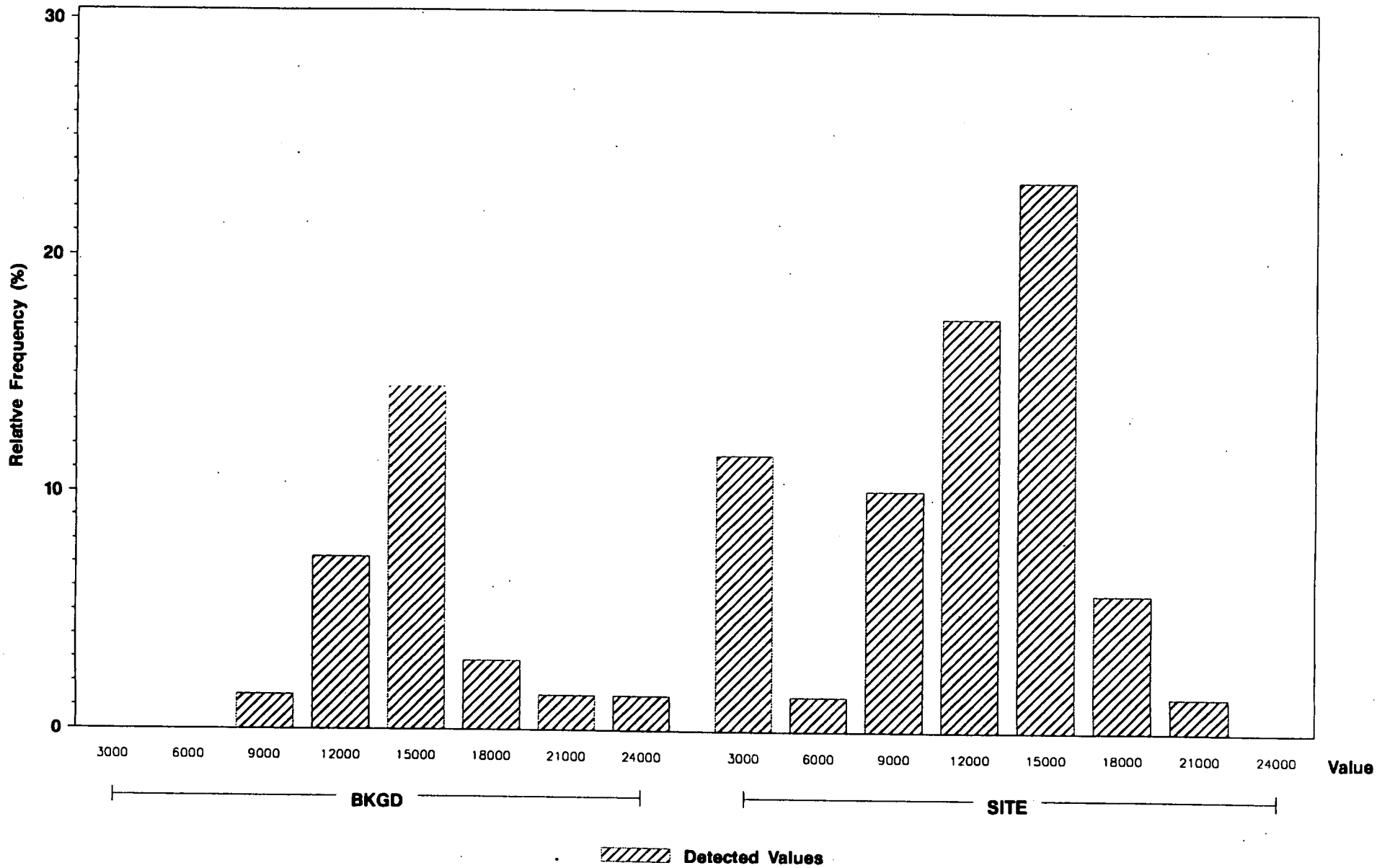
ANALYTE = LEAD



# Background vs IHSS 203 Frequency Histogram

## IRON (mg/Kg) in Surface Soils (0 – 2 inches)

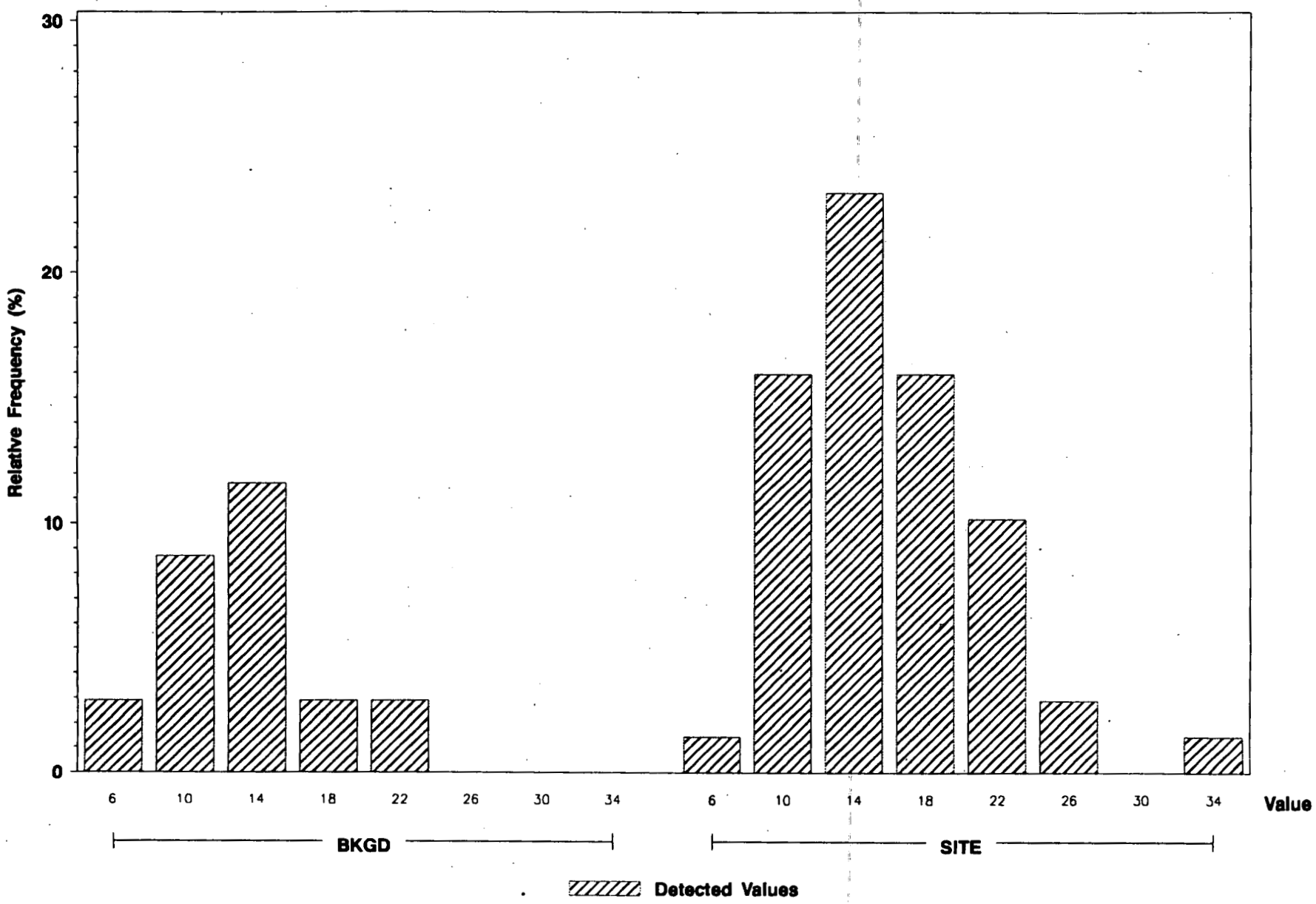
ANALYTE = IRON



# Background vs IHSS 203 Frequency Histogram

## COPPER (mg/Kg) in Surface Soils (0 – 2 inches)

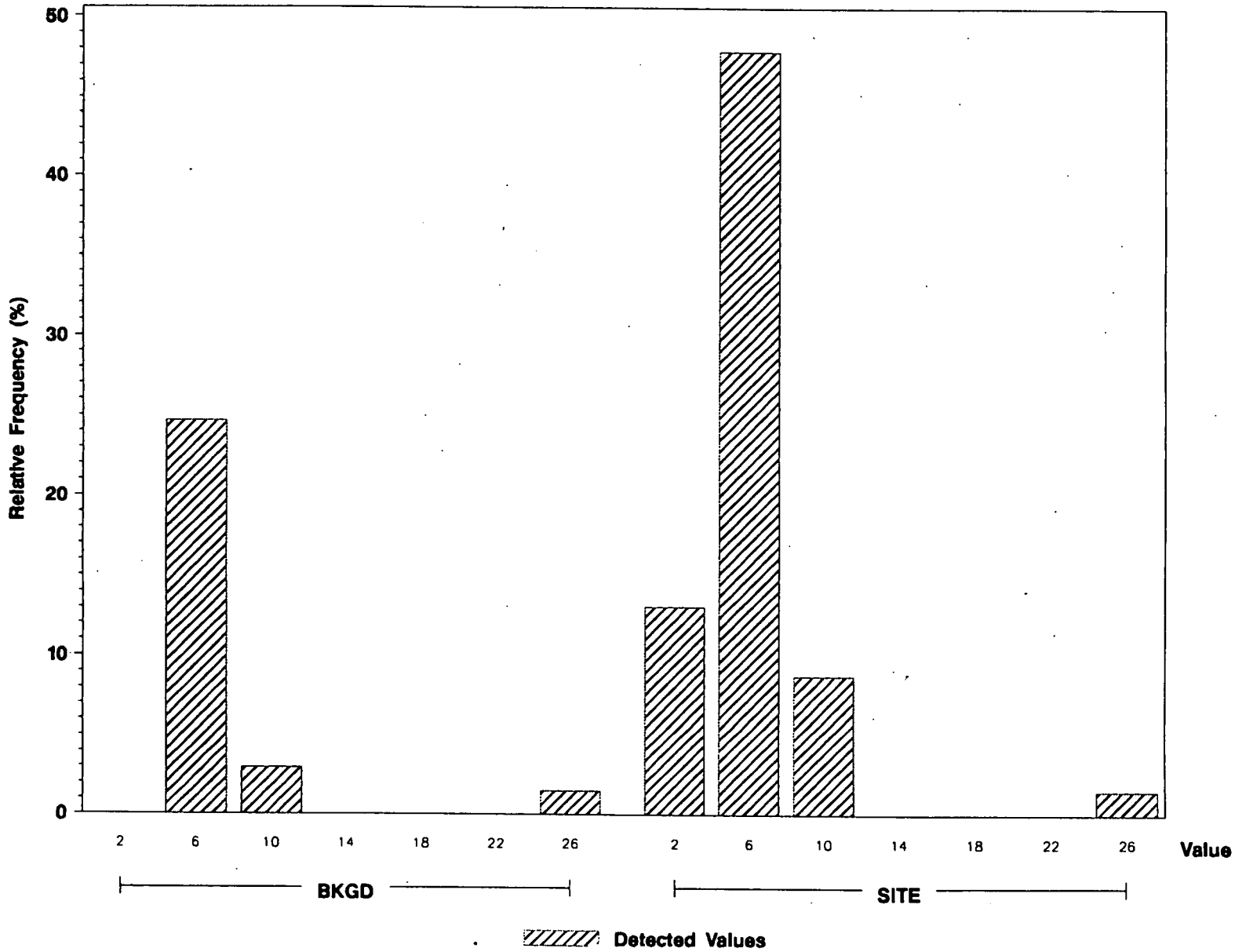
ANALYTE = COPPER



# Background vs IHSS 203 Frequency Histogram

## COBALT (mg/Kg) in Surface Soils (0 – 2 inches)

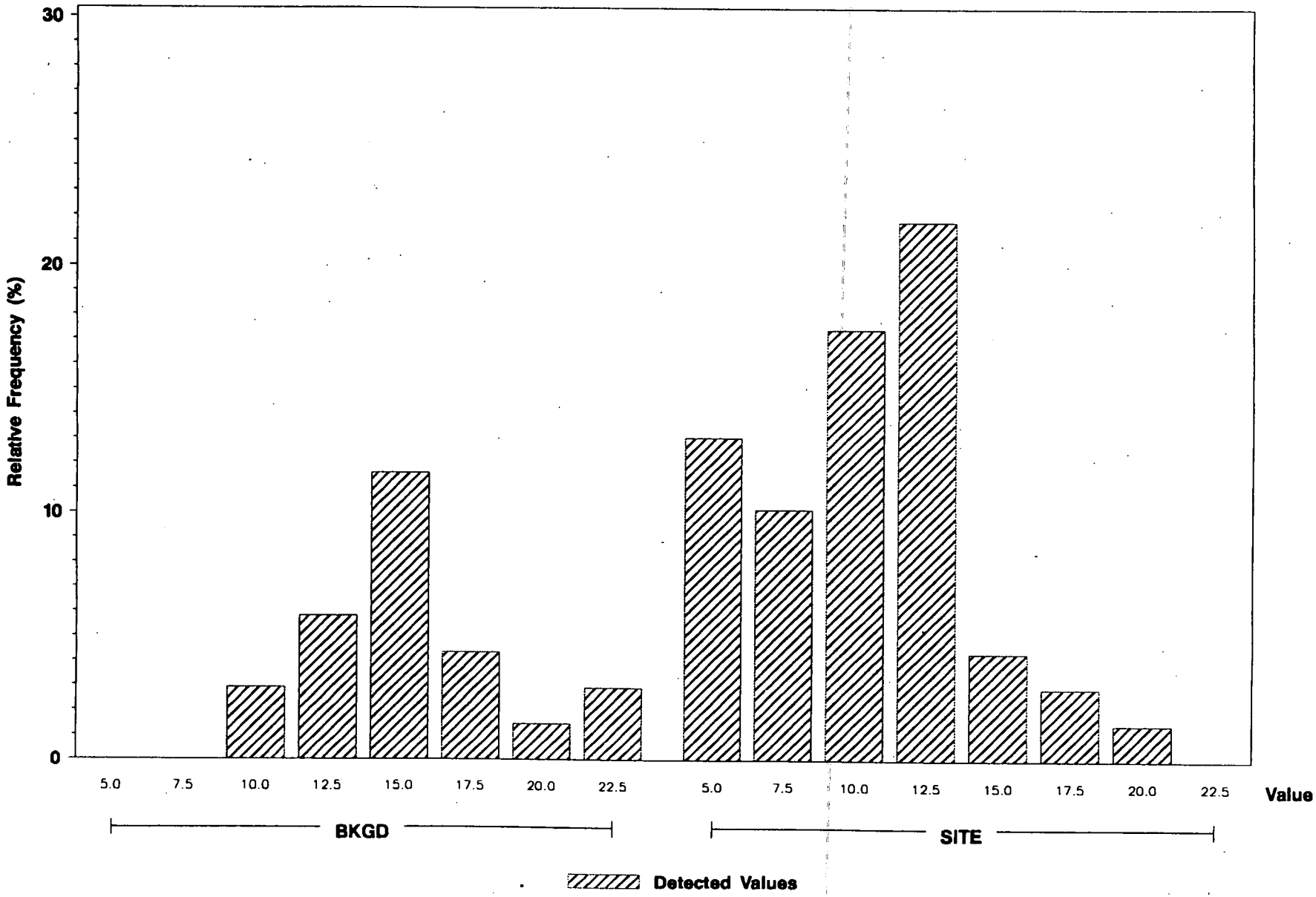
ANALYTE = COBALT



# Background vs IHSS 203 Frequency Histogram

## CHROMIUM (mg/Kg) in Surface Soils (0 – 2 inches)

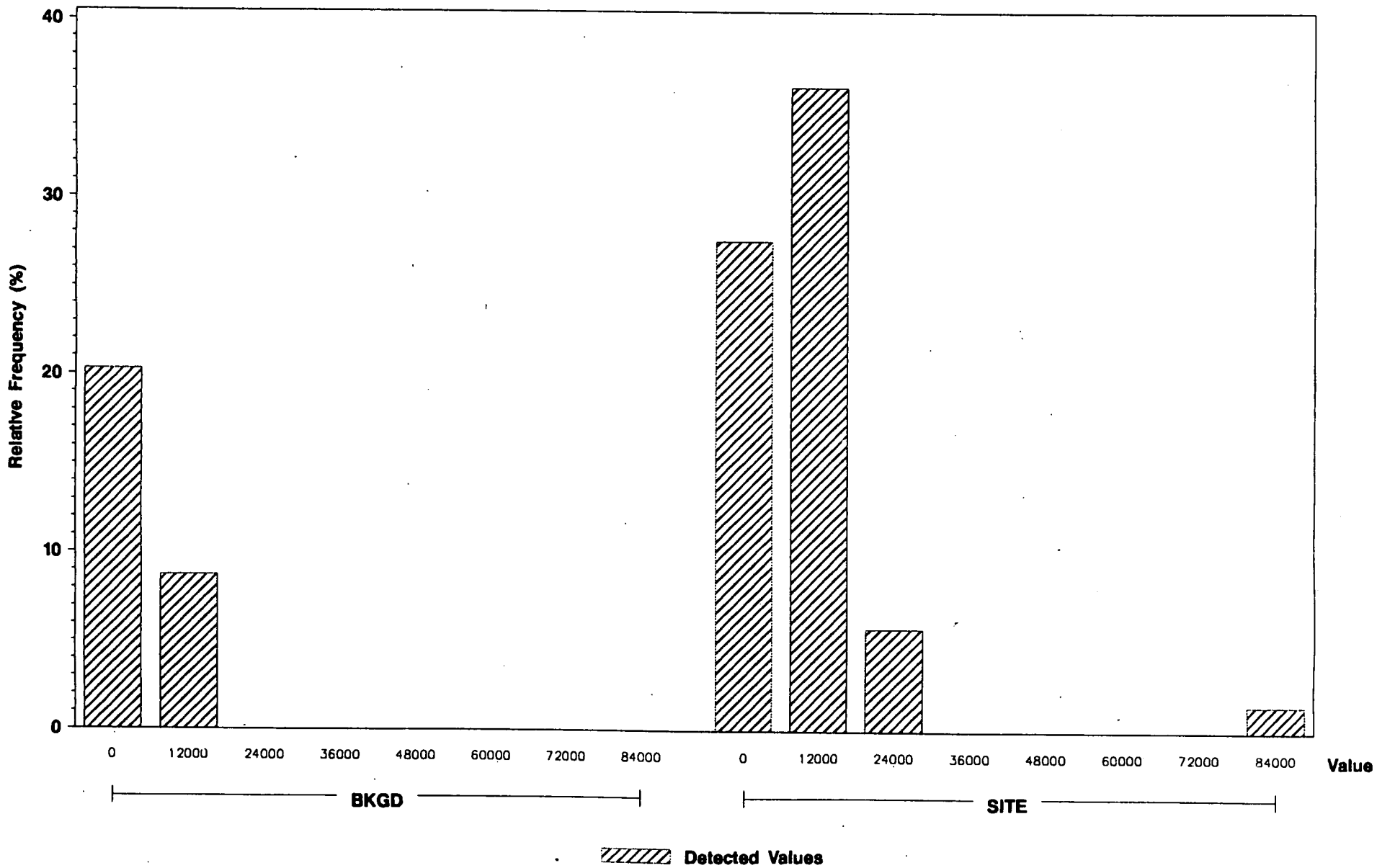
ANALYTE = CHROMIUM



# Background vs IHSS 203 Frequency Histogram

## CALCIUM (mg/Kg) in Surface Soils (0 – 2 inches)

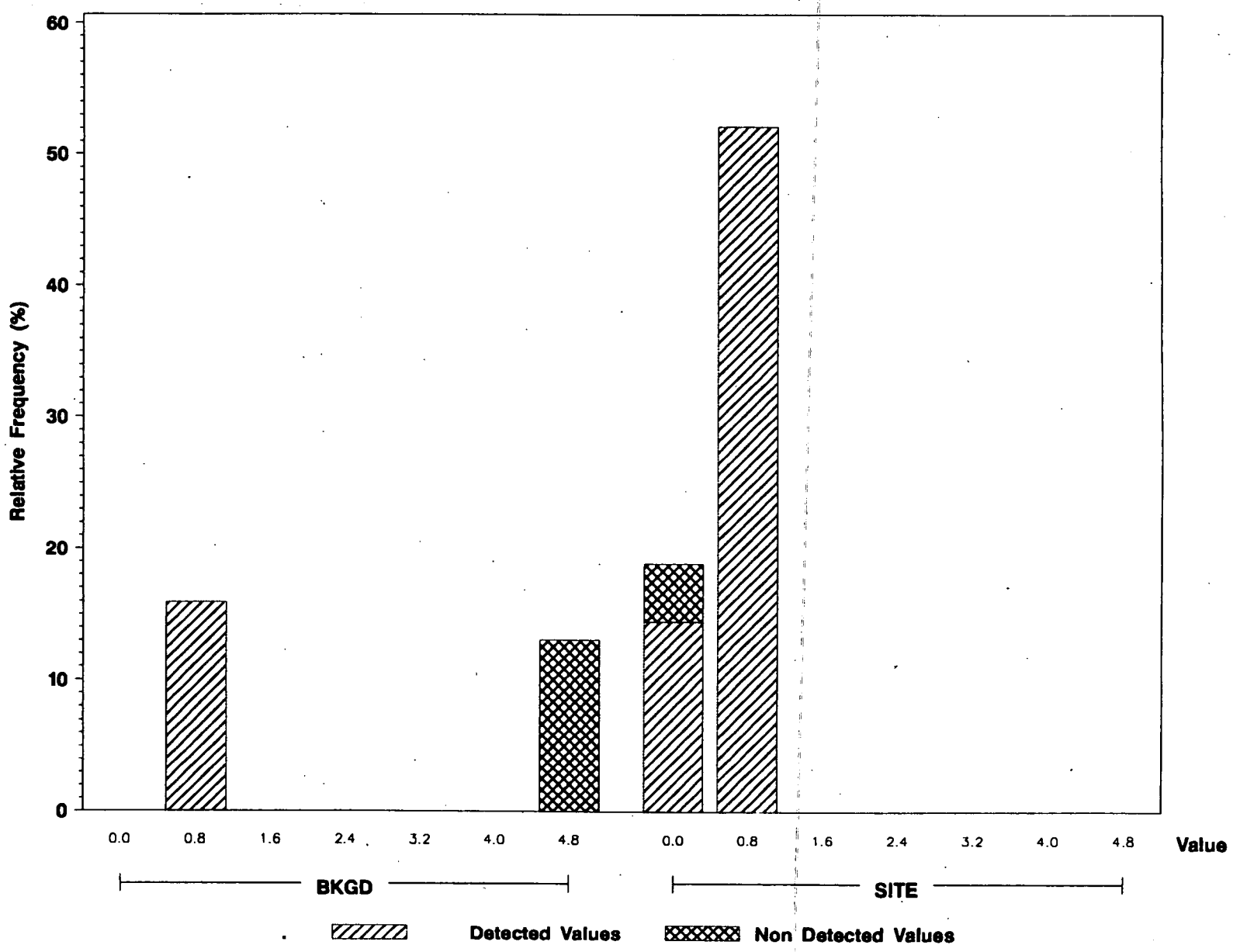
ANALYTE = CALCIUM



# Background vs IHSS 203 Frequency Histogram

## BERYLLIUM (mg/Kg) in Surface Soils (0 – 2 inches)

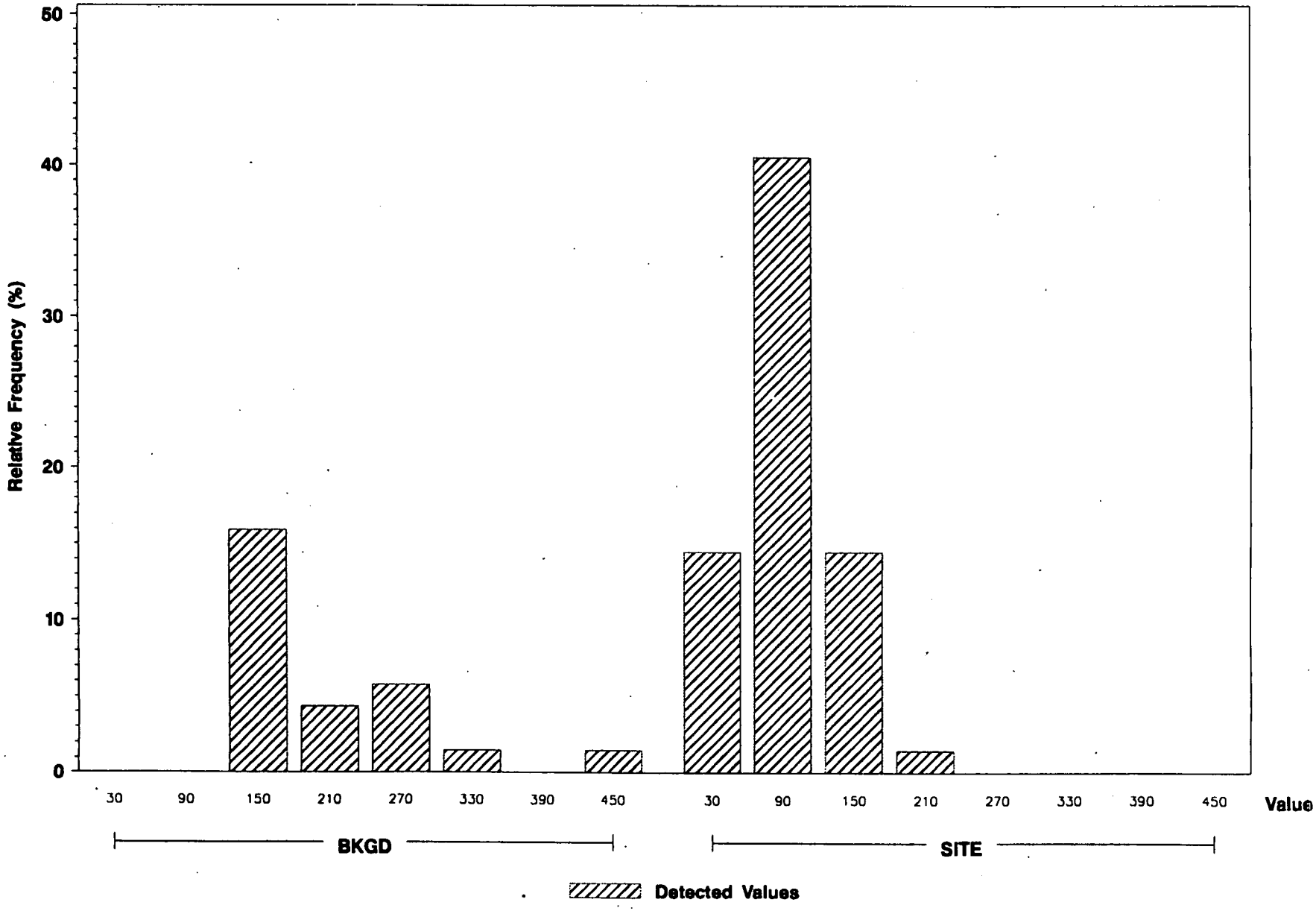
ANALYTE = BERYLLIUM



# Background vs IHSS 203 Frequency Histogram

## BARIUM (mg/Kg) in Surface Soils (0 – 2 inches)

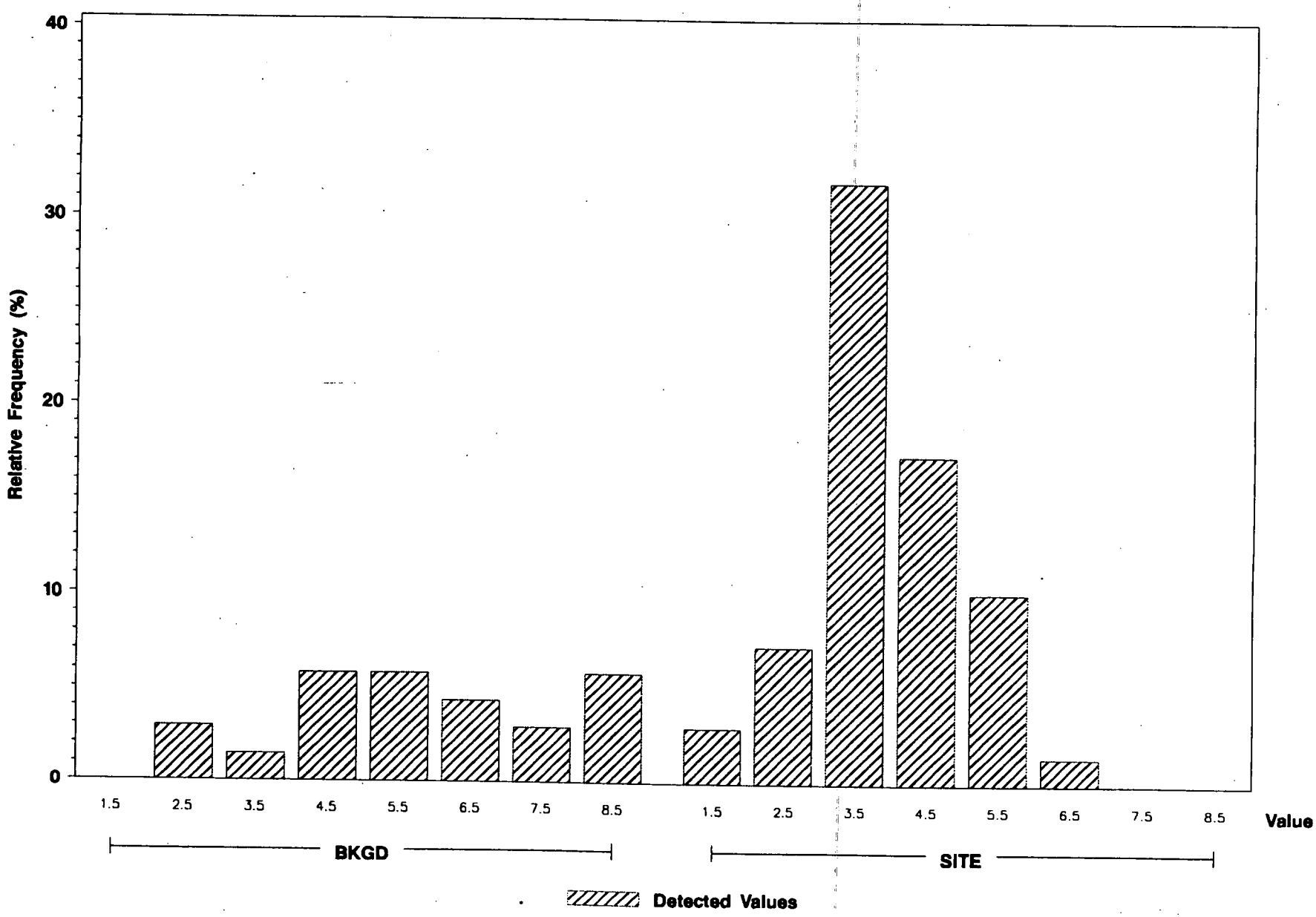
ANALYTE = BARIUM



# Background vs IHSS 203 Frequency Histogram

## ARSENIC (mg/Kg) in Surface Soils (0 – 2 inches)

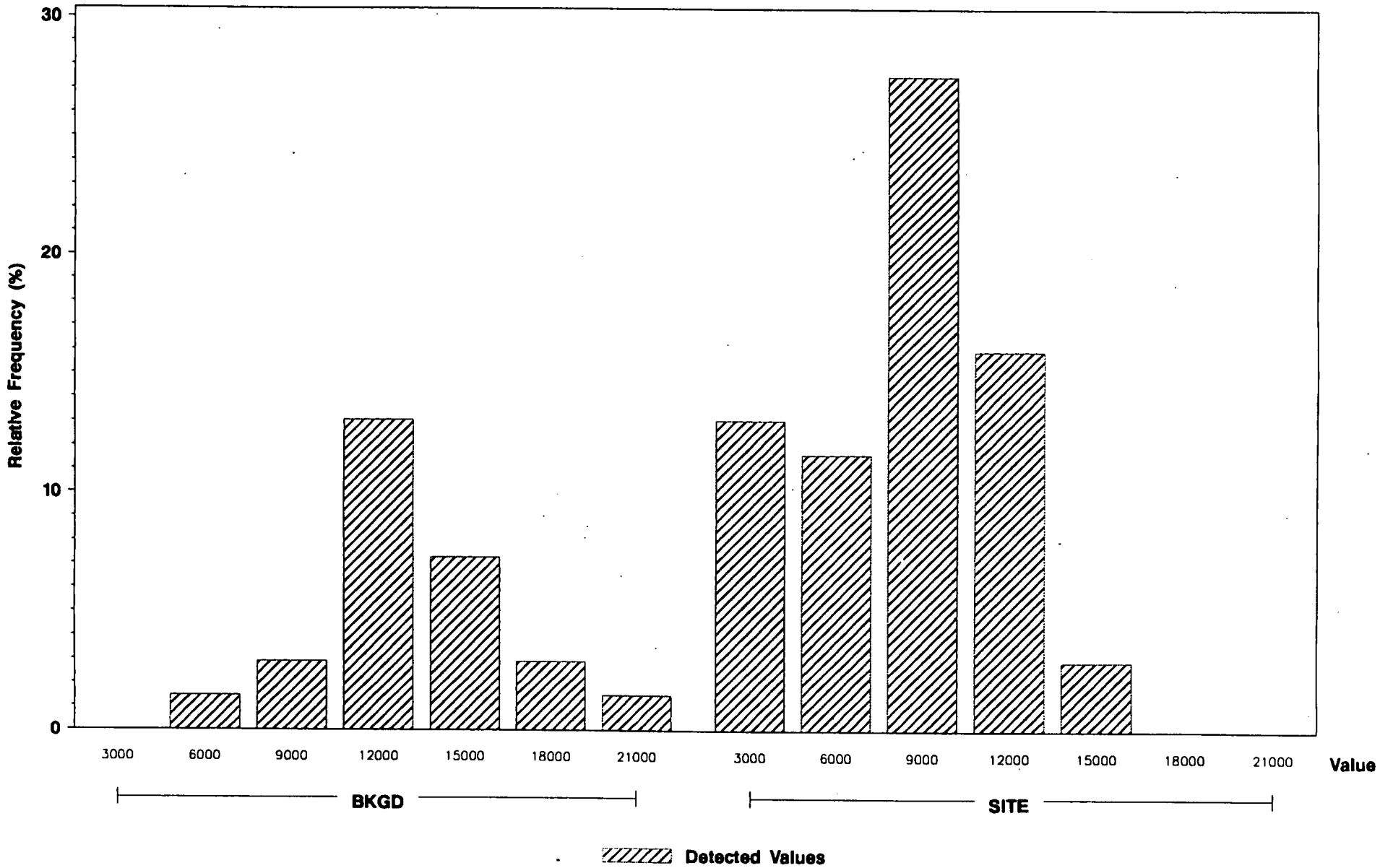
ANALYTE = ARSENIC



# Background vs IHSS 203 Frequency Histogram

## ALUMINUM (mg/Kg) in Surface Soils (0 – 2 inches)

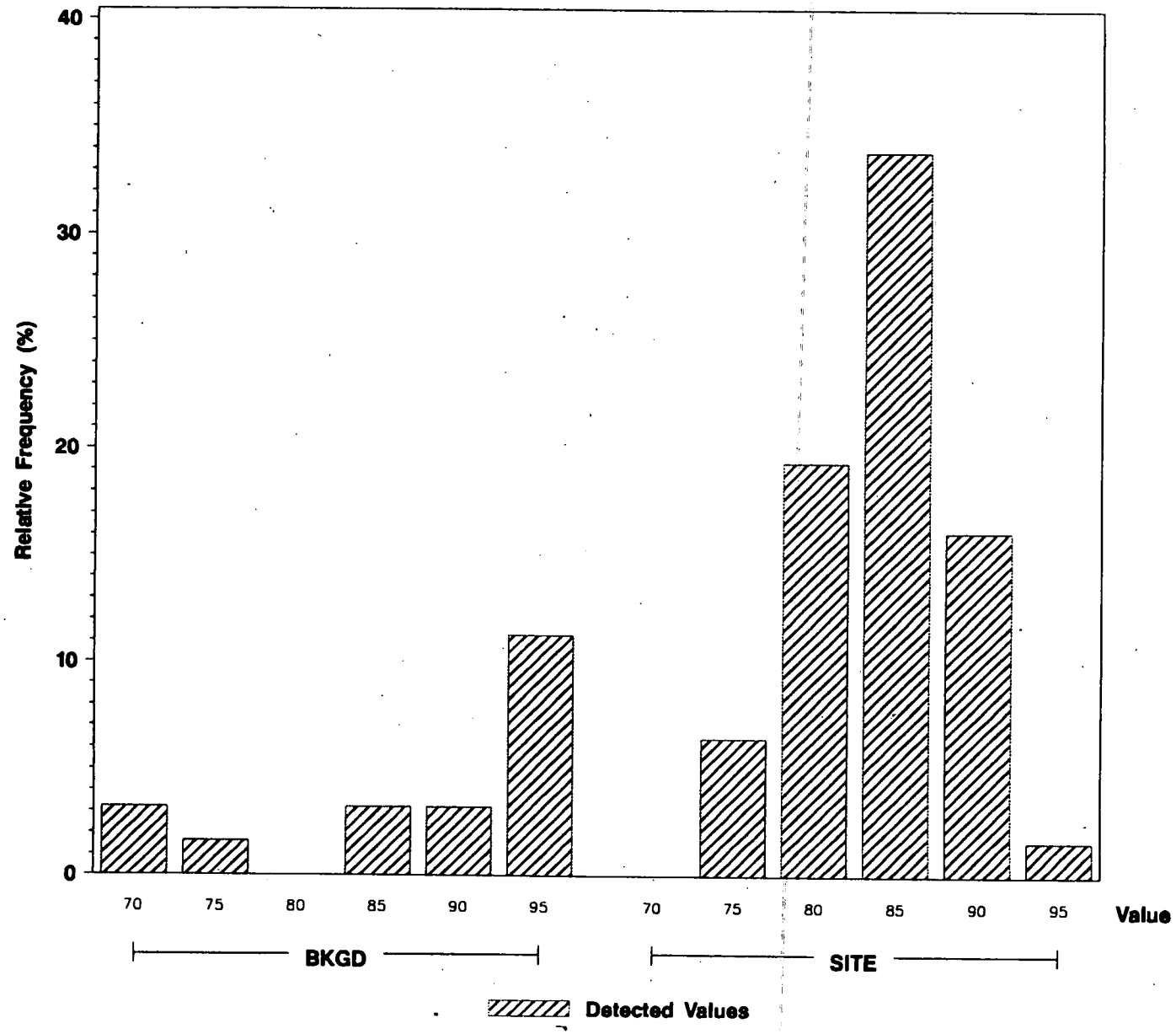
ANALYTE = ALUMINUM



# Background vs IHSS 203 Frequency Histogram

## % SOLIDS (%) in Surface Soils (0 – 2 inches)

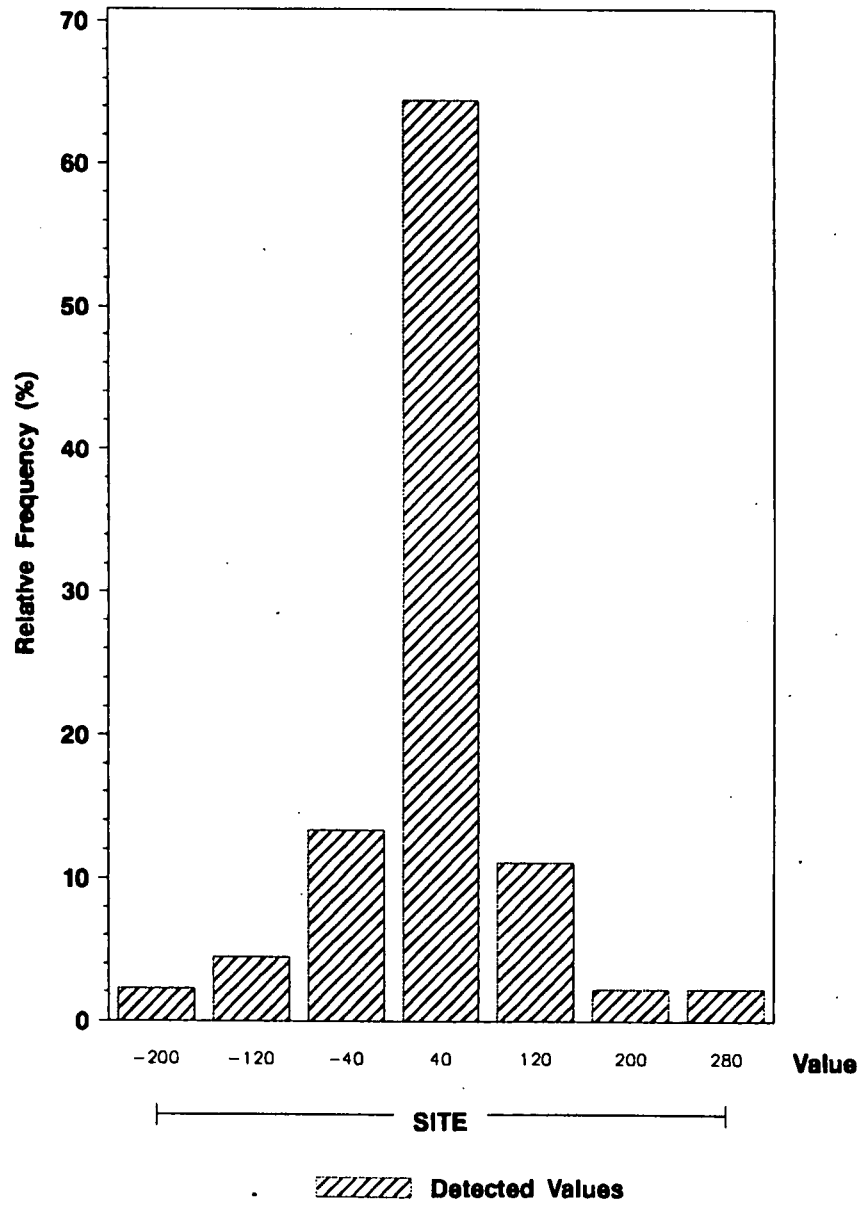
ANALYTE = % SOLIDS



# Background vs IHSS 203 Frequency Histogram

## TRITIUM (pCi/L) in Surface Soils (0–2 inches)

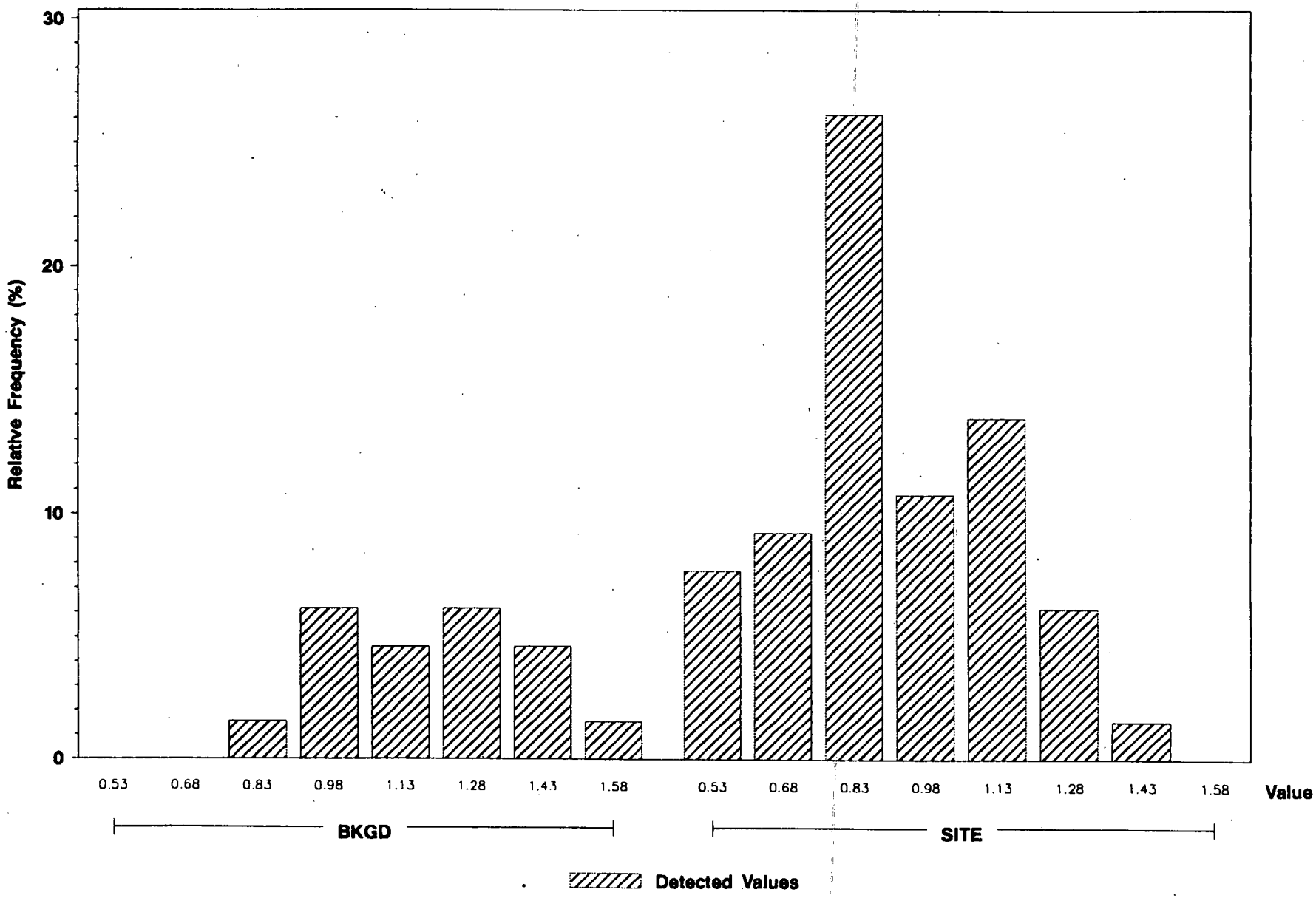
ANALYTE = TRITIUM



# Background vs IHSS 203 Frequency Histogram

## URANIUM-238 (pCi/g) in Surface Soils (0-2 inches)

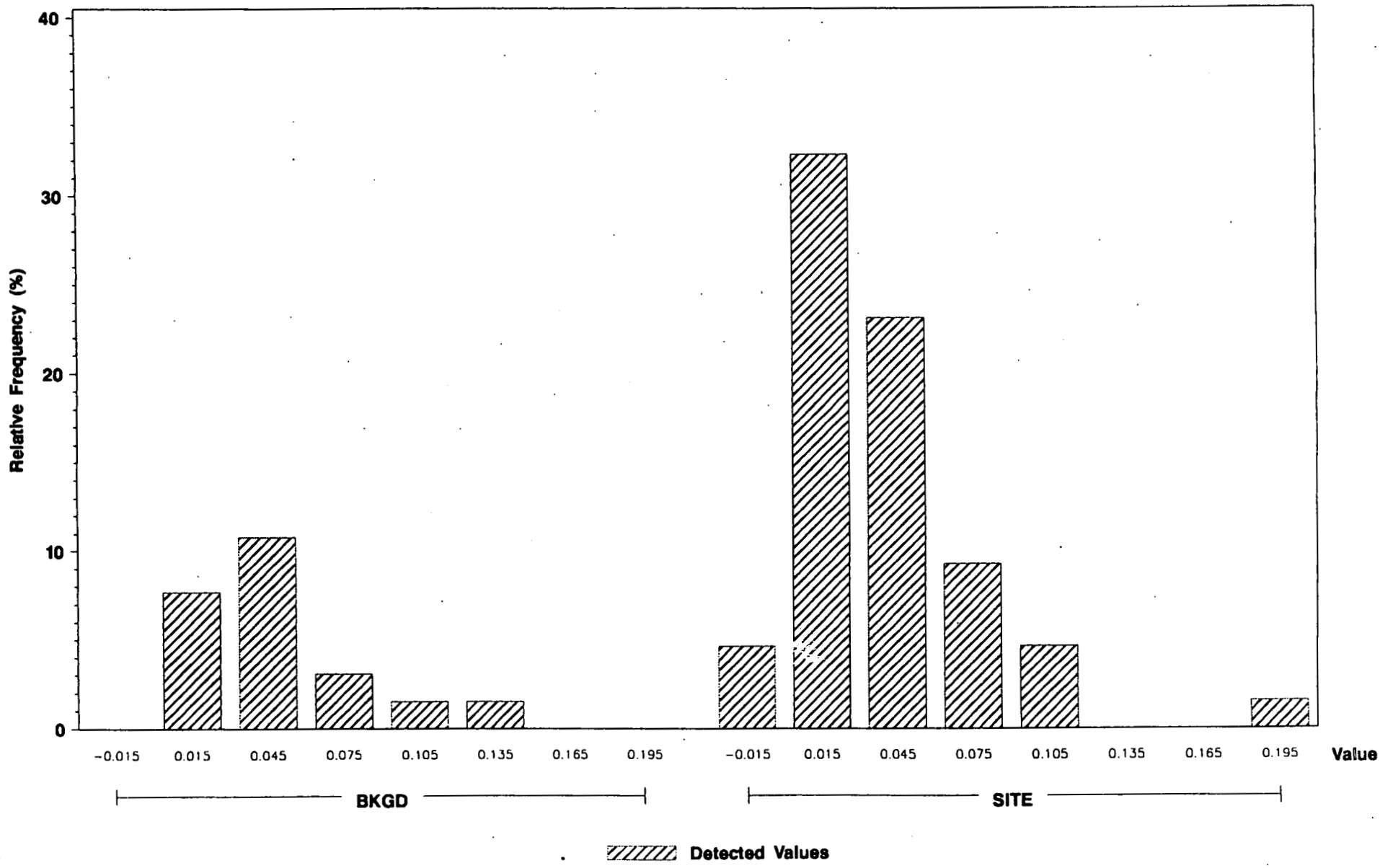
ANALYTE = URANIUM-238



# Background vs IHSS 203 Frequency Histogram

## URANIUM-235 (pCi/g) in Surface Soils (0-2 inches)

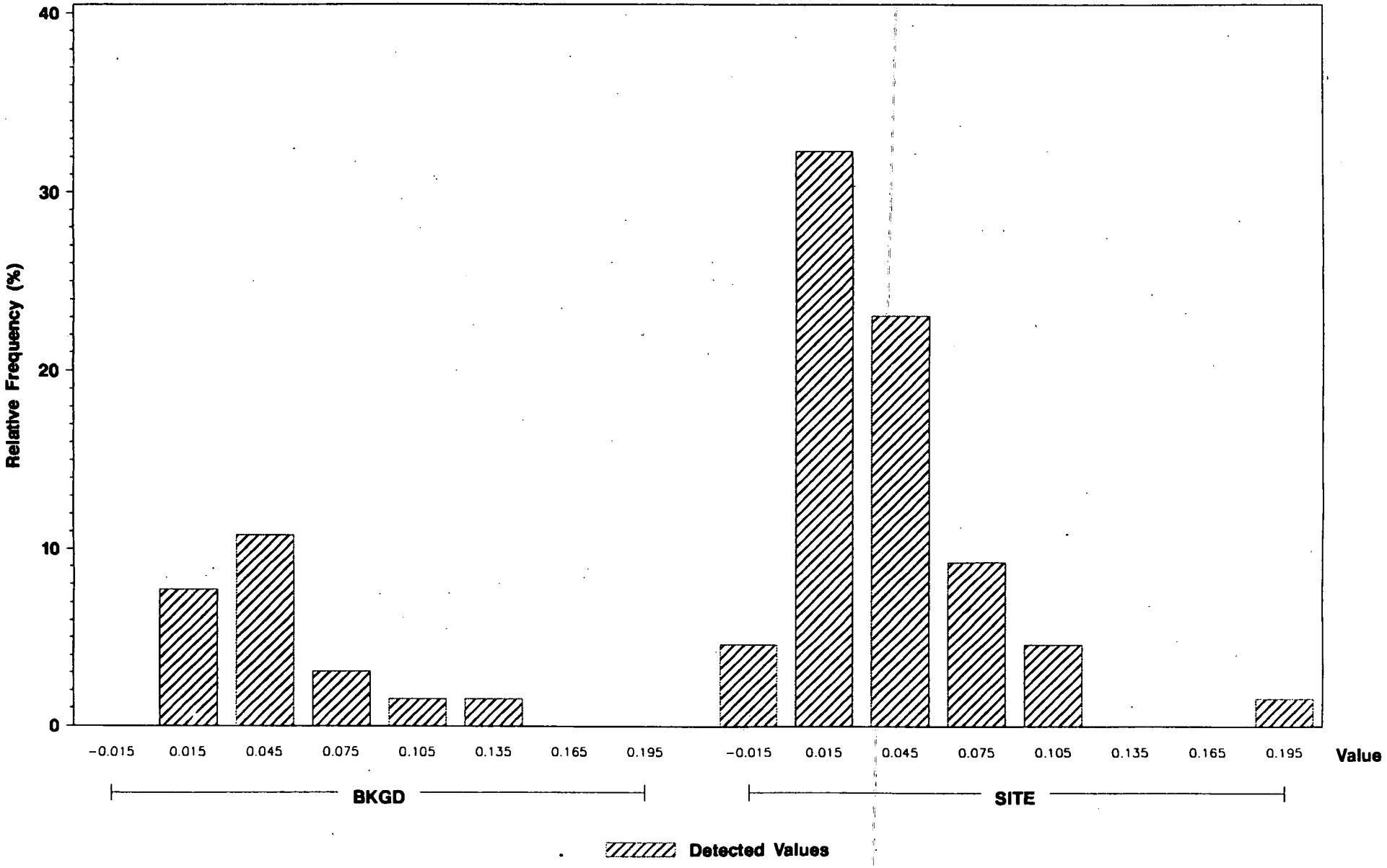
ANALYTE=URANIUM-235



# Background vs IHSS 203 Frequency Histogram

## URANIUM-235 (pCi/g) in Surface Soils (0-2 inches)

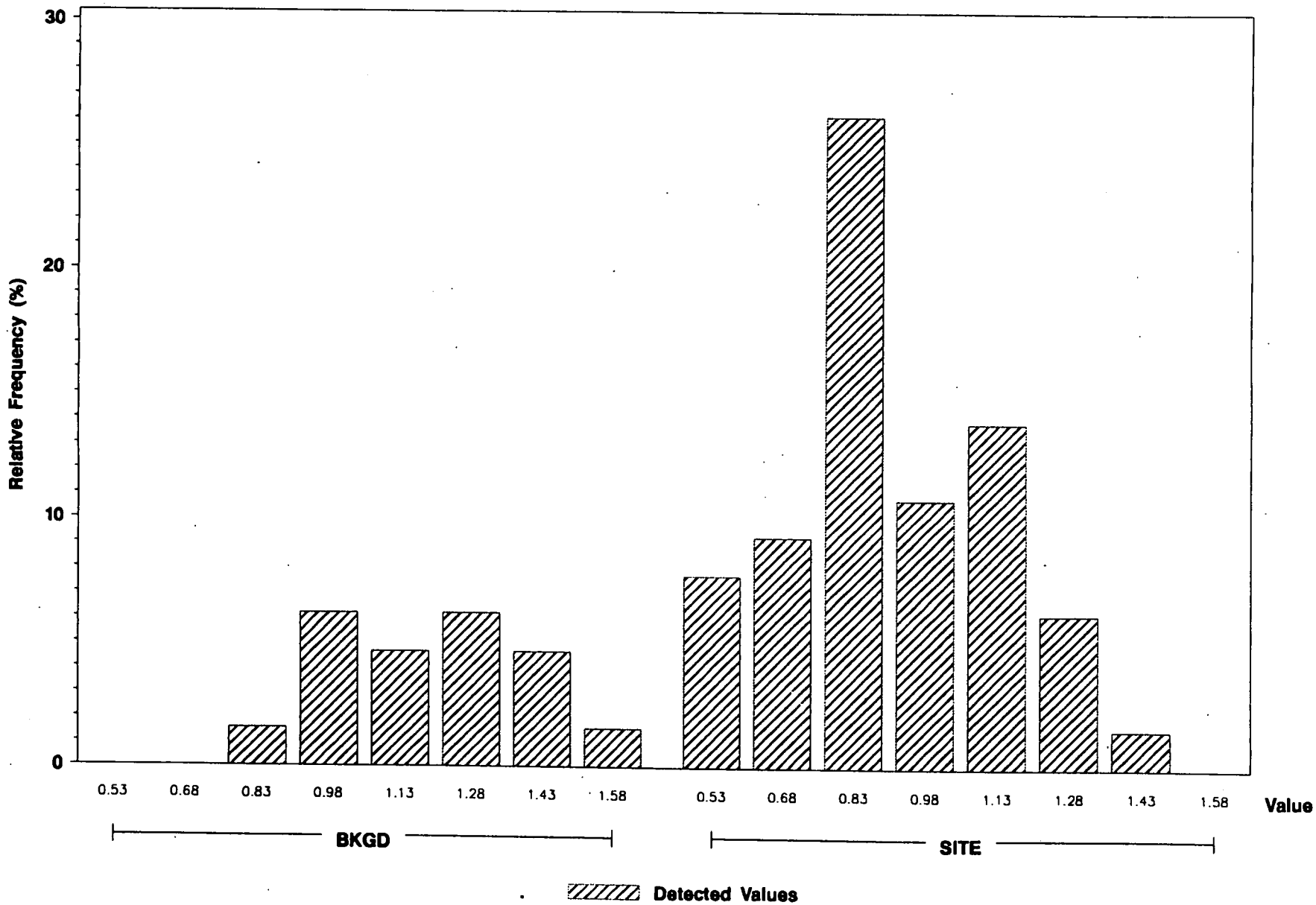
ANALYTE=URANIUM-235



# Background vs IHSS 203 Frequency Histogram

## URANIUM-238 (pCi/g) in Surface Soils (0-2 inches)

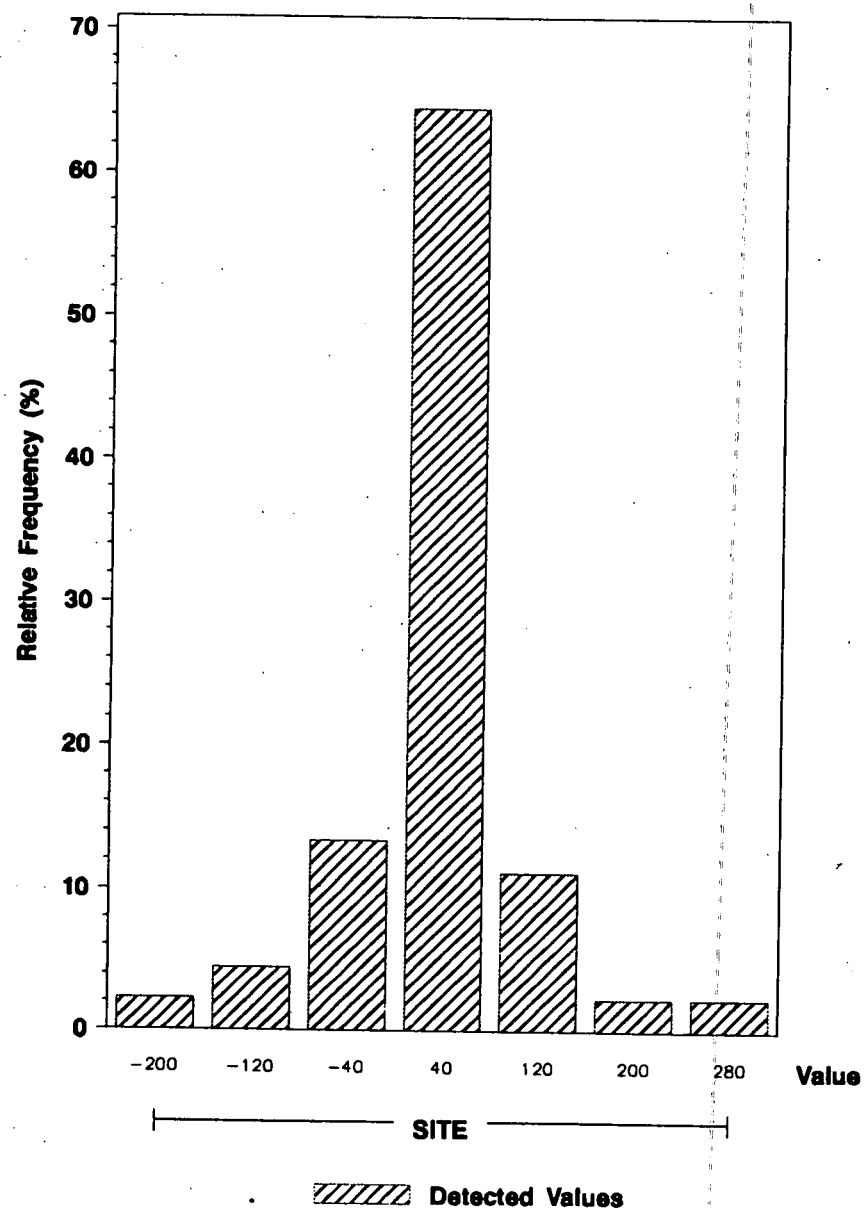
ANALYTE=URANIUM-238



# Background vs IHSS 203 Frequency Histogram

## TRITIUM (pCi/L) in Surface Soils (0 – 2 inches)

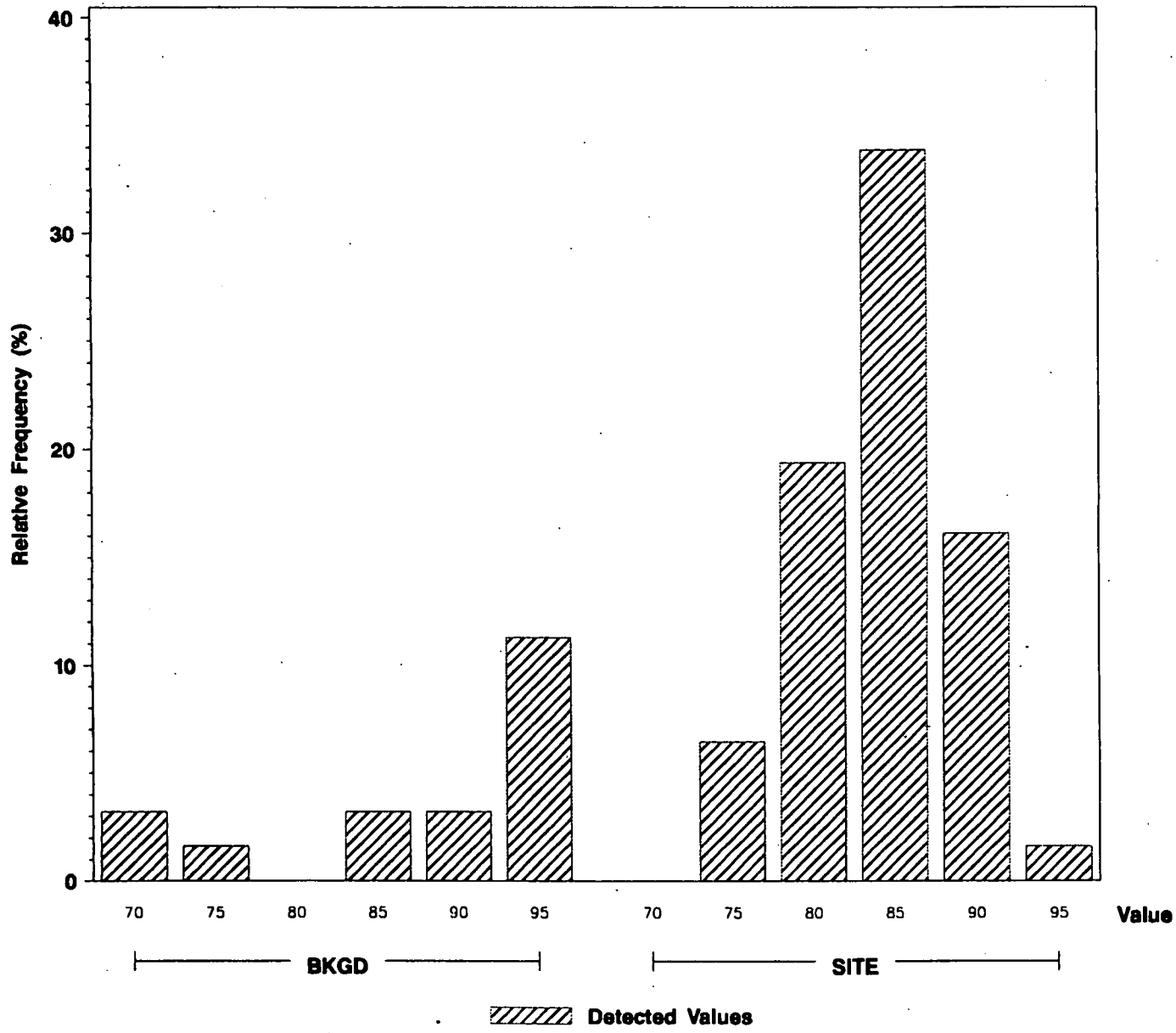
ANALYTE = TRITIUM



# Background vs IHSS 203 Frequency Histogram

## % SOLIDS (%) in Surface Soils (0 – 2 inches)

ANALYTE = % SOLIDS



**Surface Soils**

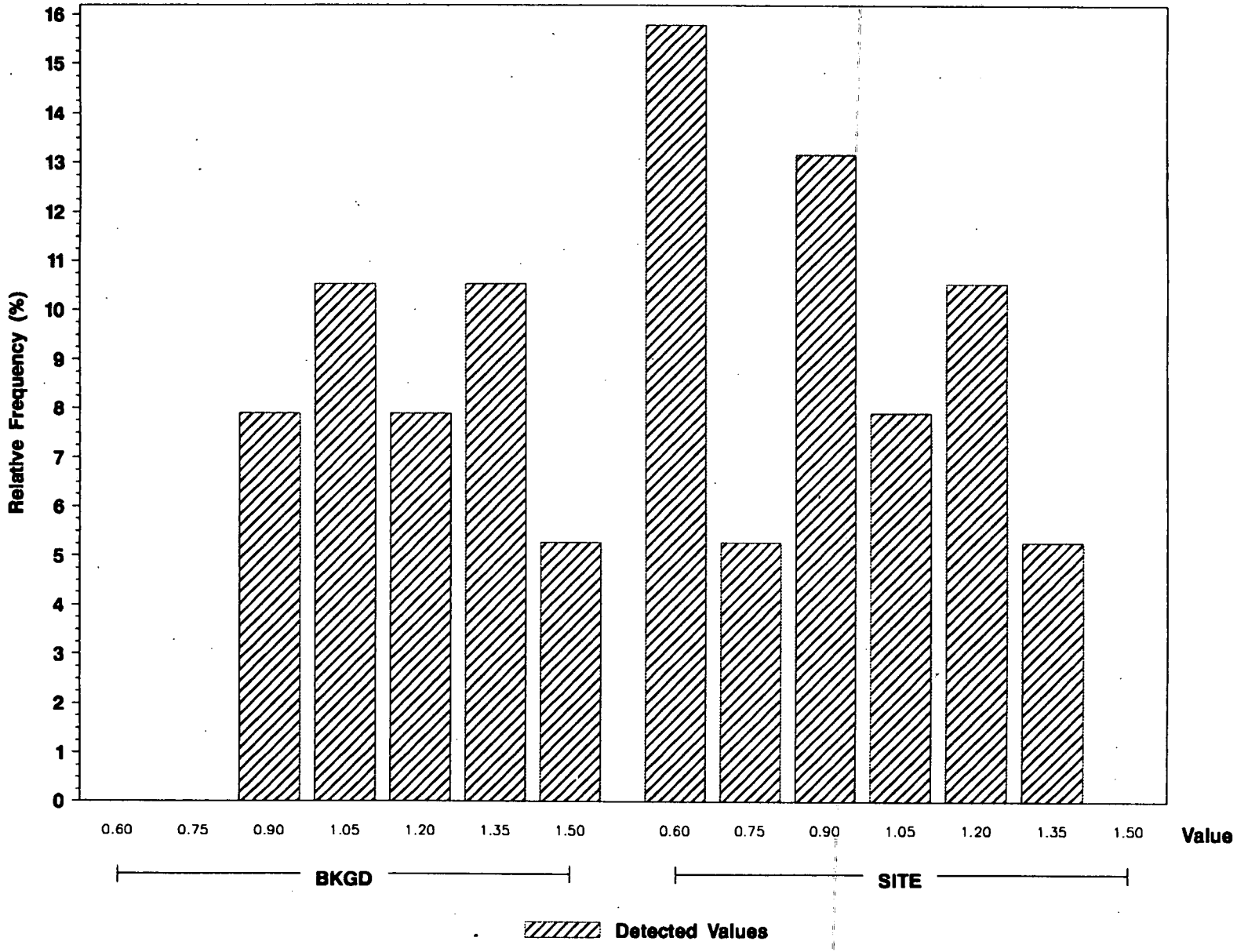
**Background vs. IHSS 203**

**(0 to 10 inches)**

# Background vs IHSS 114 Frequency Histogram

## URANIUM-238 (pCi/g) in Surface Soils (0-2 inches)

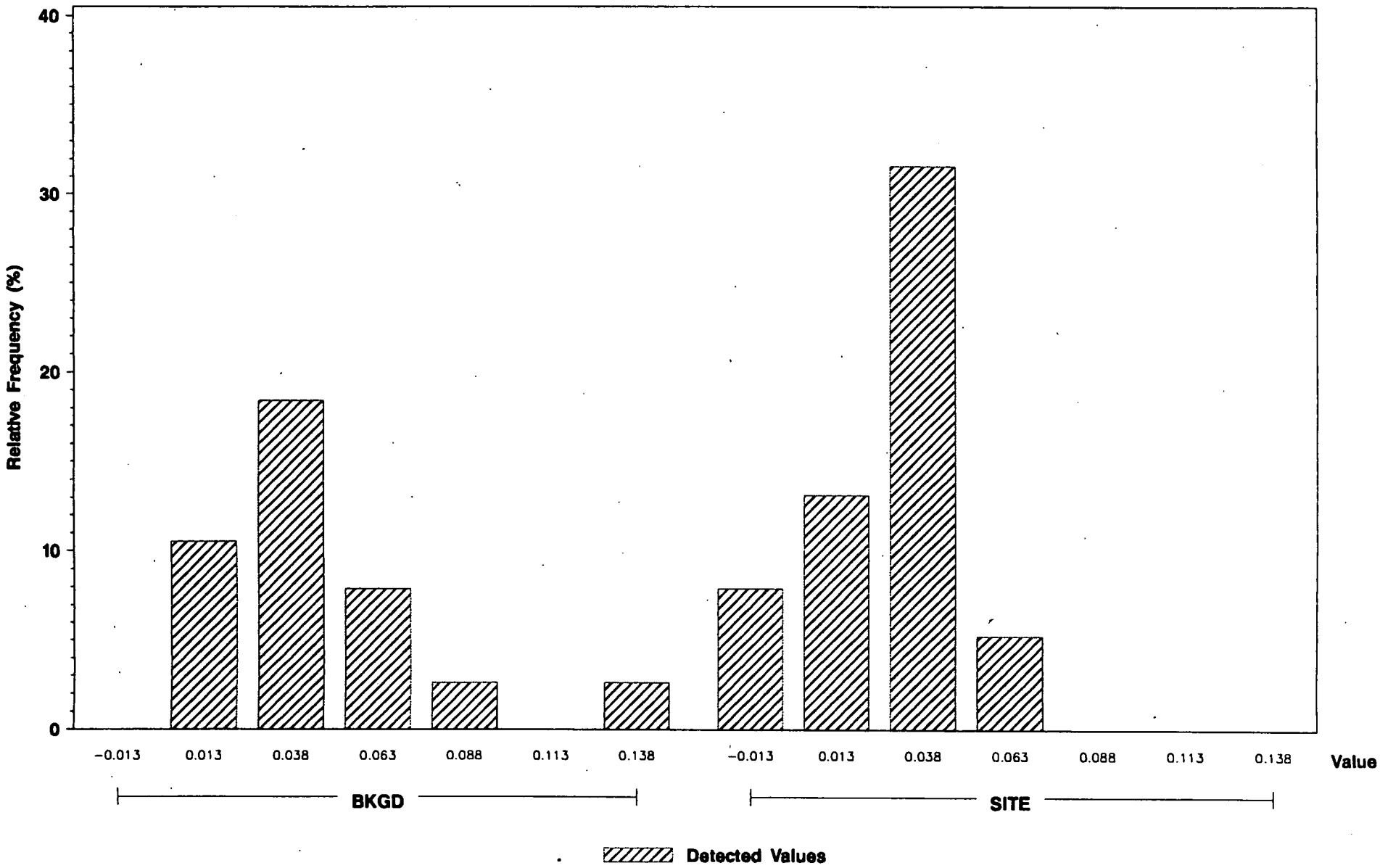
ANALYTE = URANIUM-238



# Background vs IHSS 114 Frequency Histogram

## URANIUM-235 (pCi/g) in Surface Soils (0-2 Inches)

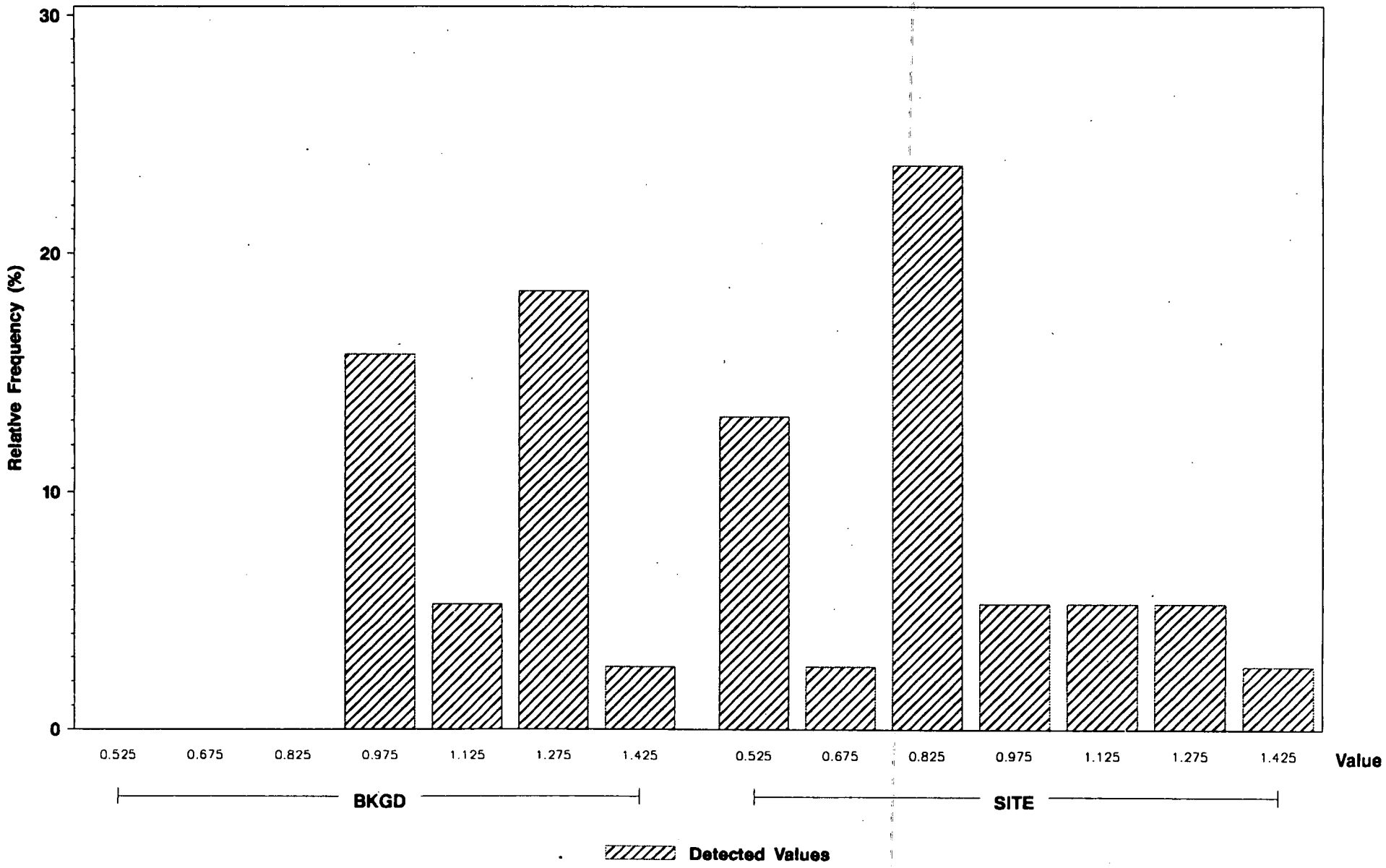
ANALYTE=URANIUM-235



# Background vs IHSS 114 Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Surface Soils (0 – 2 inches)

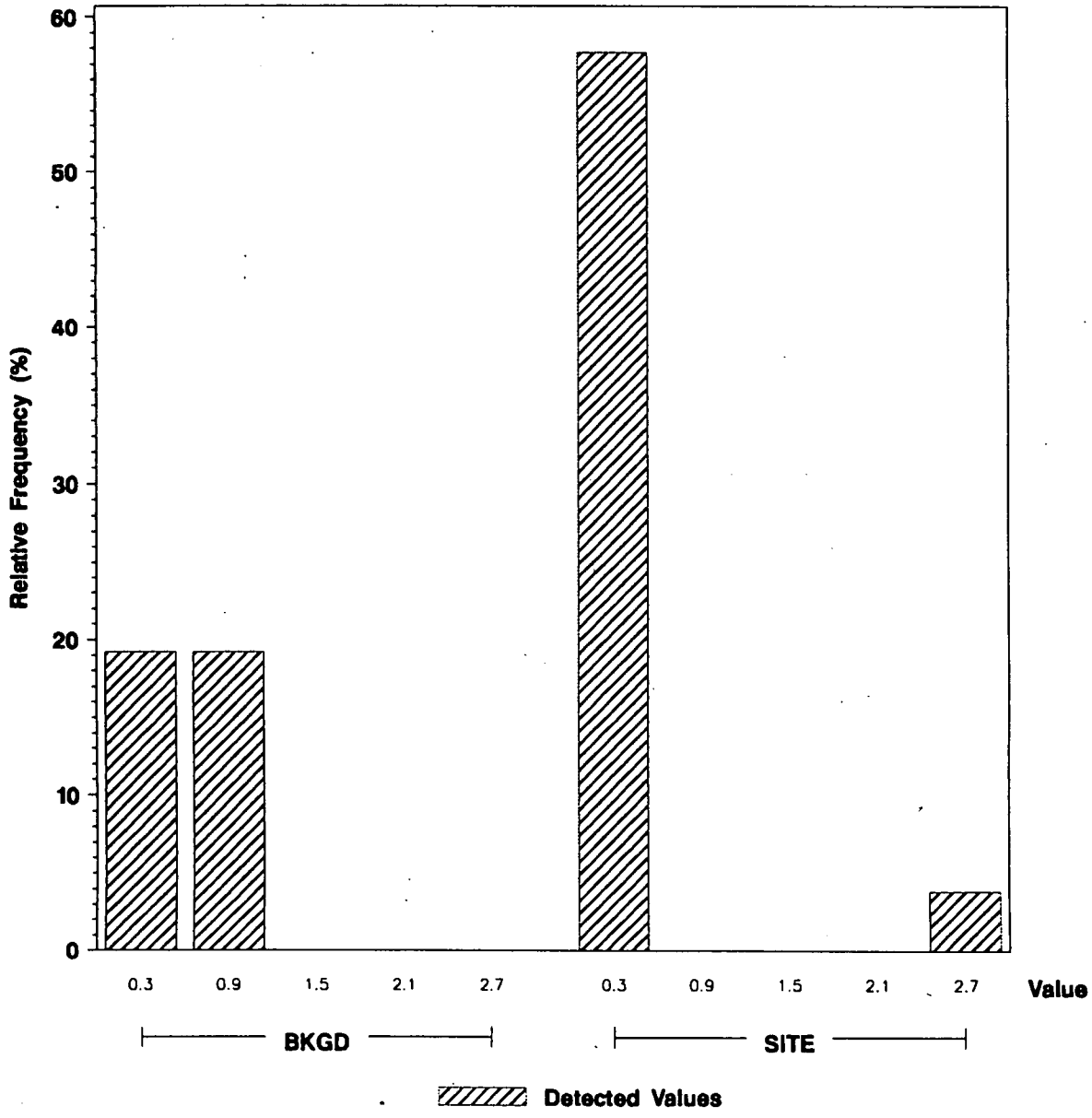
ANALYTE = URANIUM – 233, – 234



# Background vs IHSS 114 Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Surface Soils (0 – 2 inches)

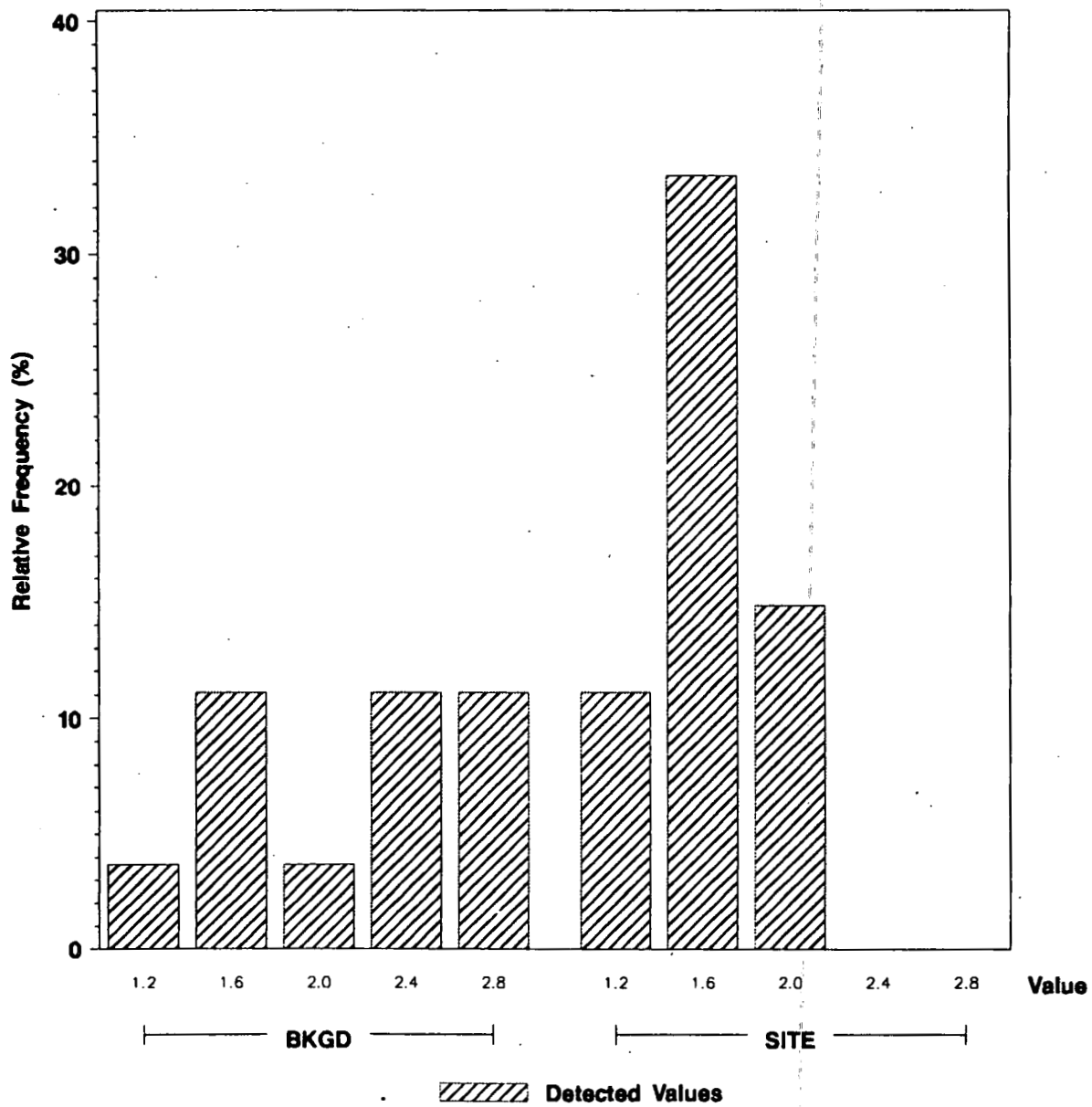
ANALYTE = STRONTIUM – 89,90



# Background vs IHSS 114 Frequency Histogram

## RADIUM – 228 (pCi/g) in Surface Soils (0 – 2 inches)

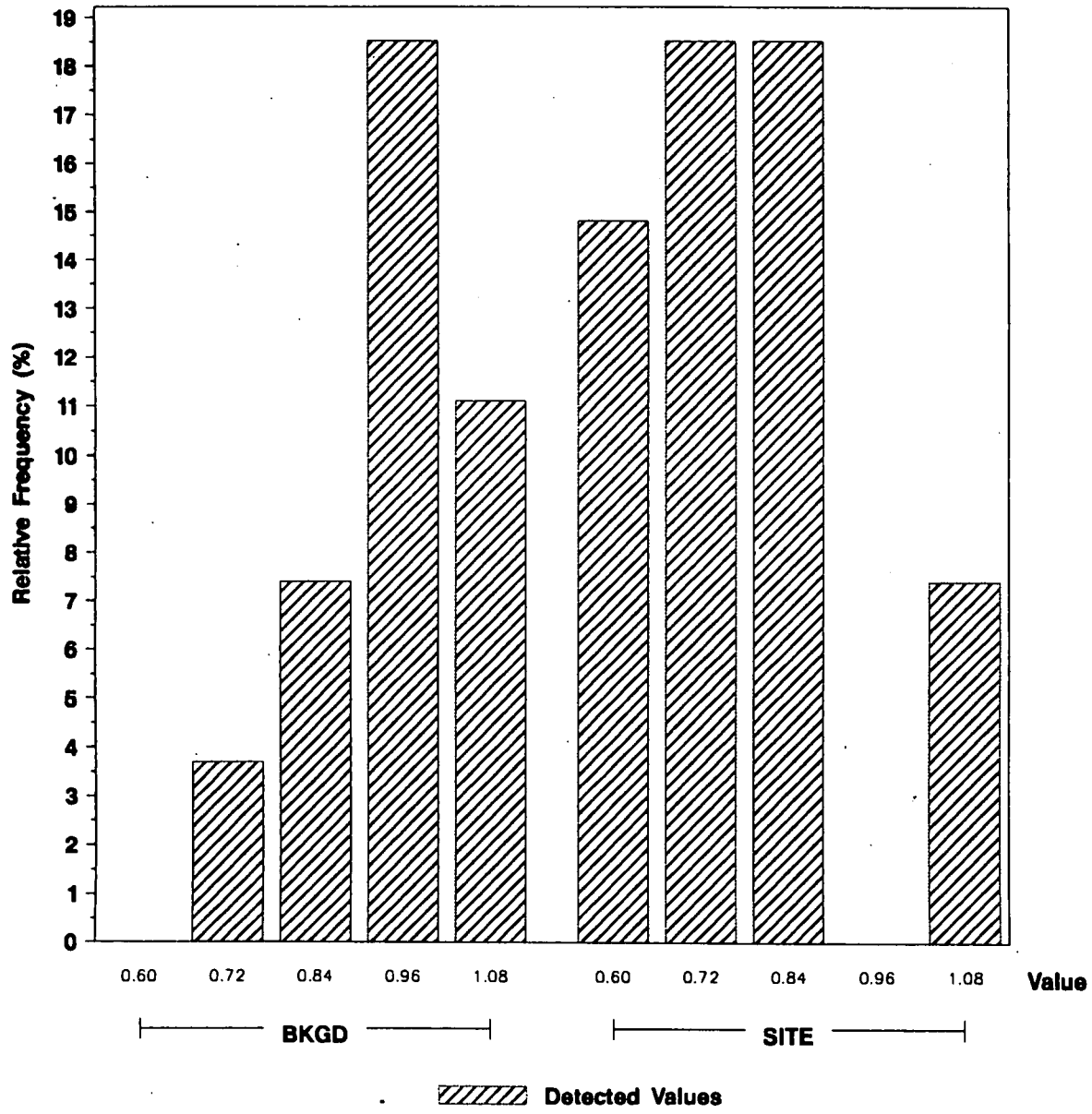
ANALYTE = RADIUM – 228



# Background vs IHSS 114 Frequency Histogram

## RADIUM-226 (pCi/g) in Surface Soils (0-2 inches)

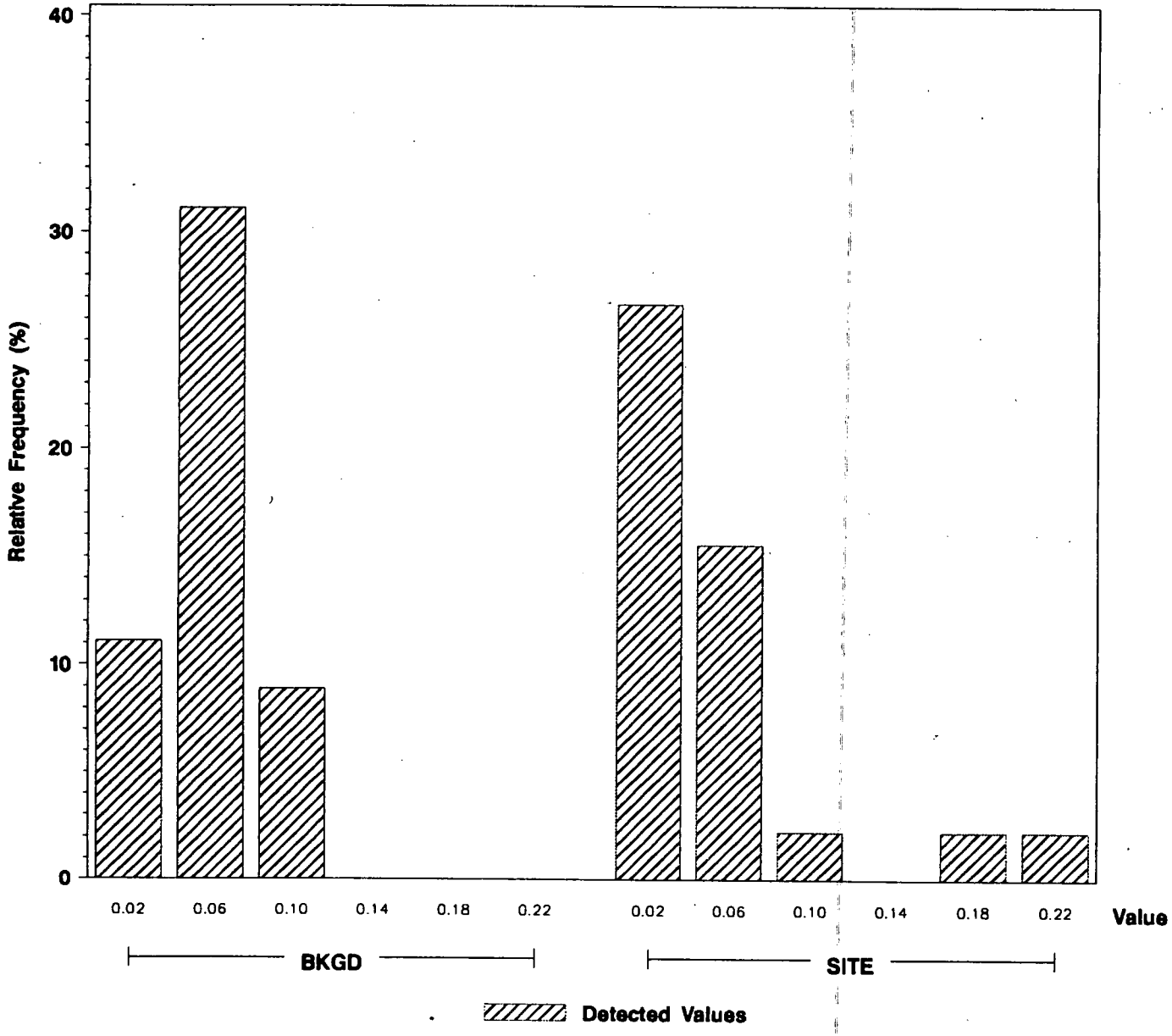
ANALYTE = RADIUM-226



# Background vs IHSS 114 Frequency Histogram

## PLUTONIUM – 239/240 (pCi/g) in Surface Soils (0 – 2 inches)

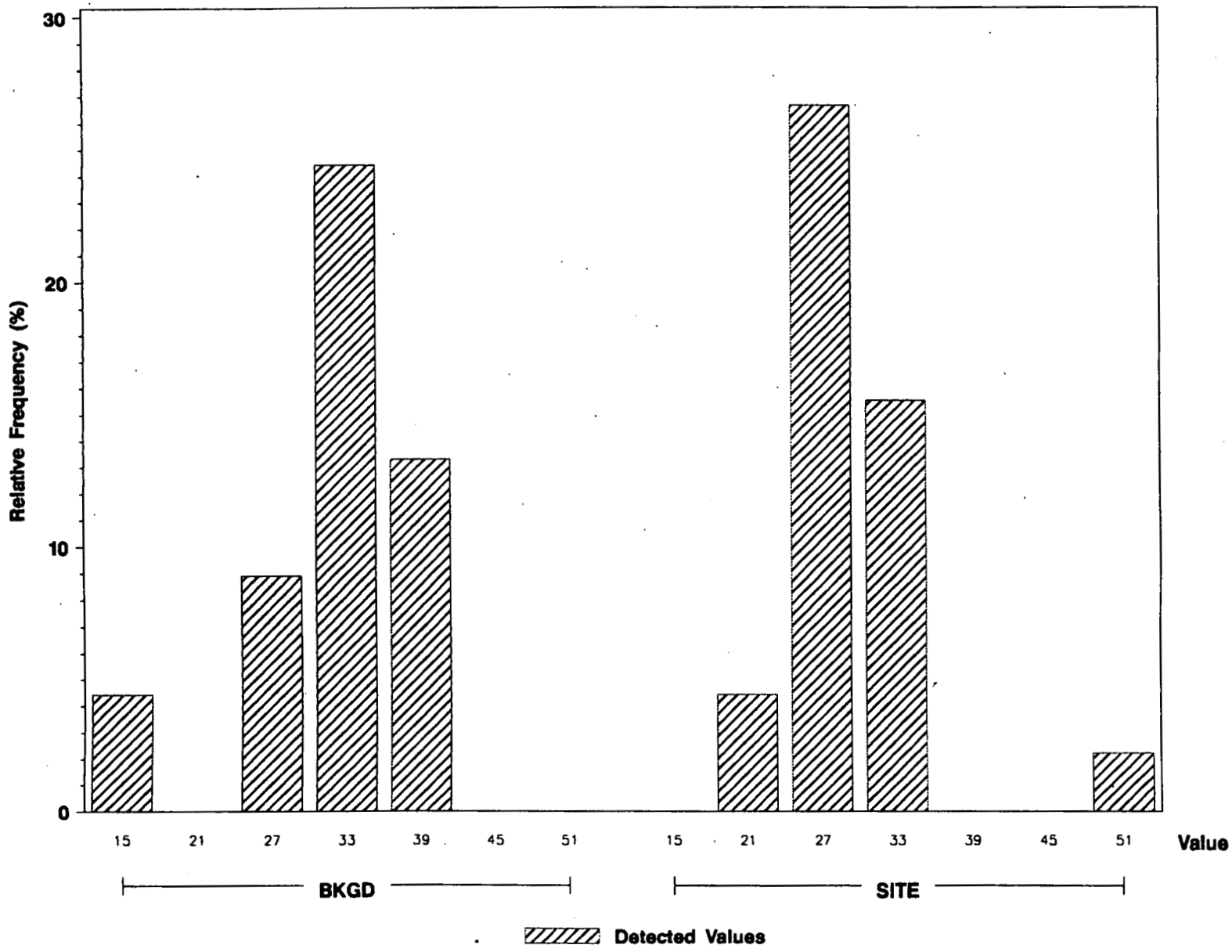
ANALYTE = PLUTONIUM – 239/240



# Background vs IHSS 114 Frequency Histogram

## GROSS BETA (pCi/g) in Surface Soils (0–2 Inches)

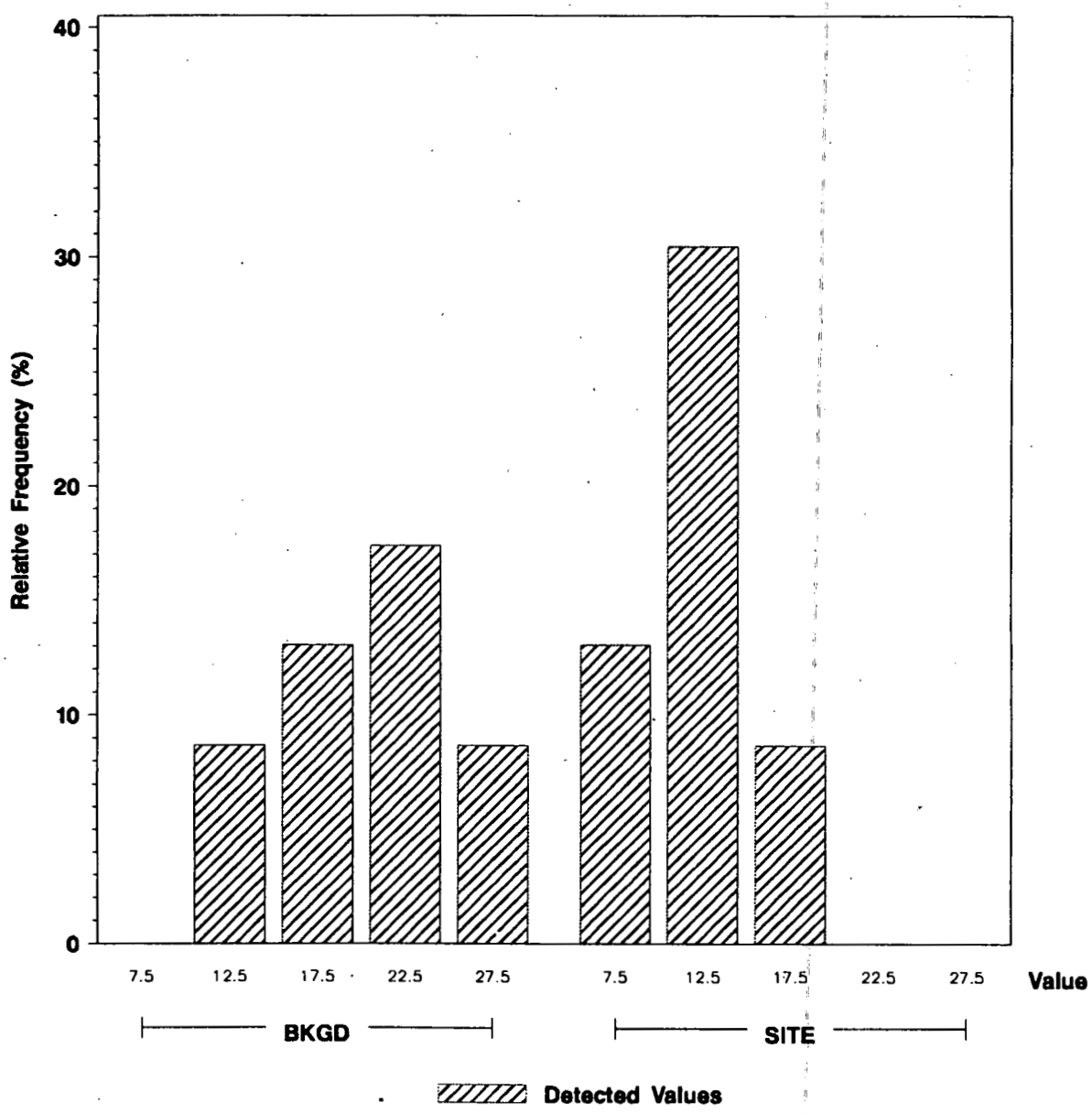
ANALYTE=GROSS BETA



# Background vs IHSS 114 Frequency Histogram

## GROSS ALPHA (pCi/g) in Surface Soils (0 – 2 inches)

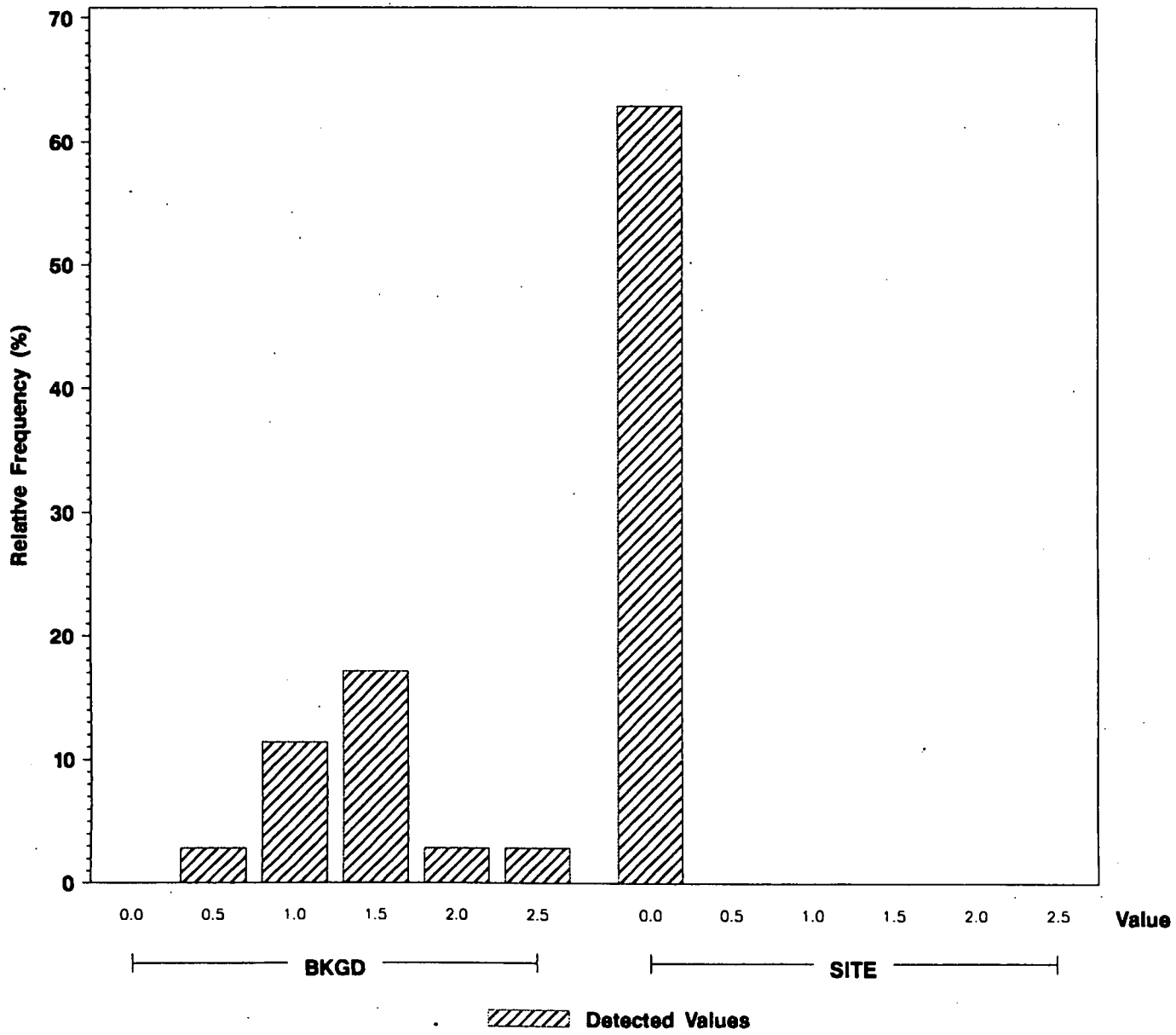
ANALYTE = GROSS ALPHA



# Background vs IHSS 114 Frequency Histogram

## CESIUM – 137 (pCi/g) in Surface Soils (0 – 2 inches)

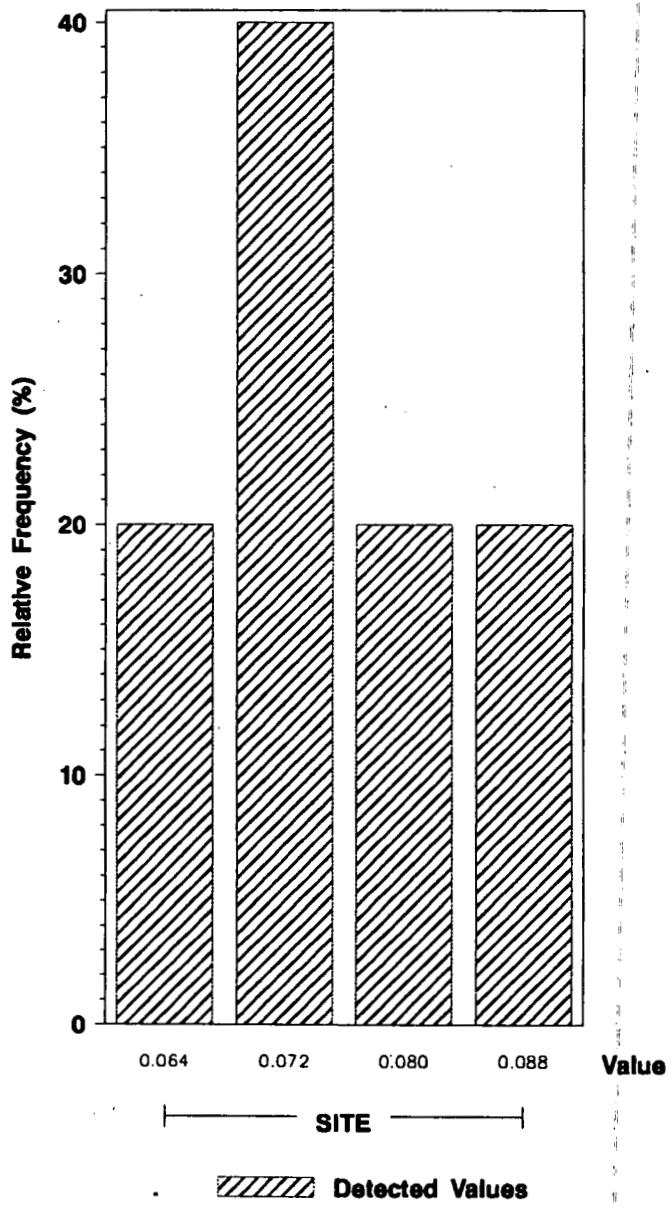
ANALYTE = CESIUM – 137



# Background vs IHSS 114 Frequency Histogram

## CESIUM – 134 (pCi/g) in Surface Soils (0 – 2 inches)

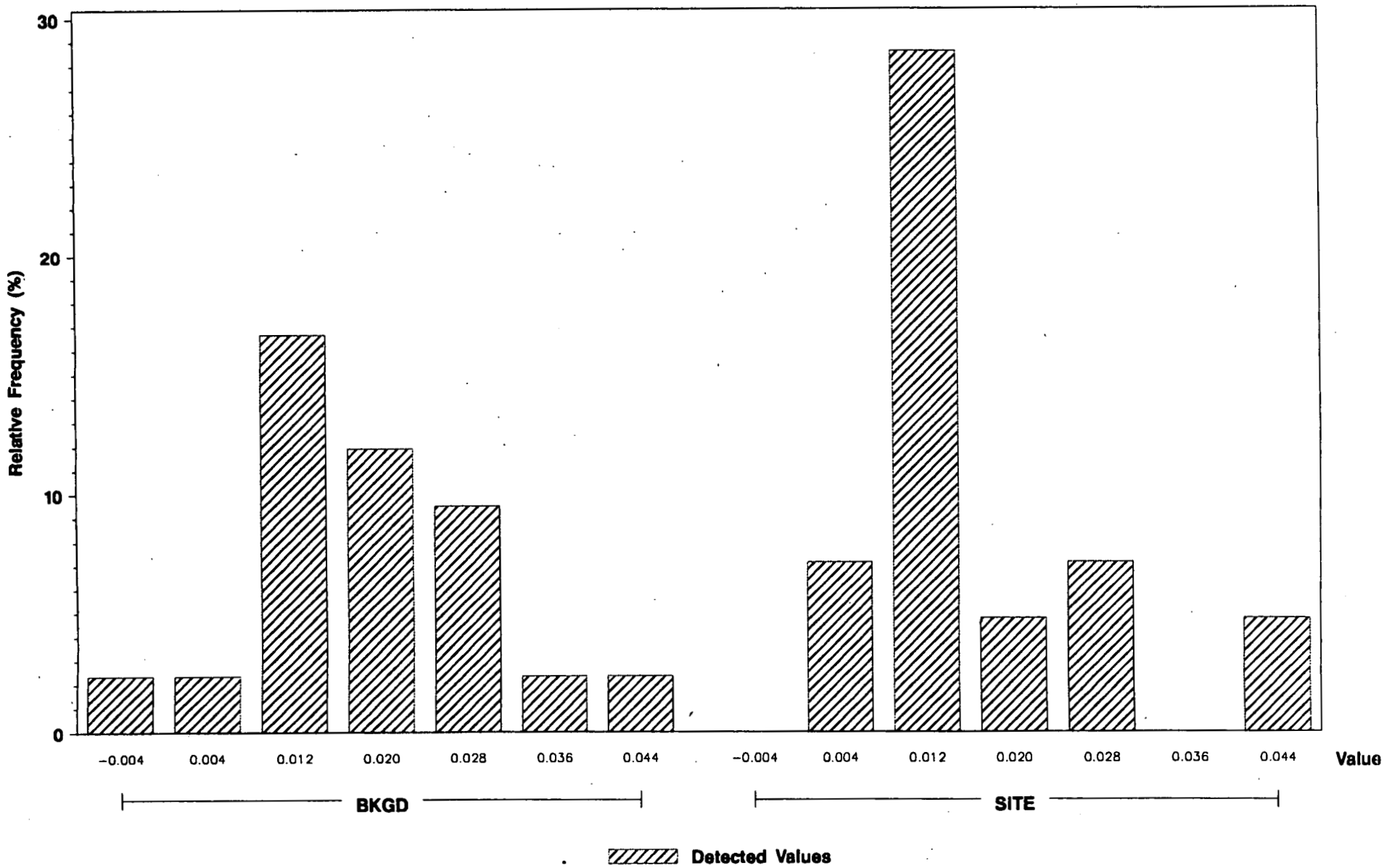
ANALYTE = CESIUM – 134



# Background vs IHSS 114 Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Surface Soils (0 – 2 inches)

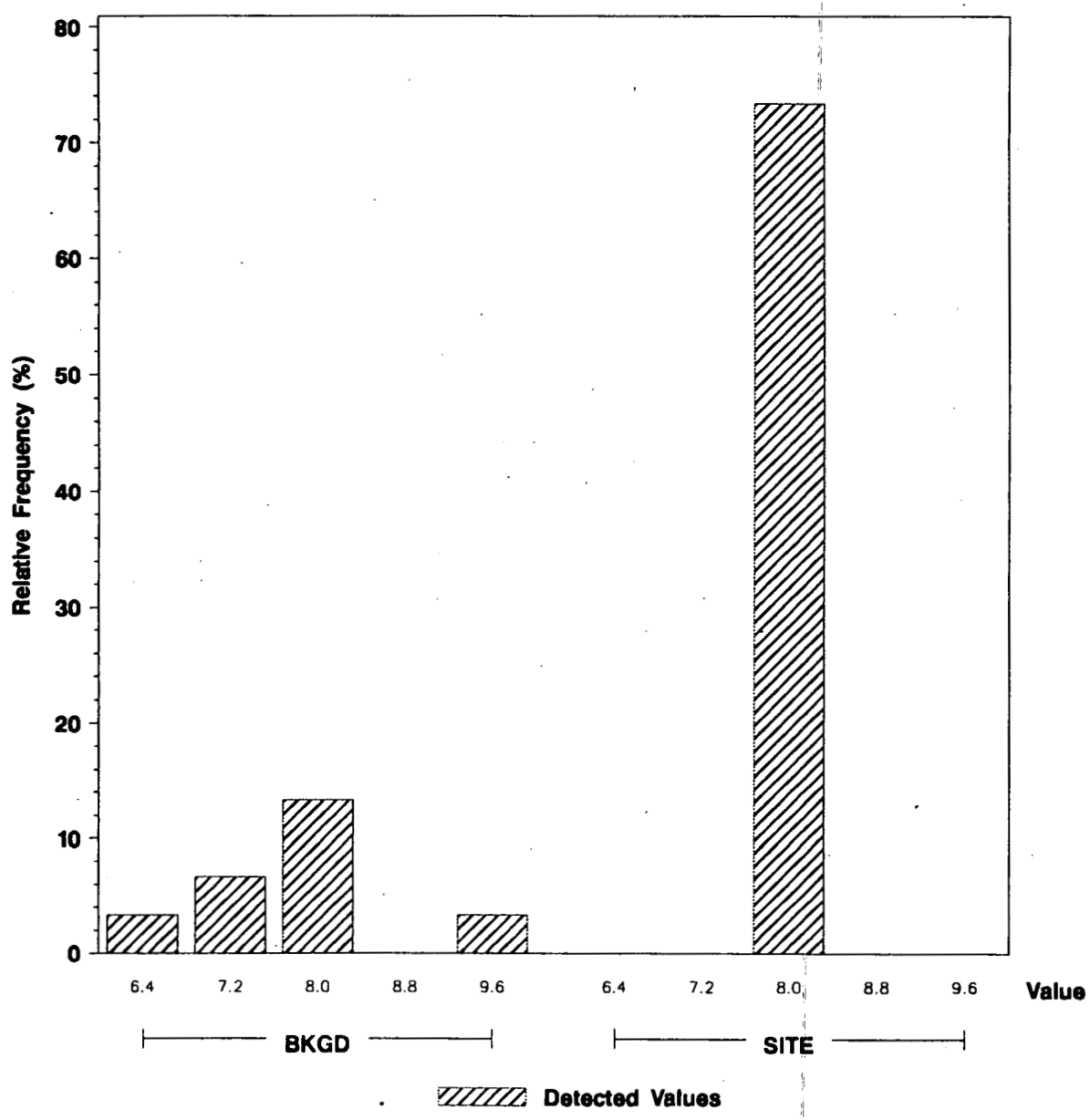
ANALYTE = AMERICIUM – 241



# Background vs IHSS 114 Frequency Histogram

## pH in Surface Soils (0 – 2 inches)

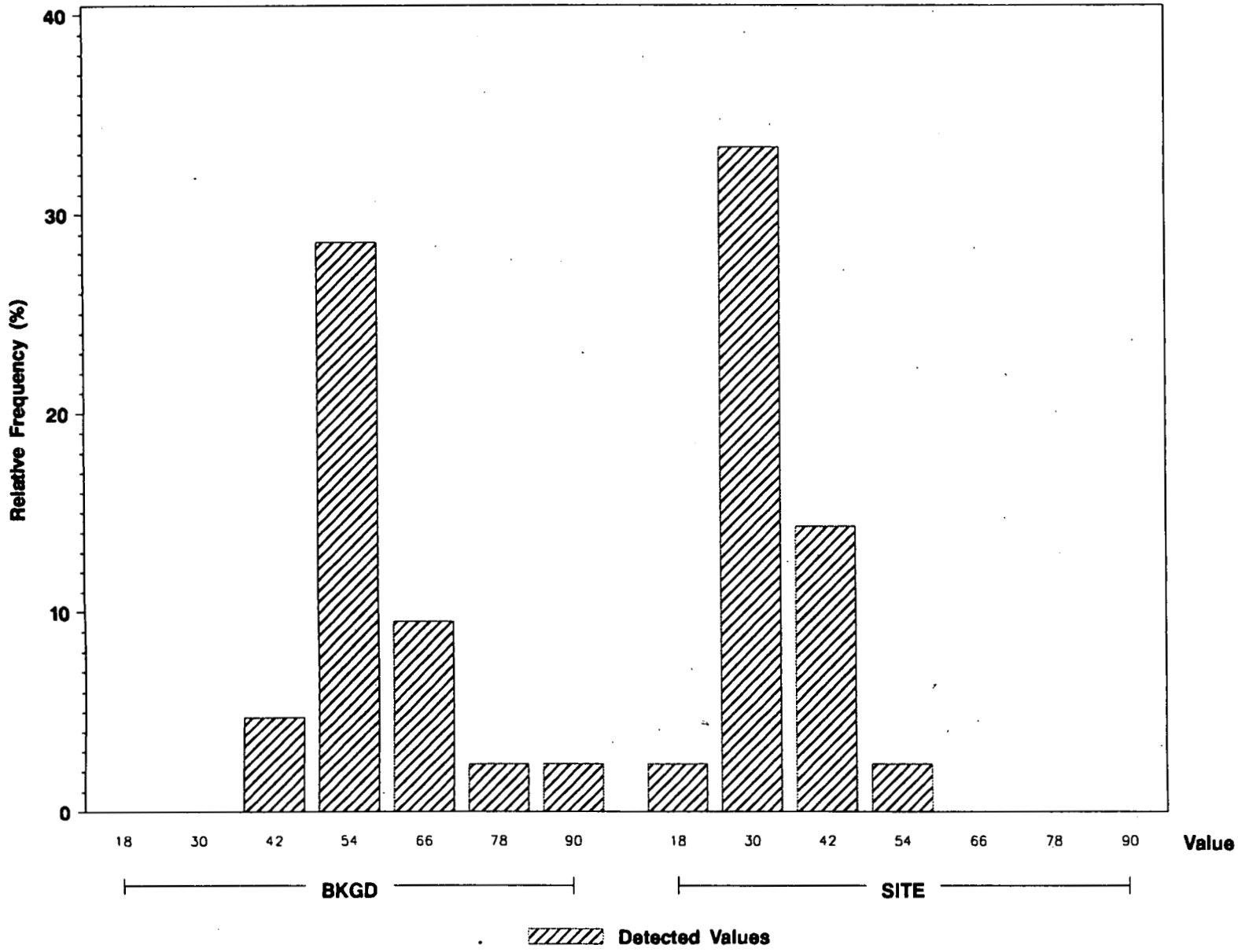
ANALYTE = pH



# Background vs IHSS 114 Frequency Histogram

## ZINC (mg/Kg) in Surface Soils (0 – 2 inches)

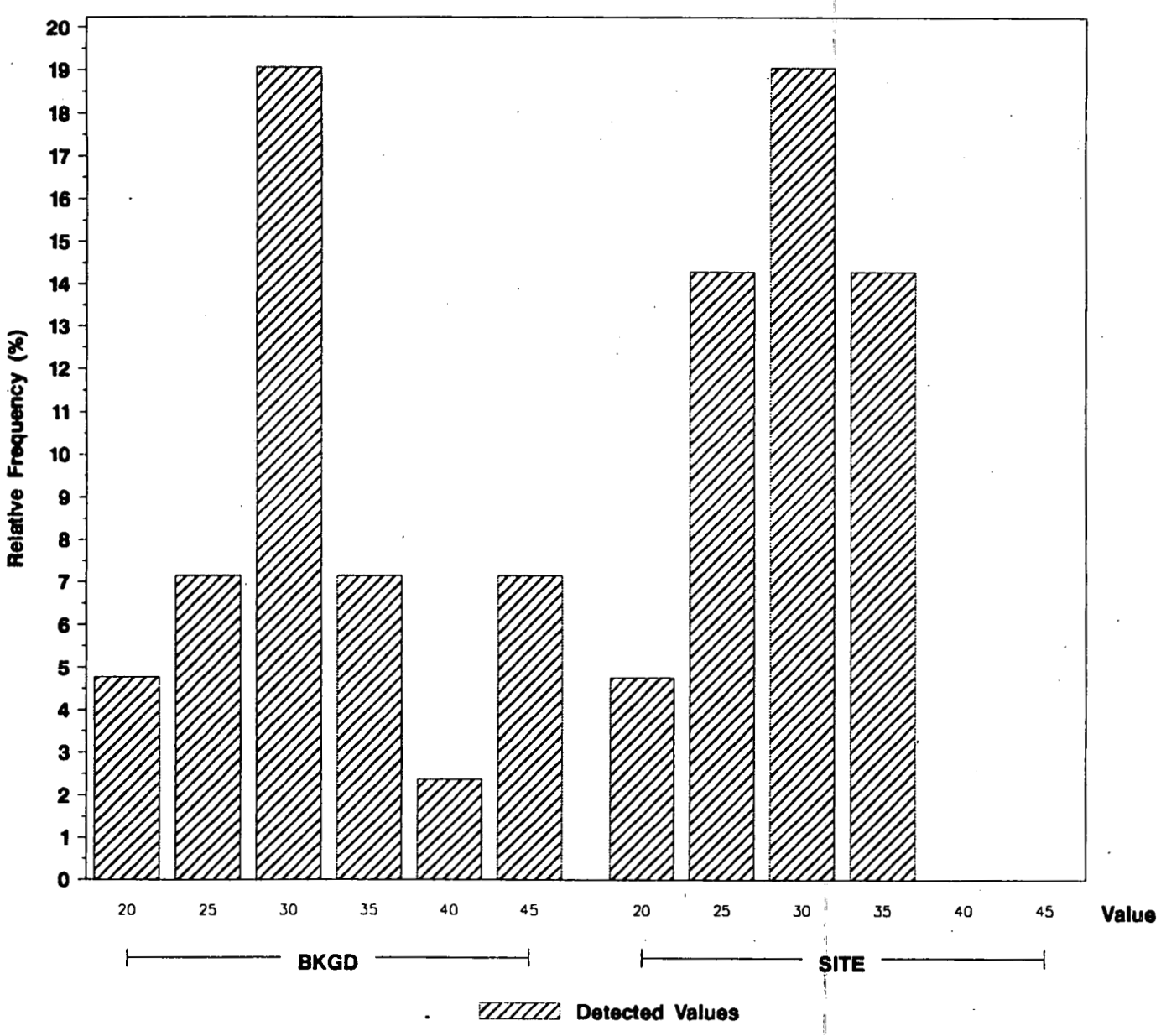
ANALYTE = ZINC



# Background vs IHSS 114 Frequency Histogram

## VANADIUM (mg/Kg) in Surface Soils (0–2 inches)

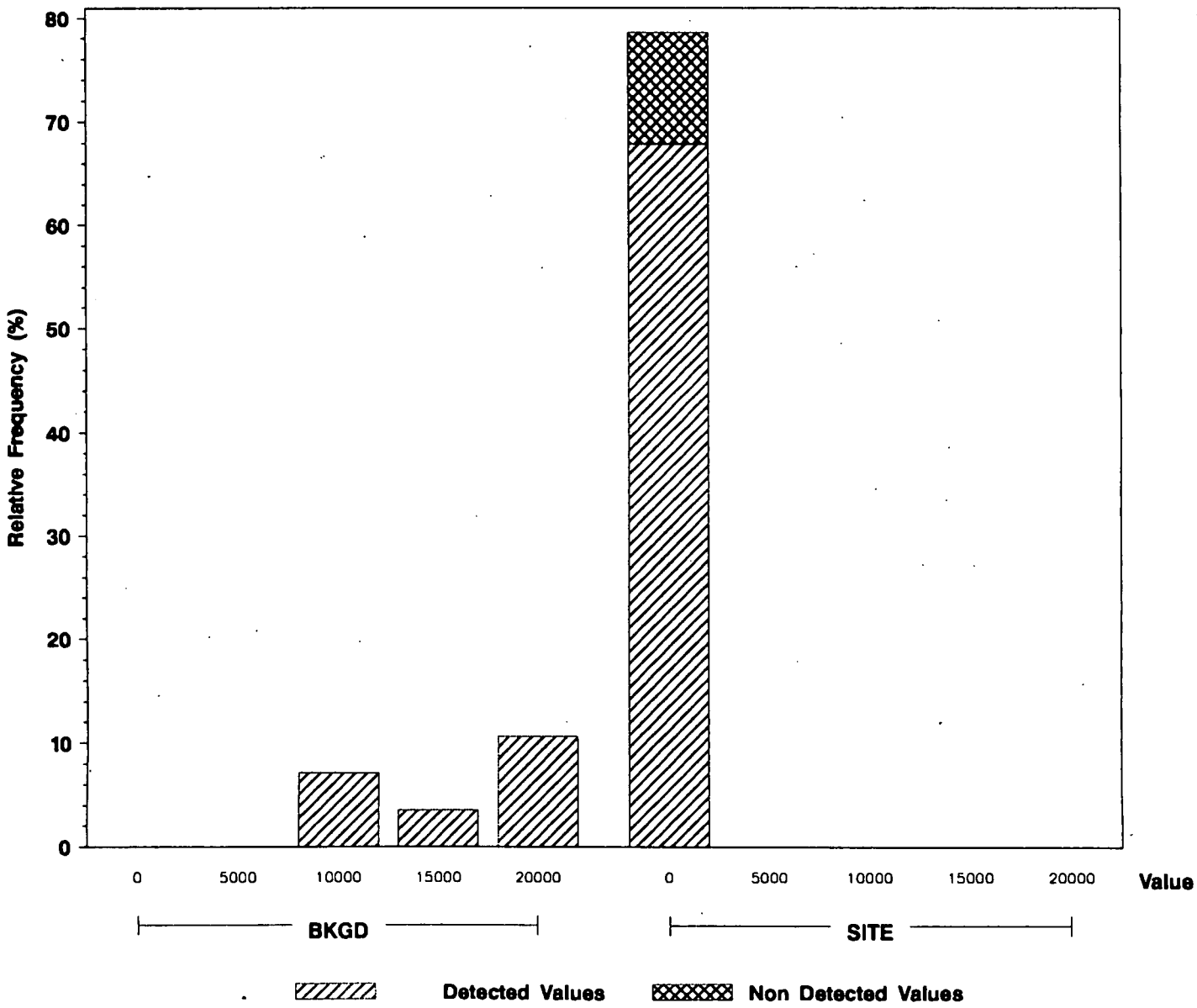
ANALYTE=VANADIUM



# Background vs IHSS 114 Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Surface Soils (0–2 inches)

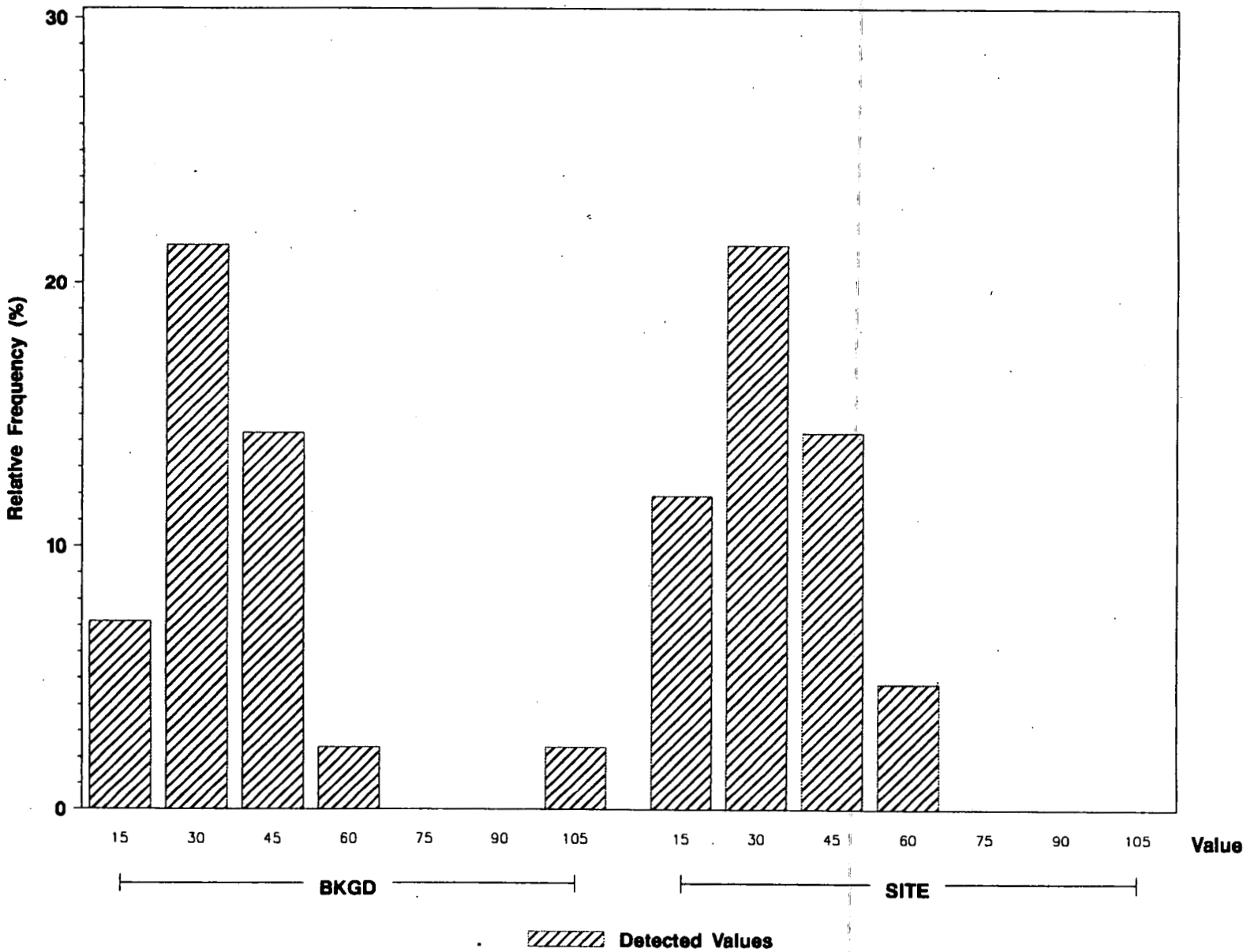
ANALYTE=TOTAL ORGANIC CARBON



# Background vs IHSS 114 Frequency Histogram

## STRONTIUM (mg/Kg) in Surface Soils (0 – 2 inches)

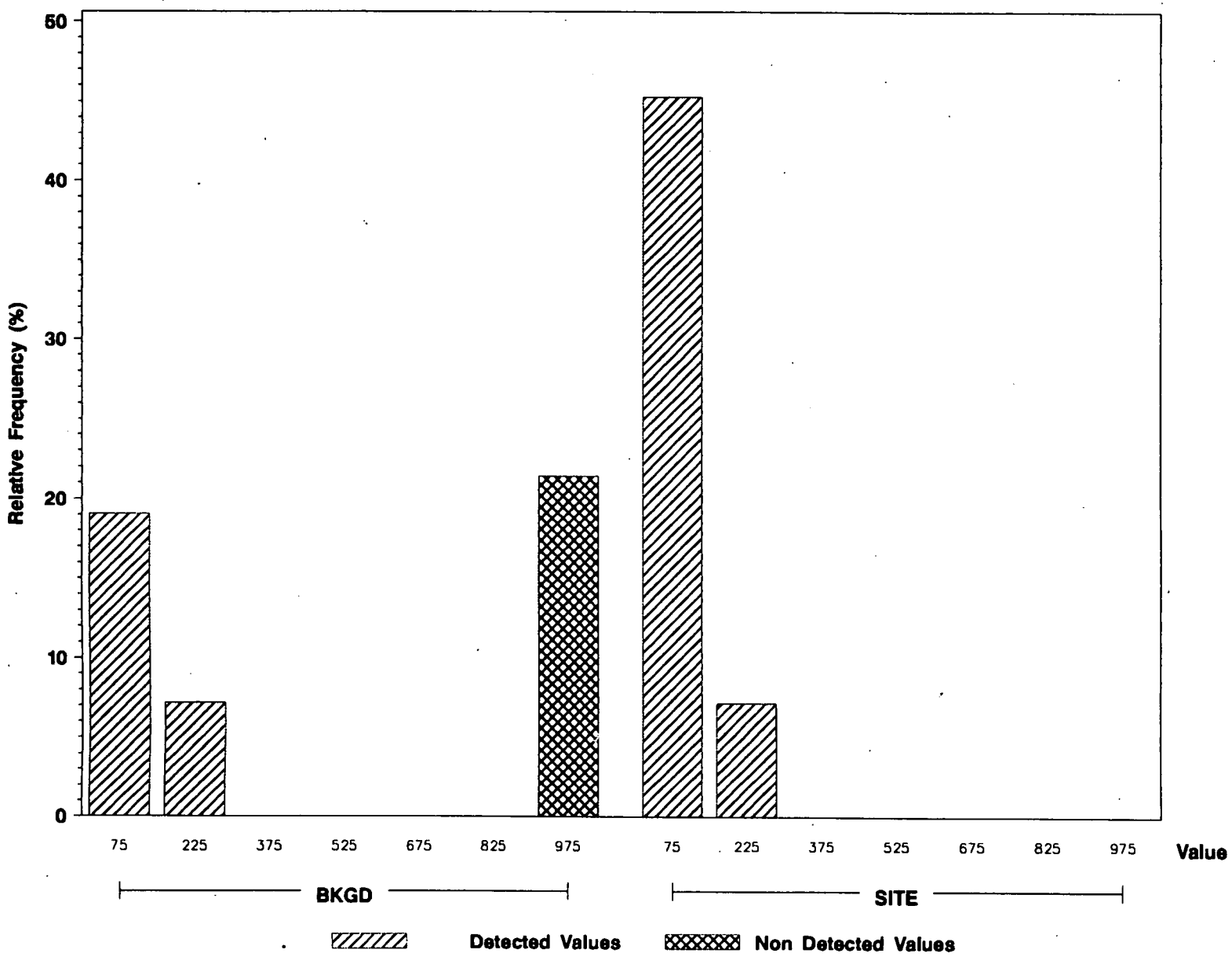
ANALYTE = STRONTIUM



# Background vs IHSS 114 Frequency Histogram

## SODIUM (mg/Kg) in Surface Soils (0 – 2 inches)

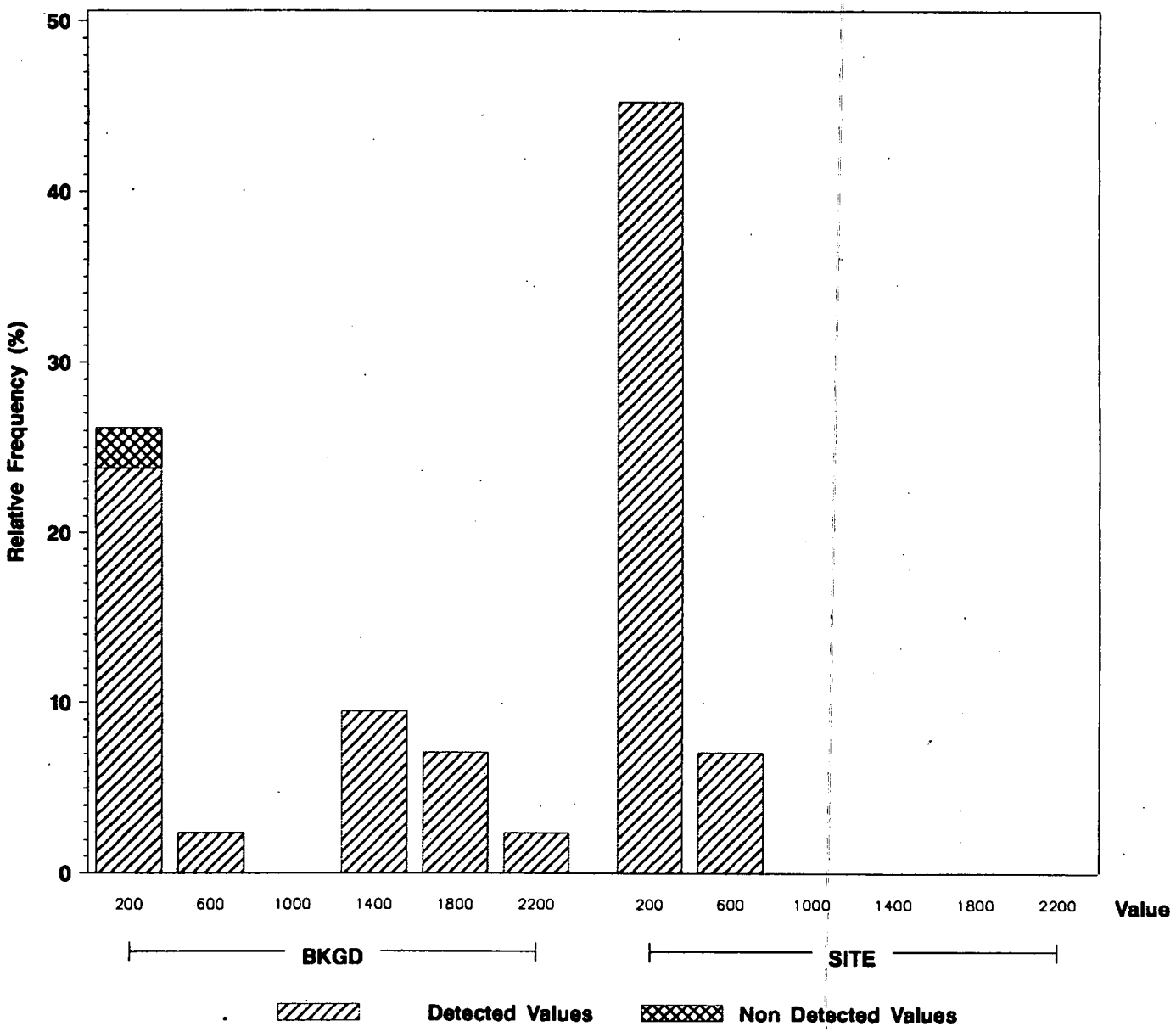
ANALYTE = SODIUM



# Background vs IHSS 114 Frequency Histogram

## SILICON (mg/Kg) in Surface Soils (0 – 2 inches)

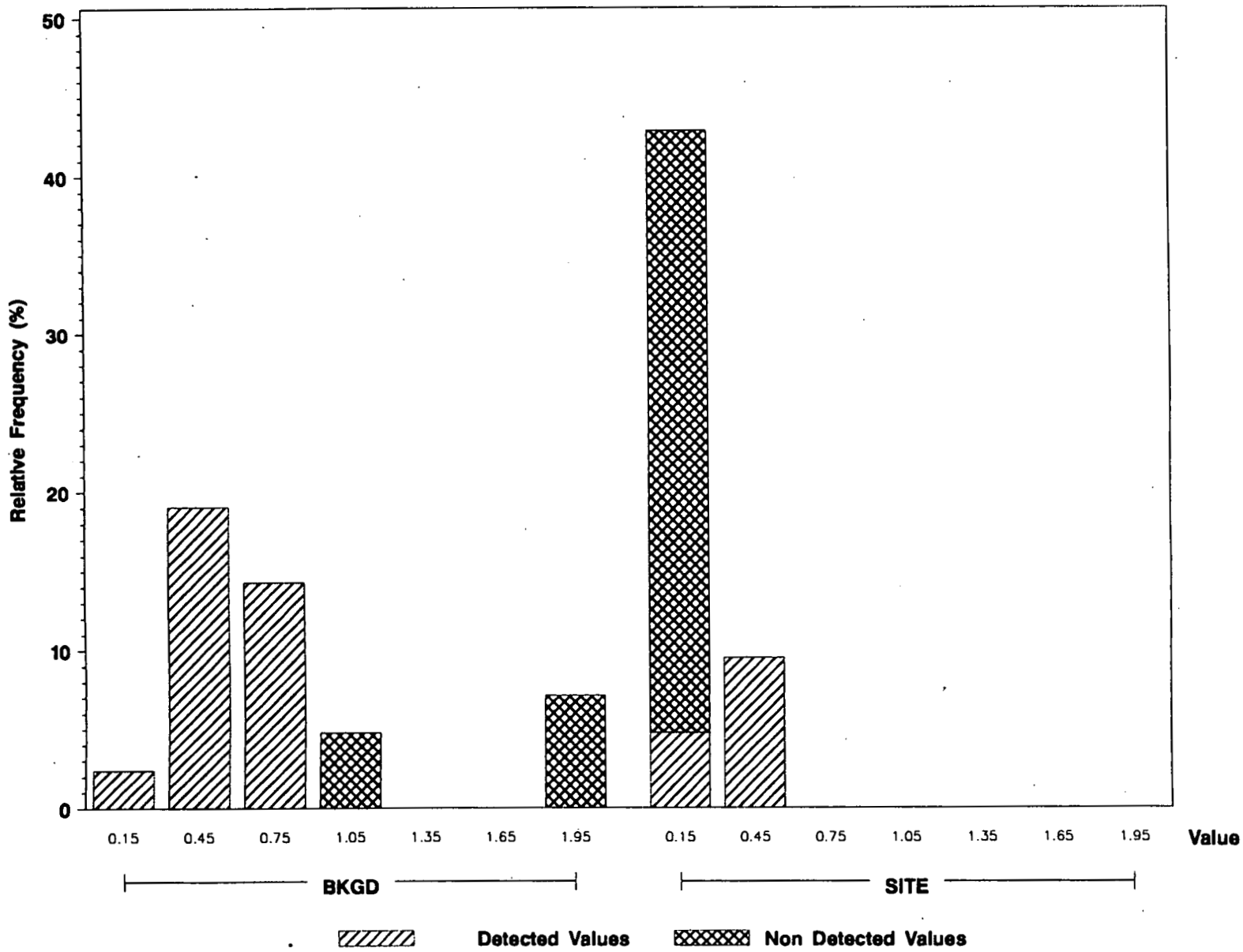
ANALYTE = SILICON



# Background vs IHSS 114 Frequency Histogram

## SELENIUM (mg/Kg) in Surface Soils (0–2 inches)

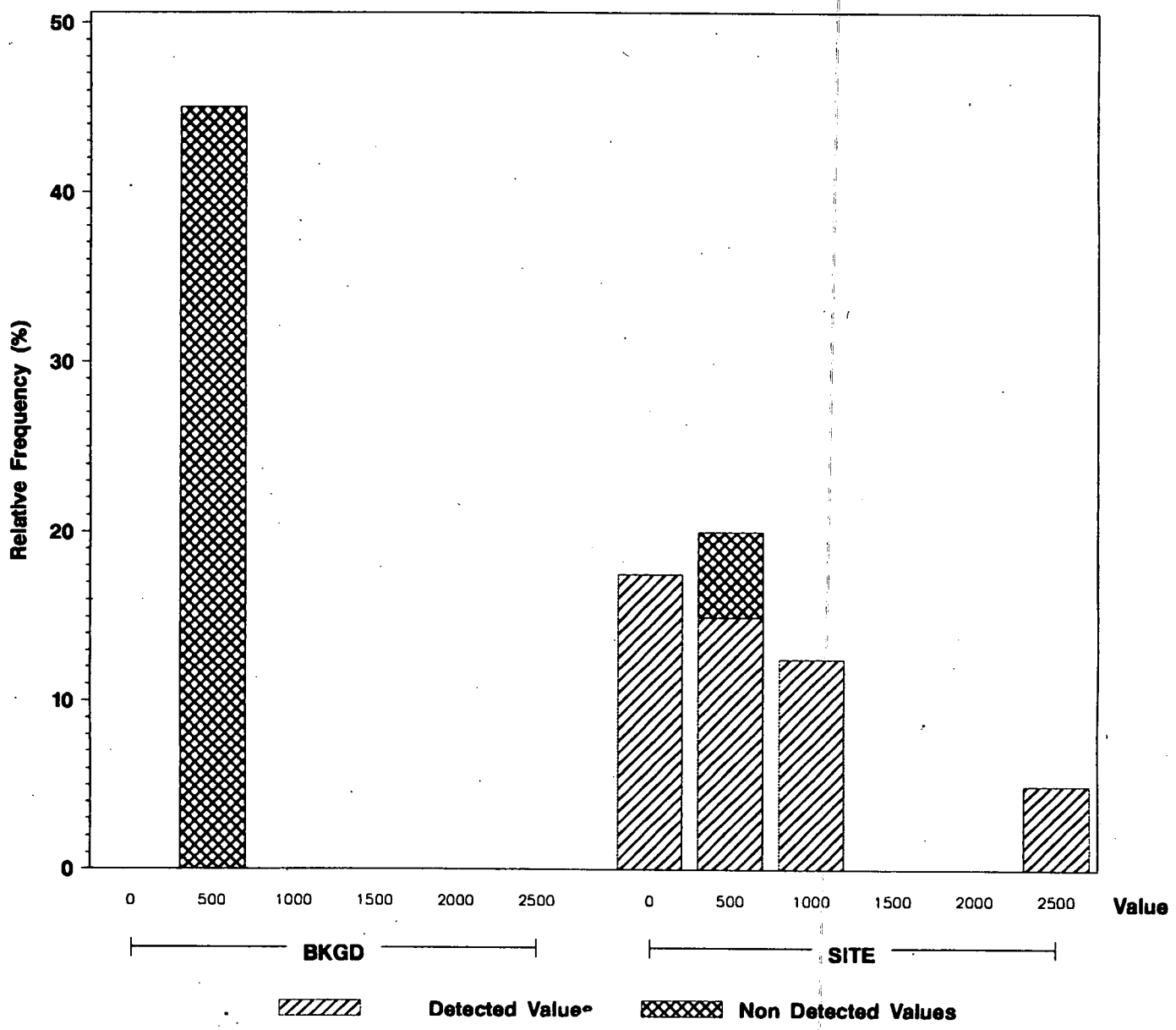
ANALYTE = SELENIUM



# Background vs IHSS 114 Frequency Histogram

## PYRENE (ug/Kg) in Surface Soils (0 – 2 inches)

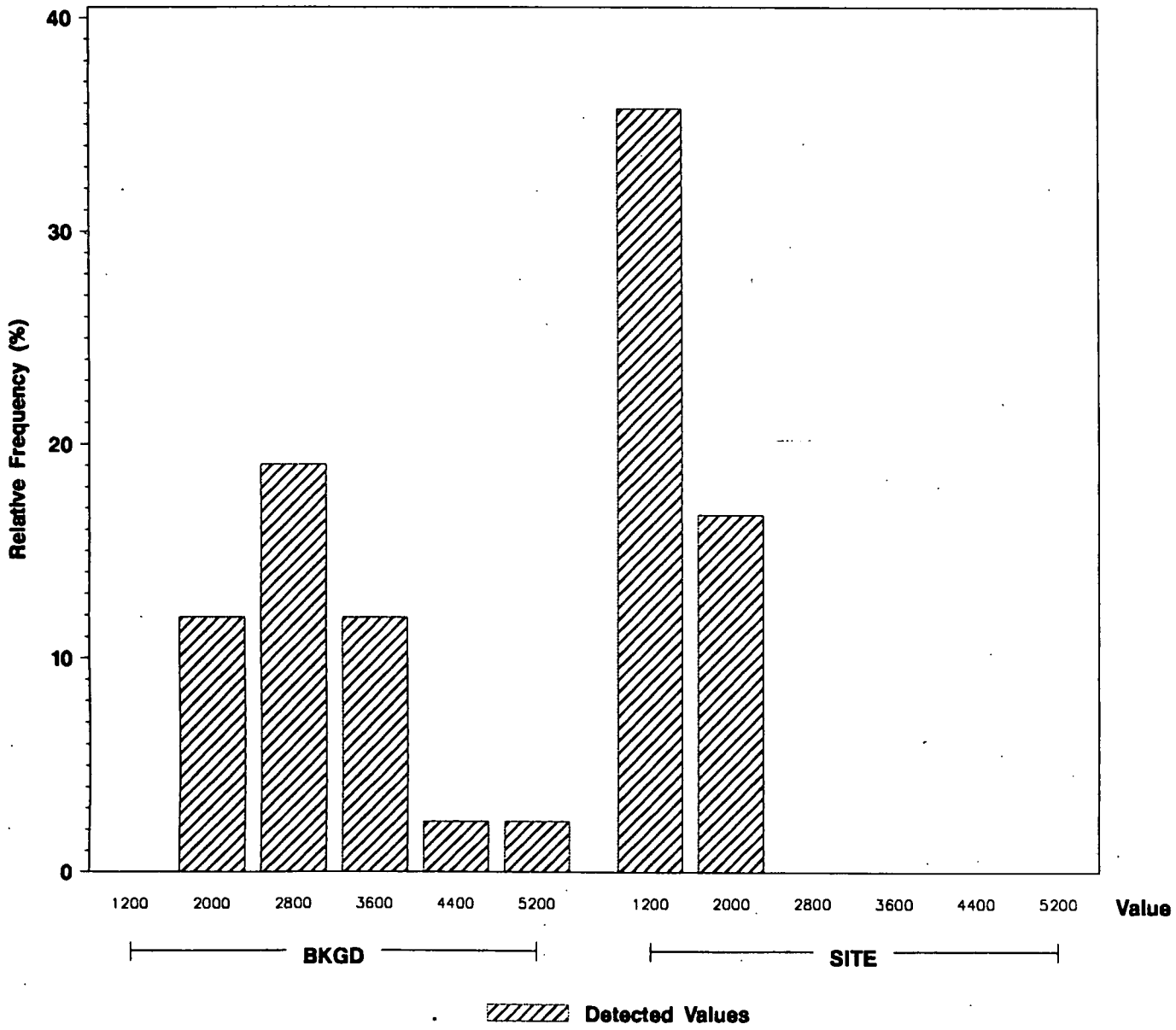
ANALYTE = PYRENE



# Background vs IHSS 114 Frequency Histogram

## POTASSIUM (mg/Kg) in Surface Soils (0 – 2 inches)

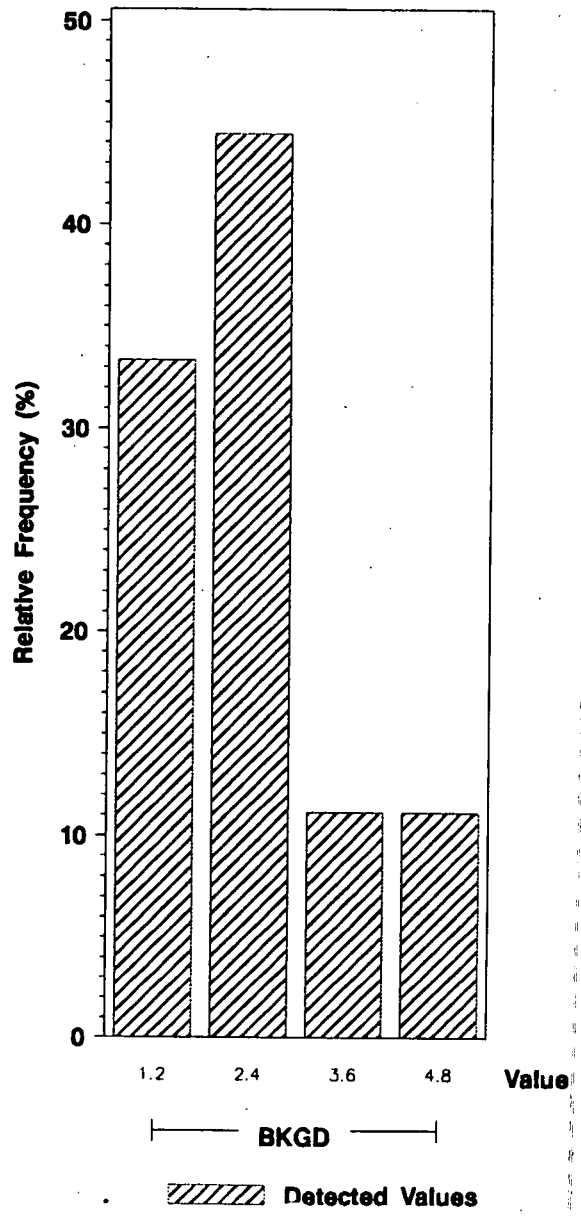
ANALYTE = POTASSIUM



# Background vs IHSS 114 Frequency Histogram

## NITRATE/NITRITE (mg/Kg) in Surface Soils (0 – 2 inches)

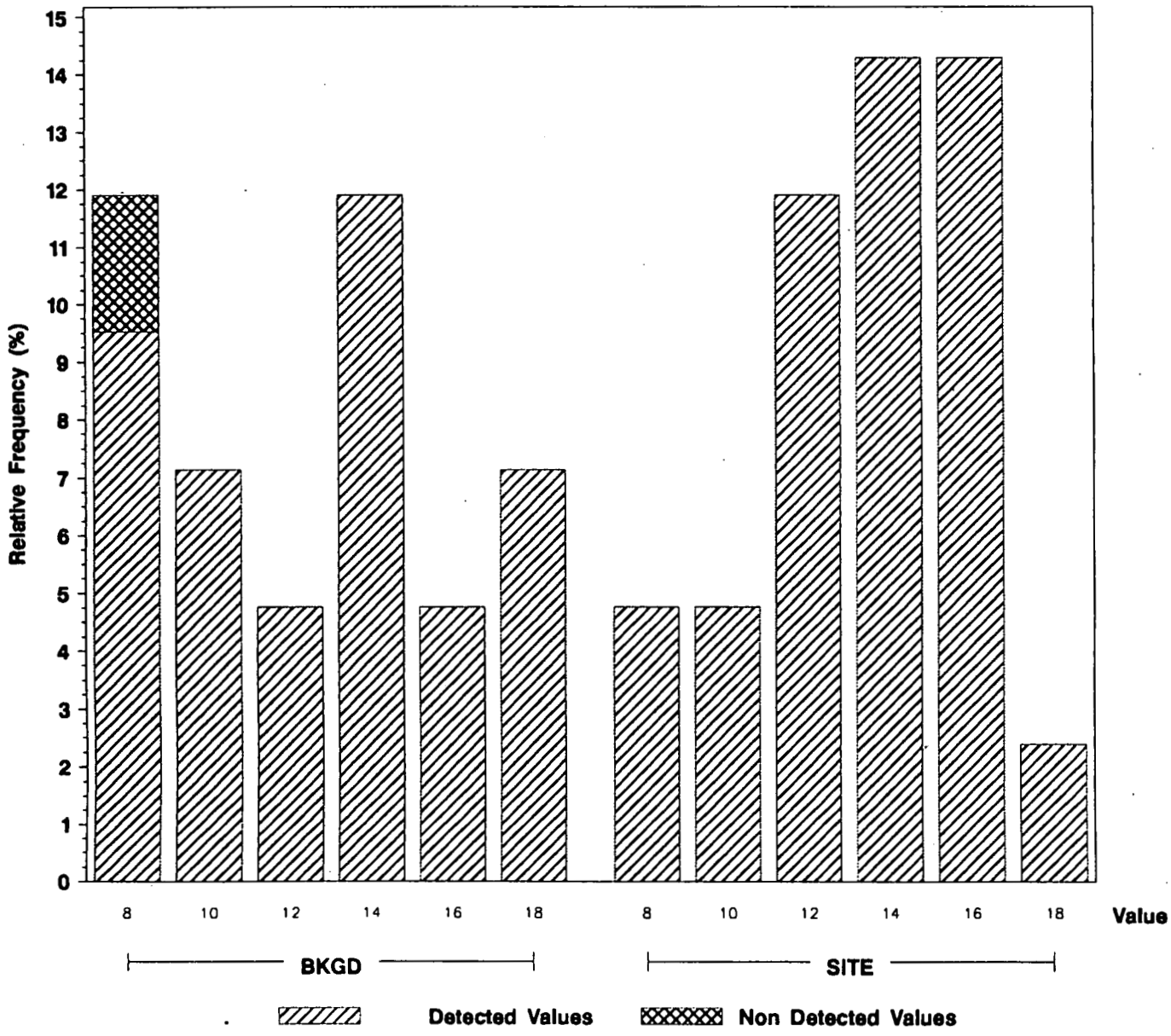
ANALYTE = NITRATE/NITRITE



# Background vs IHSS 114 Frequency Histogram

## NICKEL (mg/Kg) in Surface Soils (0–2 inches)

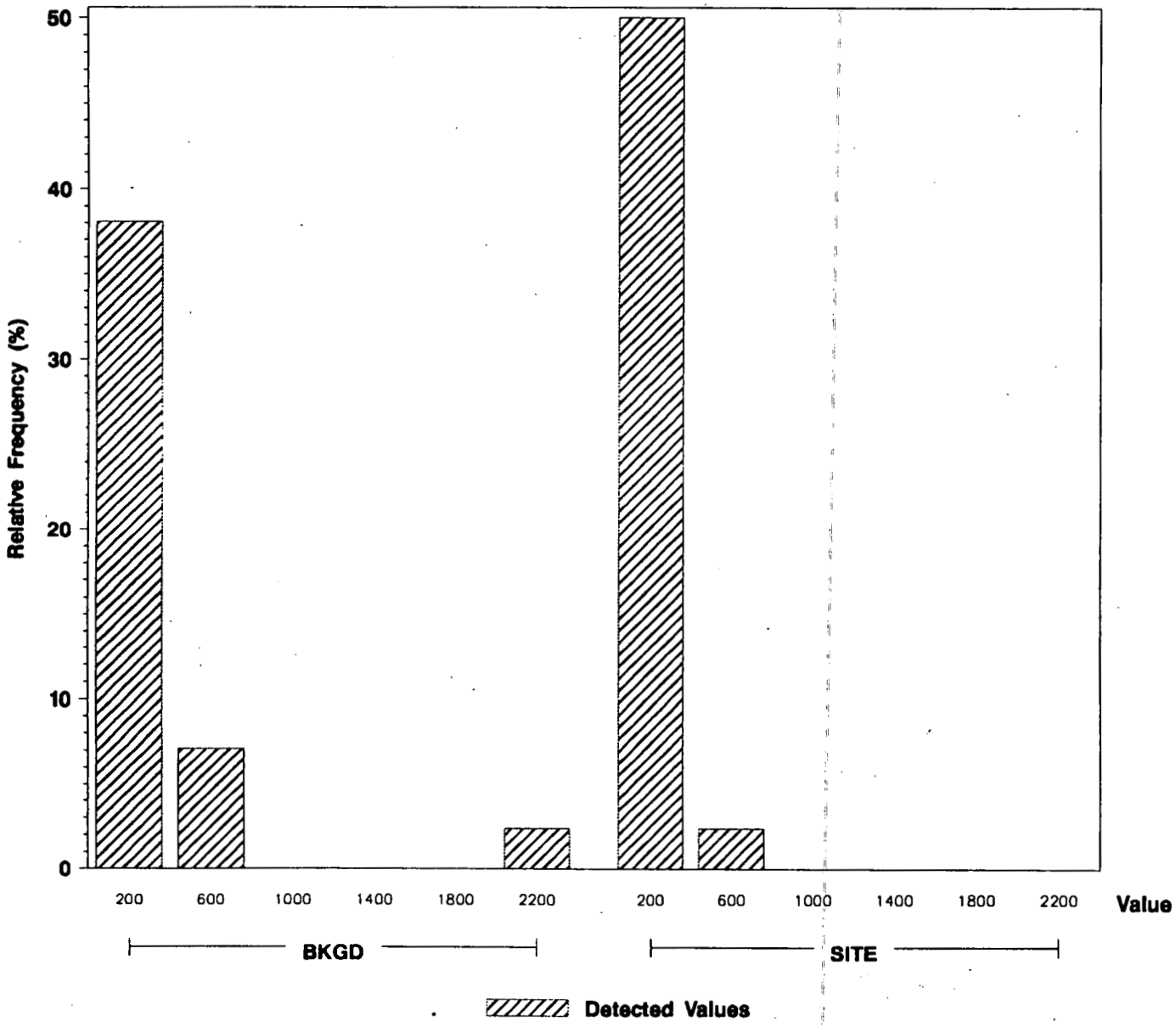
ANALYTE = NICKEL



# Background vs IHSS 114 Frequency Histogram

## MANGANESE (mg/Kg) in Surface Soils (0–2 inches)

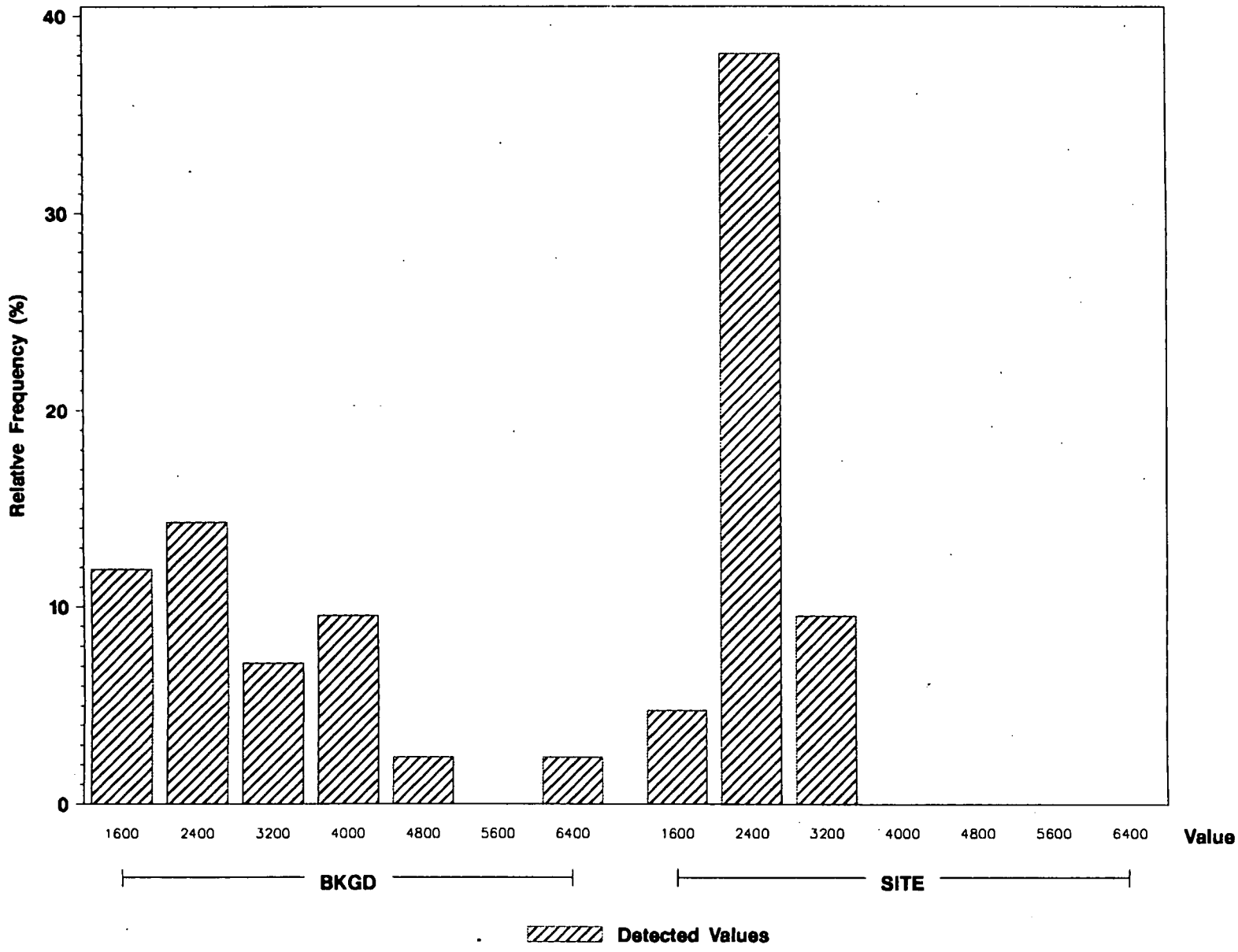
ANALYTE = MANGANESE



# Background vs IHSS 114 Frequency Histogram

## MAGNESIUM (mg/Kg) in Surface Soils (0 – 2 inches)

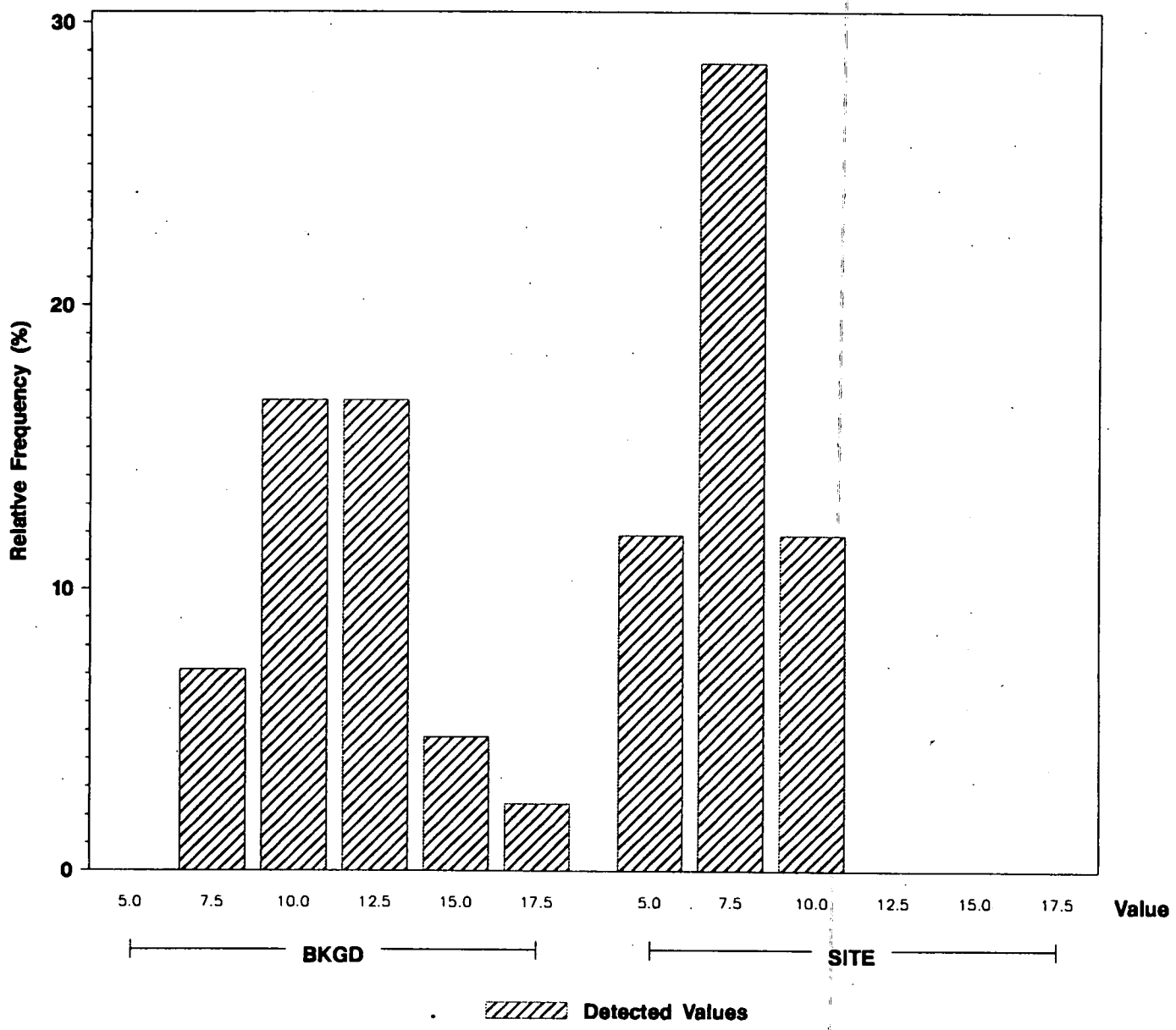
ANALYTE = MAGNESIUM



# Background vs IHSS 114 Frequency Histogram

## LITHIUM (mg/Kg) in Surface Soils (0 – 2 inches)

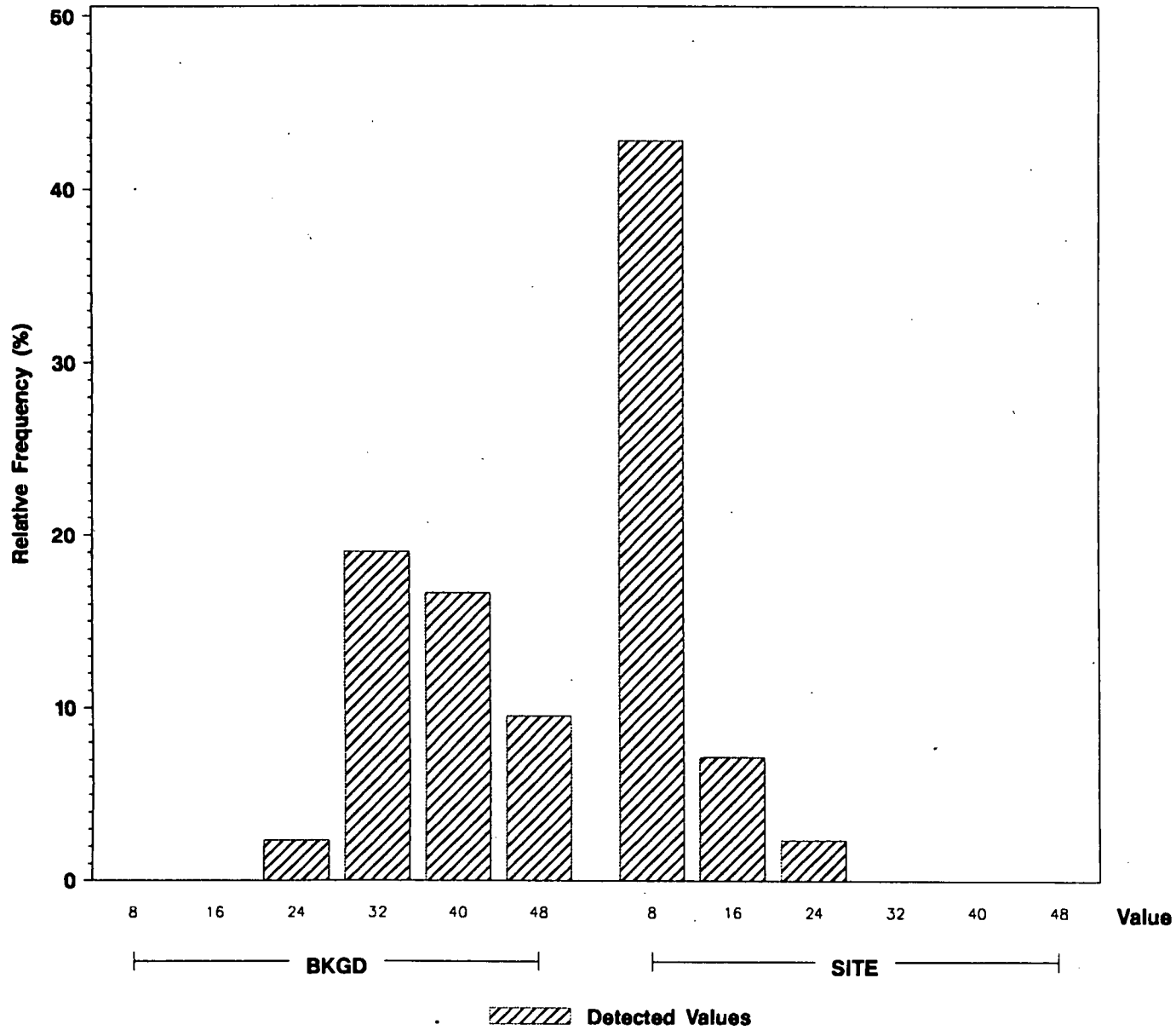
ANALYTE = LITHIUM



# Background vs IHSS 114 Frequency Histogram

## LEAD (mg/Kg) in Surface Soils (0 – 2 inches)

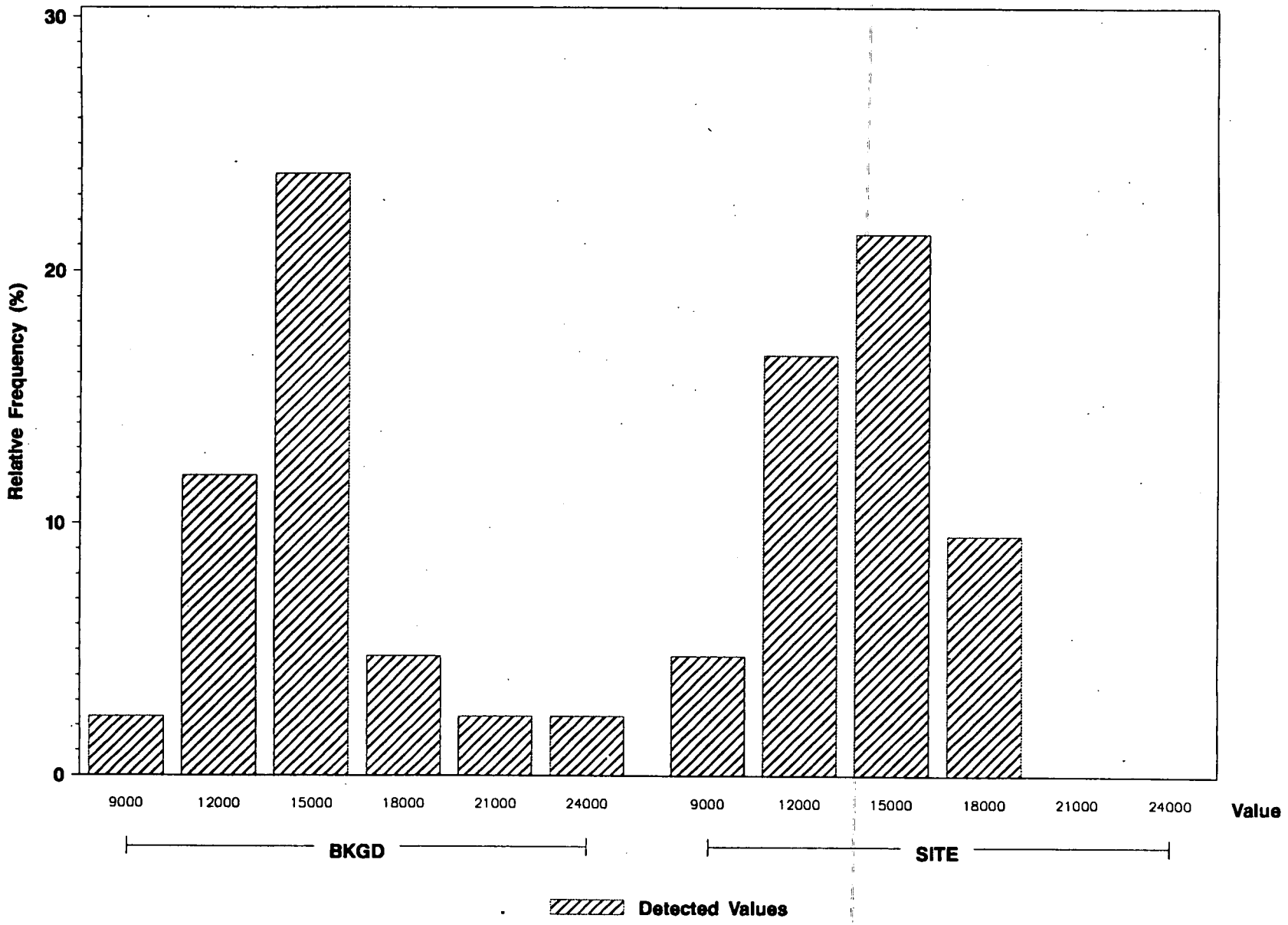
ANALYTE = LEAD



# Background vs IHSS 114 Frequency Histogram

## IRON (mg/Kg) in Surface Soils (0 – 2 inches)

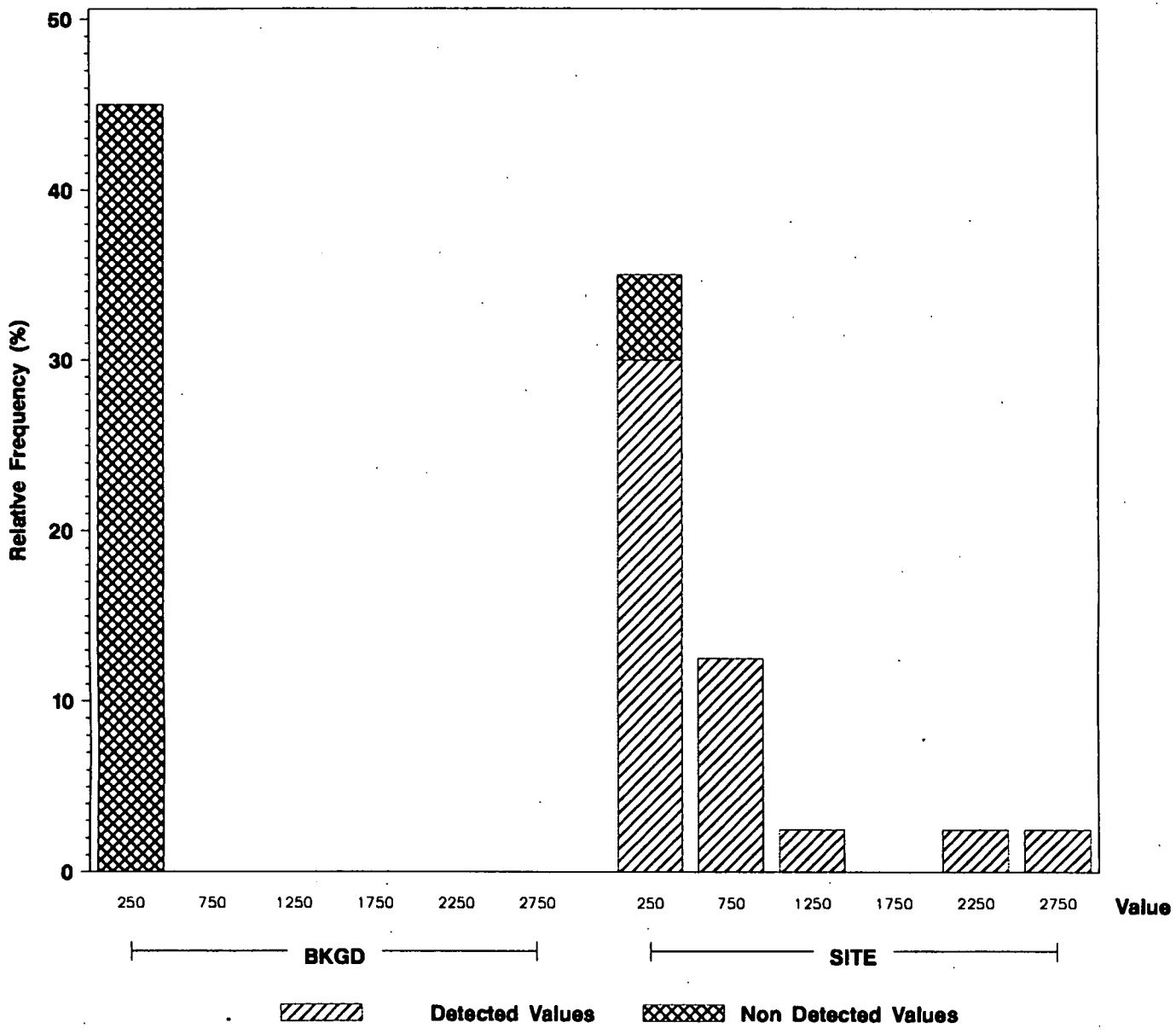
ANALYTE = IRON



# Background vs IHSS 114 Frequency Histogram

## FLUORANTHENE (ug/Kg) in Surface Soils (0 – 2 inches)

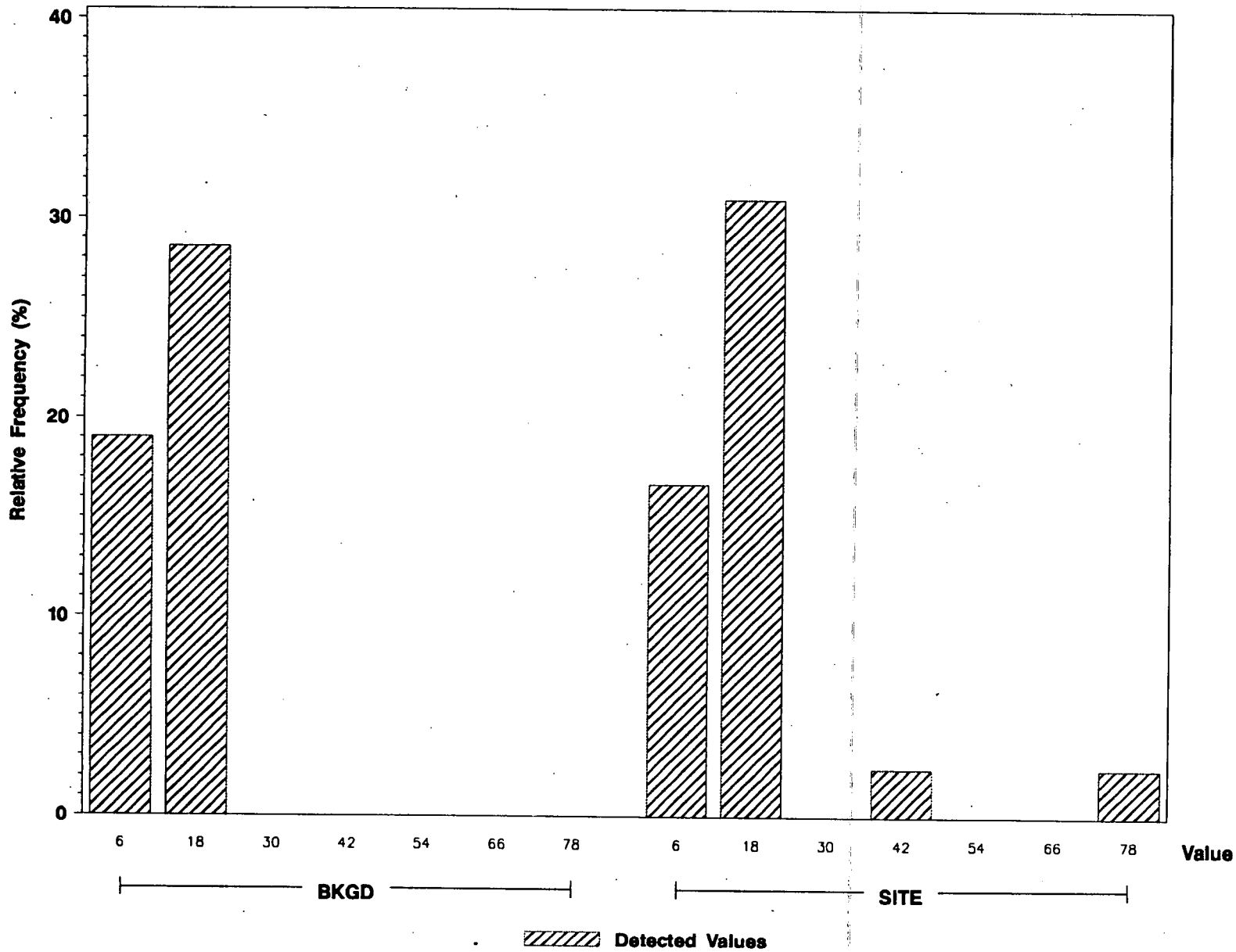
ANALYTE = FLUORANTHENE



# Background vs IHSS 114 Frequency Histogram

## COPPER (mg/Kg) in Surface Soils (0 – 2 inches)

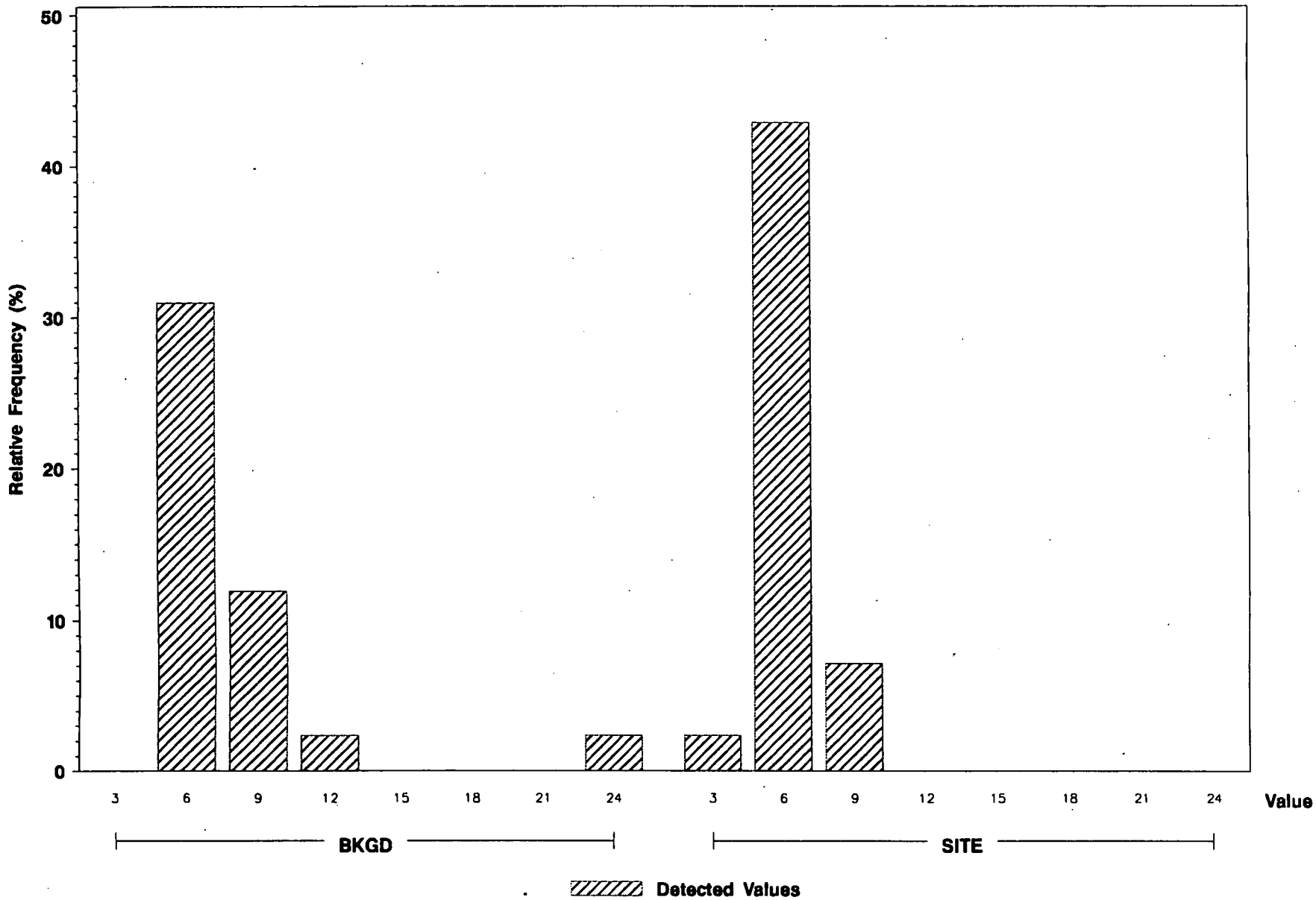
ANALYTE = COPPER



# Background vs IHSS 114 Frequency Histogram

## COBALT (mg/Kg) in Surface Soils (0 – 2 inches)

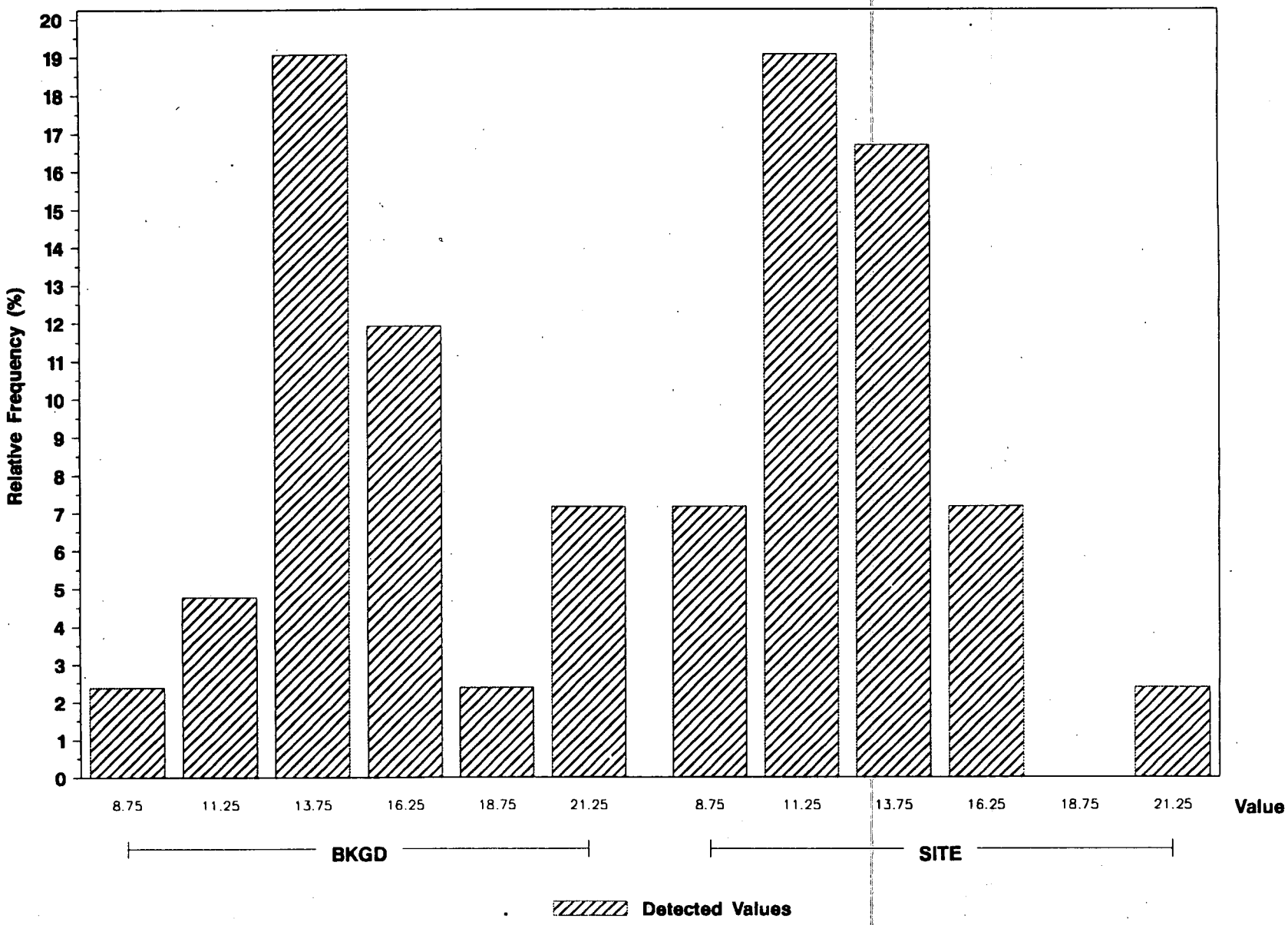
ANALYTE = COBALT



# Background vs IHSS 114 Frequency Histogram

## CHROMIUM (mg/Kg) in Surface Soils (0 – 2 inches)

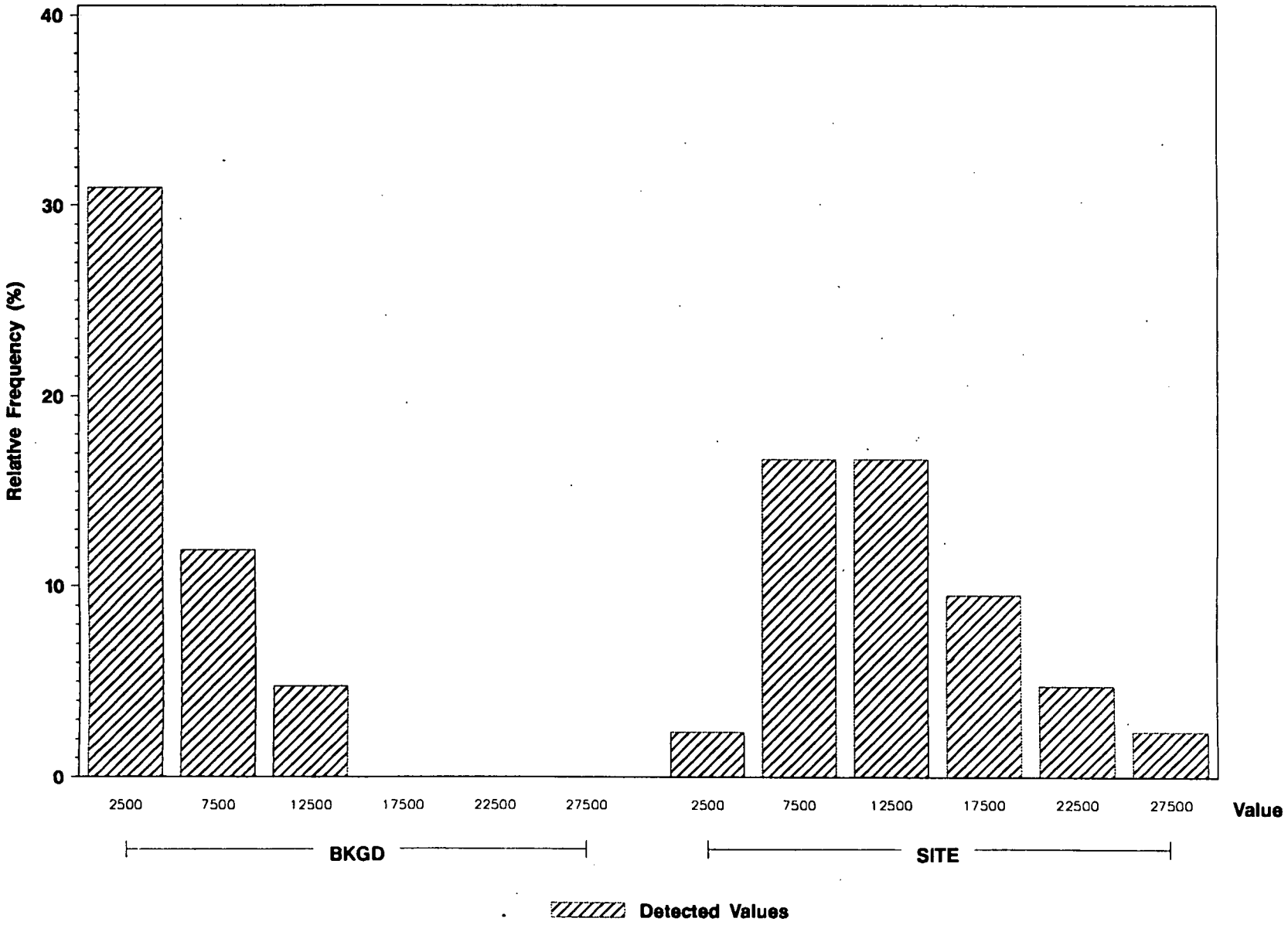
ANALYTE = CHROMIUM



# Background vs IHSS 114 Frequency Histogram

## CALCIUM (mg/Kg) in Surface Soils (0 – 2 inches)

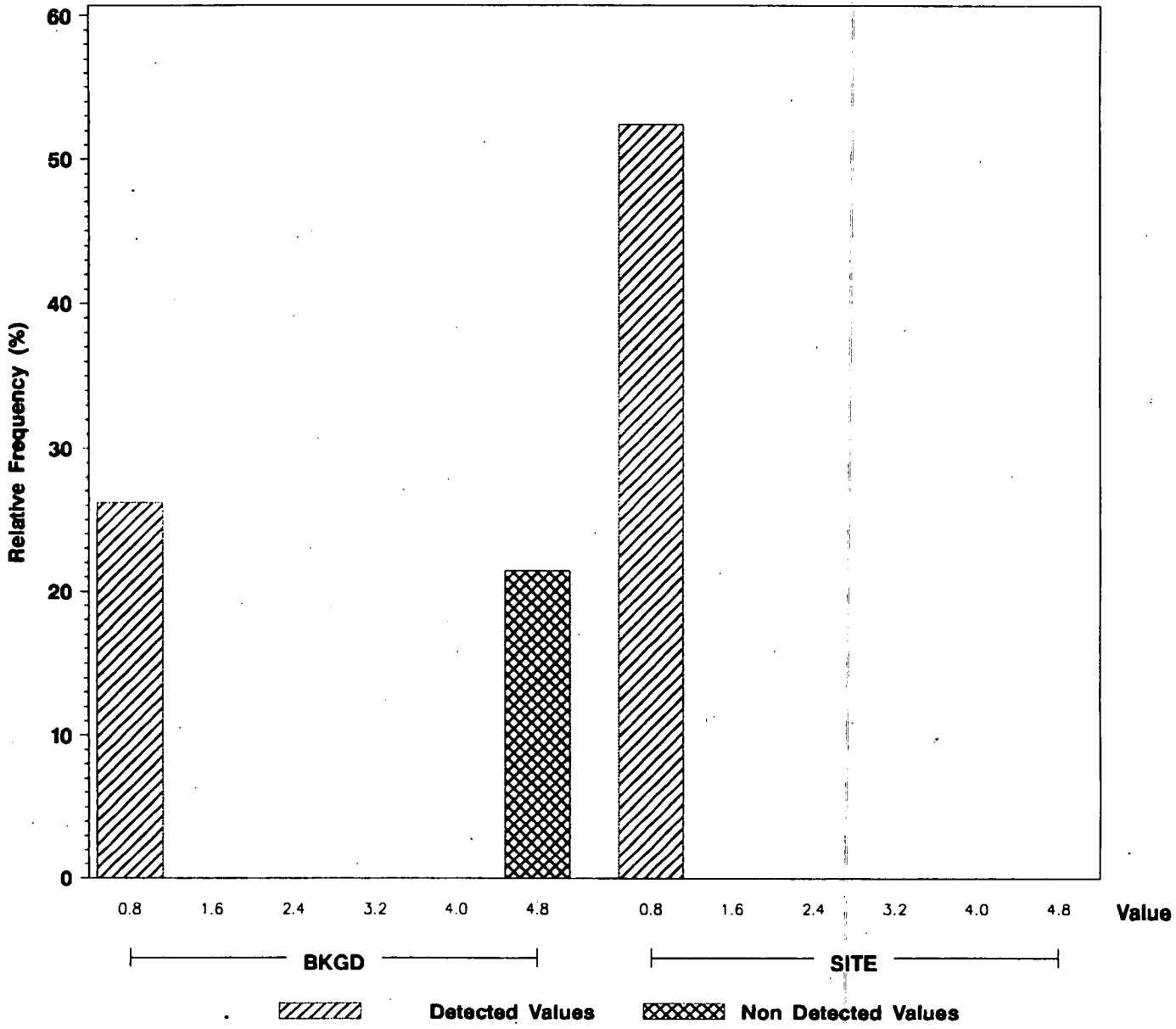
ANALYTE = CALCIUM



# Background vs IHSS 114 Frequency Histogram

## BERYLLIUM (mg/Kg) in Surface Soils (0–2 inches)

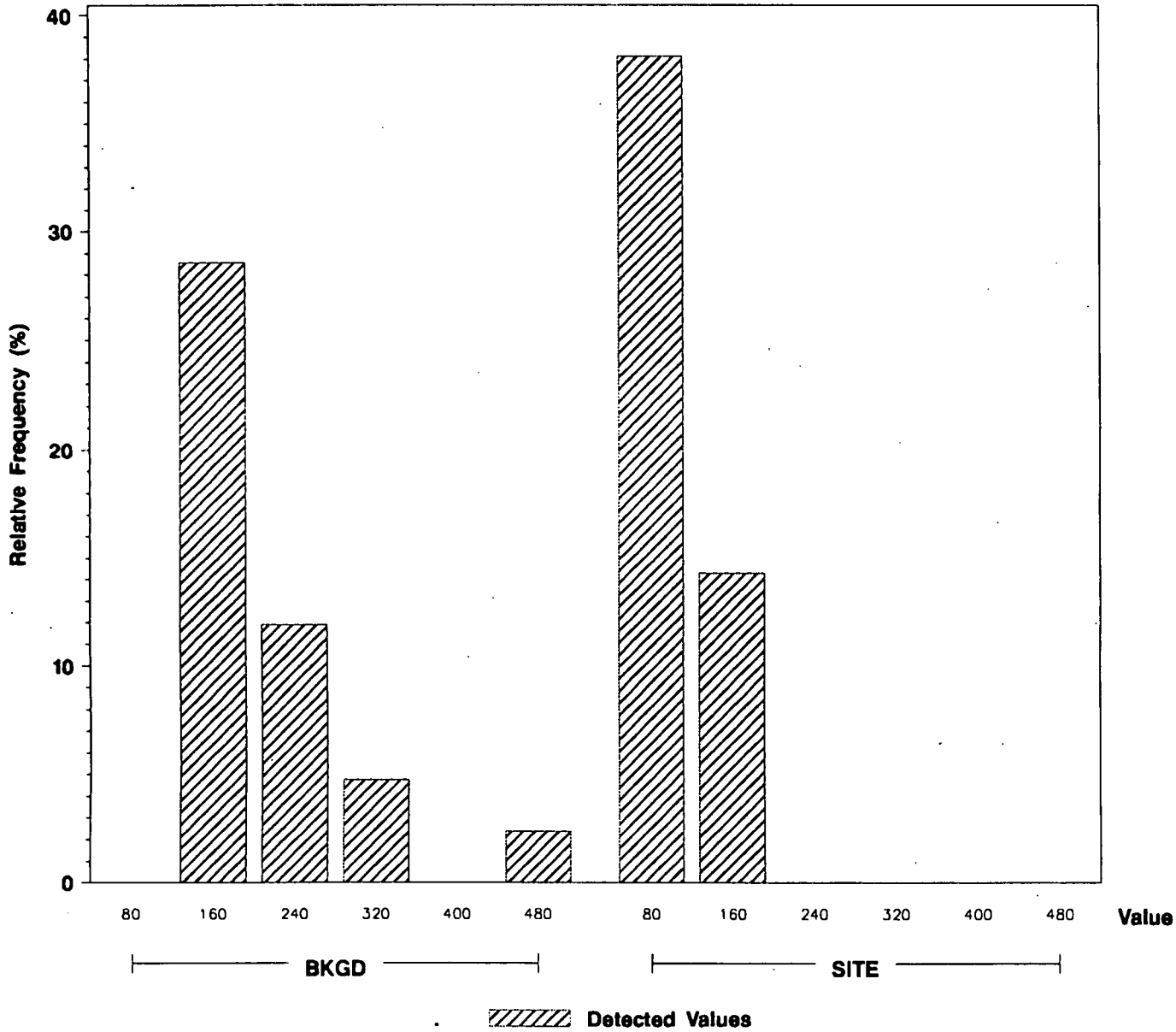
ANALYTE = BERYLLIUM



# Background vs IHSS 114 Frequency Histogram

## BARIUM (mg/Kg) in Surface Soils (0 – 2 inches)

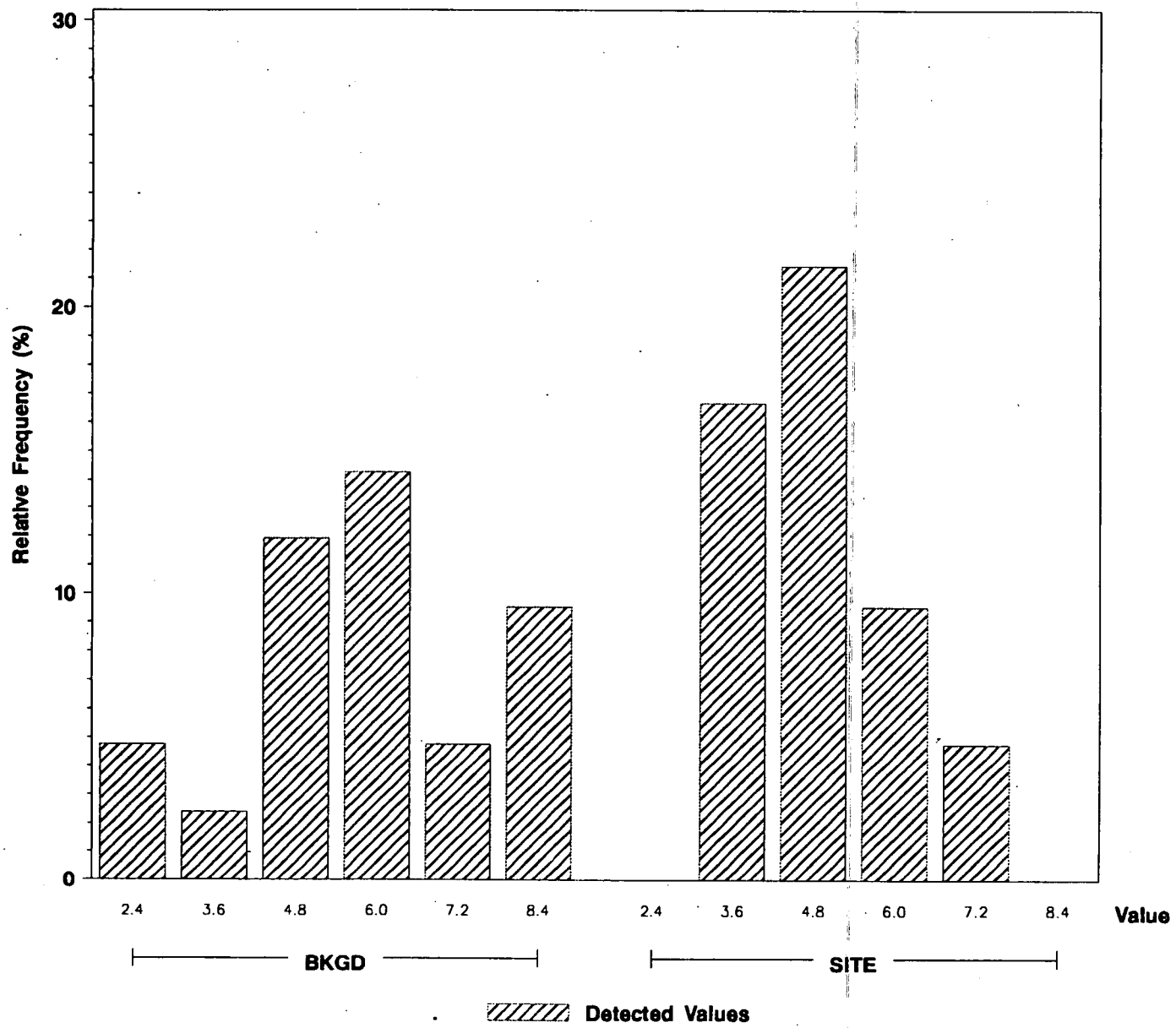
ANALYTE = BARIUM



# Background vs IHSS 114 Frequency Histogram

## ARSENIC (mg/Kg) in Surface Soils (0 – 2 inches)

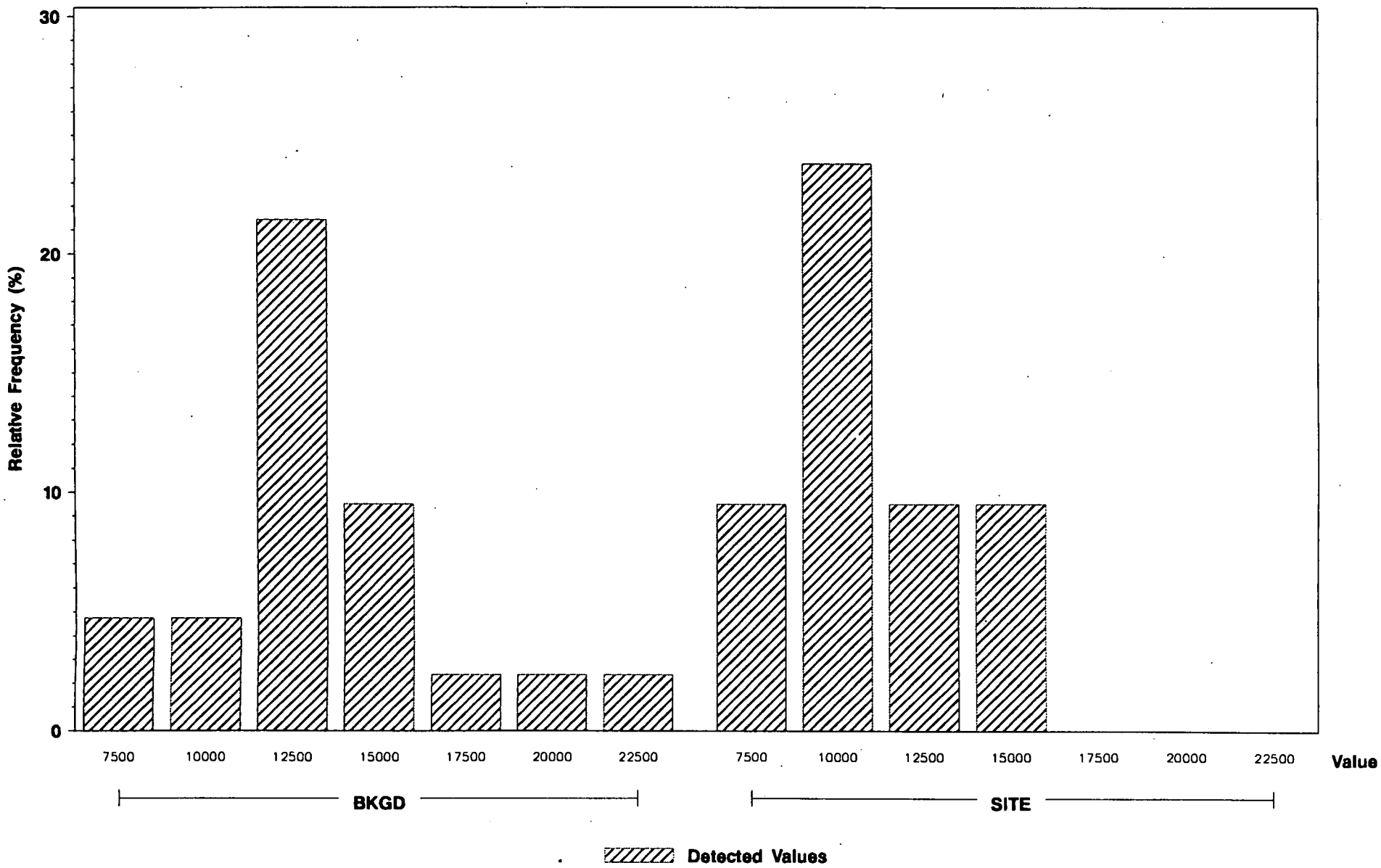
ANALYTE = ARSENIC



# Background vs IHSS 114 Frequency Histogram

## ALUMINUM (mg/Kg) in Surface Soils (0 – 2 inches)

ANALYTE = ALUMINUM



# Surface Soils

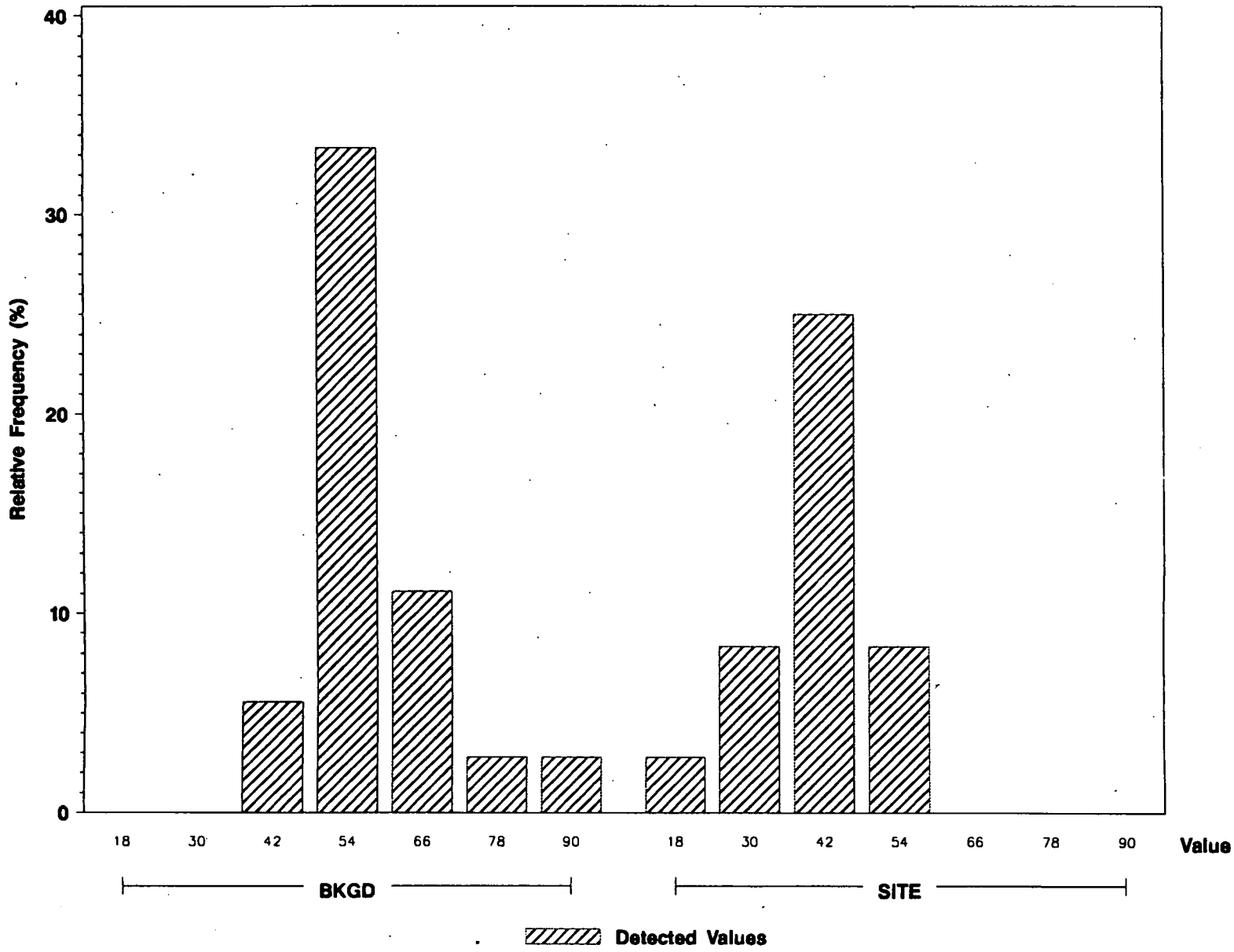
# Background vs. IHSS 114

# (0 to 2 inches)

# Background vs IHSS 203 Frequency Histogram

## ZINC (mg/Kg) in Surface Soils (0 – 10 inches)

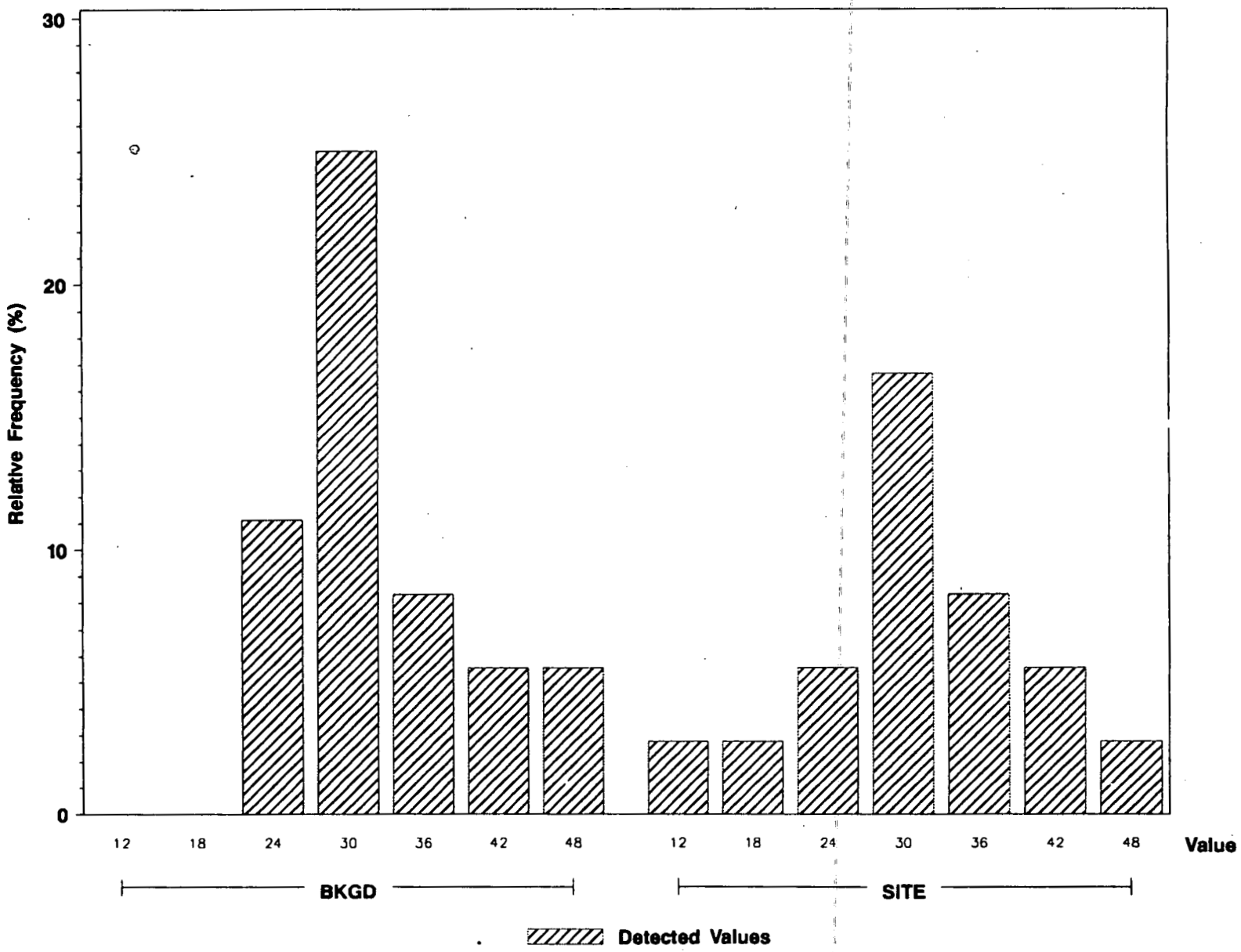
ANALYTE = ZINC



# Background vs IHSS 203 Frequency Histogram

## VANADIUM (mg/Kg) in Surface Soils (0–10 inches)

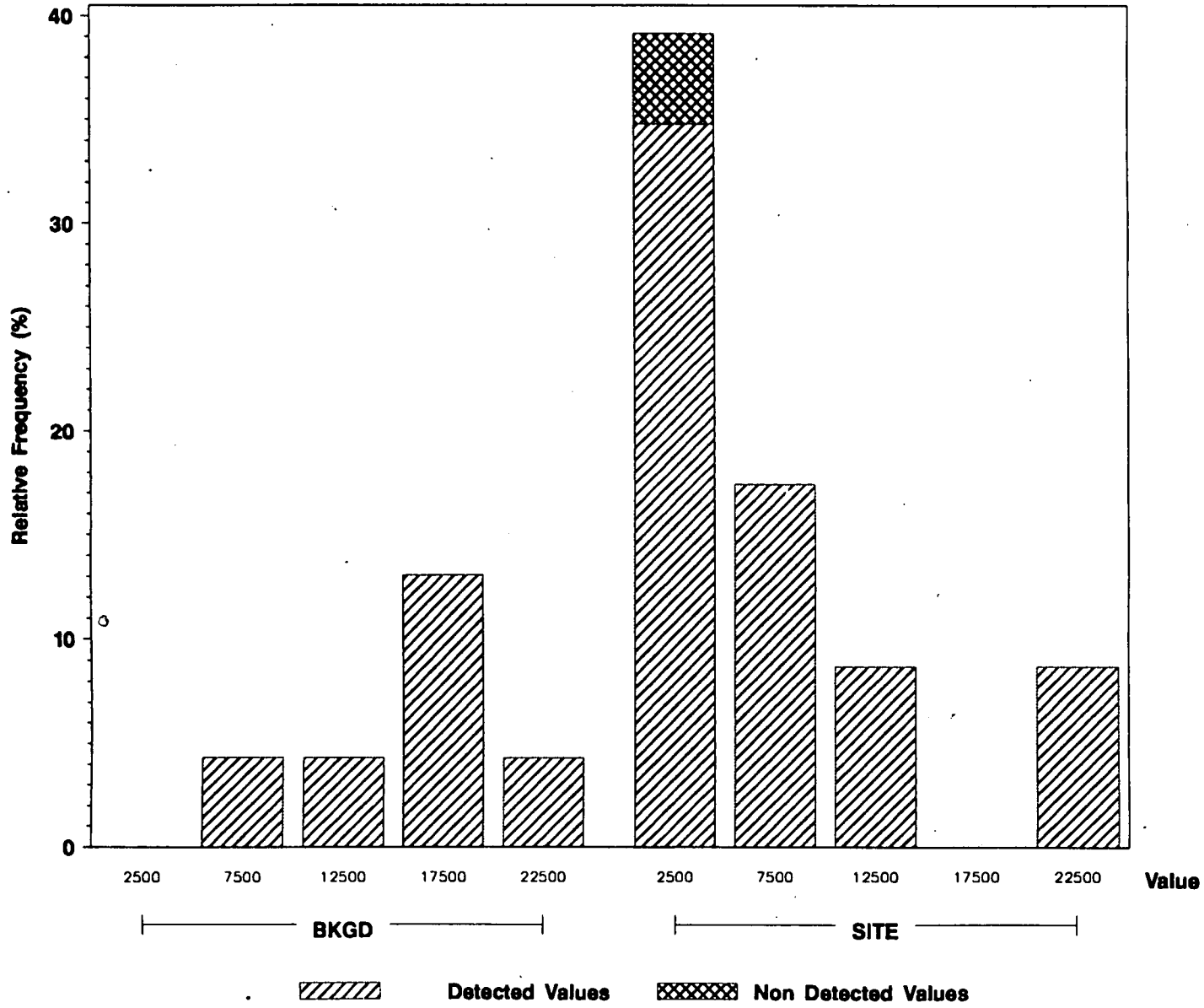
ANALYTE = VANADIUM



# Background vs IHSS 203 Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Surface Soils (0–10 inches)

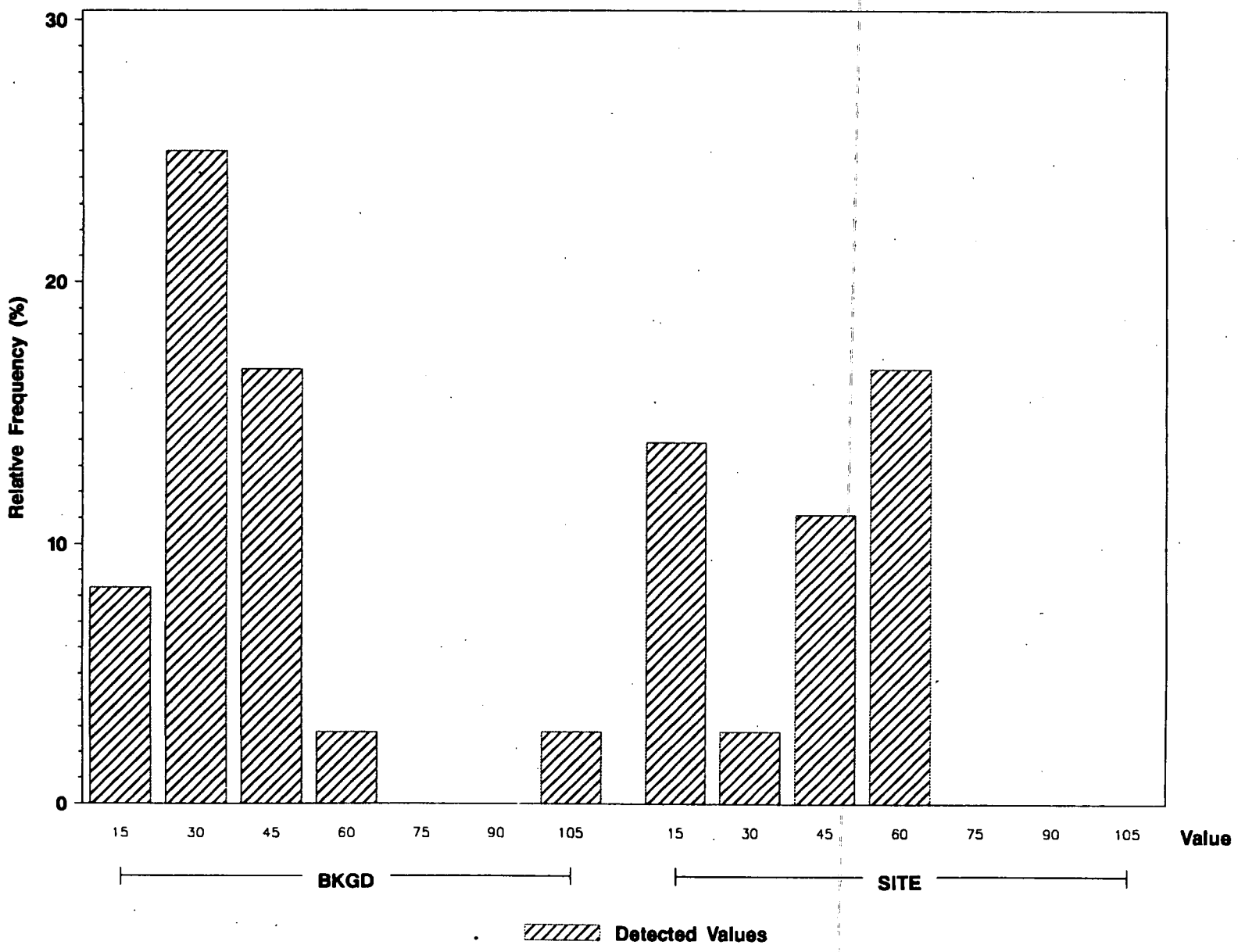
ANALYTE=TOTAL ORGANIC CARBON



# Background vs IHSS 203 Frequency Histogram

## STRONTIUM (mg/Kg) in Surface Soils (0–10 inches)

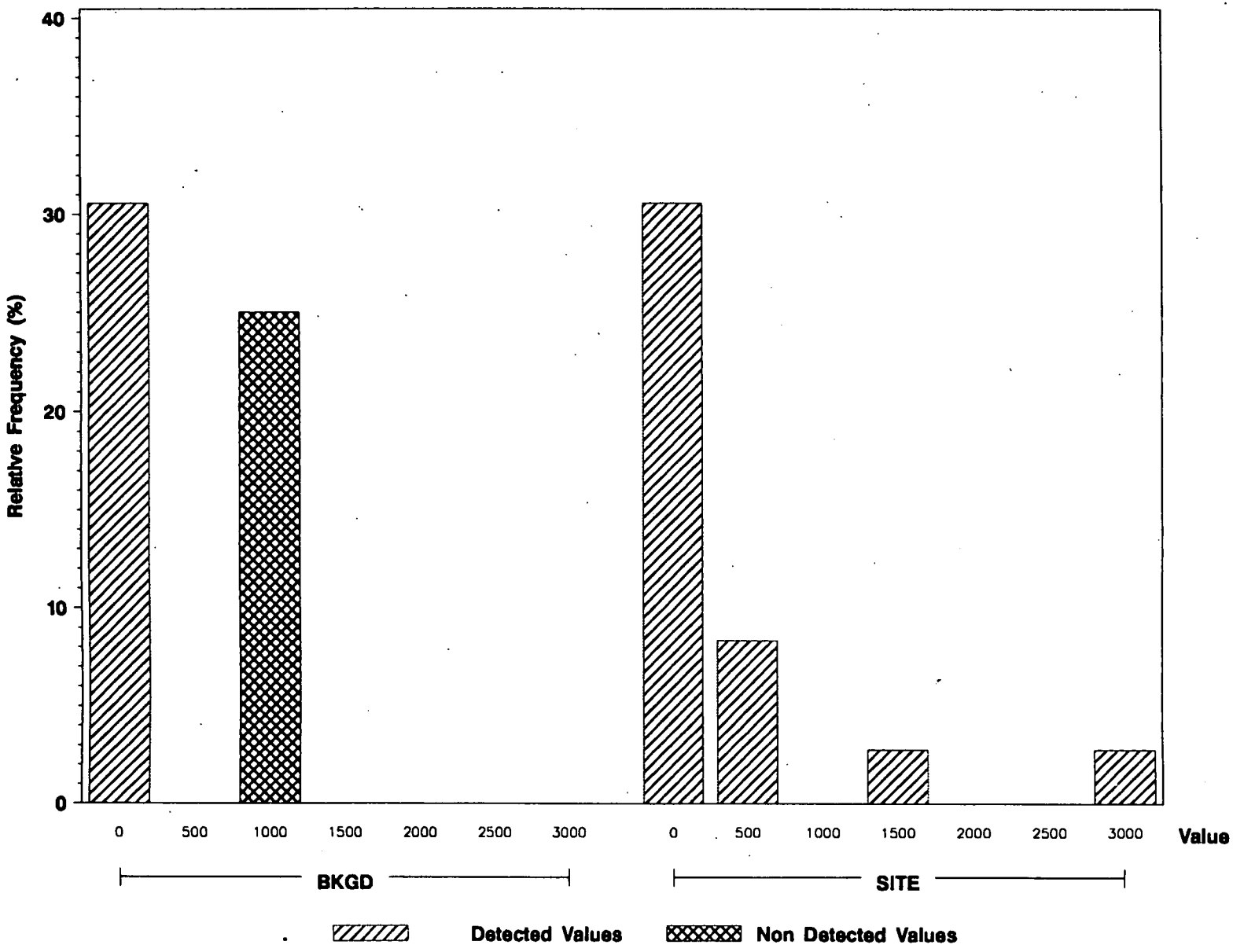
ANALYTE = STRONTIUM



# Background vs IHSS 203 Frequency Histogram

## SODIUM (mg/Kg) In Surface Soils (0 – 10 inches)

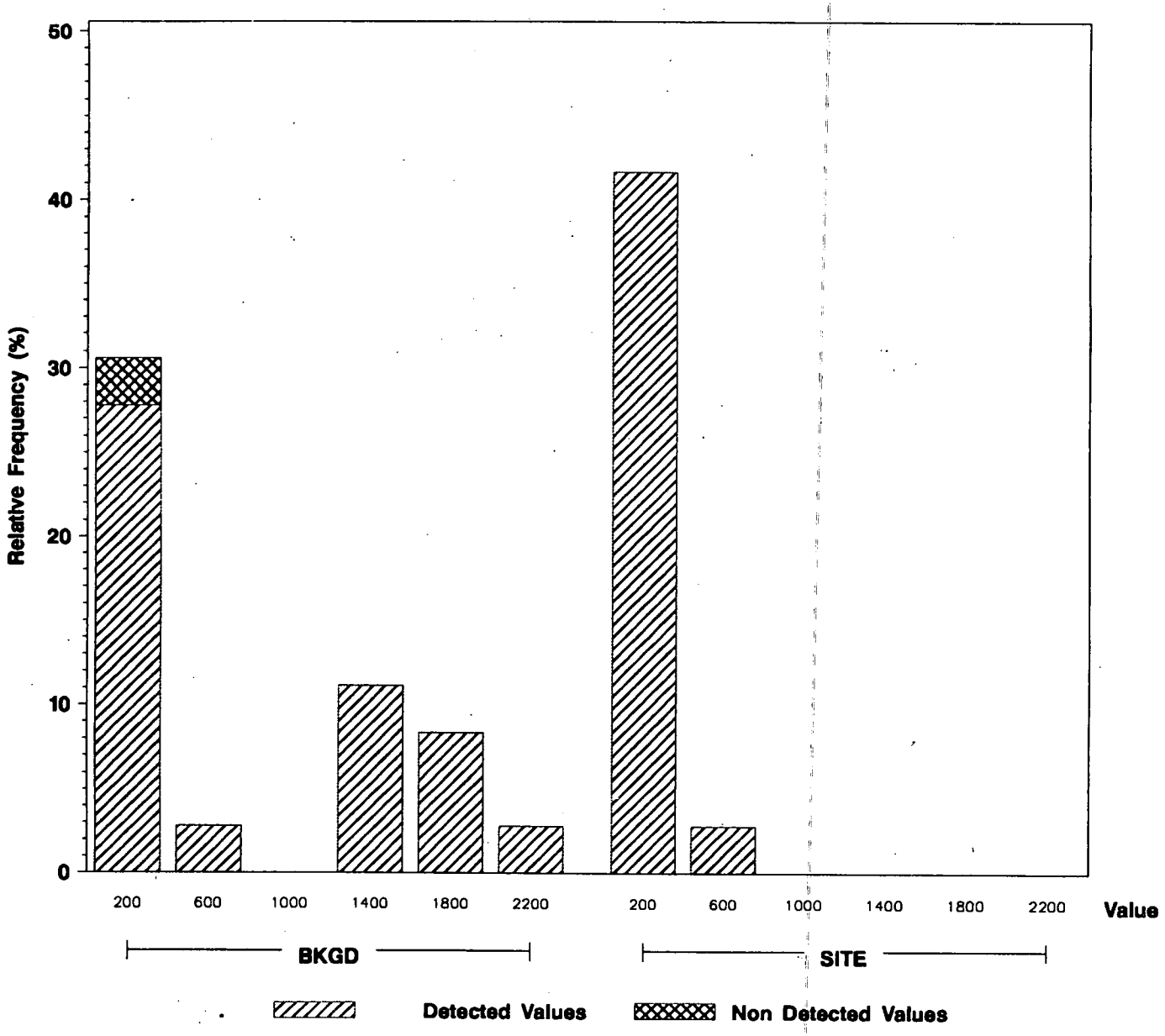
ANALYTE = SODIUM



# Background vs IHSS 203 Frequency Histogram

## SILICON (mg/Kg) in Surface Soils (0 – 10 inches)

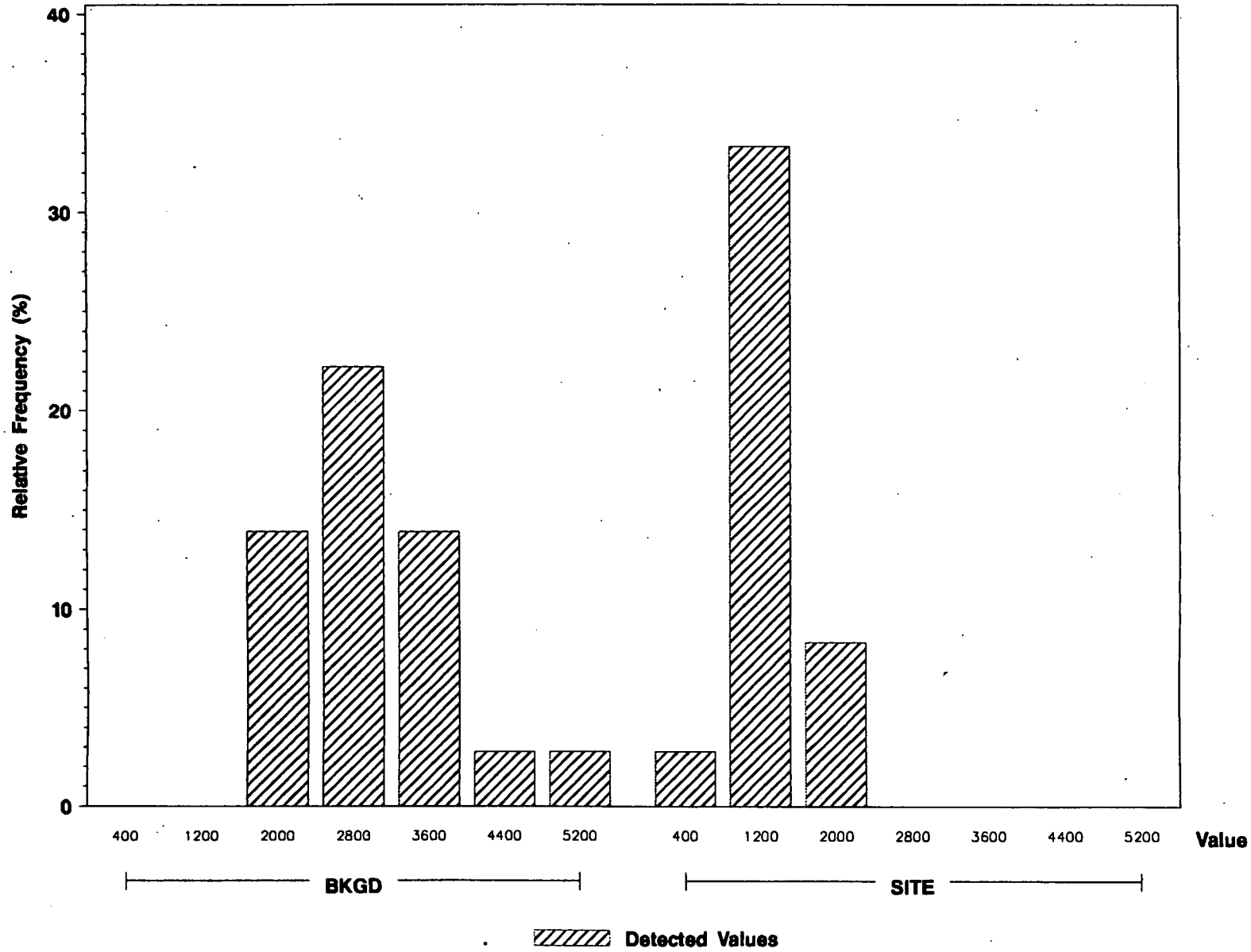
ANALYTE = SILICON



# Background vs IHSS 203 Frequency Histogram

## POTASSIUM (mg/Kg) in Surface Soils (0–10 inches)

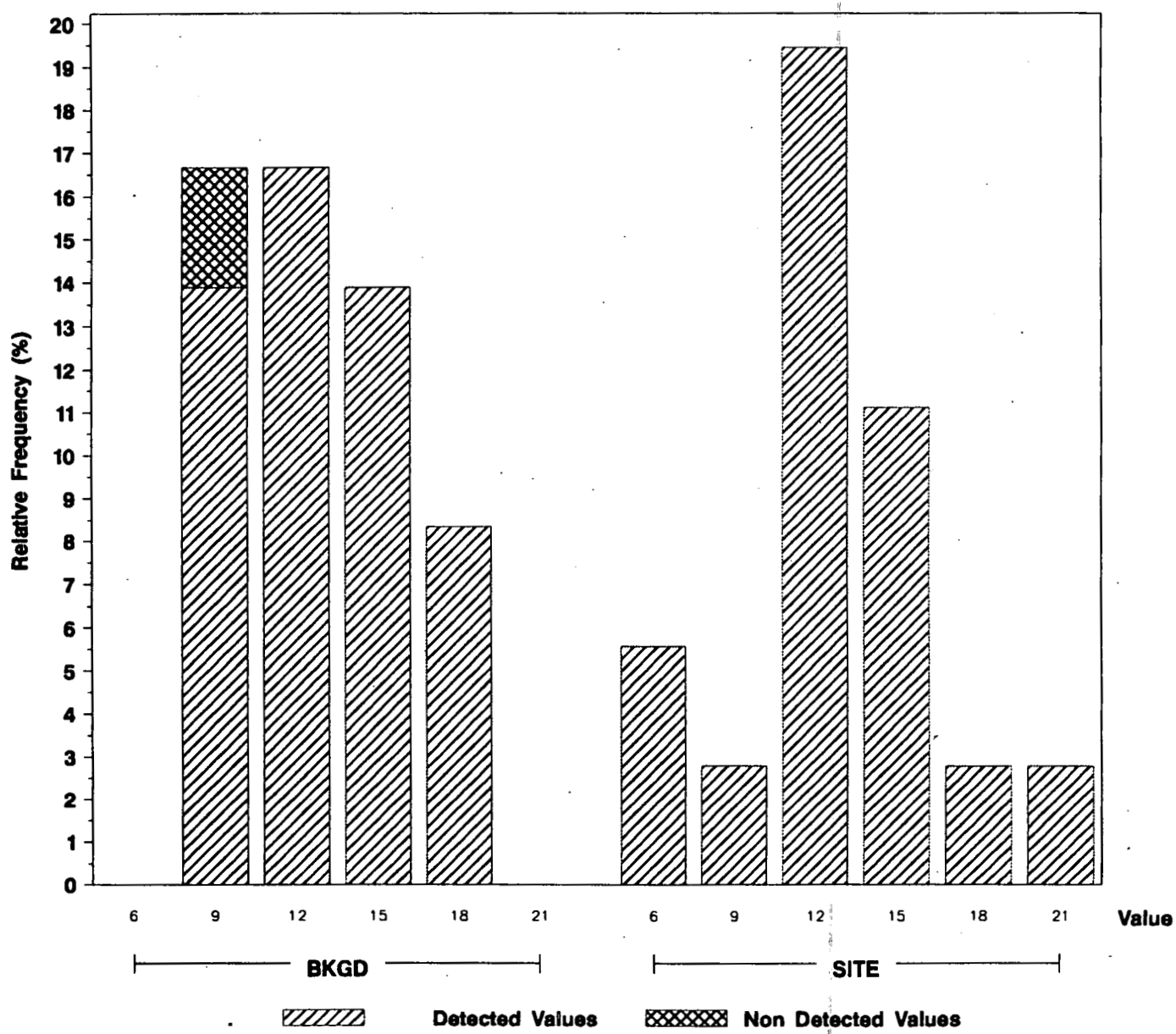
ANALYTE = POTASSIUM



# Background vs IHSS 203 Frequency Histogram

## NICKEL (mg/Kg) in Surface Soils (0 – 10 inches)

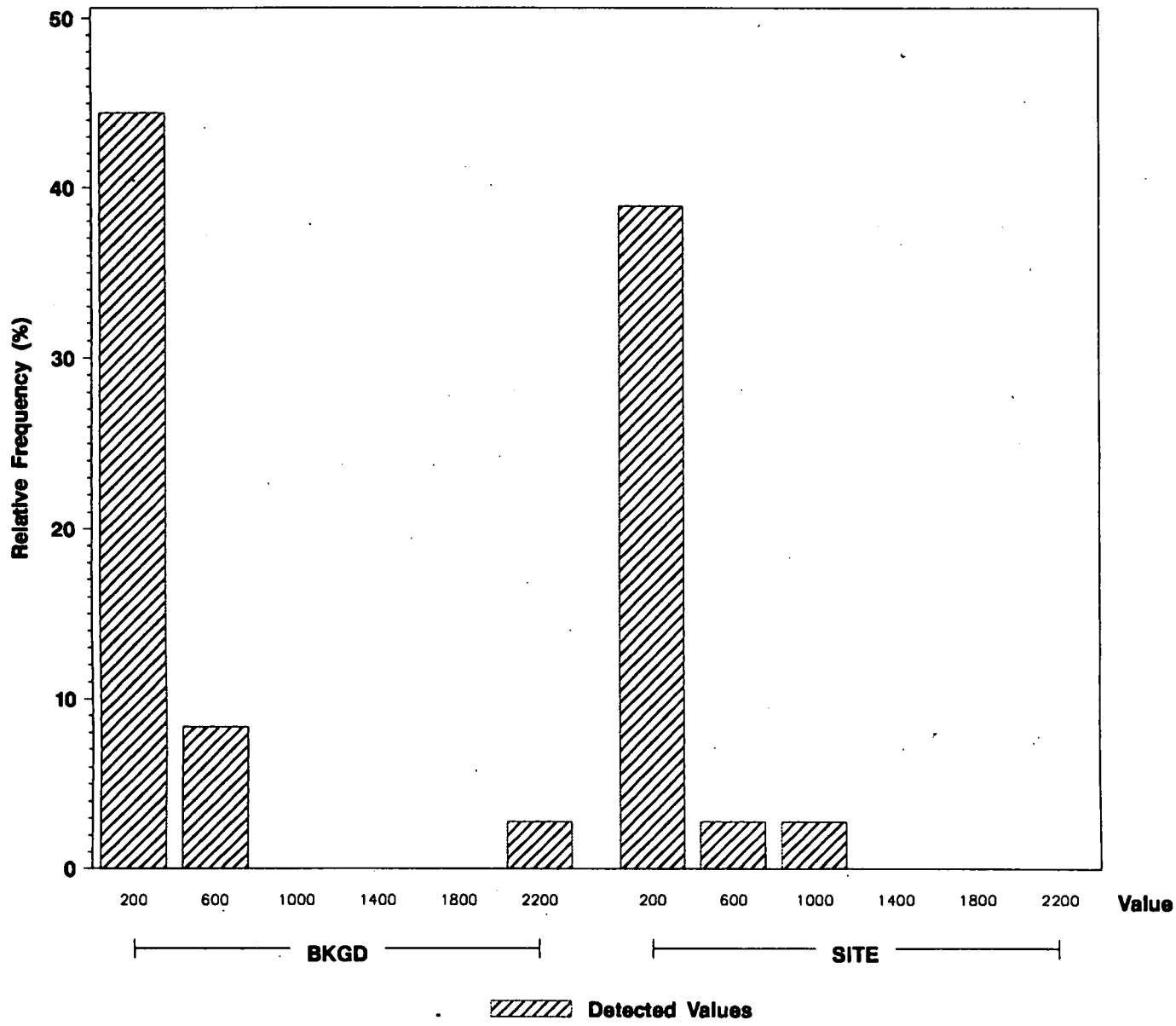
ANALYTE = NICKEL



# Background vs IHSS 203 Frequency Histogram

## MANGANESE (mg/Kg) in Surface Soils (0–10 inches)

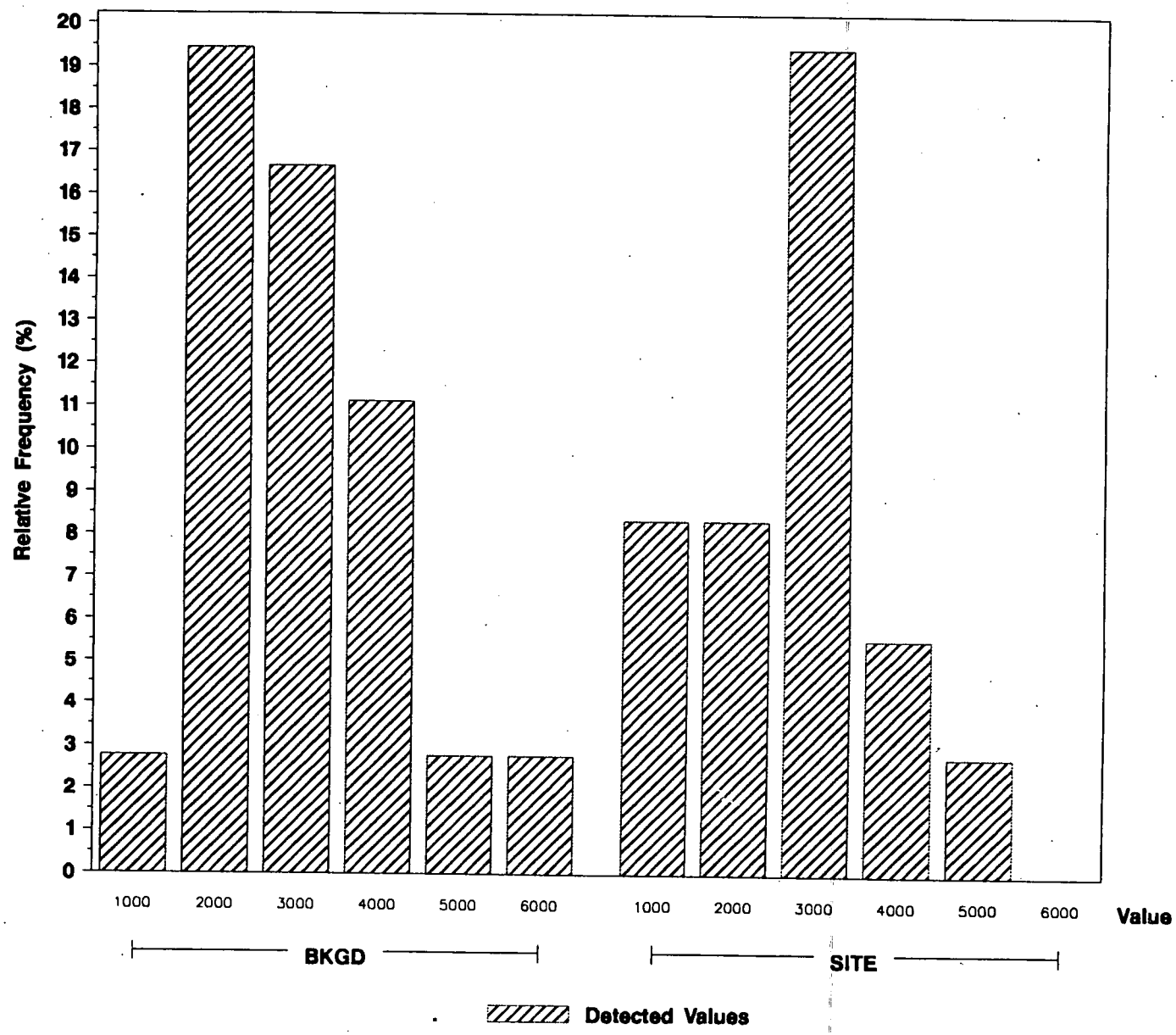
ANALYTE = MANGANESE



# Background vs IHSS 203 Frequency Histogram

## MAGNESIUM (mg/Kg) in Surface Soils (0 – 10 inches)

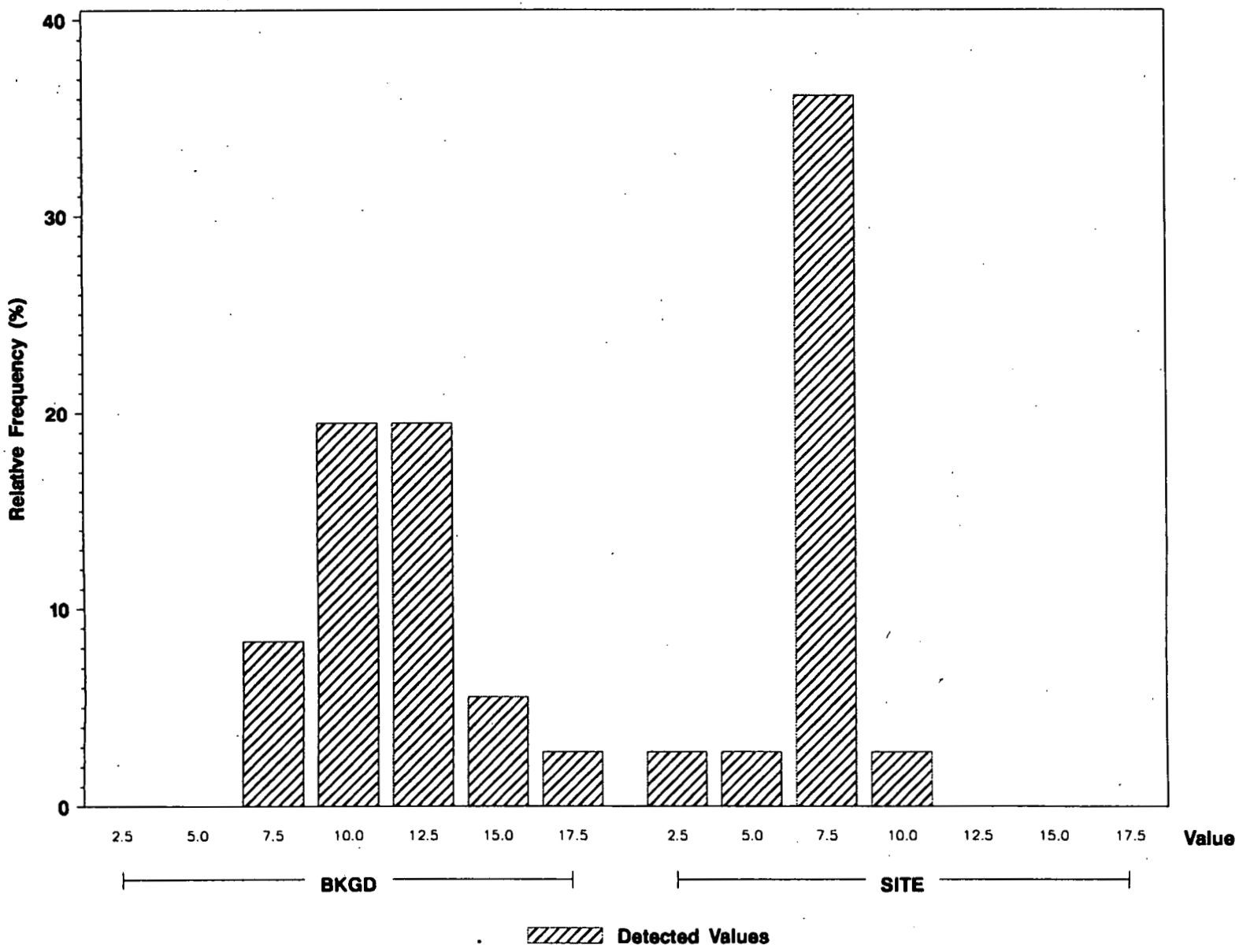
ANALYTE = MAGNESIUM



# Background vs IHSS 203 Frequency Histogram

## LITHIUM (mg/Kg) in Surface Soils (0–10 inches)

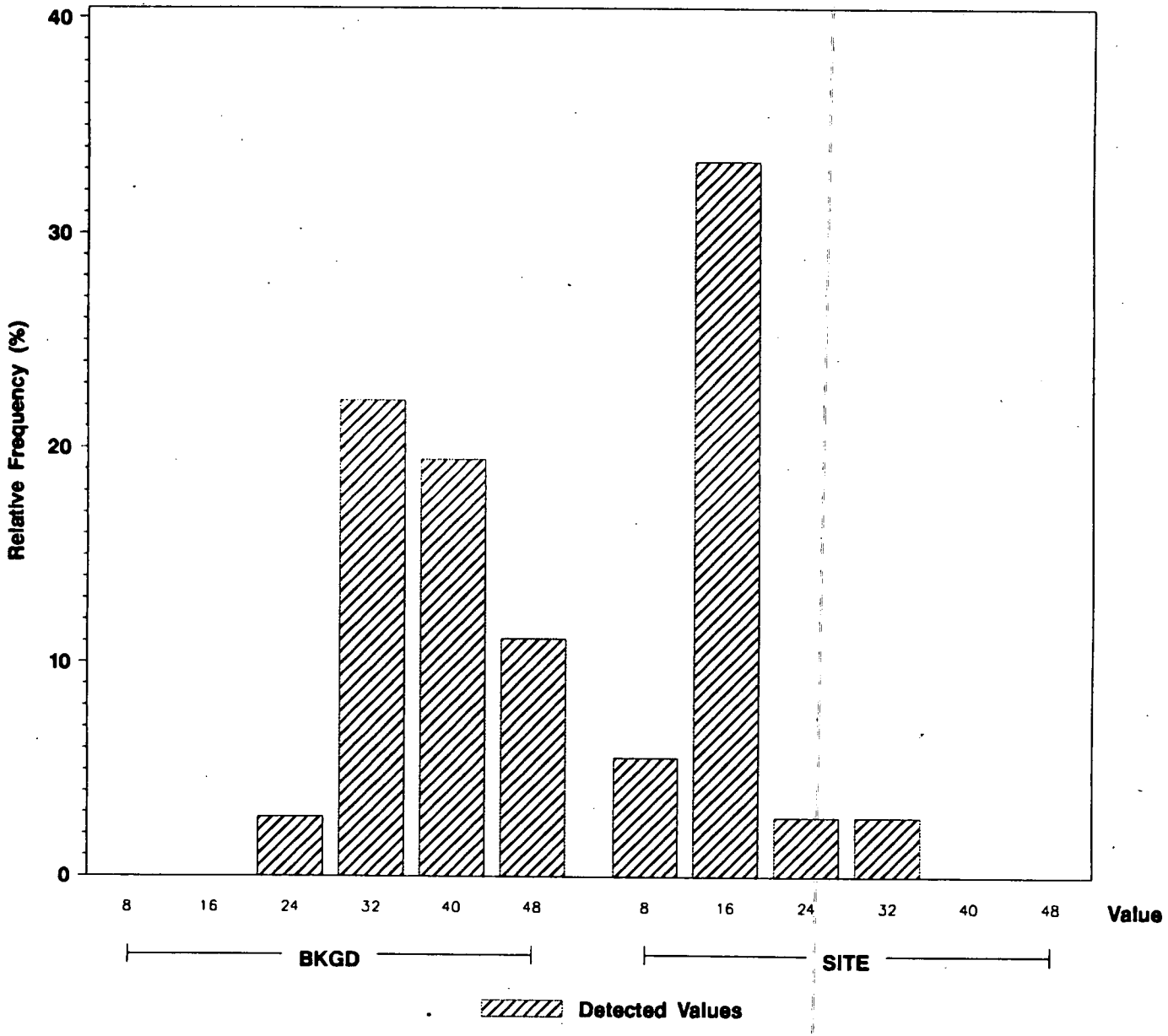
ANALYTE=LITHIUM



# Background vs IHSS 203 Frequency Histogram

## LEAD (mg/Kg) in Surface Soils (0 – 10 inches)

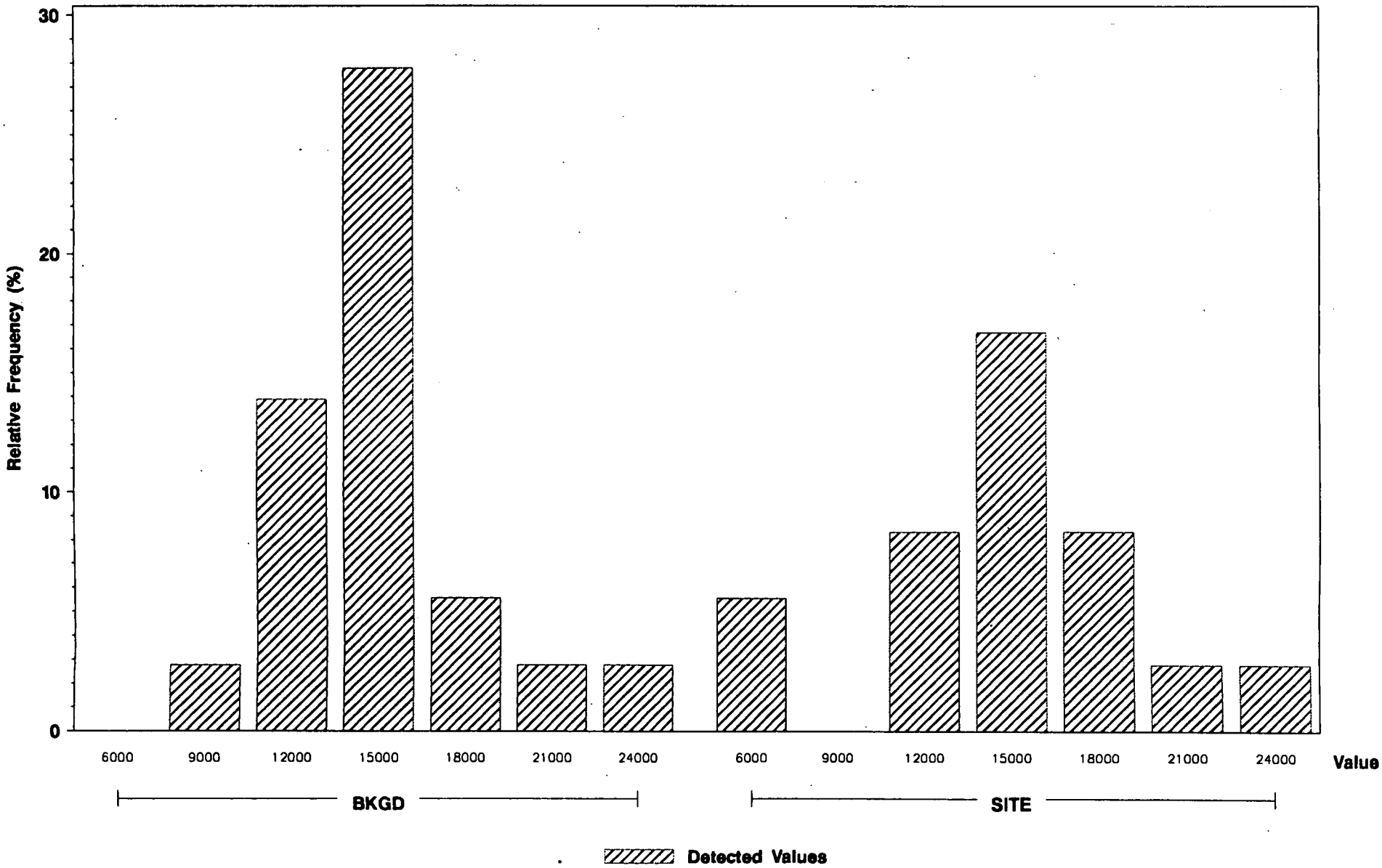
ANALYTE = LEAD



# Background vs IHSS 203 Frequency Histogram

## IRON (mg/Kg) in Surface Soils (0–10 inches)

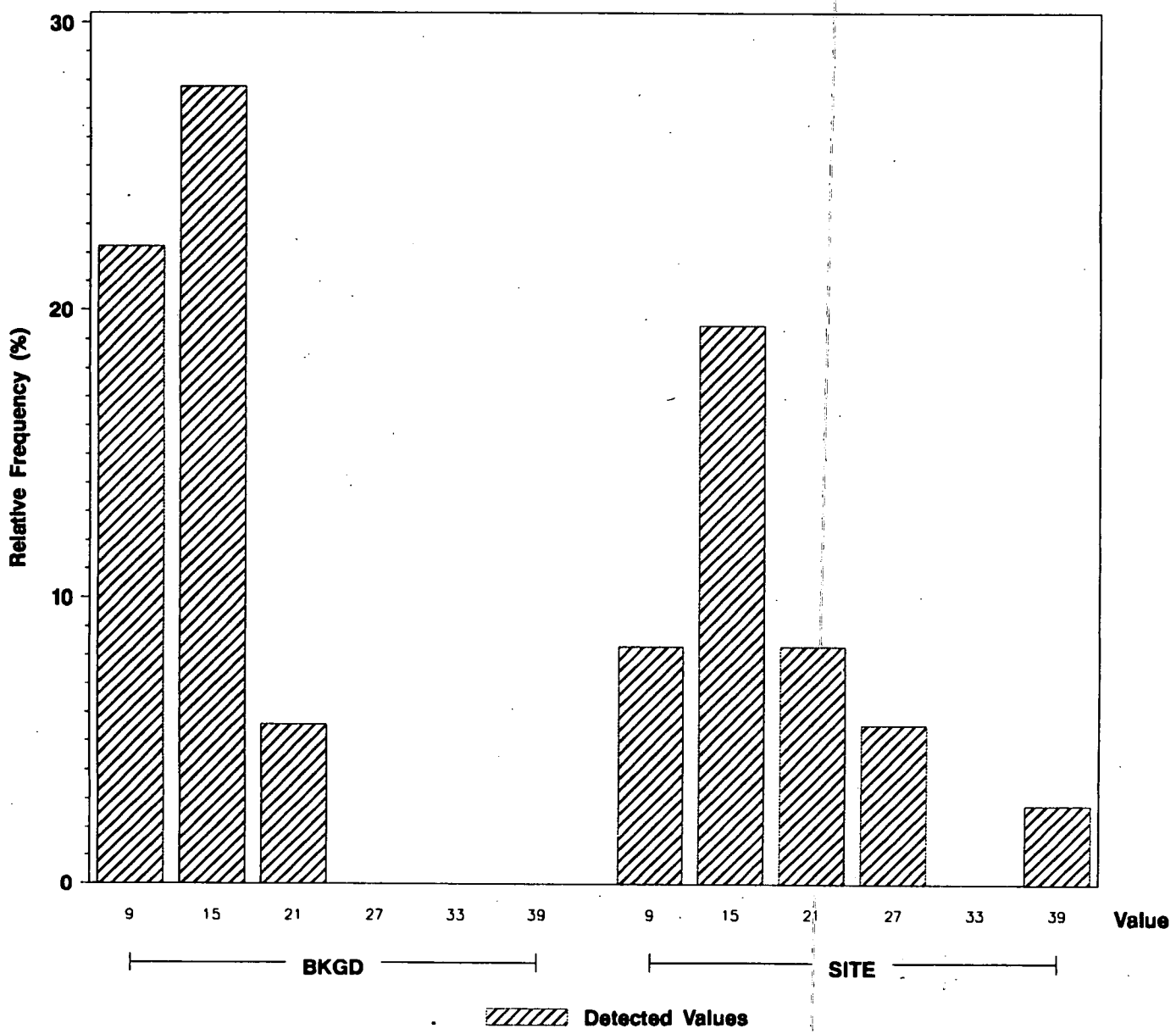
ANALYTE = IRON



# Background vs IHSS 203 Frequency Histogram

## COPPER (mg/Kg) in Surface Soils (0 – 10 inches)

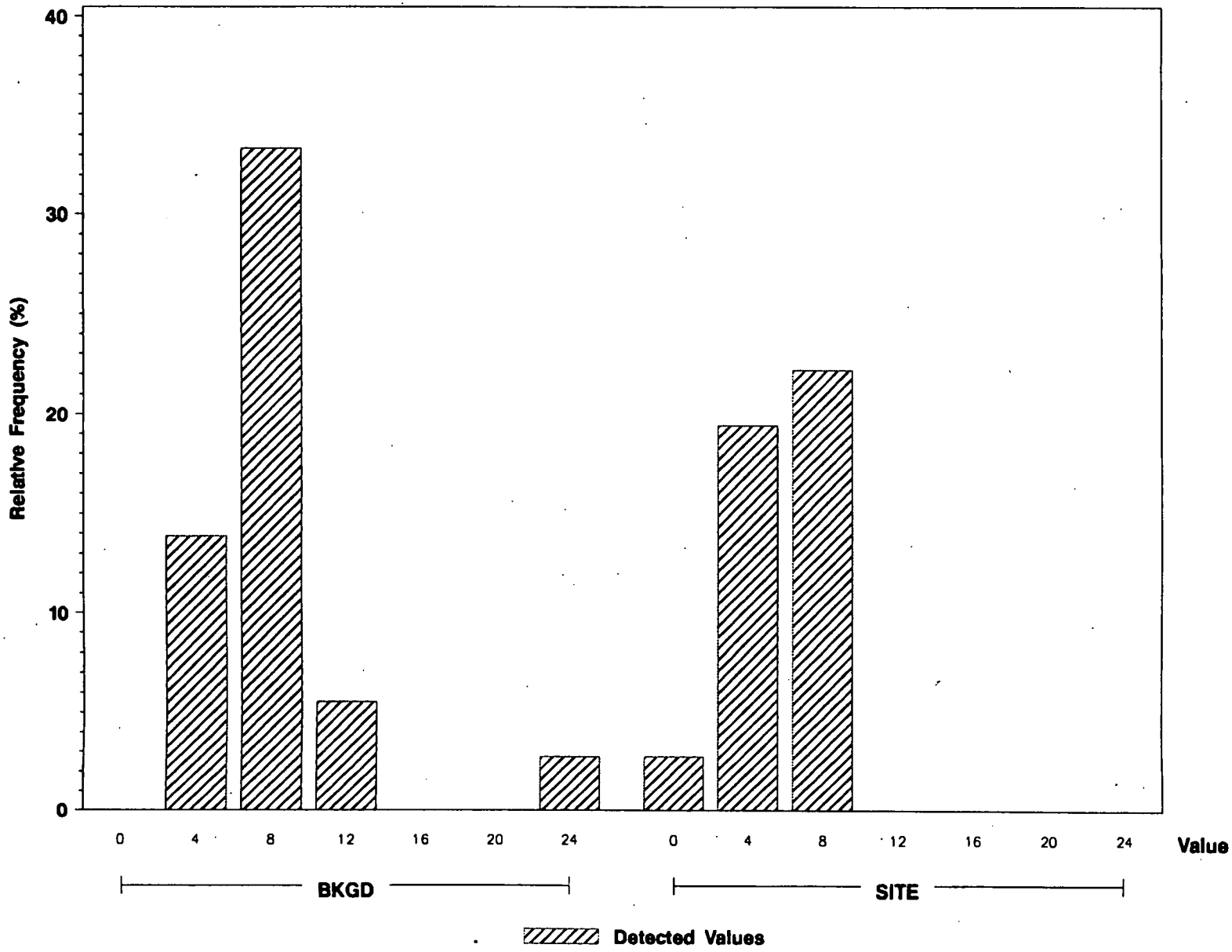
ANALYTE = COPPER



# Background vs IHSS 203 Frequency Histogram

## COBALT (mg/Kg) in Surface Soils (0 – 10 inches)

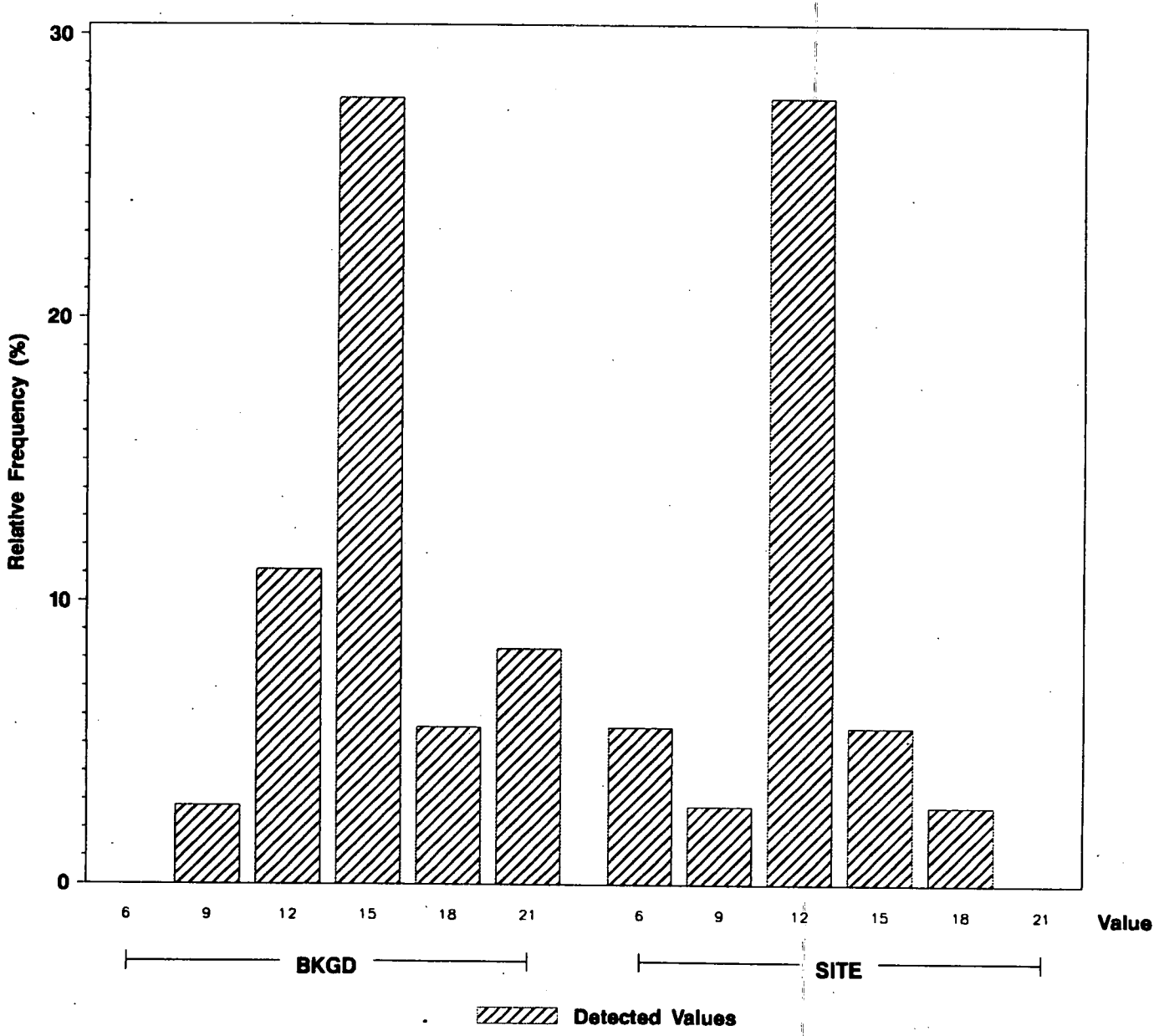
ANALYTE = COBALT



# Background vs IHSS 203 Frequency Histogram

## CHROMIUM (mg/Kg) in Surface Soils (0 – 10 inches)

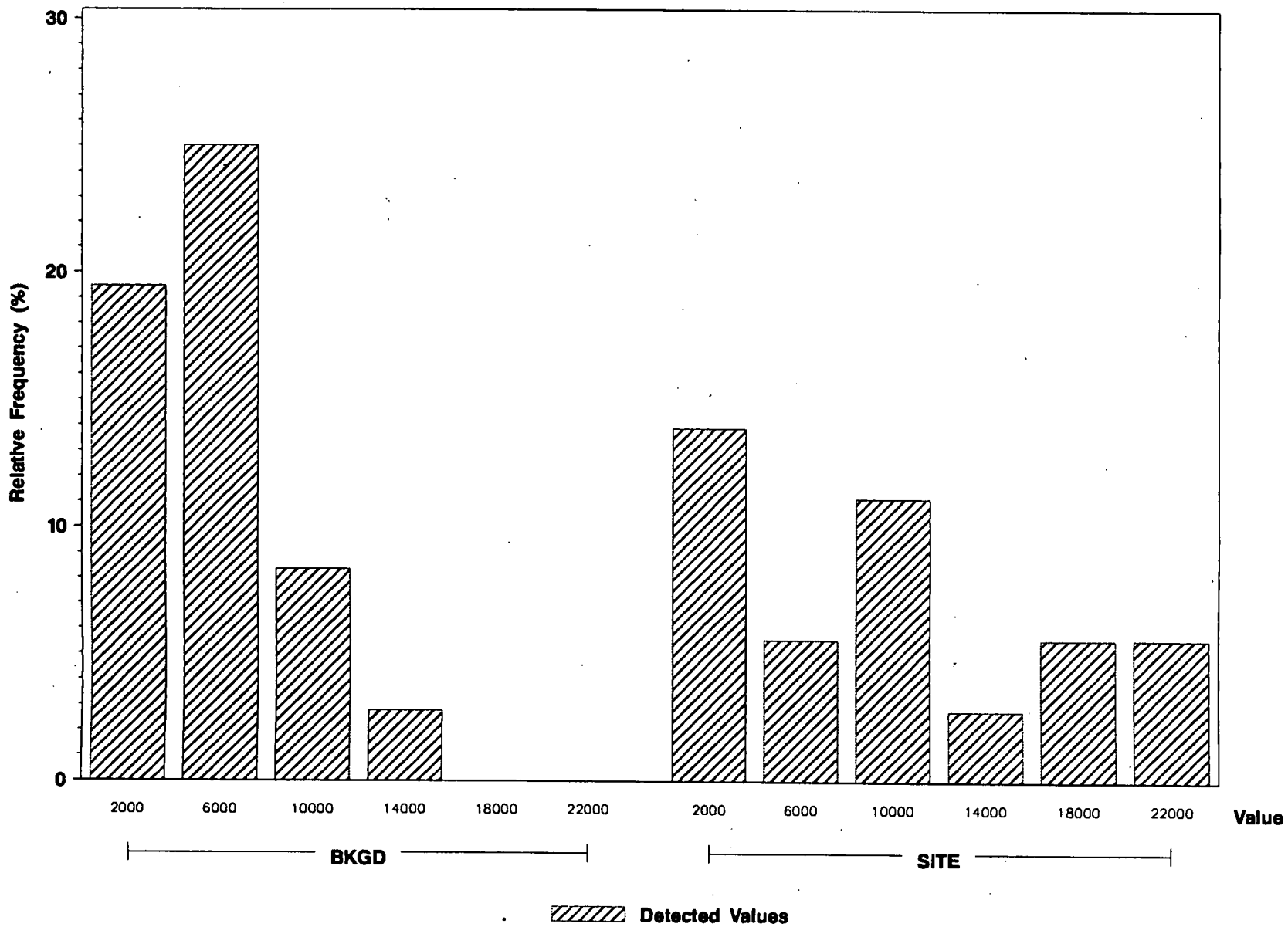
ANALYTE = CHROMIUM



# Background vs IHSS 203 Frequency Histogram

## CALCIUM (mg/Kg) in Surface Soils (0 – 10 inches)

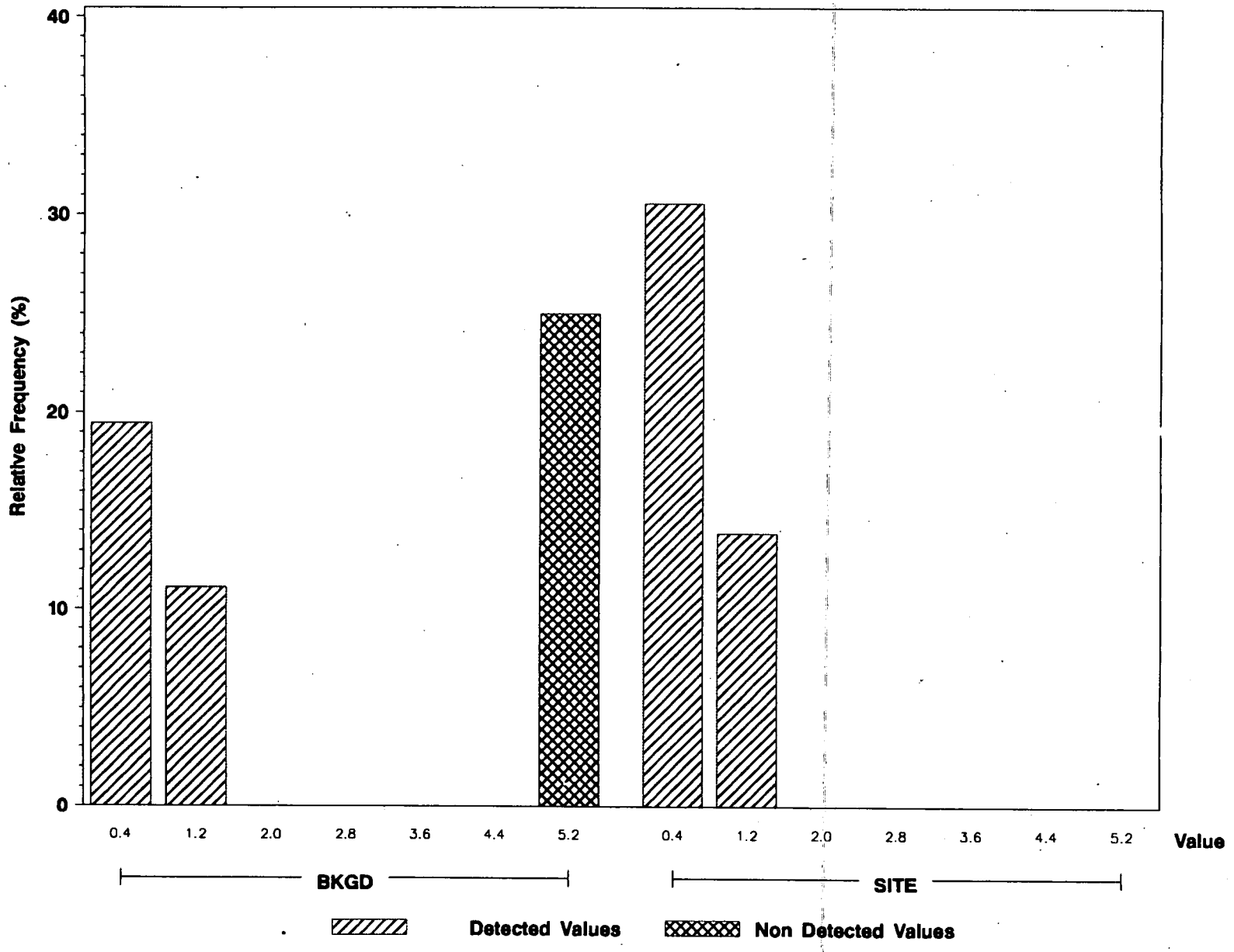
ANALYTE = CALCIUM



# Background vs IHSS 203 Frequency Histogram

## BERYLLIUM (mg/Kg) in Surface Soils (0 – 10 inches)

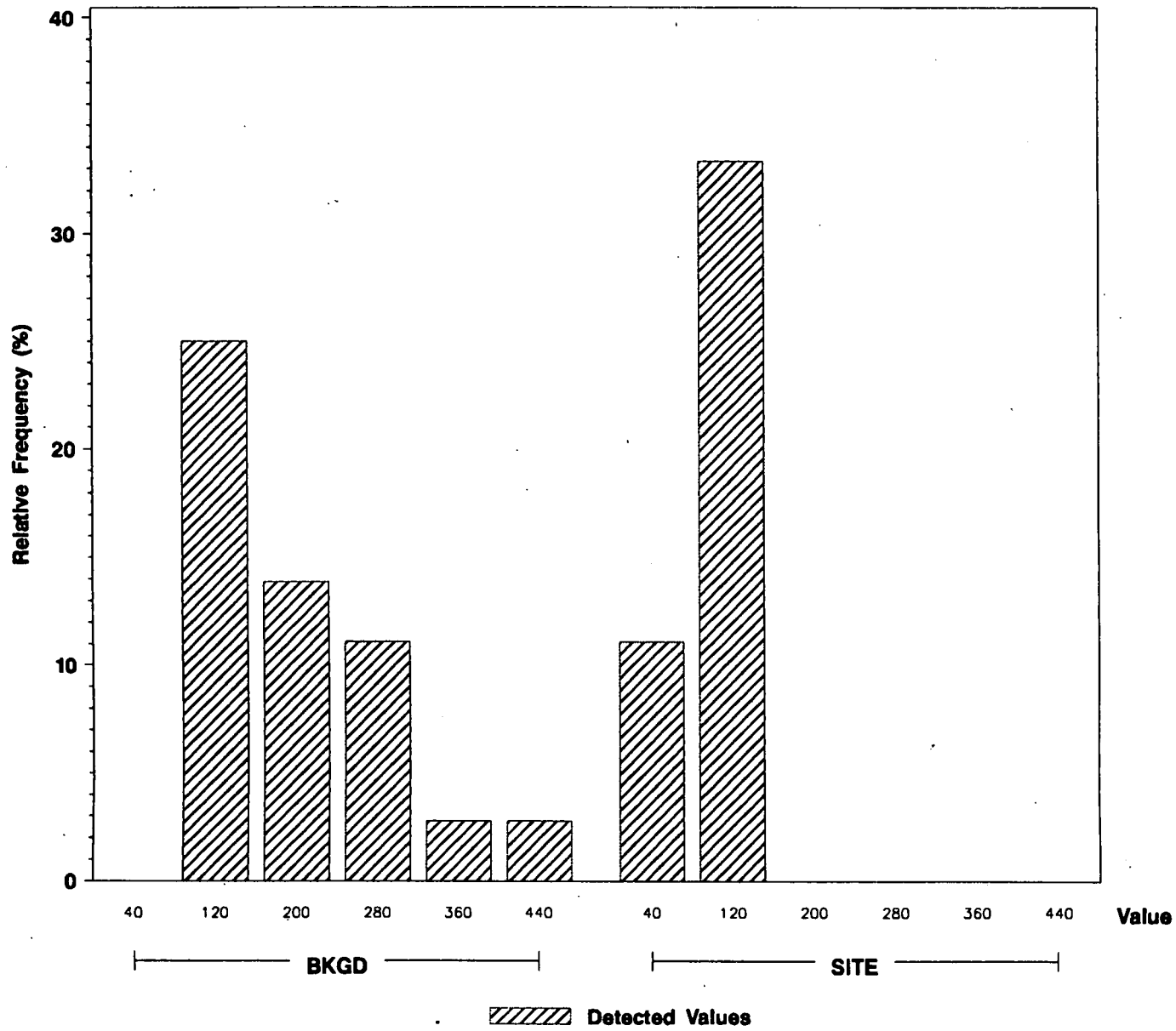
ANALYTE = BERYLLIUM



# Background vs IHSS 203 Frequency Histogram

## BARIUM (mg/Kg) in Surface Soils (0–10 inches)

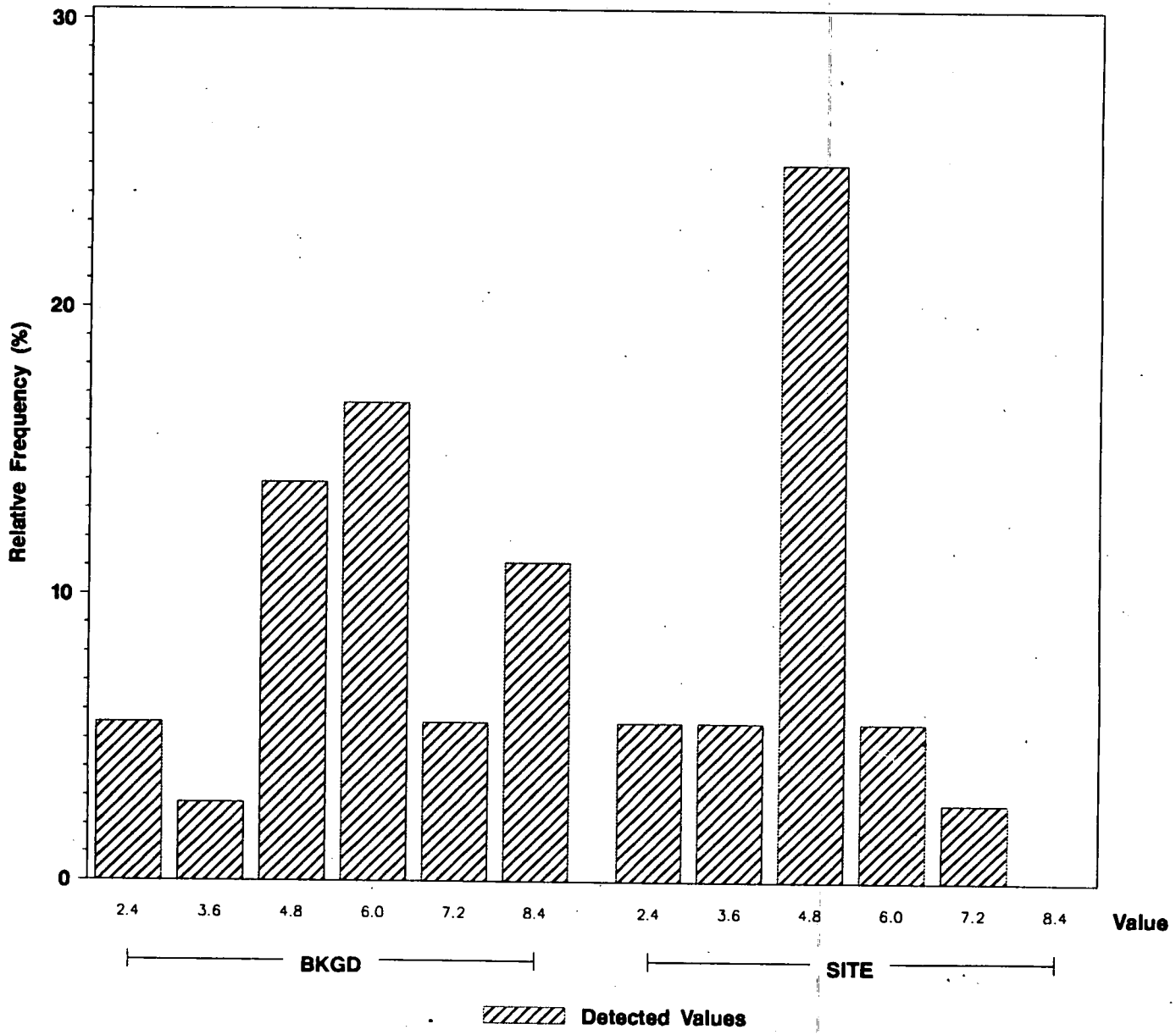
ANALYTE = BARIUM



# Background vs IHSS 203 Frequency Histogram

## ARSENIC (mg/Kg) in Surface Soils (0 – 10 inches)

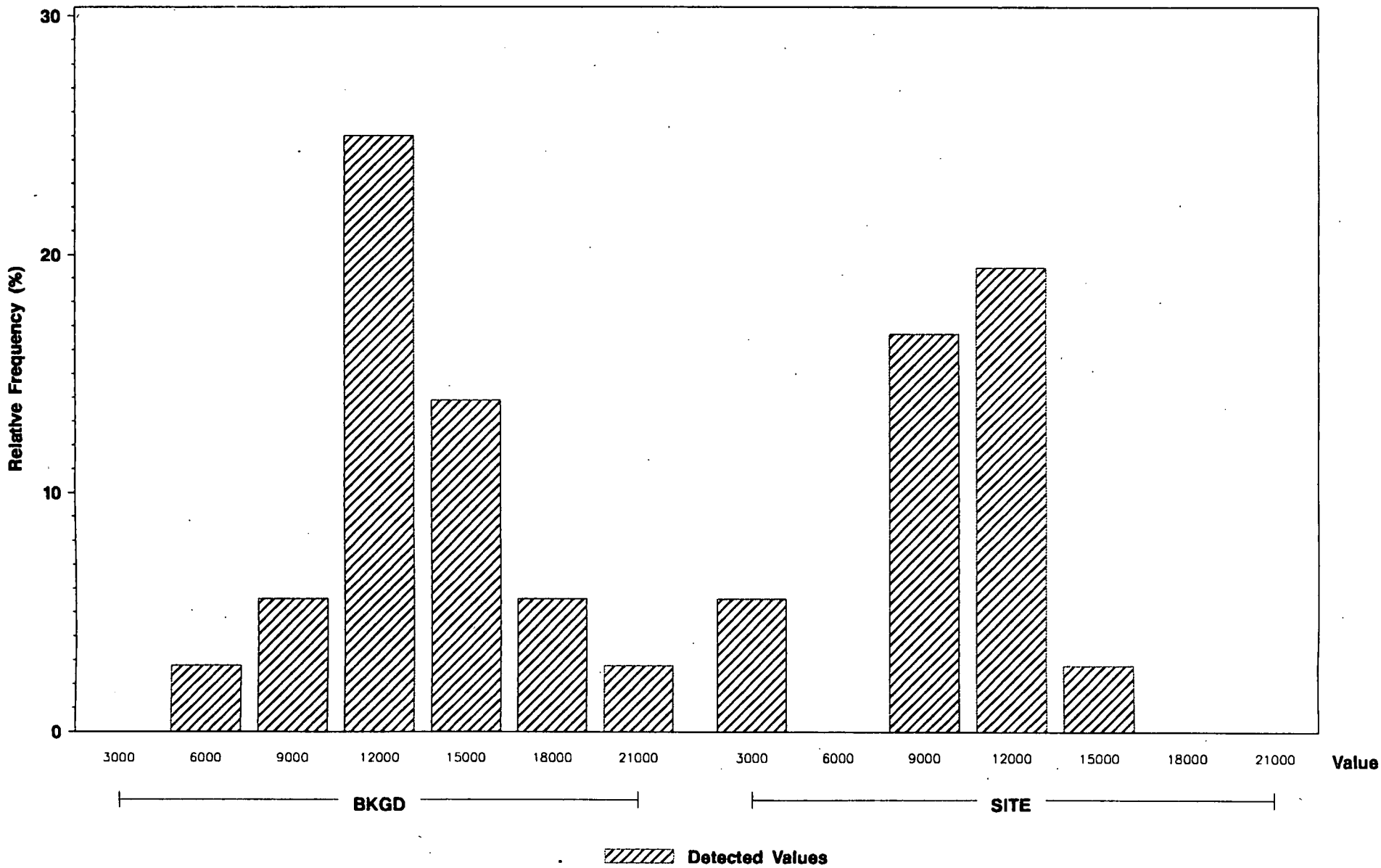
ANALYTE = ARSENIC



# Background vs IHSS 203 Frequency Histogram

## ALUMINUM (mg/Kg) in Surface Soils (0–10 inches)

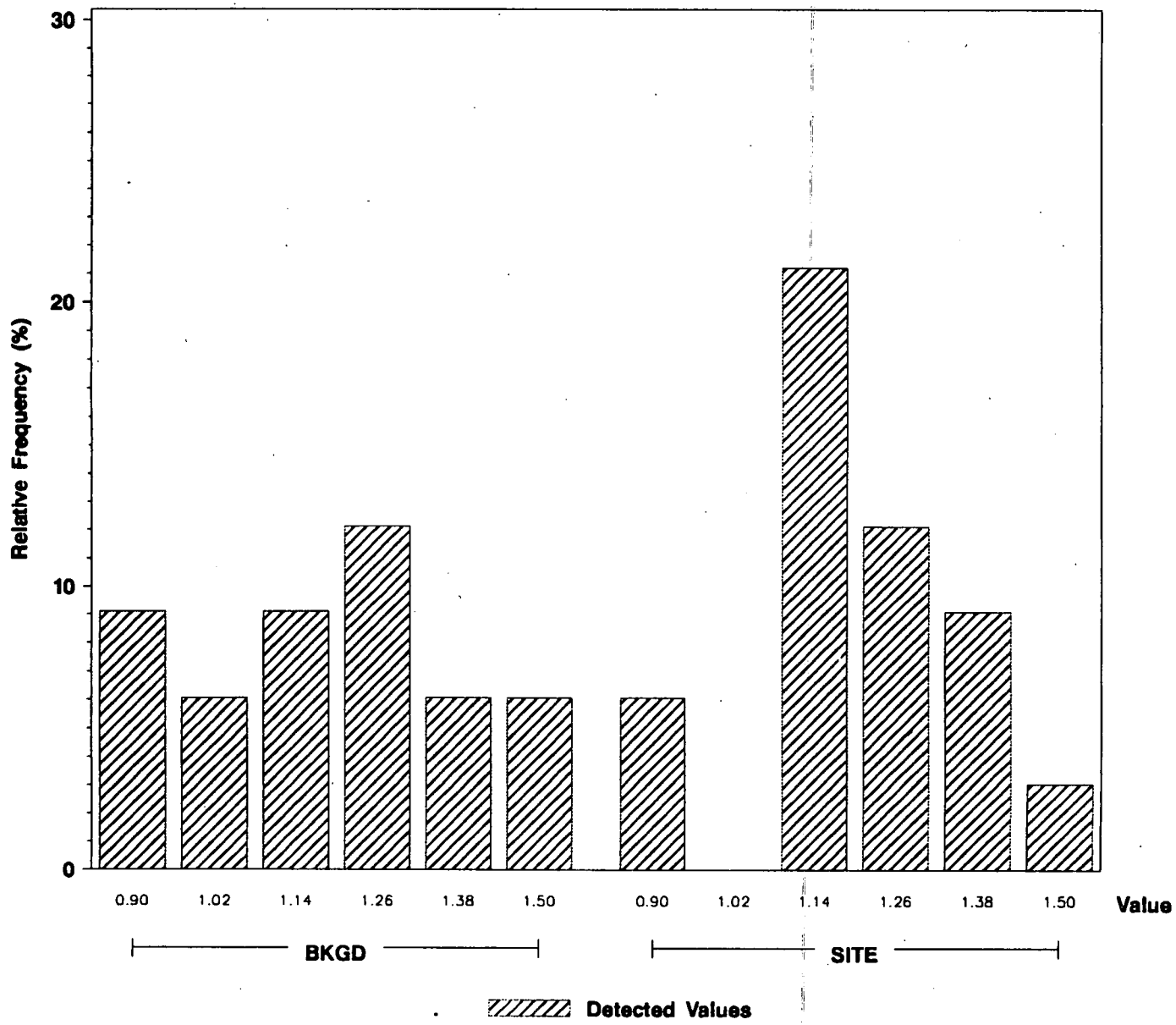
ANALYTE = ALUMINUM



# Background vs IHSS 203 Frequency Histogram

## URANIUM-238 (pCi/g) in Surface Soils (0-10 inches)

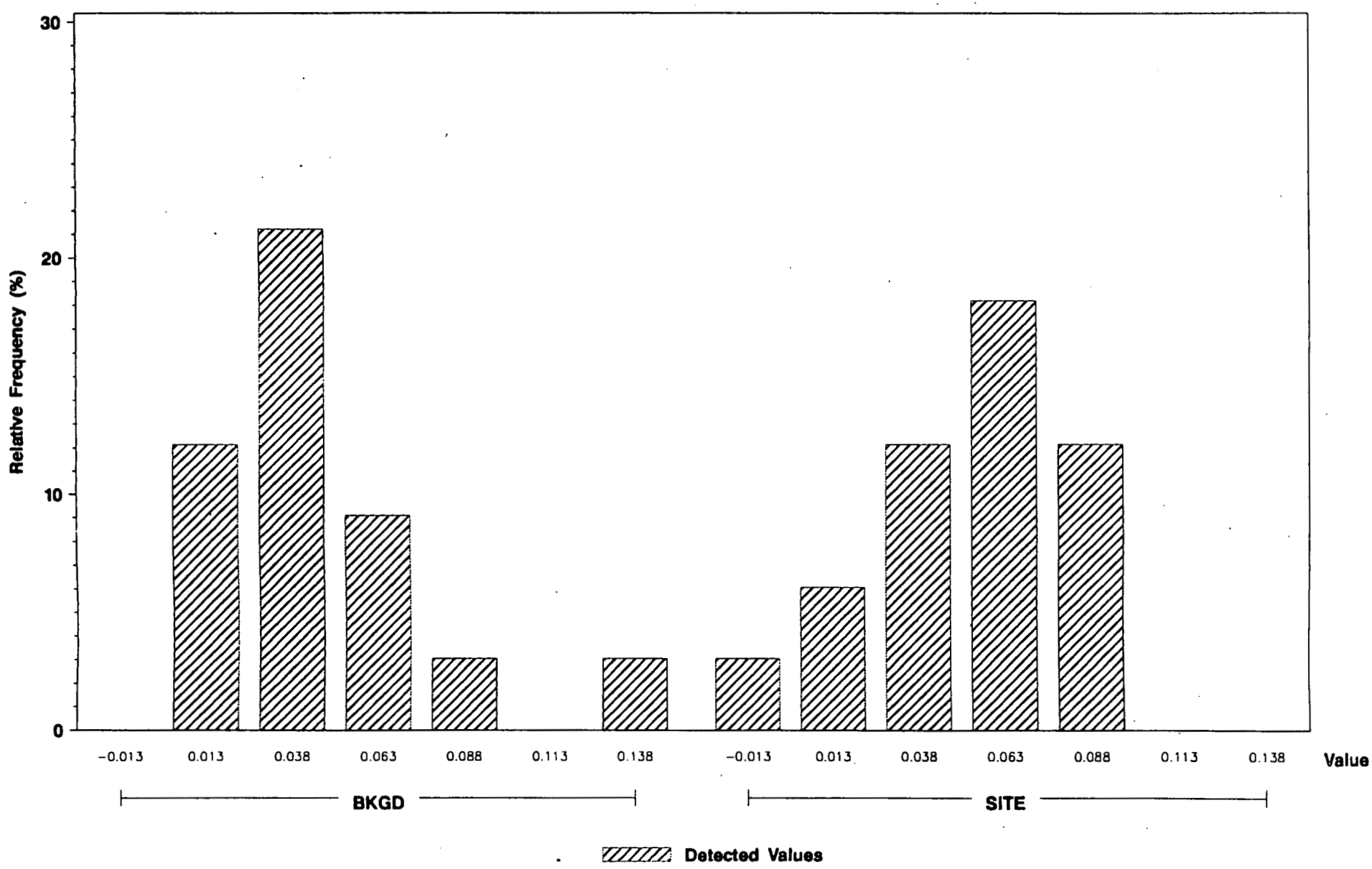
ANALYTE = URANIUM-238



# Background vs IHSS 203 Frequency Histogram

## URANIUM-235 (pCi/g) in Surface Soils (0-10 inches)

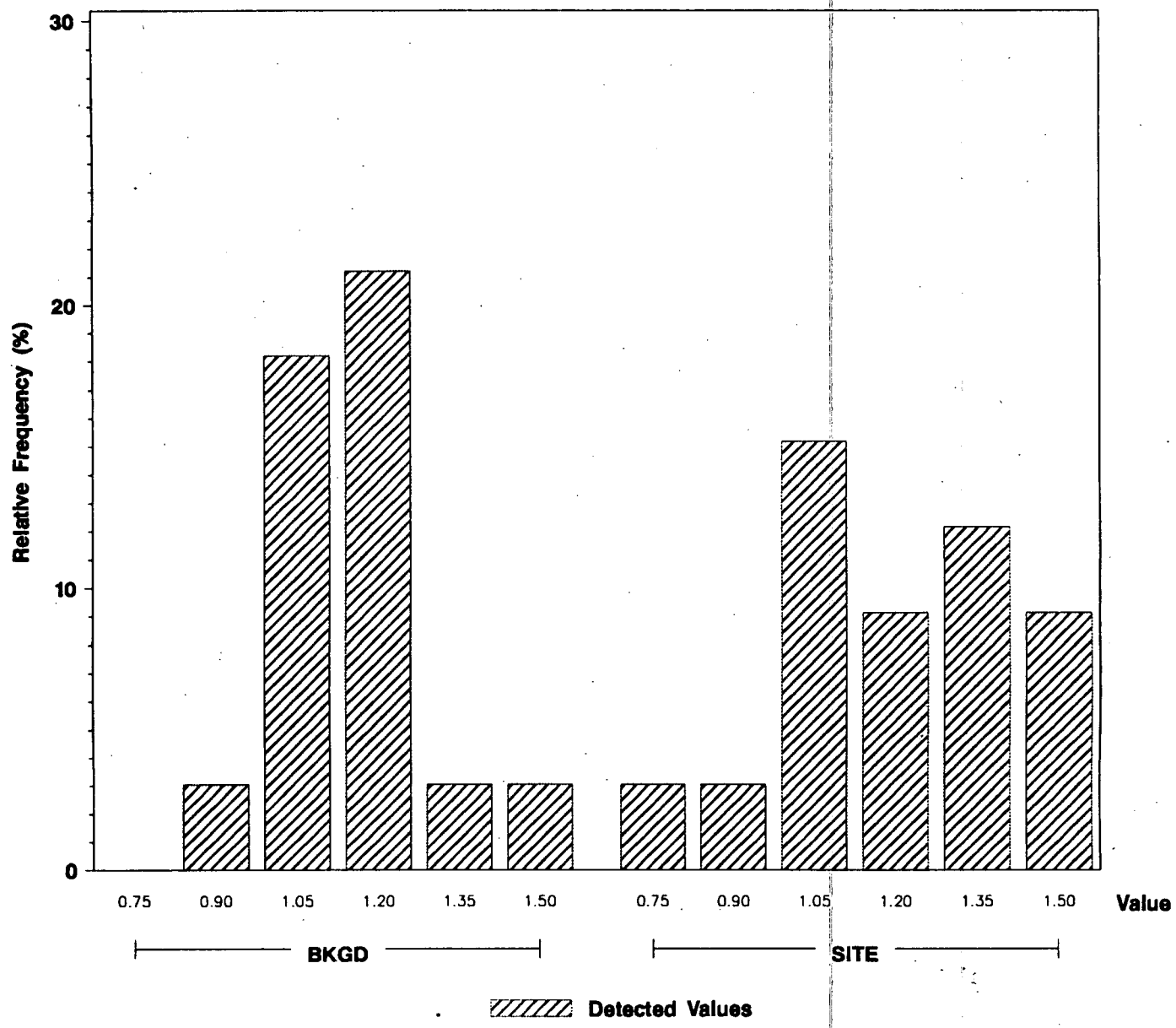
ANALYTE=URANIUM-235



# Background vs IHSS 203 Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Surface Soils (0 – 10 inches)

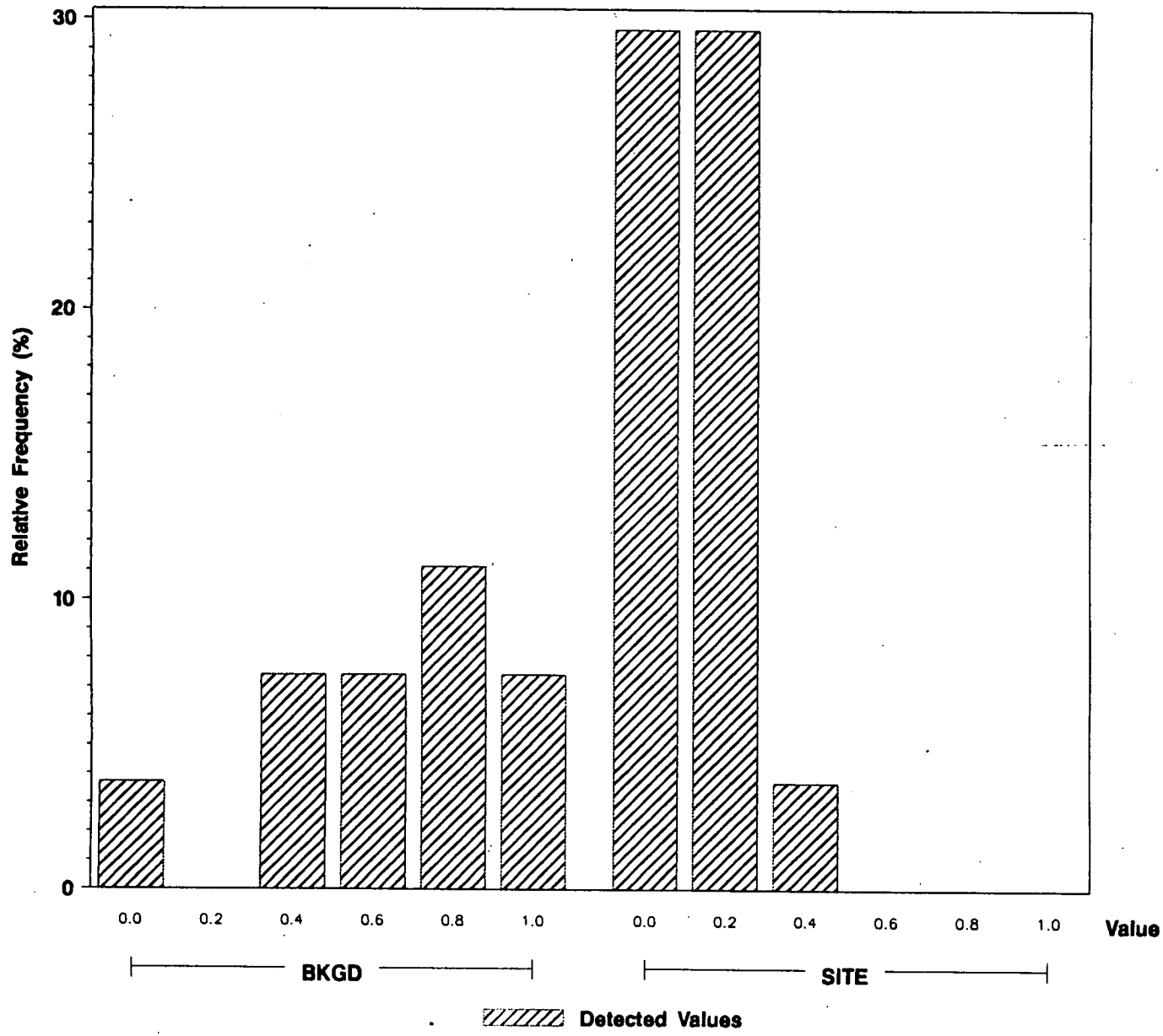
ANALYTE = URANIUM – 233, – 234



# Background vs IHSS 203 Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Surface Soils (0 – 10 inches)

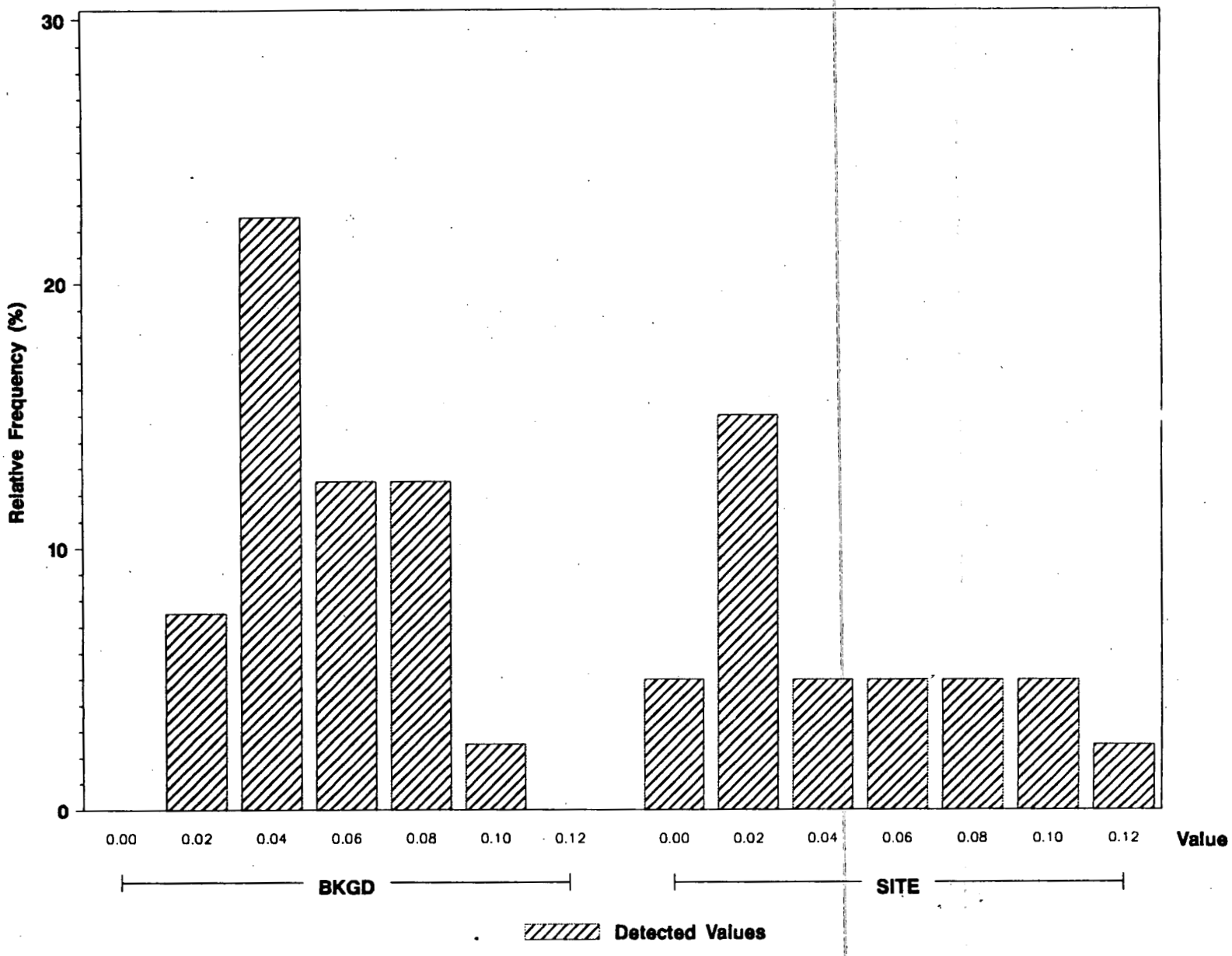
ANALYTE = STRONTIUM – 89,90



# Background vs IHSS 203 Frequency Histogram

## PLUTONIUM – 239/240 (pCi/g) in Surface Soils (0 – 10 inches)

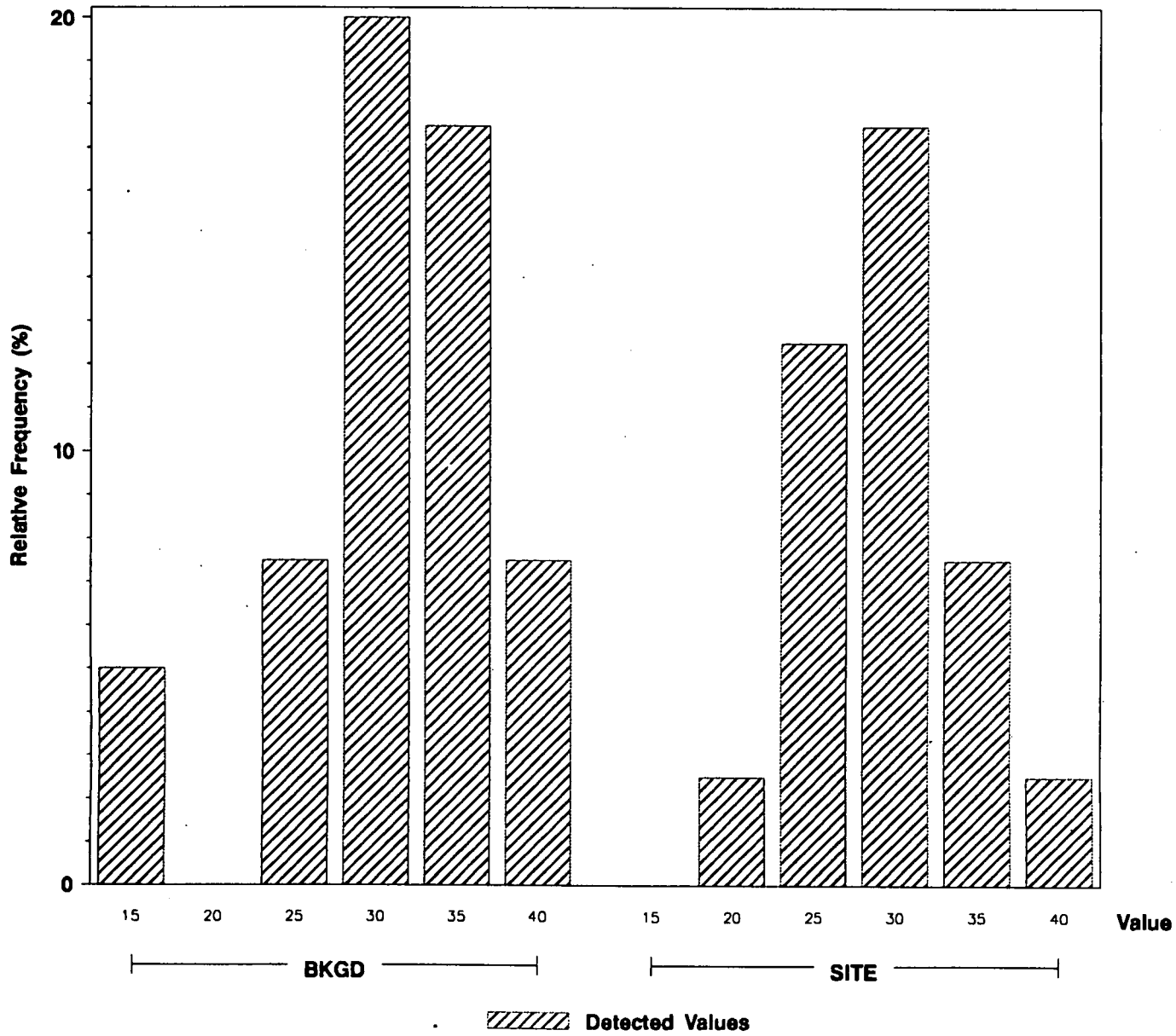
ANALYTE = PLUTONIUM – 239/240



# Background vs IHSS 203 Frequency Histogram

## GROSS BETA (pCi/g) in Surface Soils (0 – 10 inches)

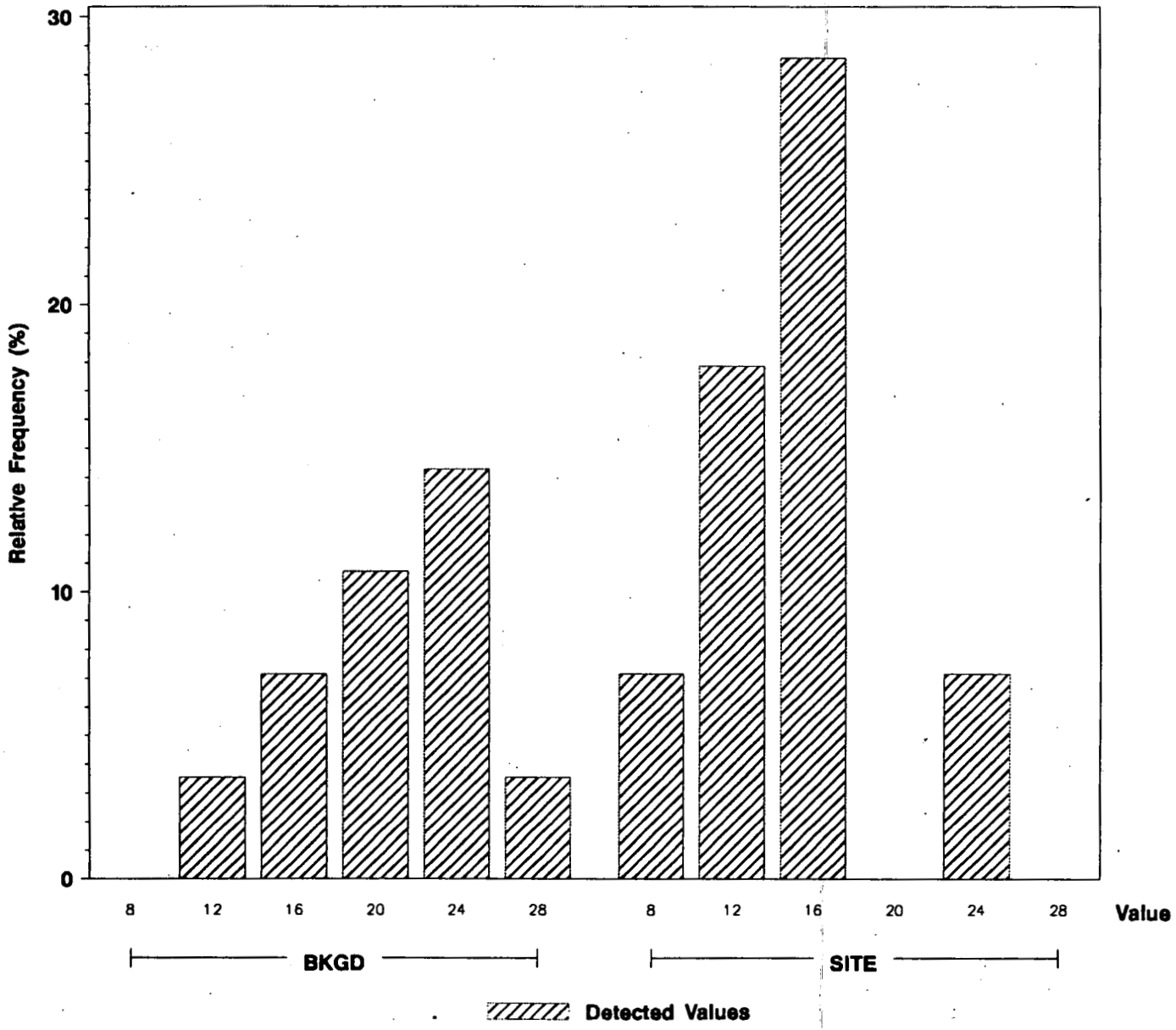
ANALYTE = GROSS BETA



# Background vs IHSS 203 Frequency Histogram

## GROSS ALPHA (pCi/g) in Surface Soils (0–10 inches)

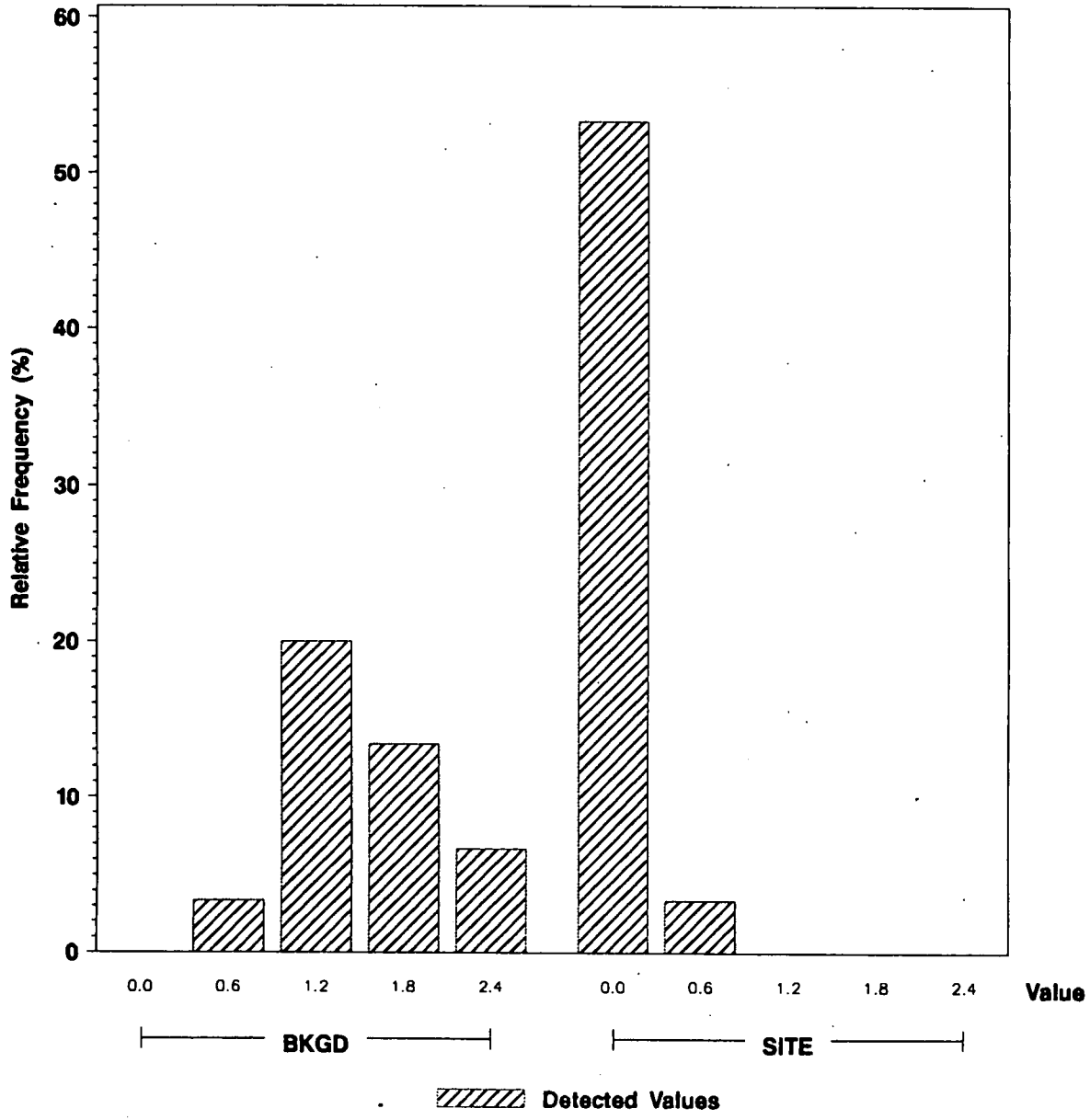
ANALYTE=GROSS ALPHA



# Background vs IHSS 203 Frequency Histogram

## CESIUM – 137 (pCi/g) in Surface Soils (0 – 10 inches)

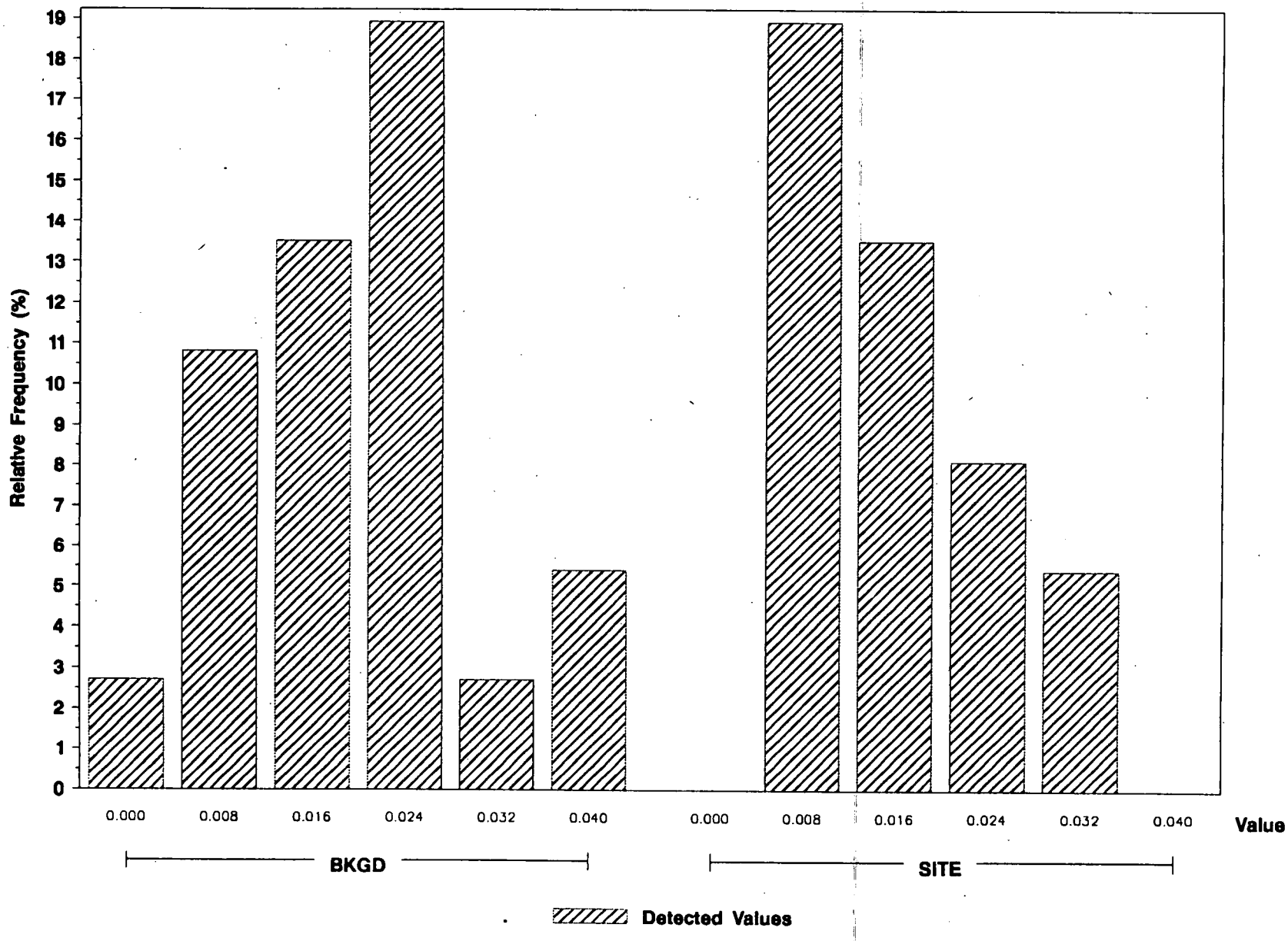
ANALYTE = CESIUM – 137



# Background vs IHSS 203 Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Surface Soils (0 – 10 inches)

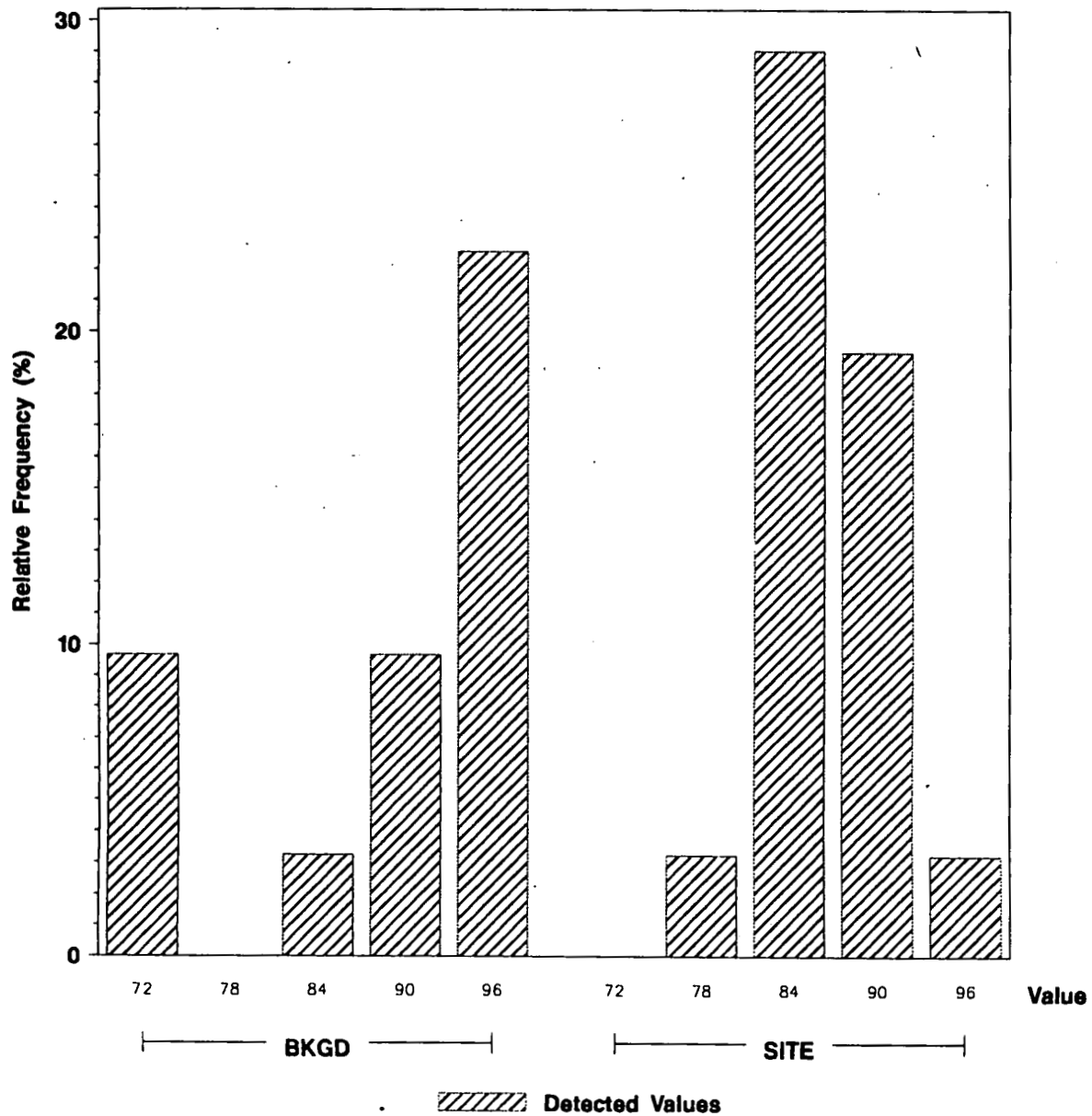
ANALYTE = AMERICIUM – 241



# Background vs IHSS 203 Frequency Histogram

## % SOLIDS in Surface Soils (0 – 10 inches)

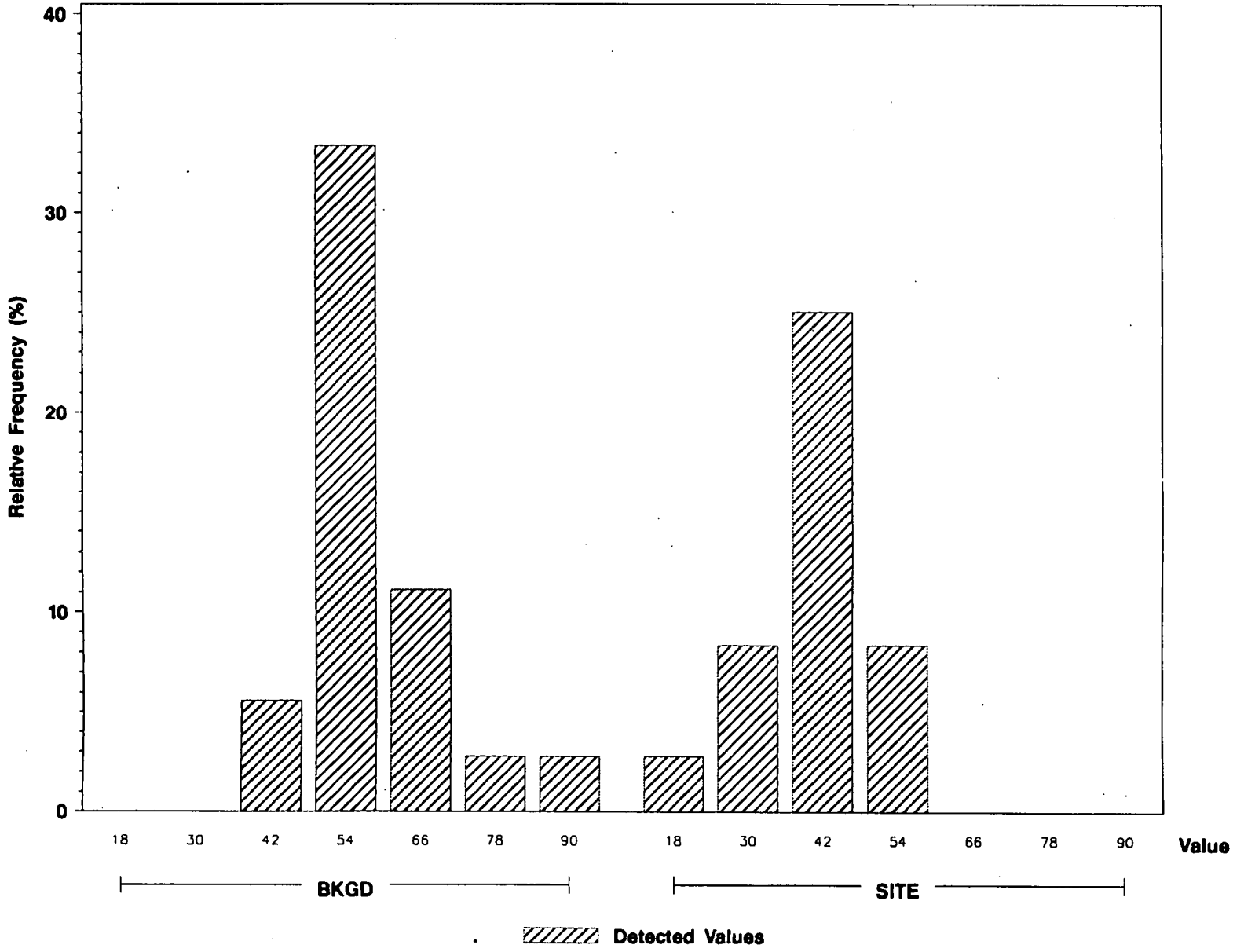
ANALYTE = % SOLIDS



# Background vs IHSS 203 Frequency Histogram

## ZINC (mg/Kg) in Surface Soils (0–10 inches)

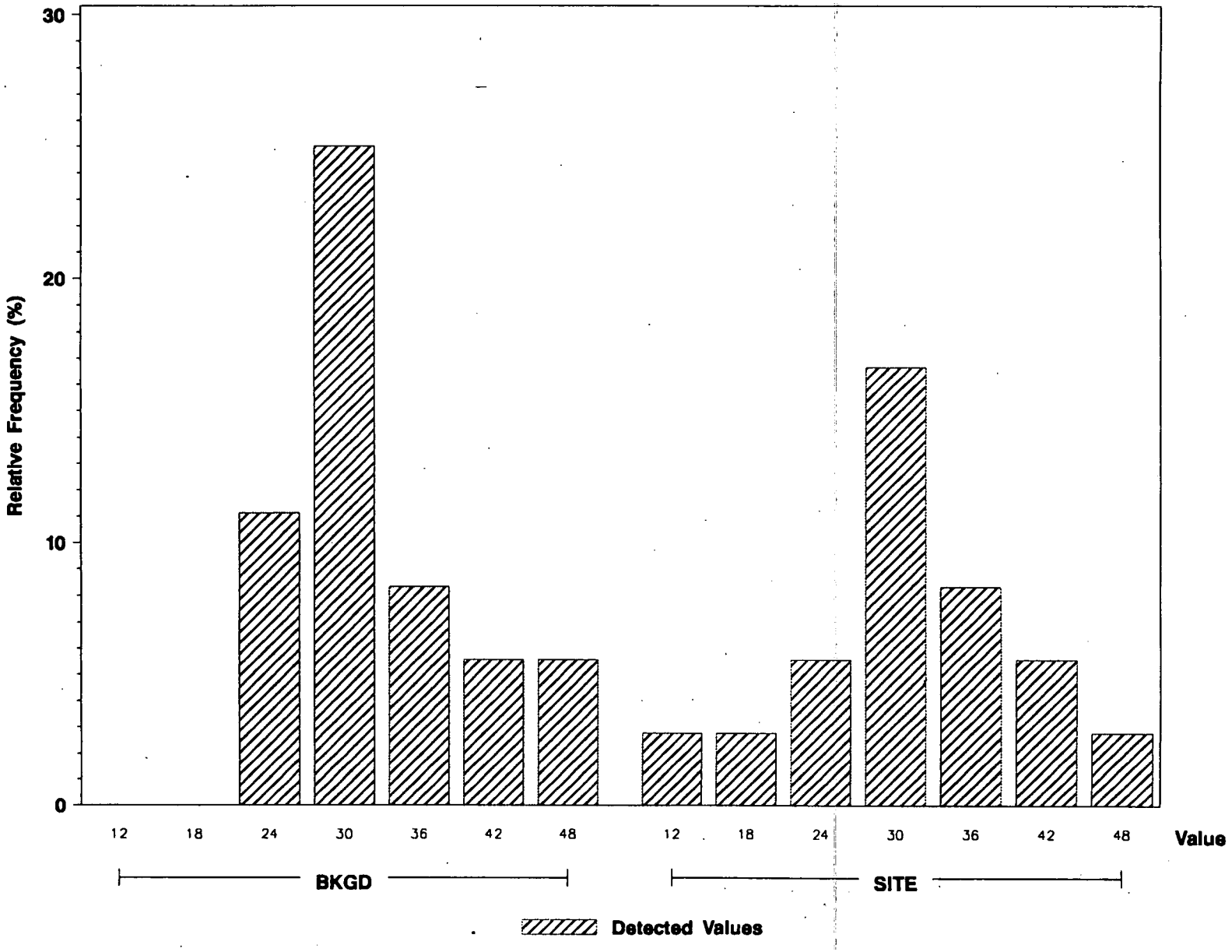
ANALYTE=ZINC



# Background vs IHSS 203 Frequency Histogram

## VANADIUM (mg/Kg) in Surface Soils (0–10 inches)

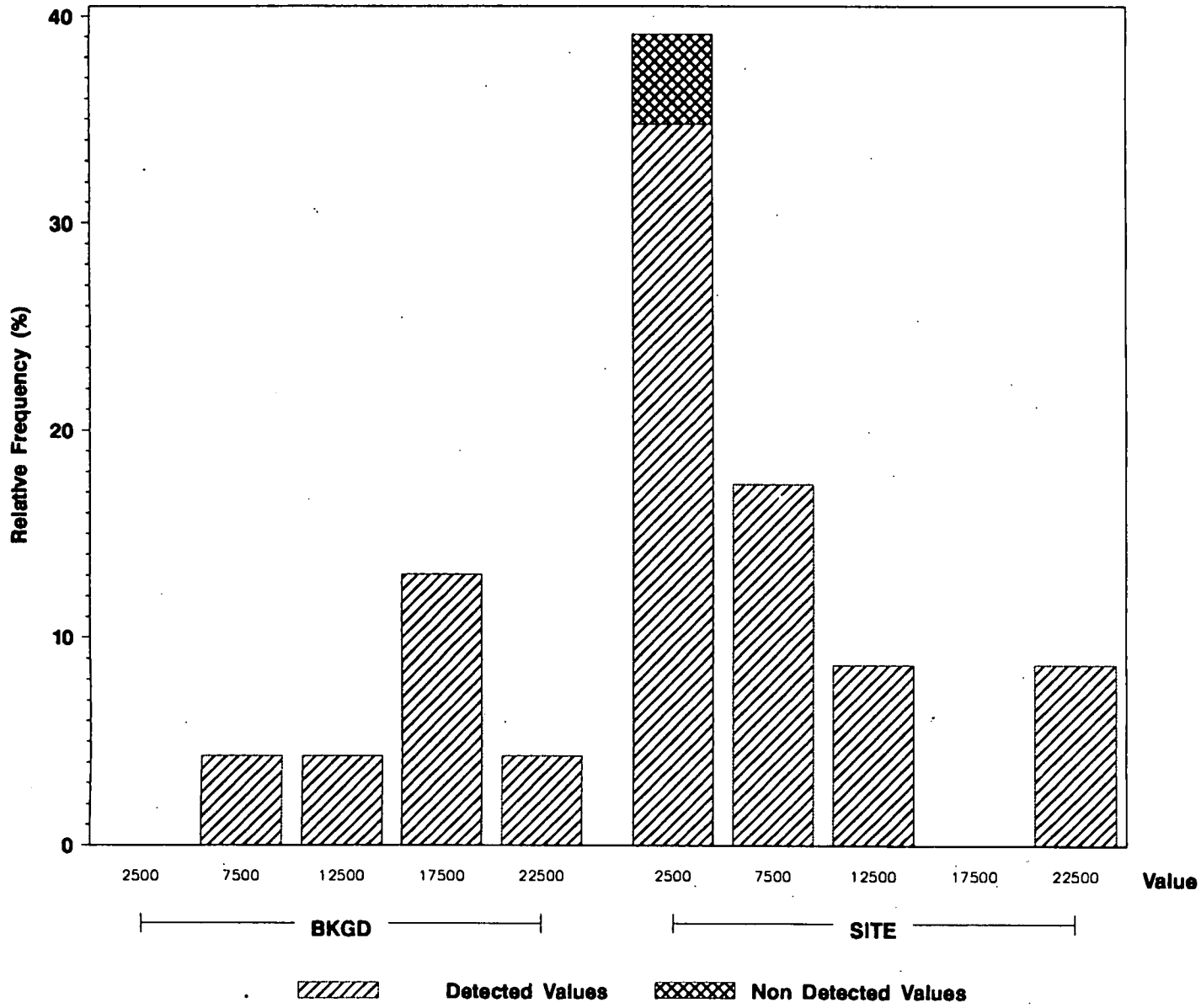
ANALYTE = VANADIUM



# Background vs IHSS 203 Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Surface Soils (0–10 inches)

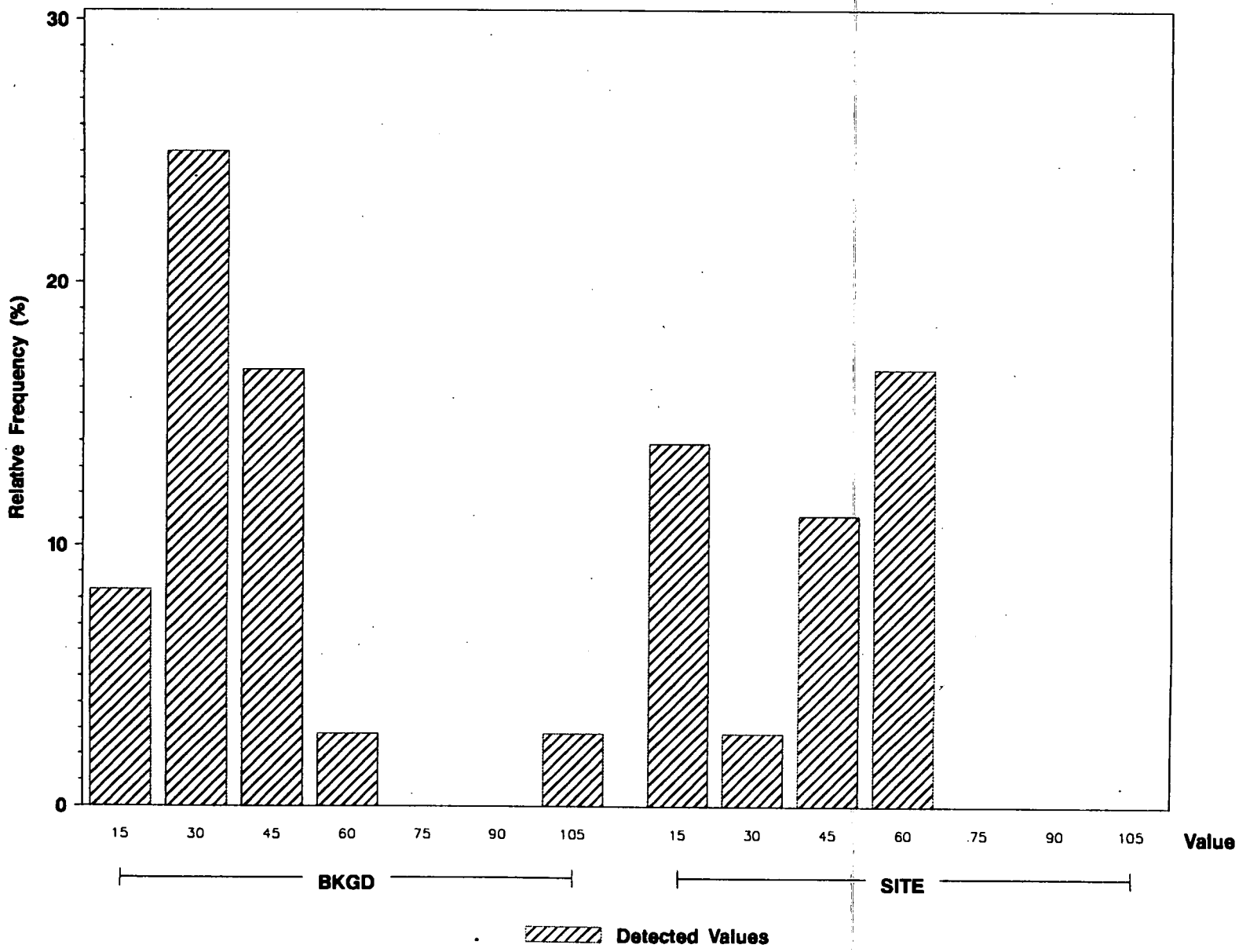
ANALYTE=TOTAL ORGANIC CARBON



# Background vs IHSS 203 Frequency Histogram

## STRONTIUM (mg/Kg) in Surface Soils (0–10 inches)

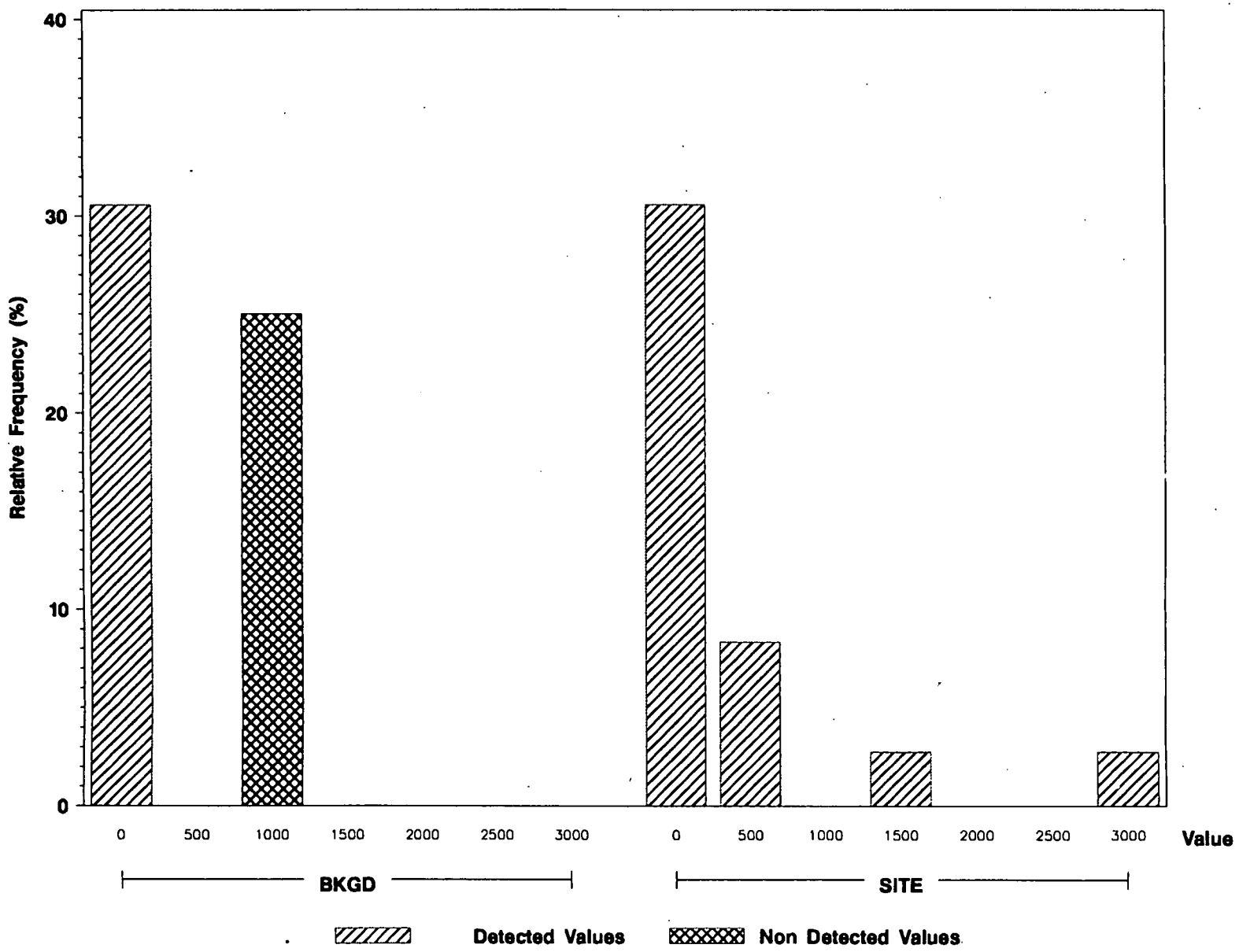
ANALYTE = STRONTIUM



# Background vs IHSS 203 Frequency Histogram

## SODIUM (mg/Kg) in Surface Soils (0–10 inches)

ANALYTE=SODIUM



# Surface Soils

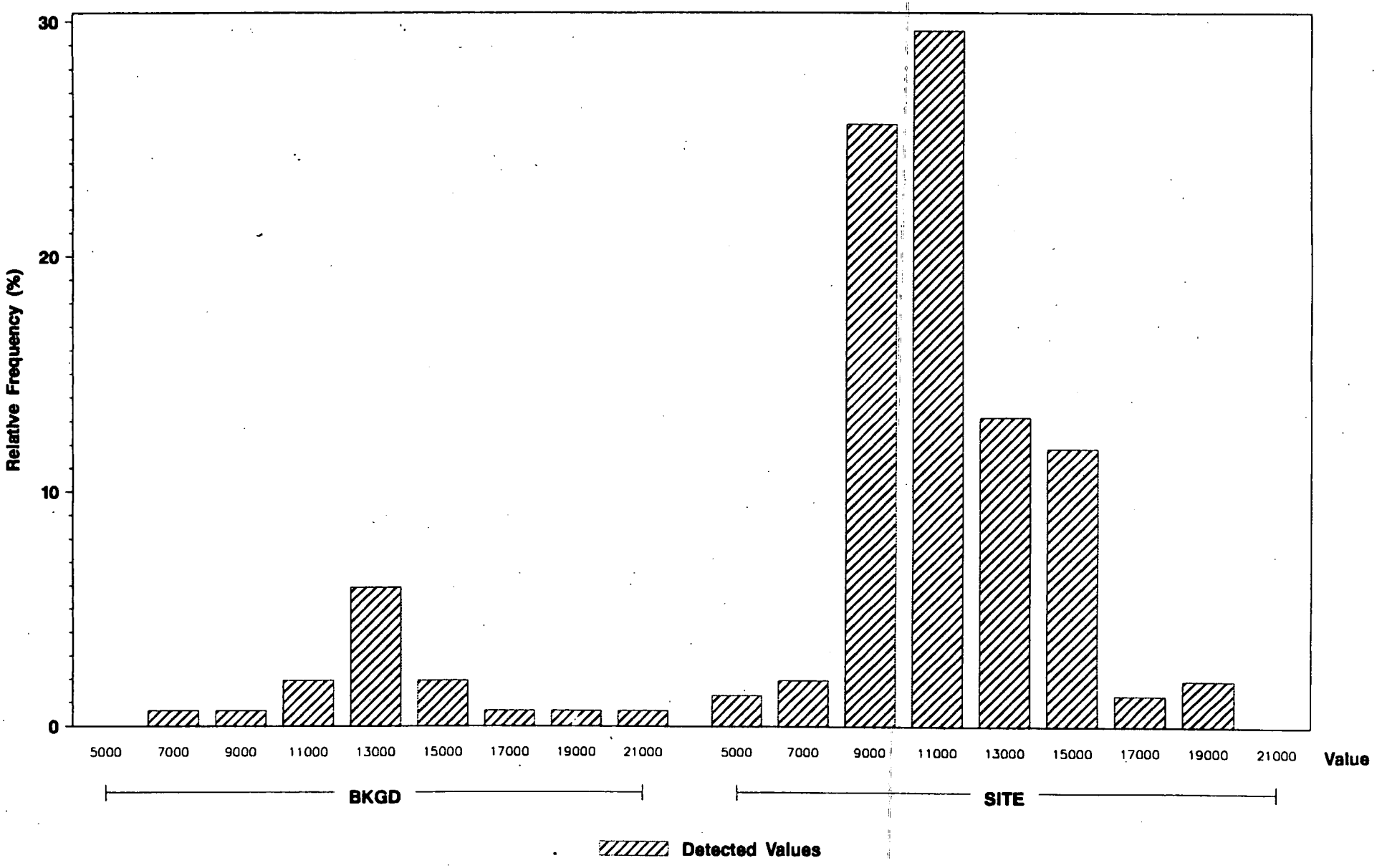
# Background vs. East Landfill Pond

# (0 to 2 inches)

# Background vs East Landfill Pond Frequency Histogram

## ALUMINUM (mg/Kg) in Surface Soils (0–2 inches)

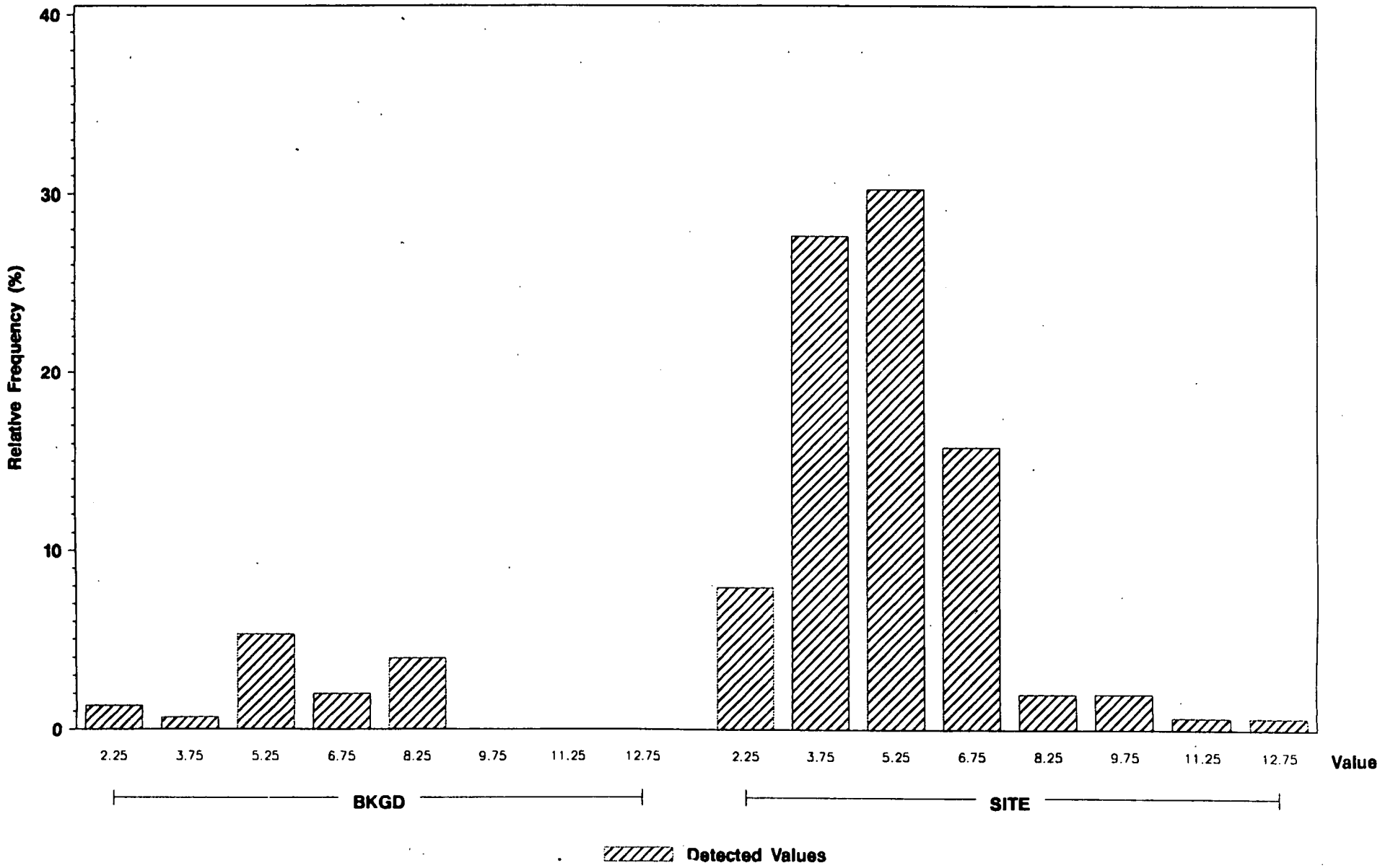
ANALYTE = ALUMINUM



# Background vs East Landfill Pond Frequency Histogram

## ARSENIC (mg/Kg) in Surface Soils (0 – 2 inches)

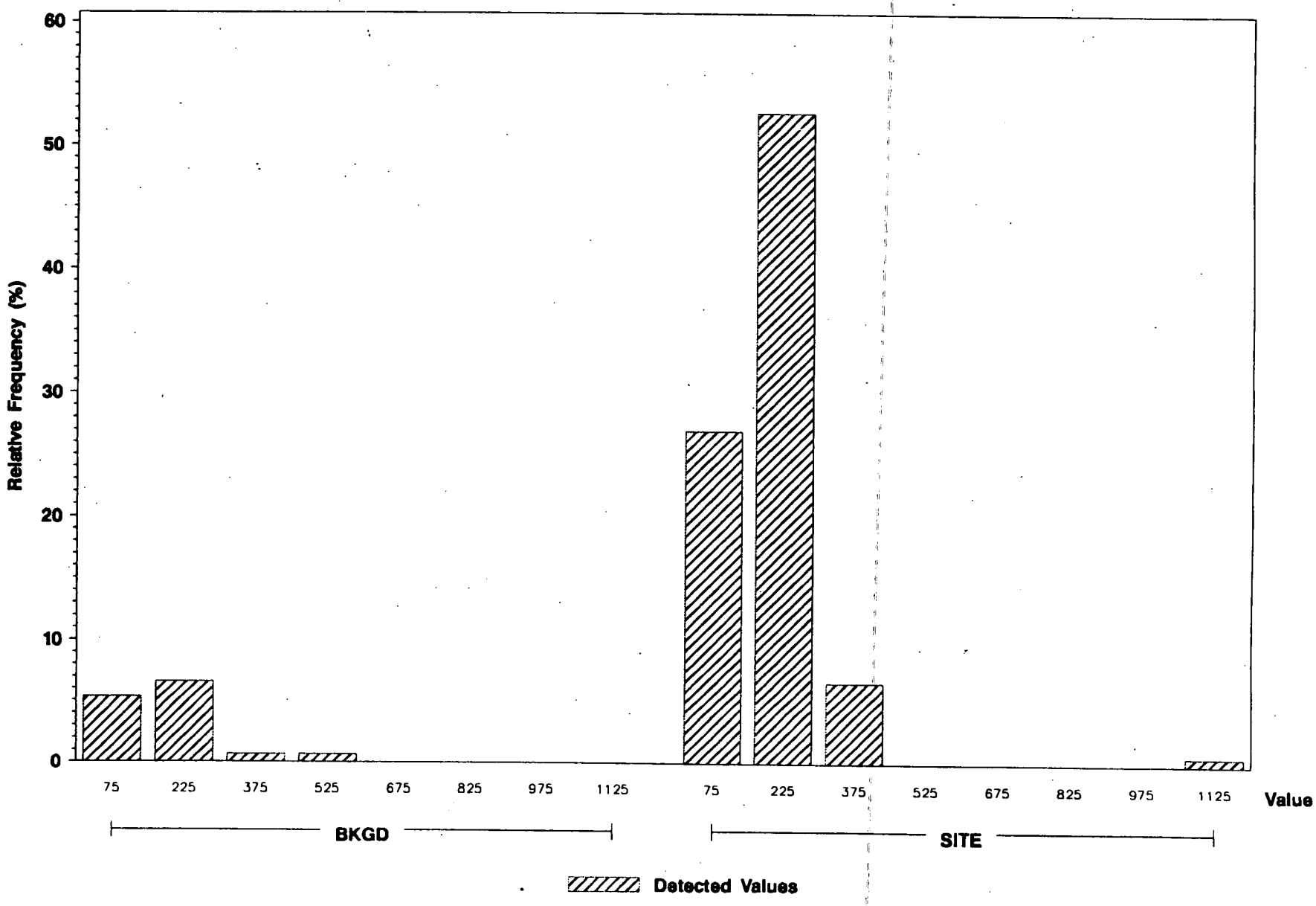
ANALYTE = ARSENIC



# Background vs East Landfill Pond Frequency Histogram

## BARIUM (mg/Kg) in Surface Soils (0 – 2 inches)

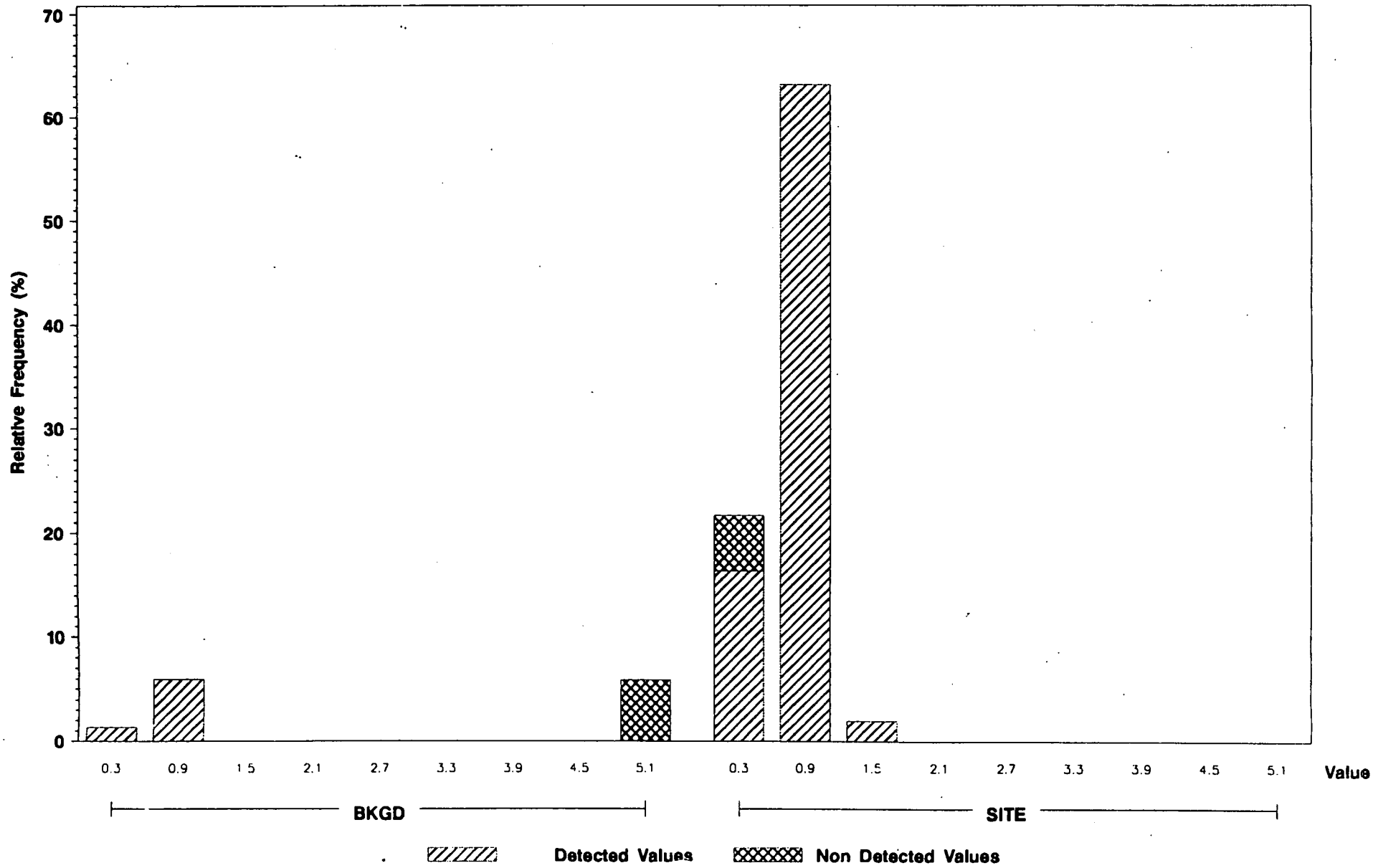
ANALYTE = BARIUM



# Background vs East Landfill Pond Frequency Histogram

## BERYLLIUM (mg/Kg) in Surface Soils (0 – 2 inches)

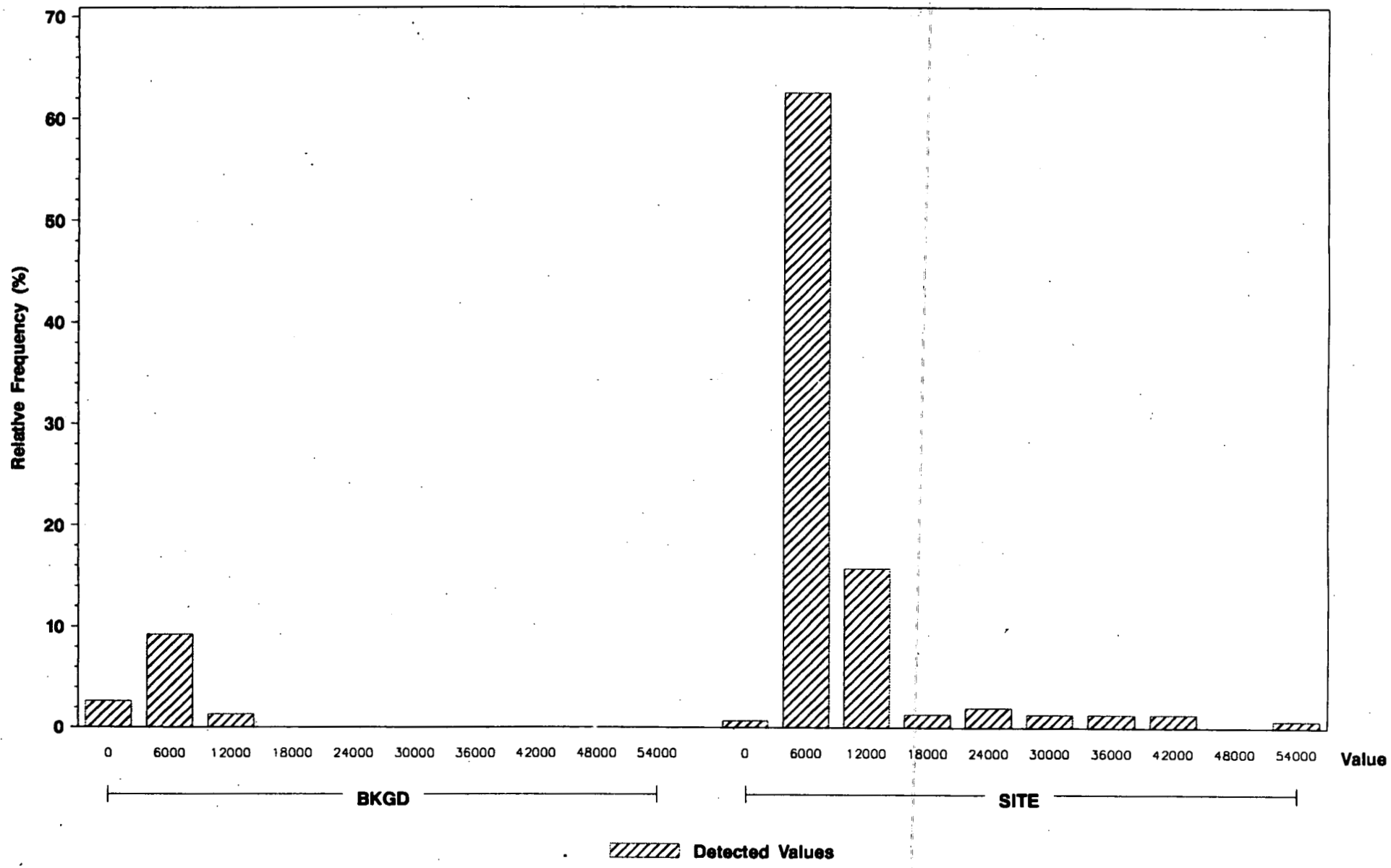
ANALYTE = BERYLLIUM



# Background vs East Landfill Pond Frequency Histogram

## CALCIUM (mg/Kg) in Surface Soils (0 – 2 inches)

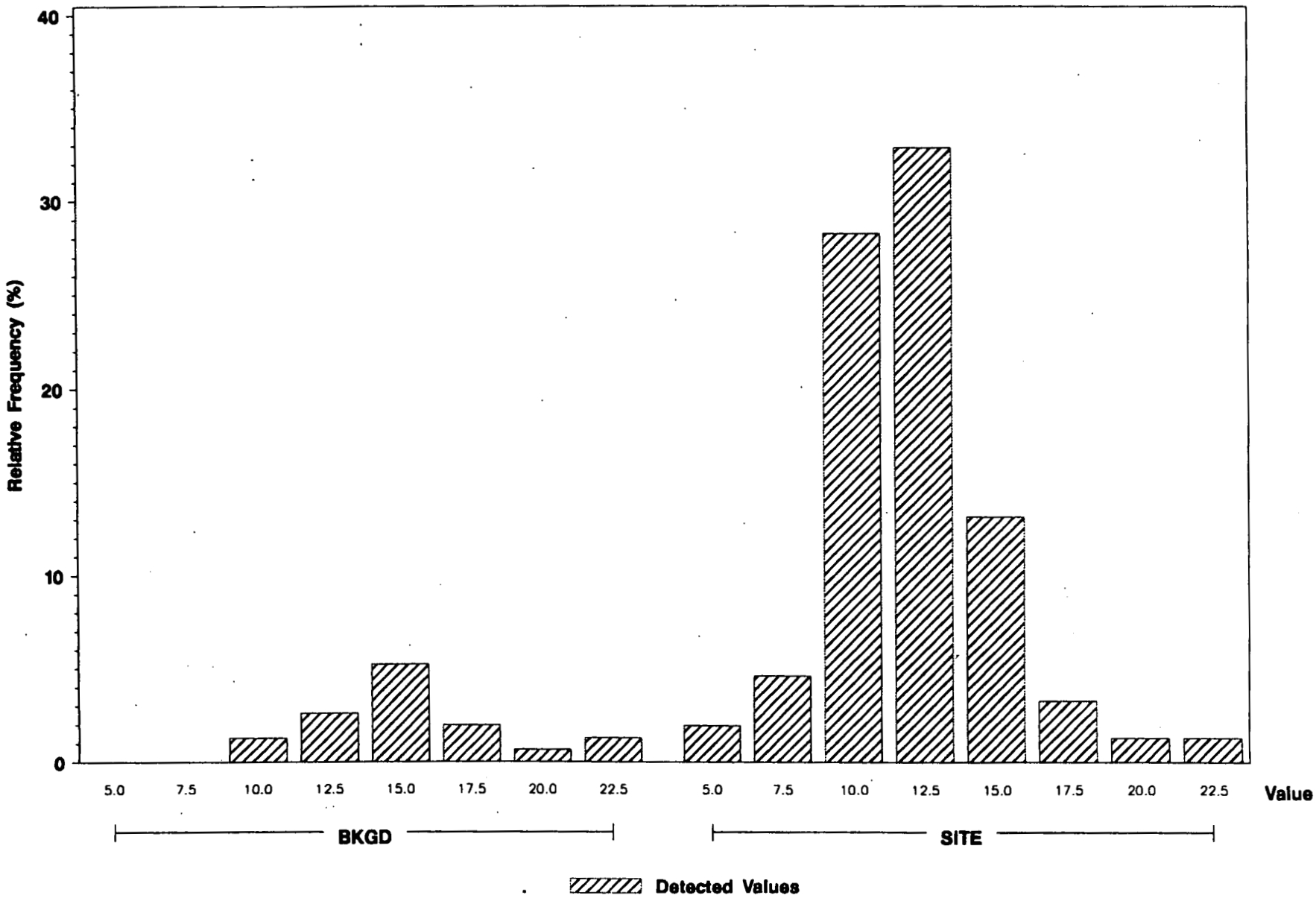
ANALYTE = CALCIUM



# Background vs East Landfill Pond Frequency Histogram

## CHROMIUM (mg/Kg) in Surface Soils (0 – 2 inches)

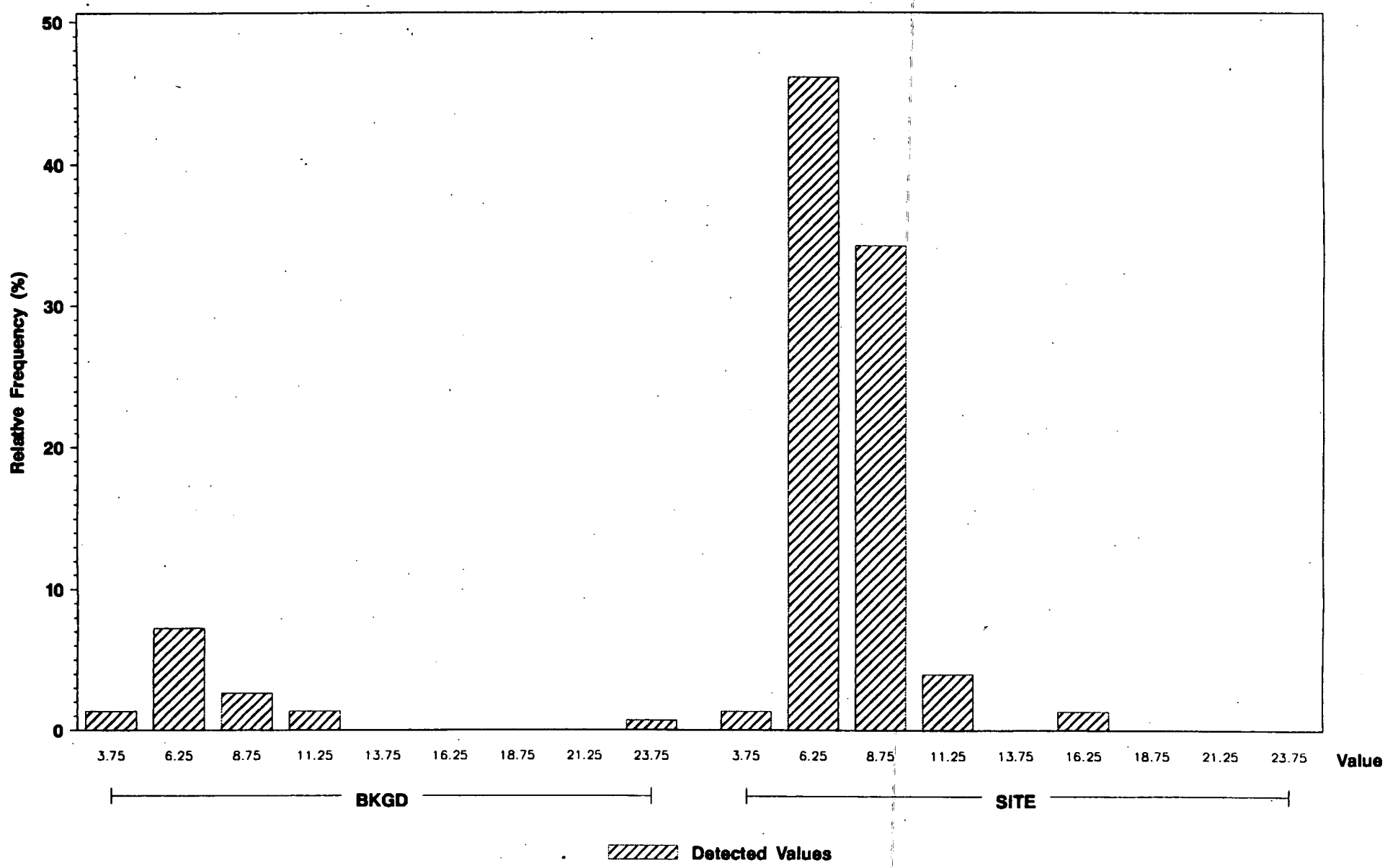
ANALYTE = CHROMIUM



# Background vs East Landfill Pond Frequency Histogram

## COBALT (mg/Kg) in Surface Soils (0 – 2 inches)

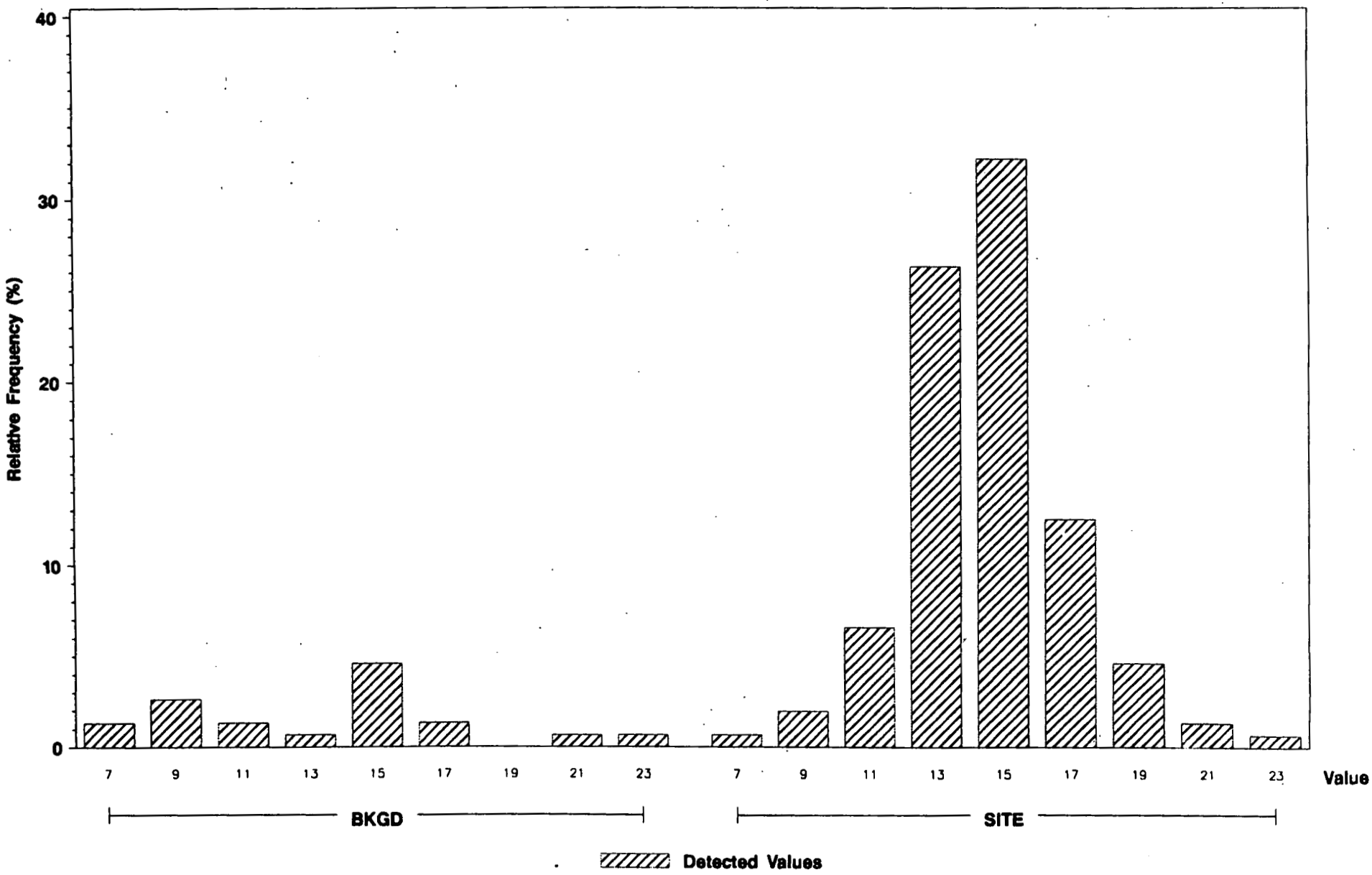
ANALYTE = COBALT



# Background vs East Landfill Pond Frequency Histogram

## COPPER (mg/Kg) in Surface Soils (0 – 2 inches)

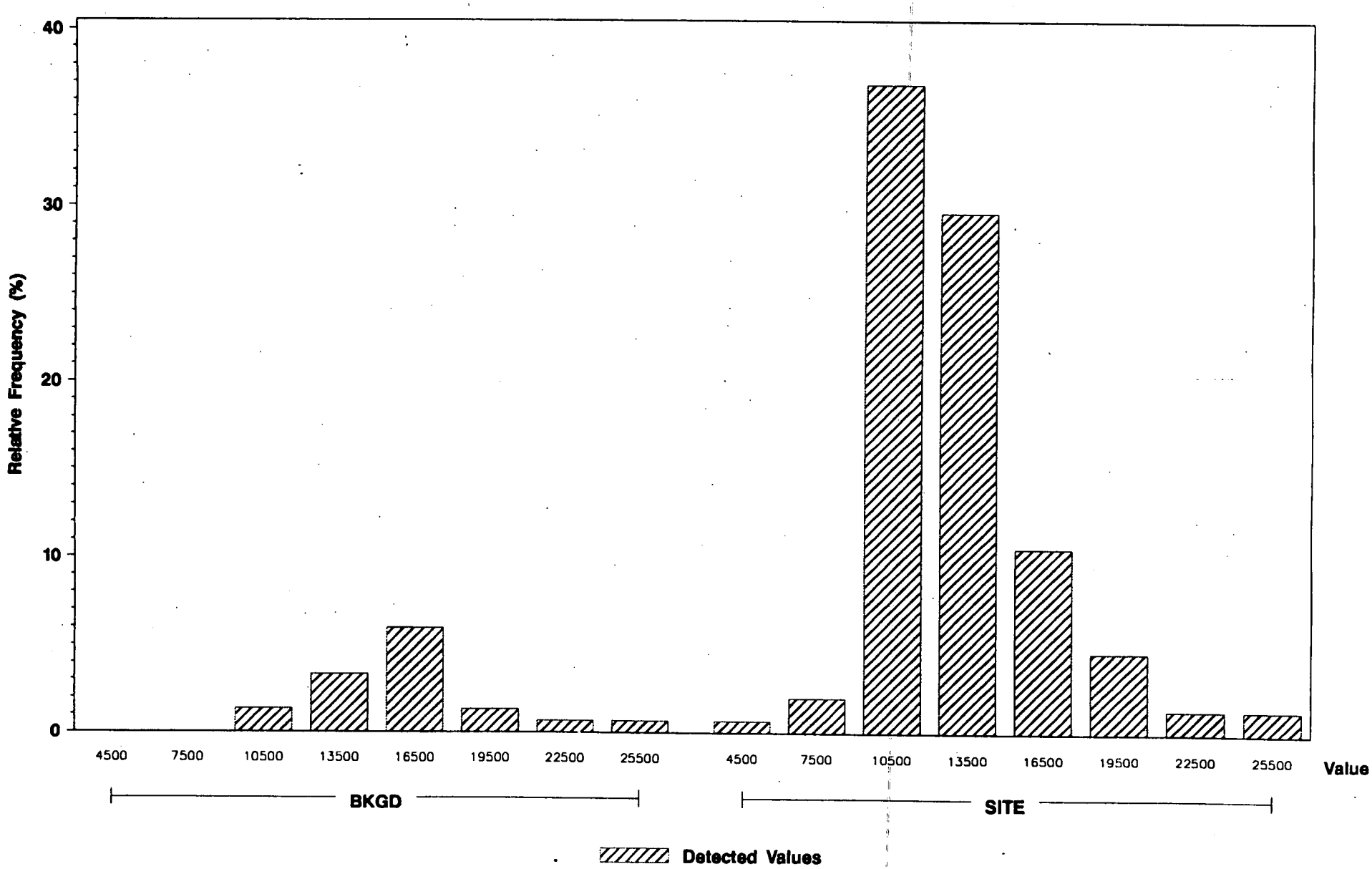
ANALYTE = COPPER



# Background vs East Landfill Pond Frequency Histogram

## IRON (mg/Kg) in Surface Soils (0 – 2 inches)

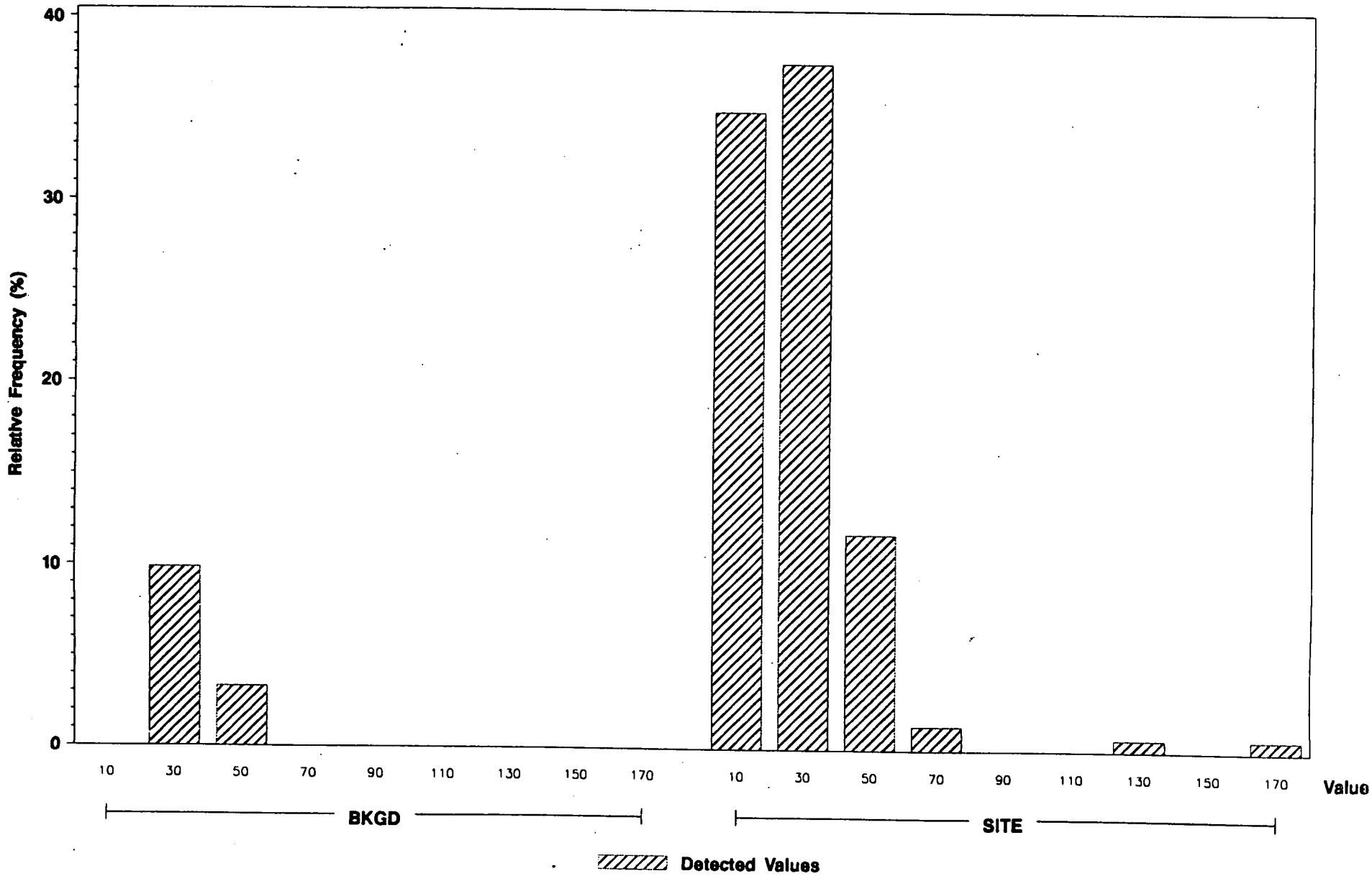
ANALYTE = IRON



# Background vs East Landfill Pond Frequency Histogram

## LEAD (mg/Kg) in Surface Soils (0 – 2 inches)

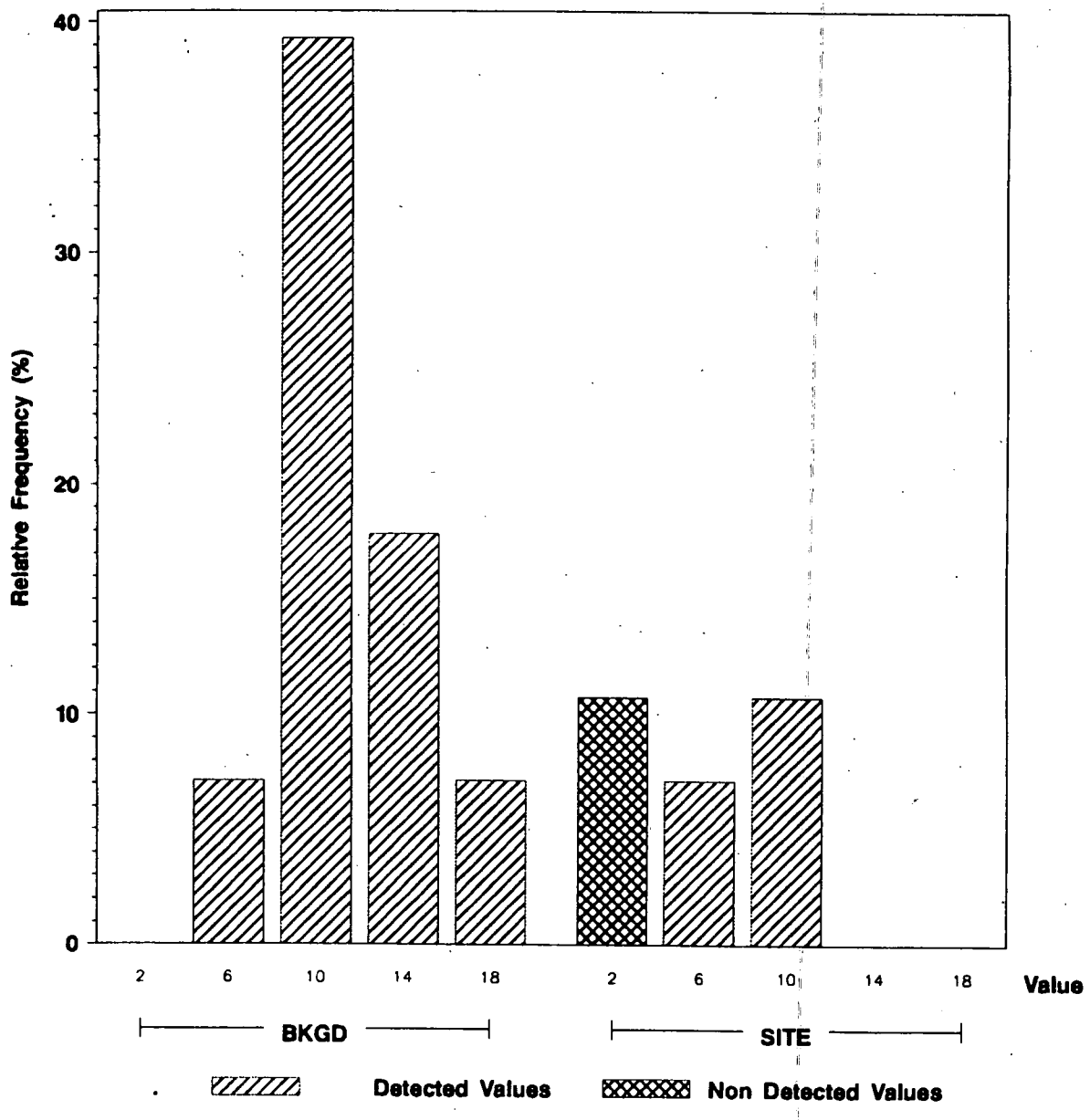
ANALYTE = LEAD



# Background vs East Landfill Pond Frequency Histogram

## LITHIUM (mg/Kg) in Surface Soils (0 – 2 inches)

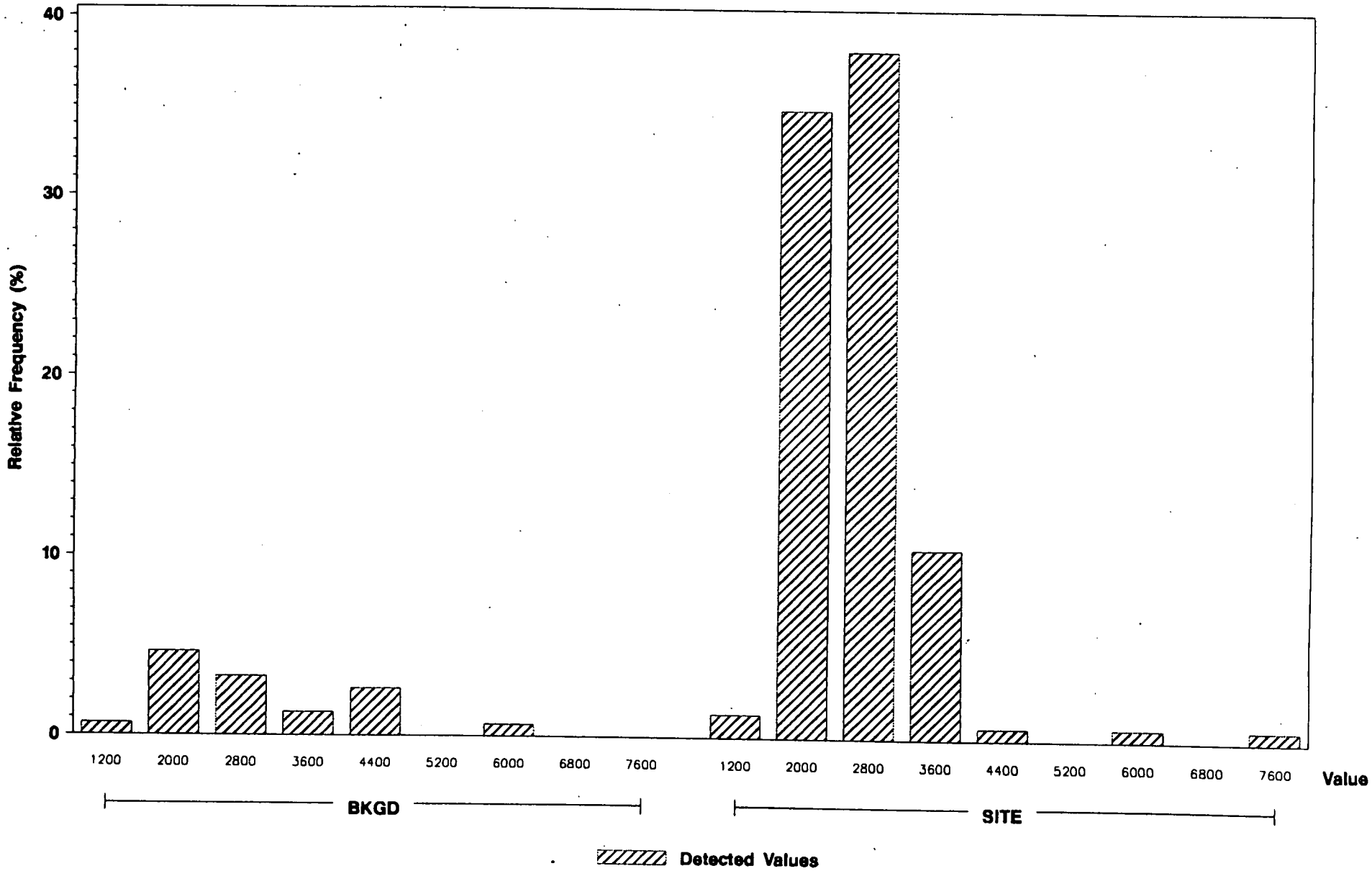
ANALYTE = LITHIUM



# Background vs East Landfill Pond Frequency Histogram

## MAGNESIUM (mg/Kg) in Surface Soils (0 – 2 inches)

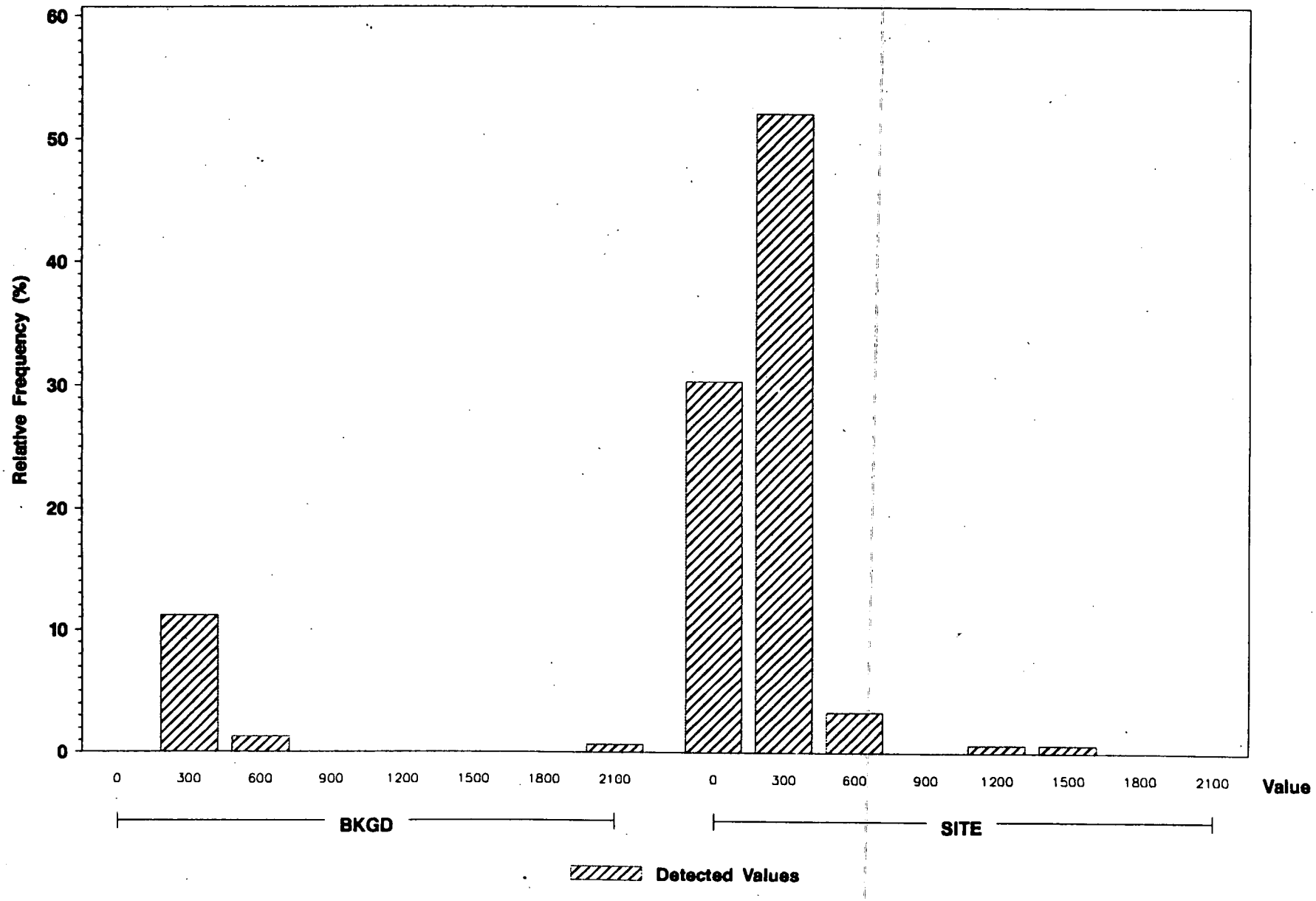
ANALYTE = MAGNESIUM



# Background vs East Landfill Pond Frequency Histogram

## MANGANESE (mg/Kg) in Surface Soils (0 – 2 inches)

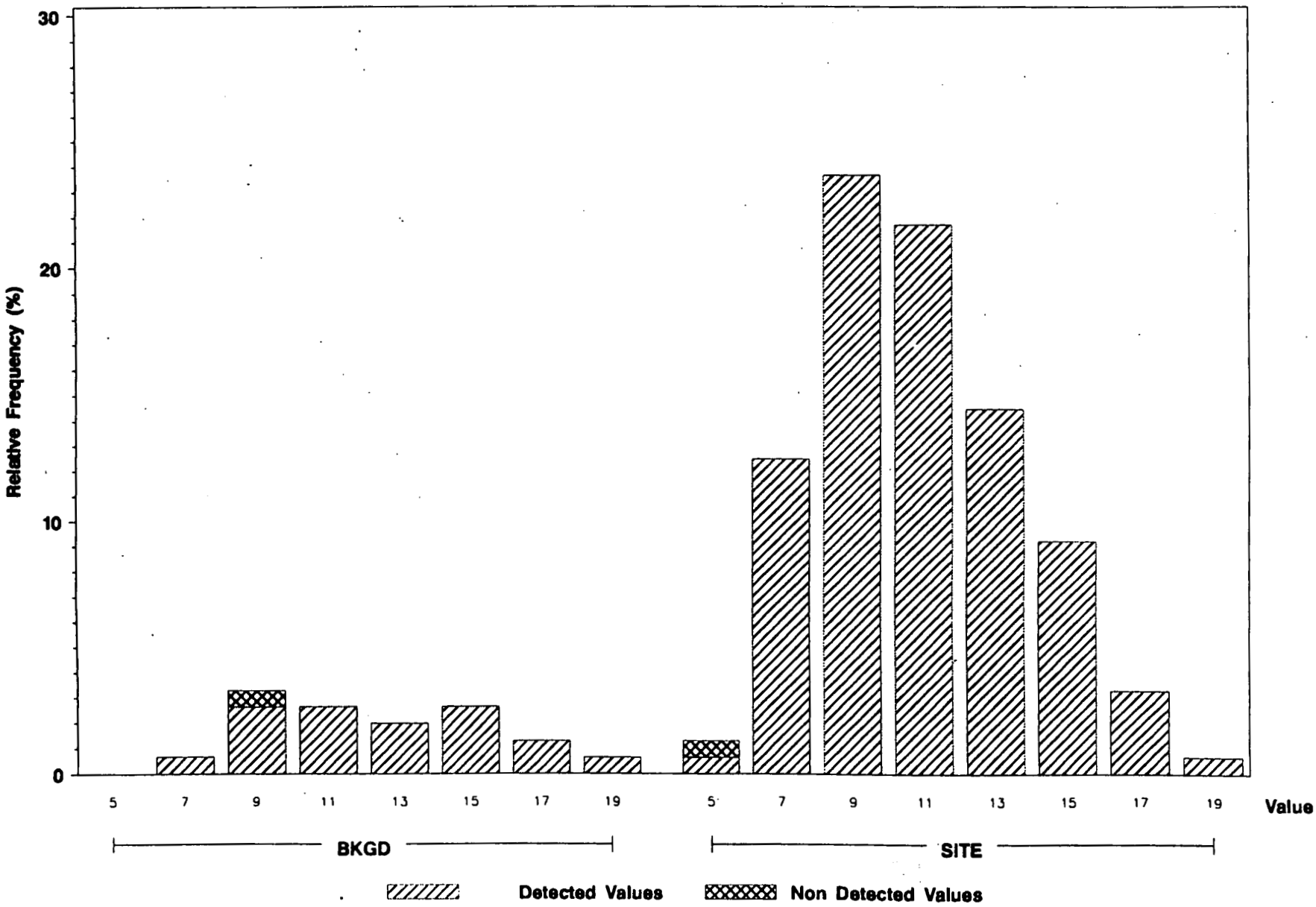
ANALYTE = MANGANESE



# Background vs East Landfill Pond Frequency Histogram

## NICKEL (mg/Kg) in Surface Soils (0–2 inches)

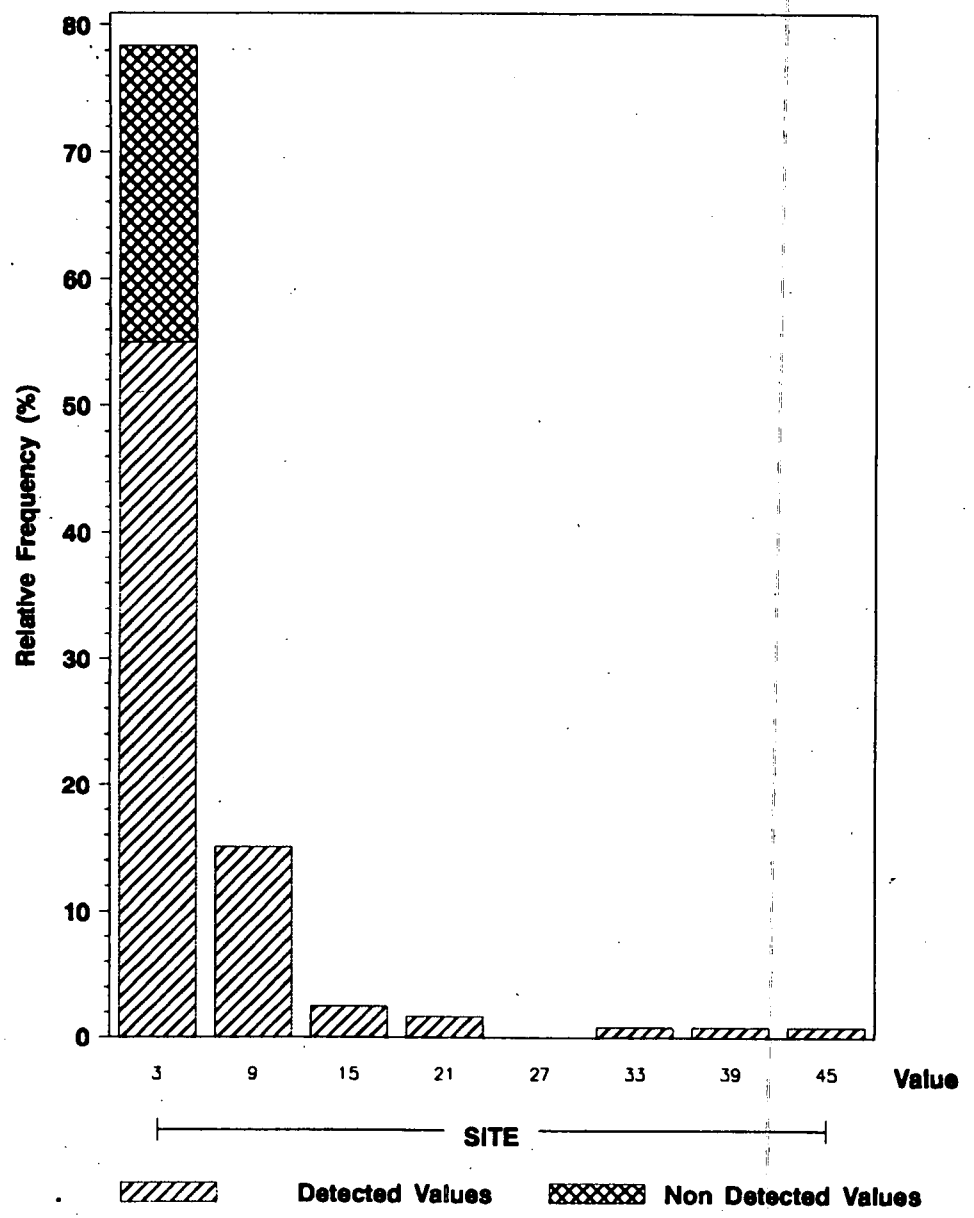
ANALYTE=NICKEL



# Background vs East Landfill Pond Frequency Histogram

## NITRATE/NITRITE (mg/Kg) in Surface Soils (0 – 2 inches)

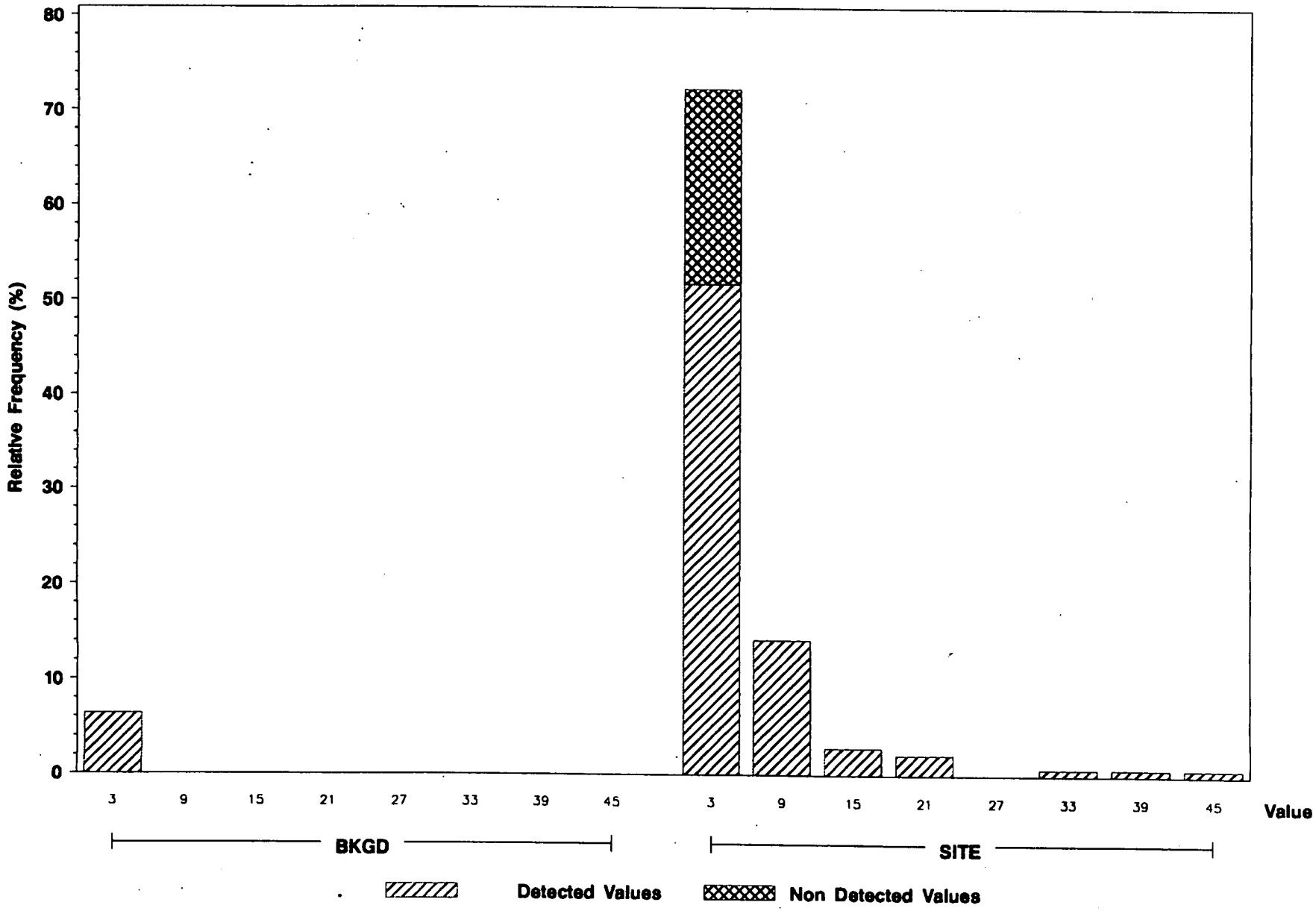
ANALYTE = NITRATE/NITRITE



# Background vs East Landfill Pond Frequency Histogram

## NITRATE/NITRITE (mg/Kg) in Surface Soils (0–2 inches)

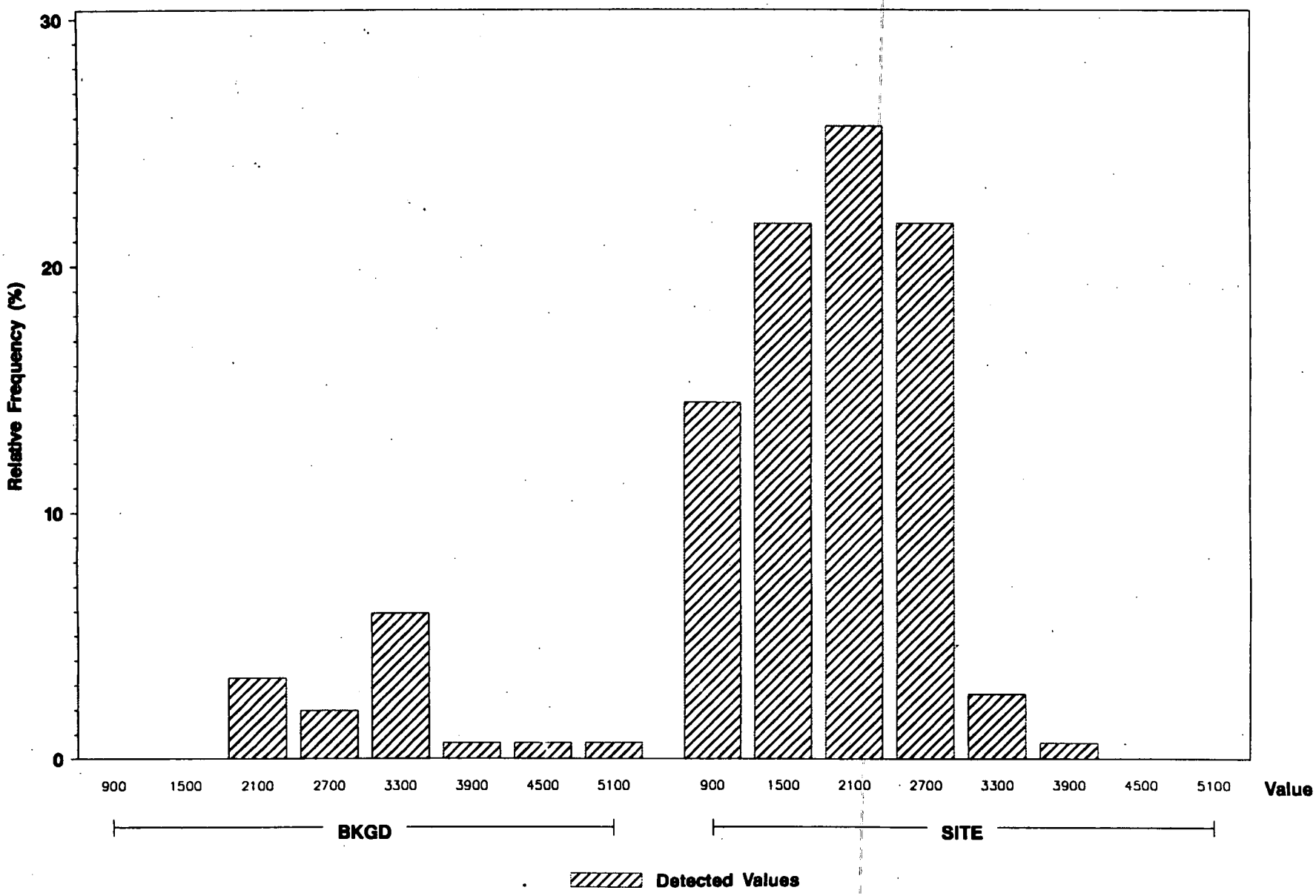
ANALYTE = NITRATE/NITRITE



# Background vs East Landfill Pond Frequency Histogram

## POTASSIUM (mg/Kg) in Surface Soils (0–2 inches)

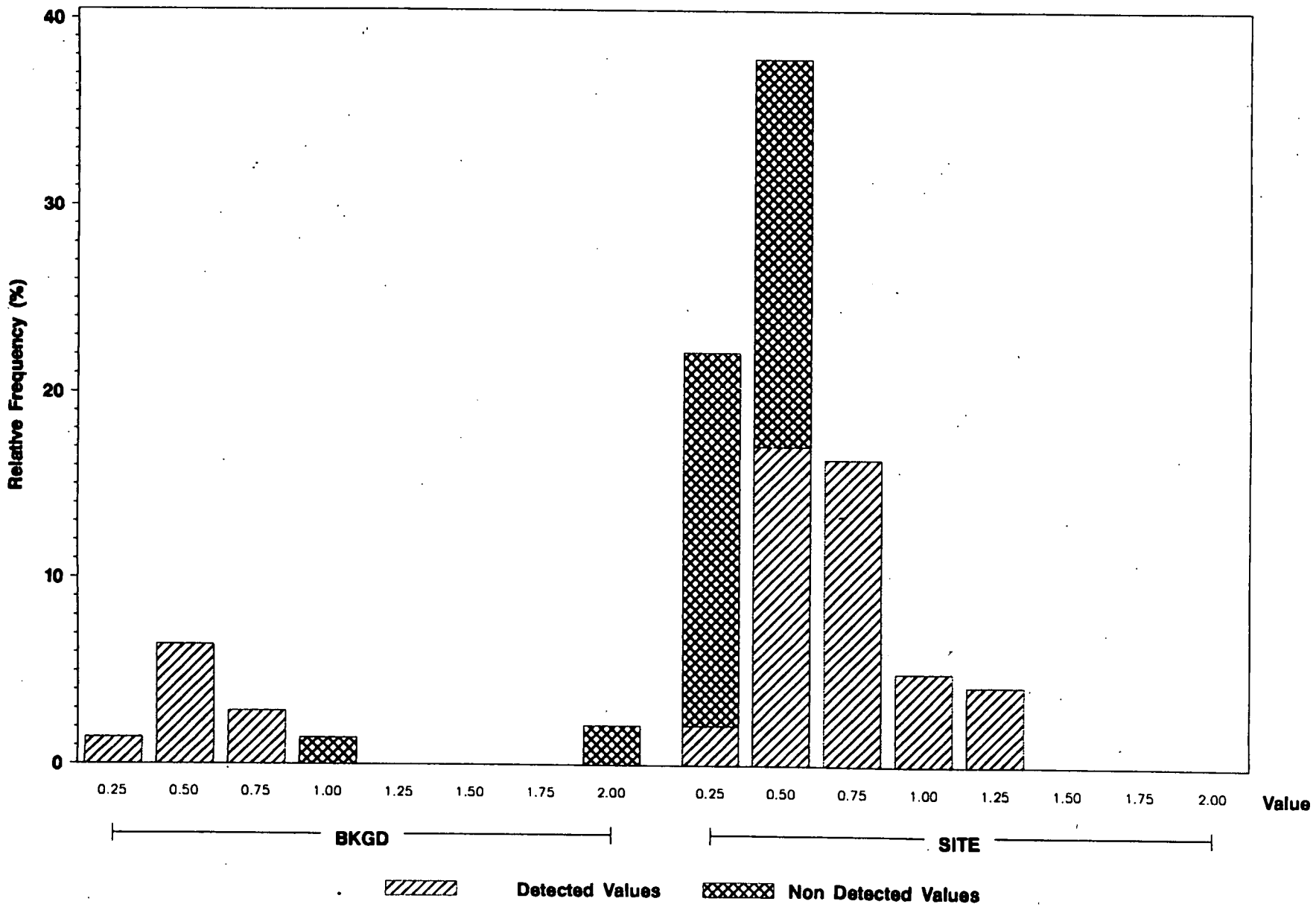
ANALYTE = POTASSIUM



# Background vs East Landfill Pond Frequency Histogram

## SELENIUM (mg/Kg) in Surface Soils (0 – 2 inches)

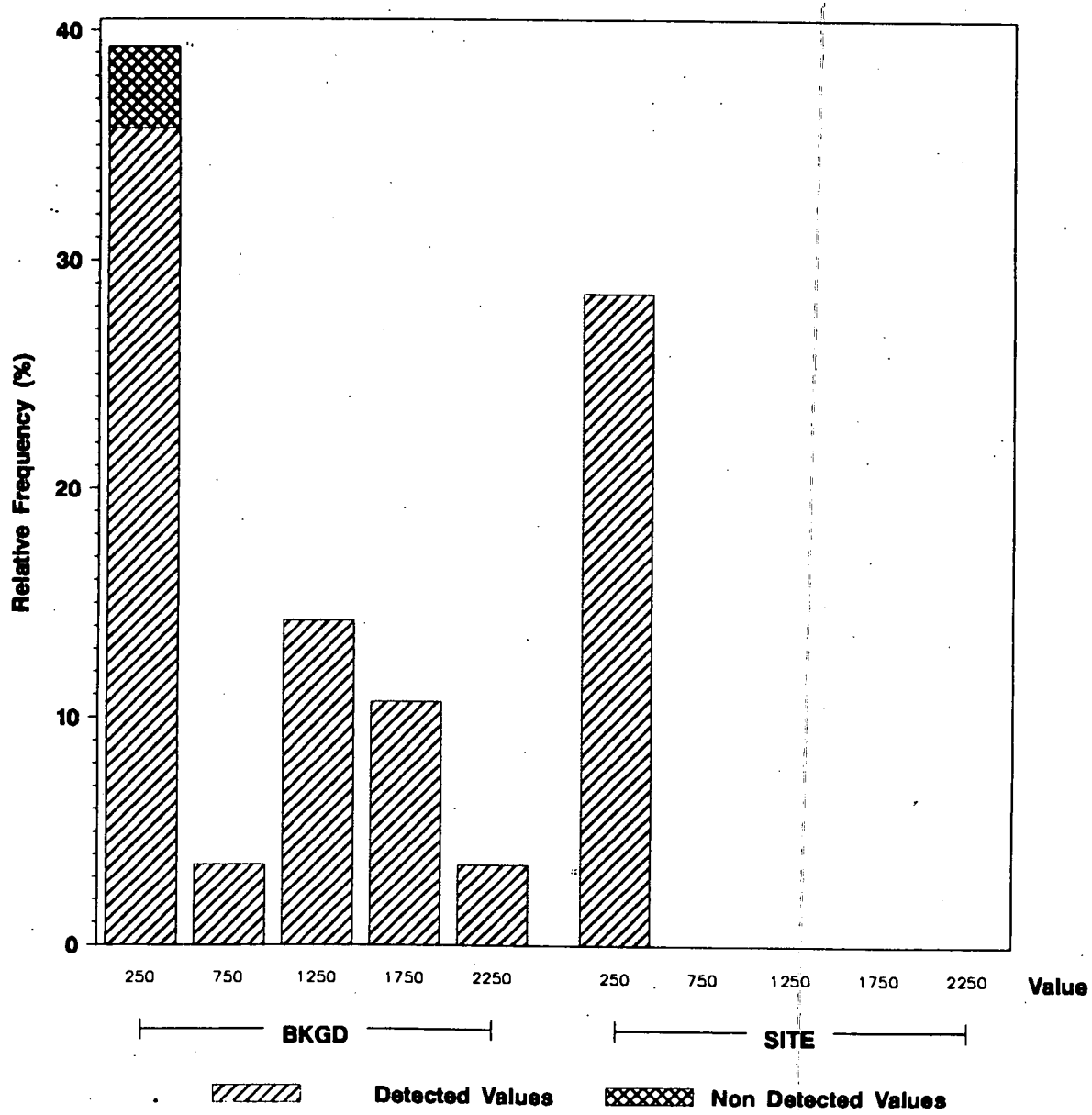
ANALYTE = SELENIUM



# Background vs East Landfill Pond Frequency Histogram

## SILICON (mg/Kg) in Surface Soils (0 – 2 inches)

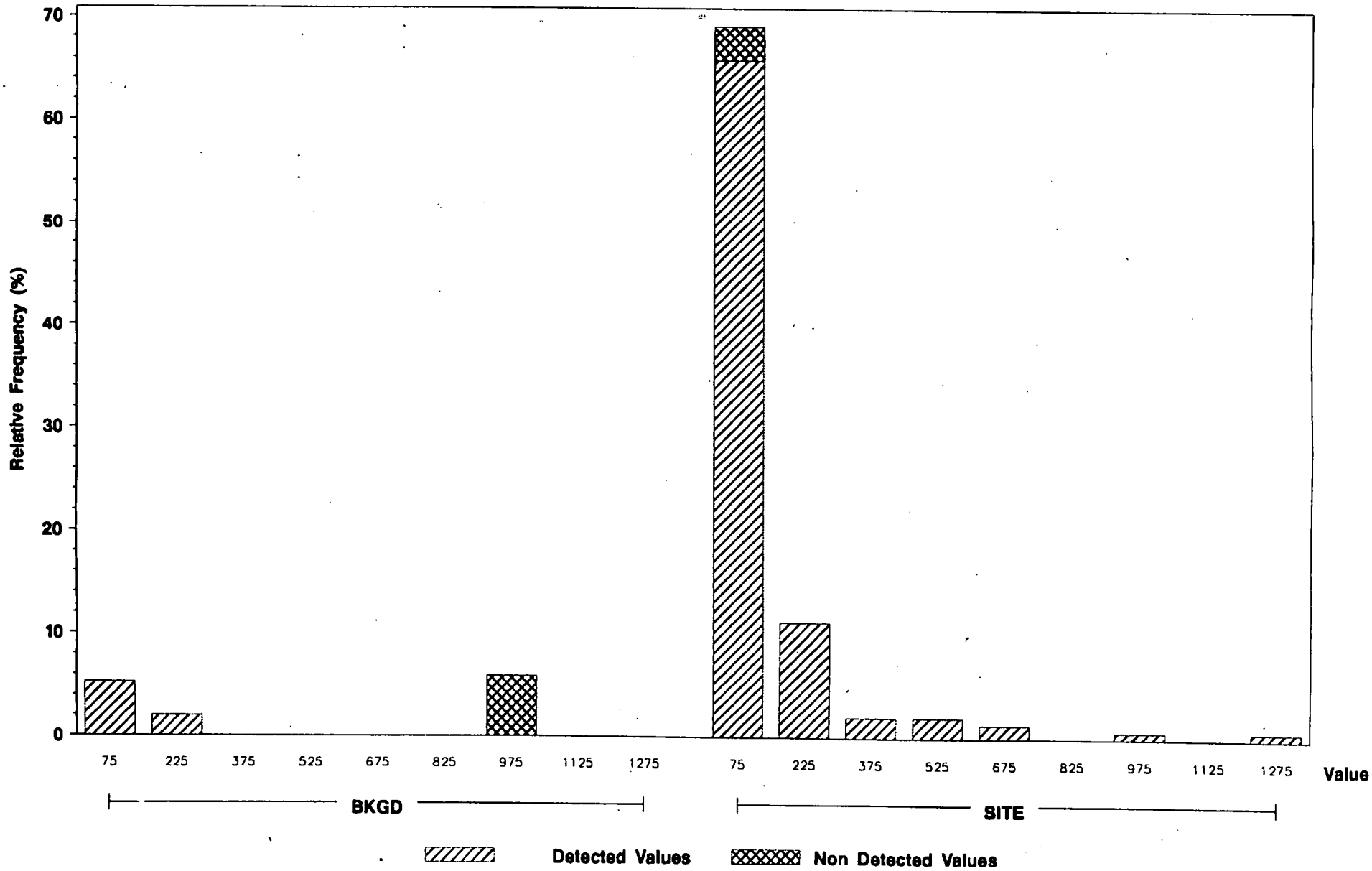
ANALYTE = SILICON



# Background vs East Landfill Pond Frequency Histogram

## SODIUM (mg/Kg) in Surface Soils (0 – 2 inches)

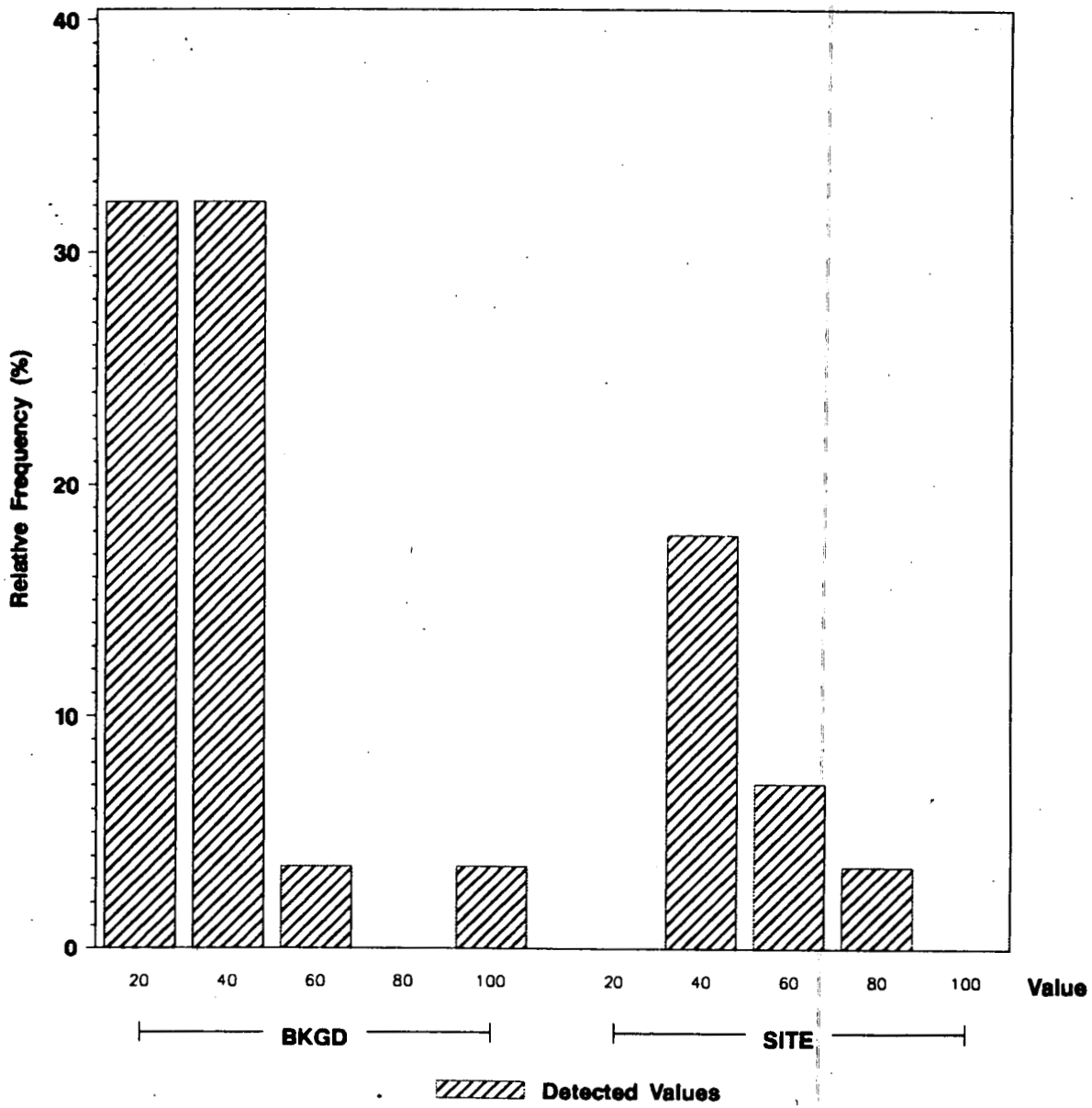
ANALYTE = SODIUM



# Background vs East Landfill Pond Frequency Histogram

## STRONTIUM (mg/Kg) in Surface Soils (0–2 inches)

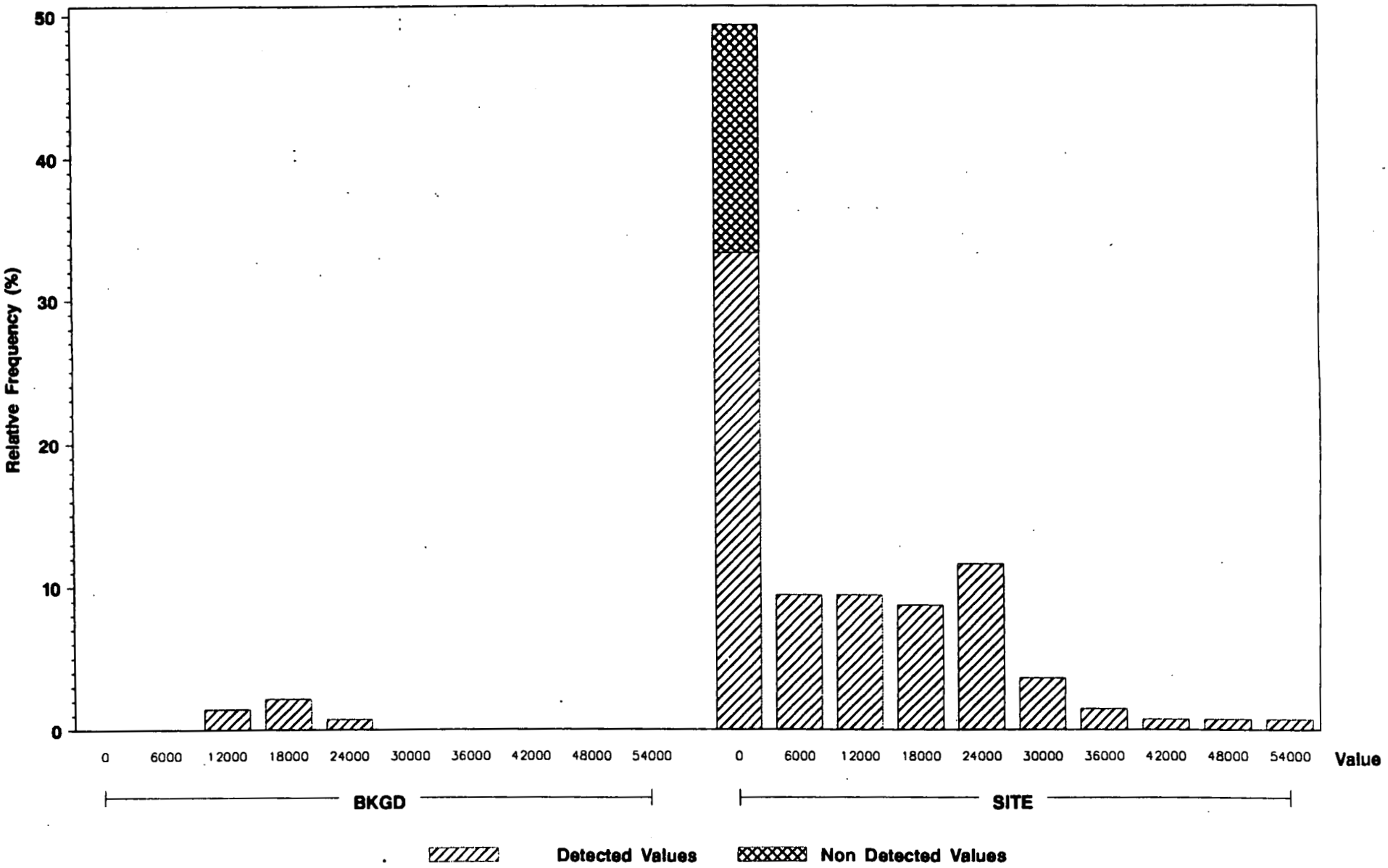
ANALYTE = STRONTIUM



# Background vs East Landfill Pond Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Surface Soils (0–2 inches)

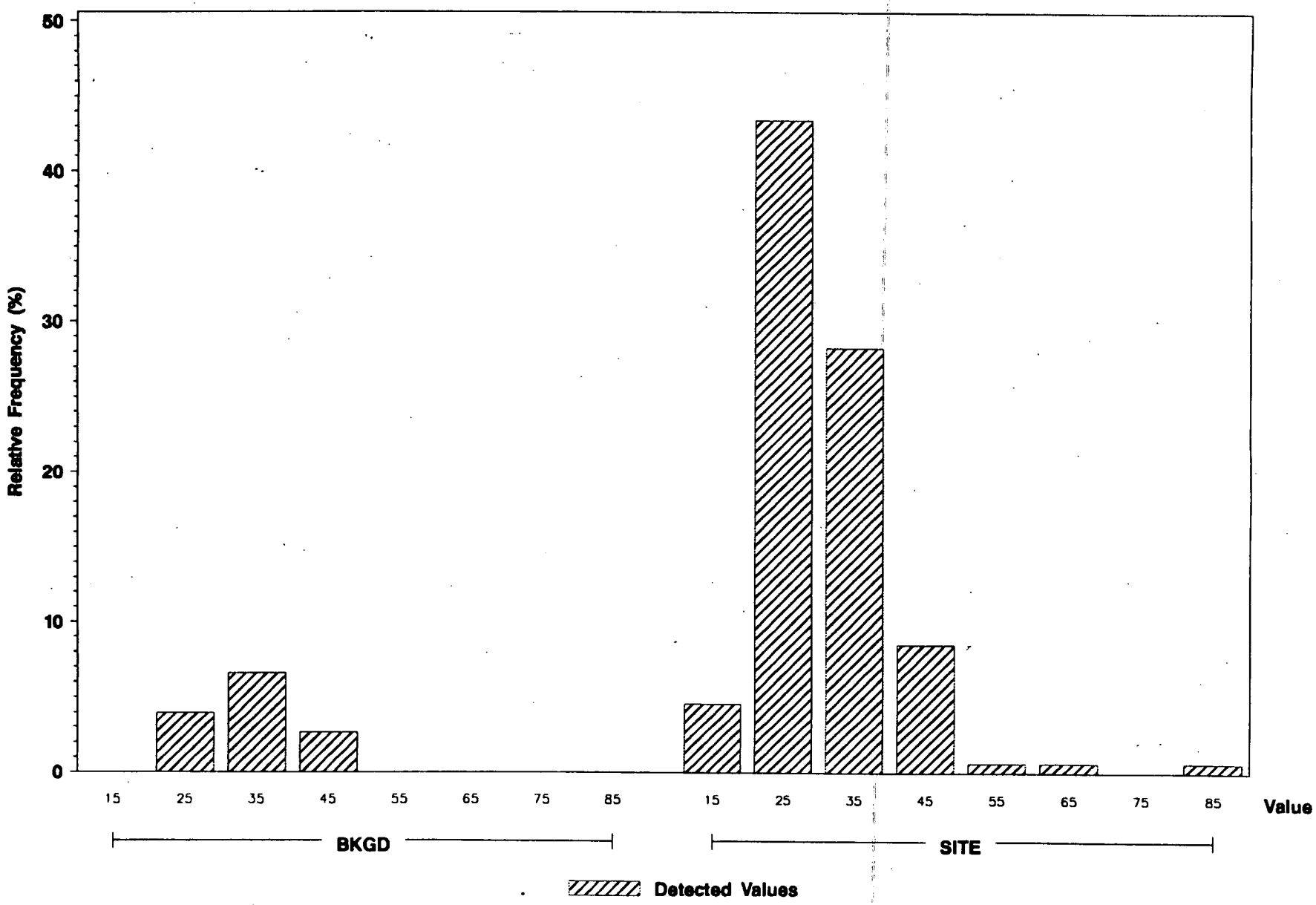
ANALYTE=TOTAL ORGANIC CARBON



# Background vs East Landfill Pond Frequency Histogram

## VANADIUM (mg/Kg) in Surface Soils (0 – 2 inches)

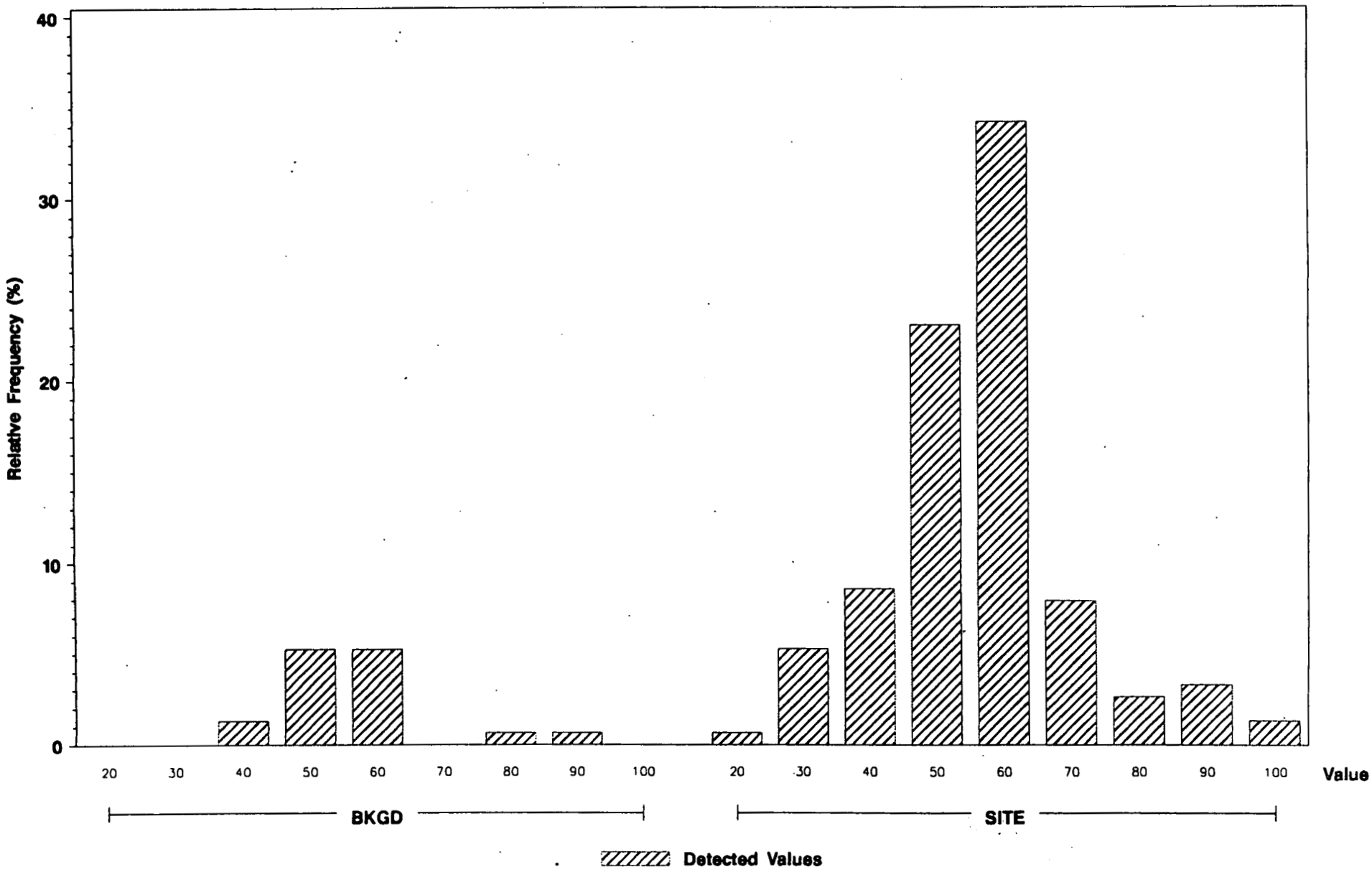
ANALYTE = VANADIUM



# Background vs East Landfill Pond Frequency Histogram

## ZINC (mg/Kg) in Surface Soils (0–2 inches)

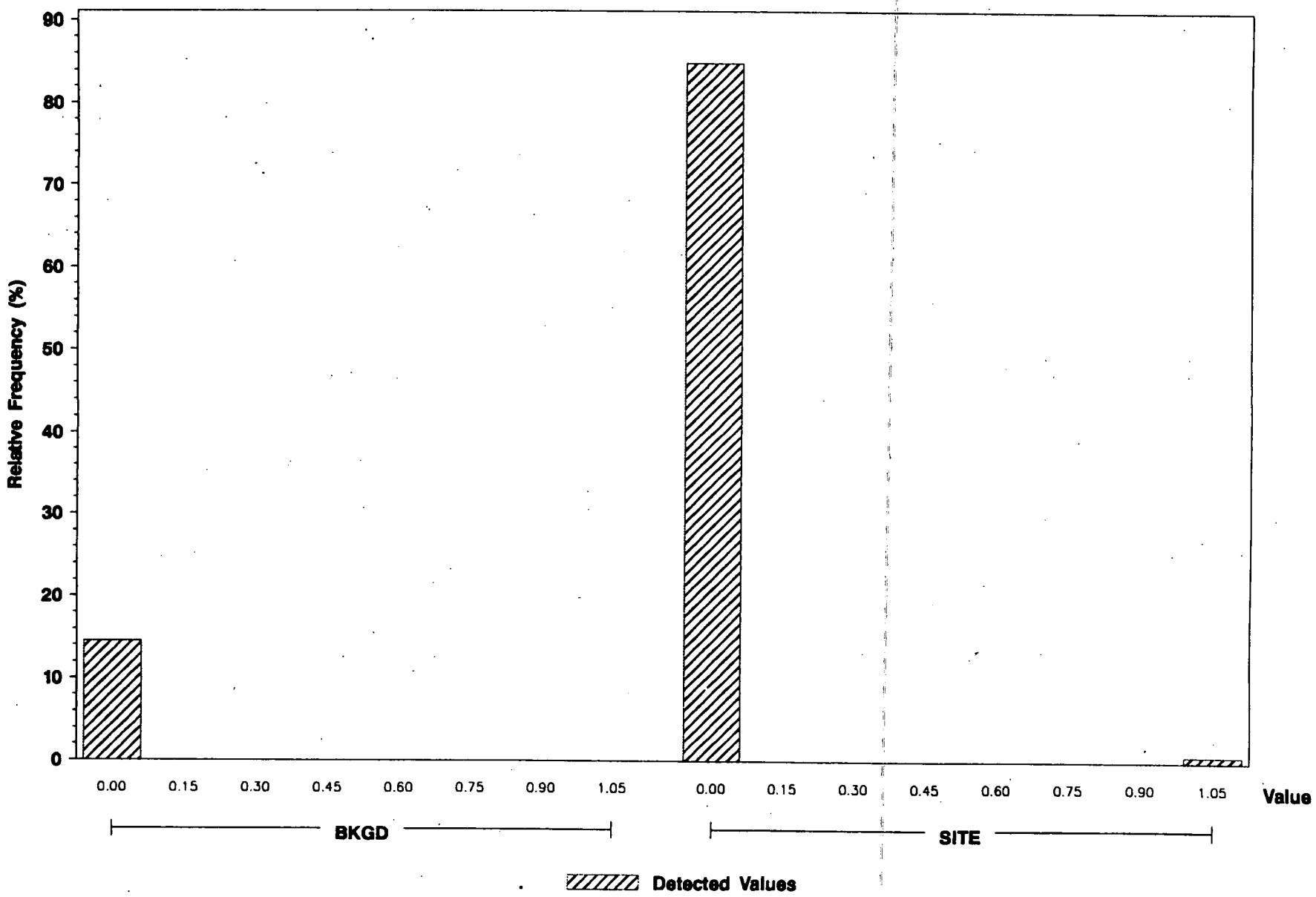
ANALYTE=ZINC



# Background vs East Landfill Pond Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Surface Soils (0 – 2 inches)

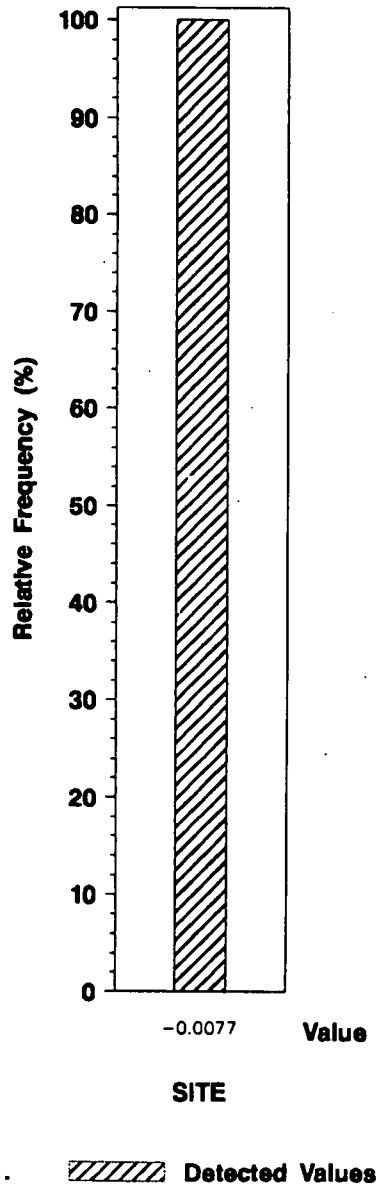
ANALYTE = AMERICIUM – 241



# Background vs East Landfill Pond Frequency Histogram

## CESIUM – 134 (pCi/g) in Surface Soils (0 – 2 inches)

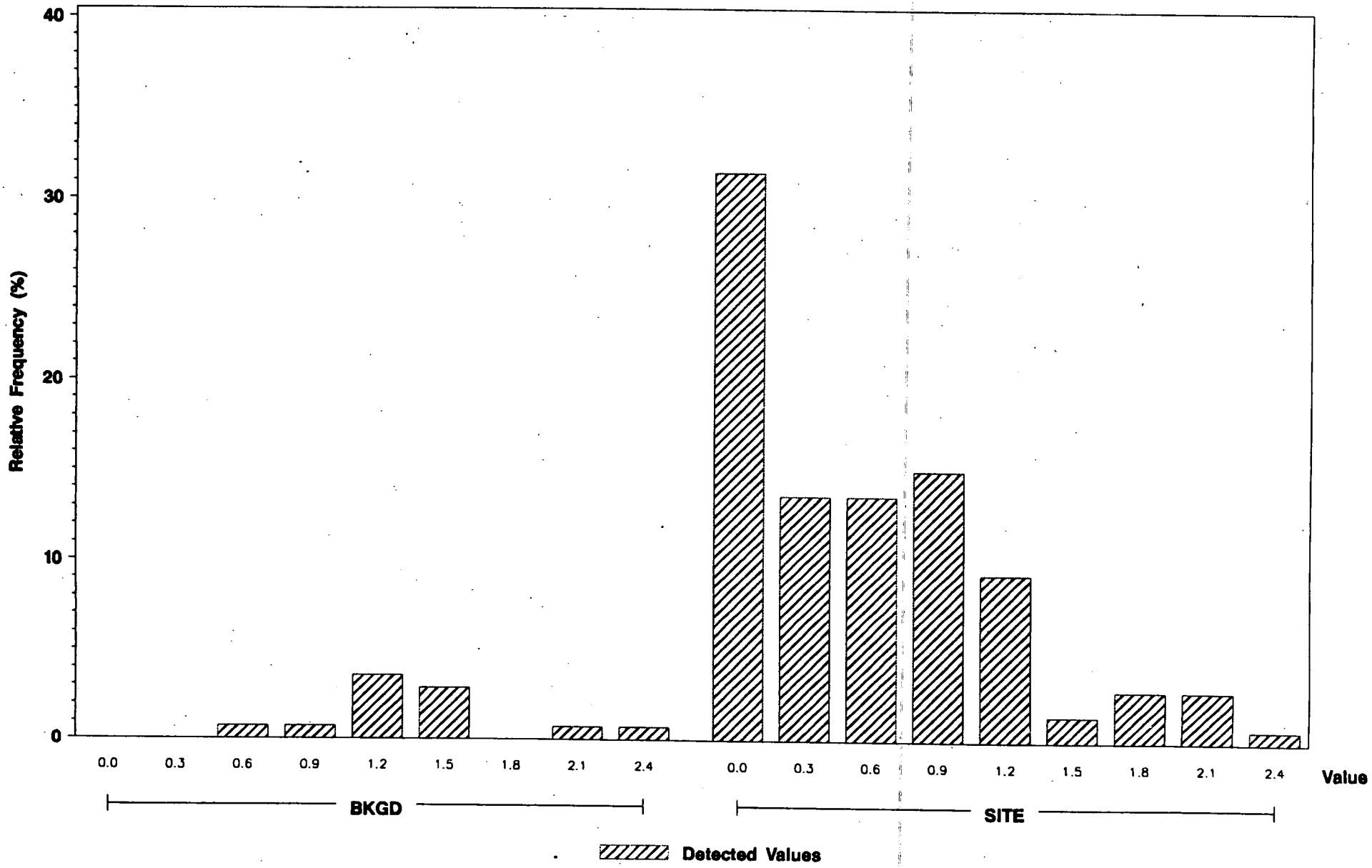
ANALYTE = CESIUM – 134



# Background vs East Landfill Pond Frequency Histogram

## CESIUM – 137 (pCi/g) in Surface Soils (0 – 2 inches)

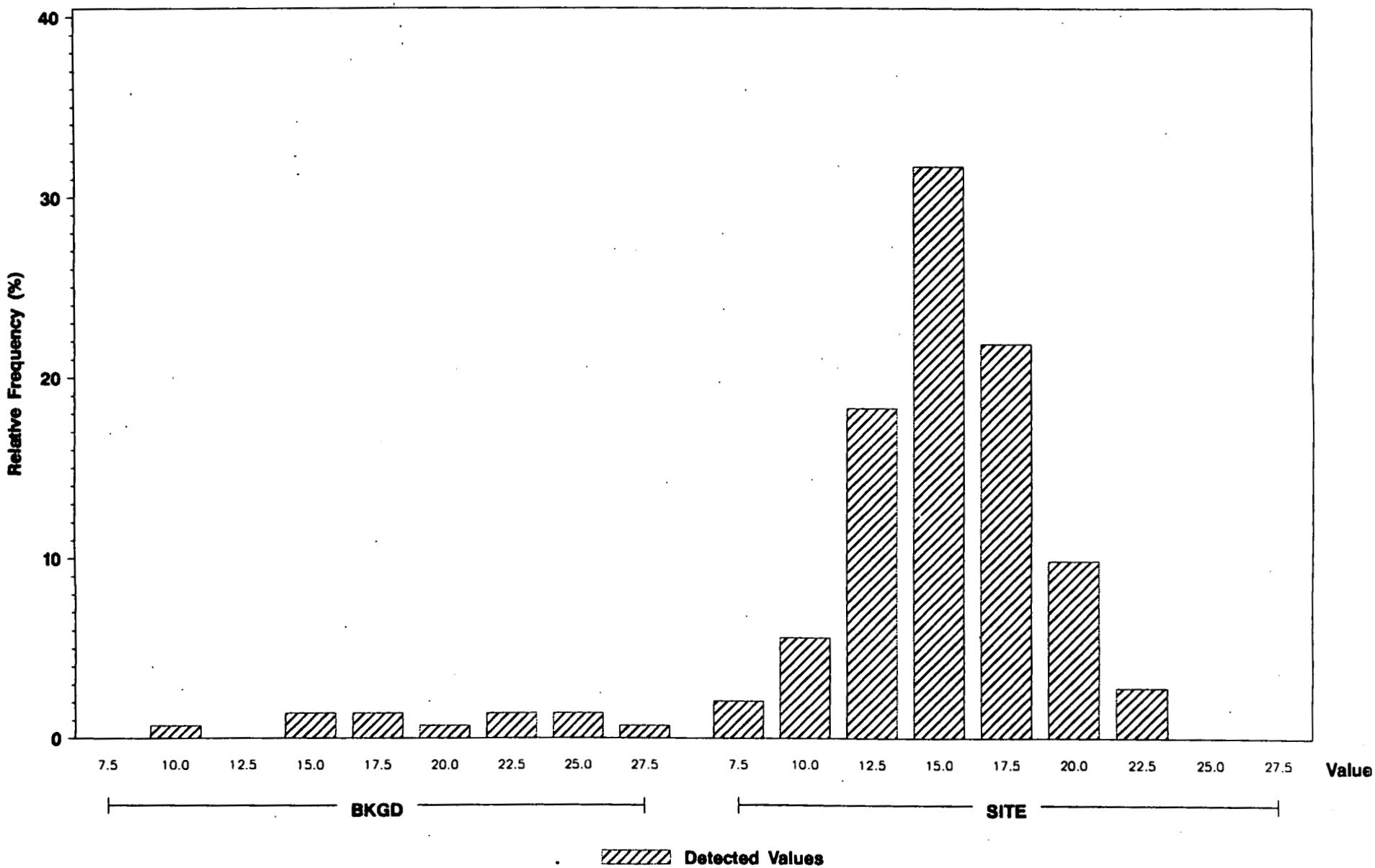
ANALYTE = CESIUM – 137



# Background vs East Landfill Pond Frequency Histogram

## GROSS ALPHA (pCi/g) in Surface Soils (0 – 2 inches)

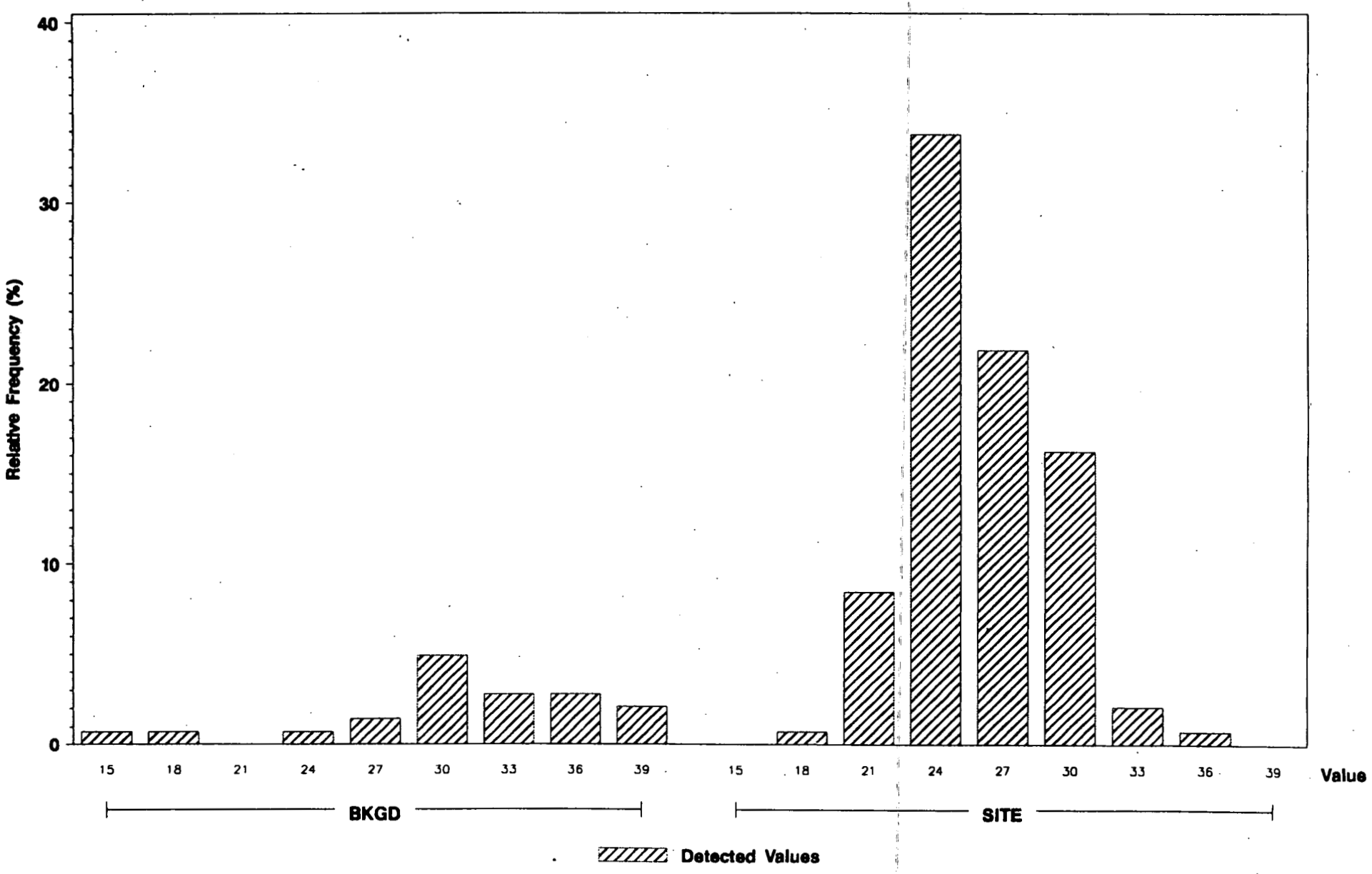
ANALYTE = GROSS ALPHA



# Background vs East Landfill Pond Frequency Histogram

## GROSS BETA (pCi/g) in Surface Soils (0–2 inches)

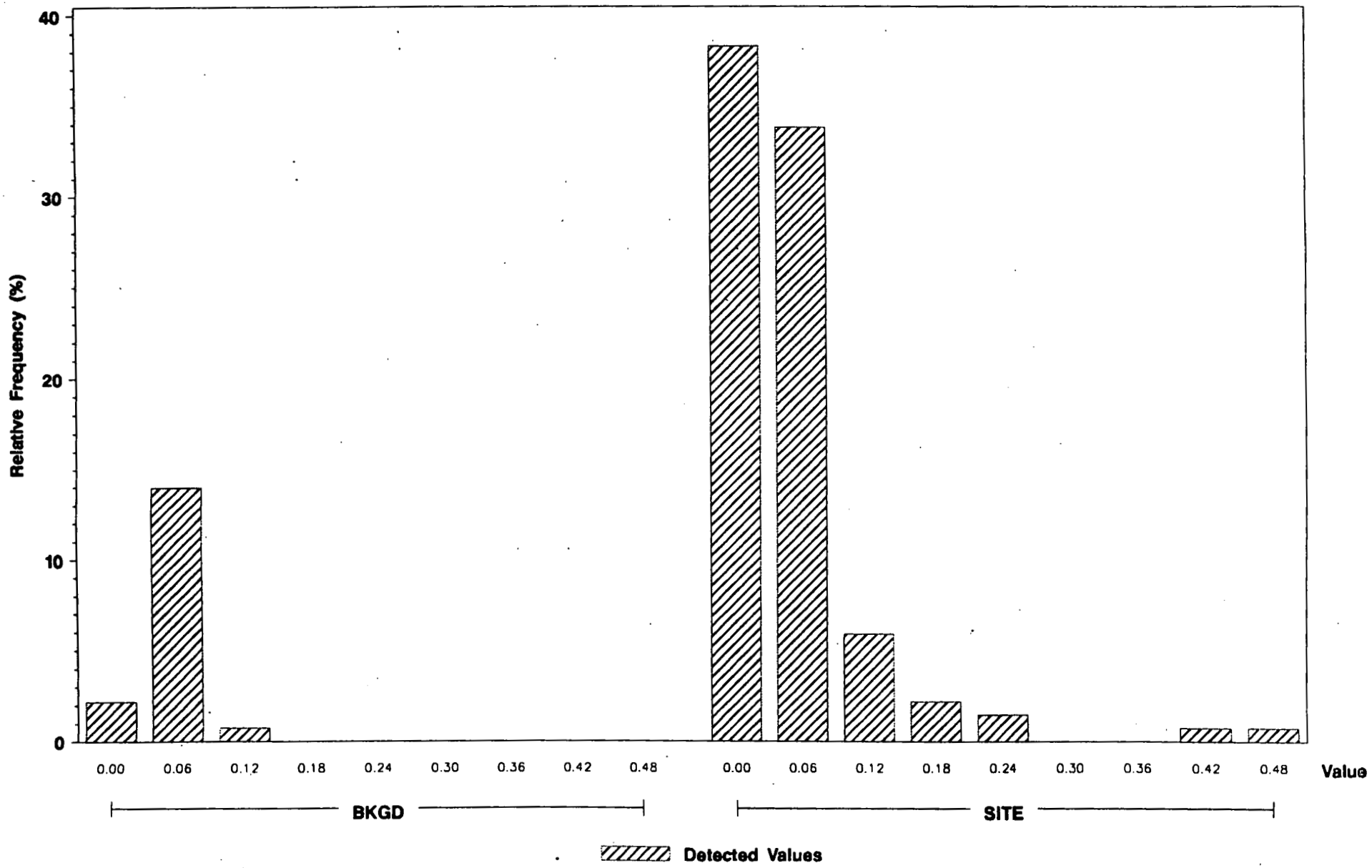
ANALYTE=GROSS BETA



# Background vs East Landfill Pond Frequency Histogram

## PLUTONIUM – 239/240 (pCi/g) in Surface Soils (0 – 2 inches)

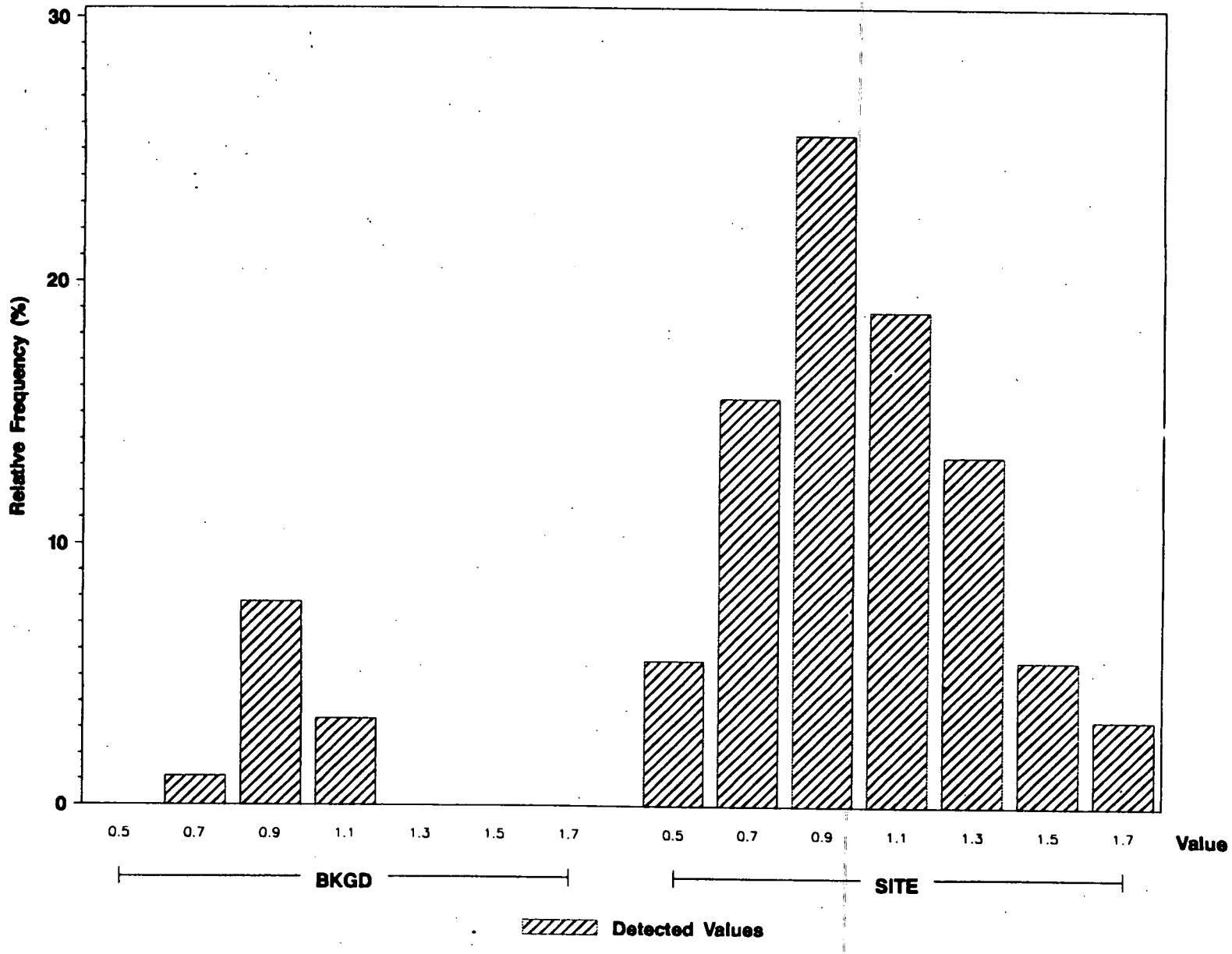
ANALYTE = PLUTONIUM – 239/240



# Background vs East Landfill Pond Frequency Histogram

## RADIUM-226 (pCi/g) in Surface Soils (0-2 inches)

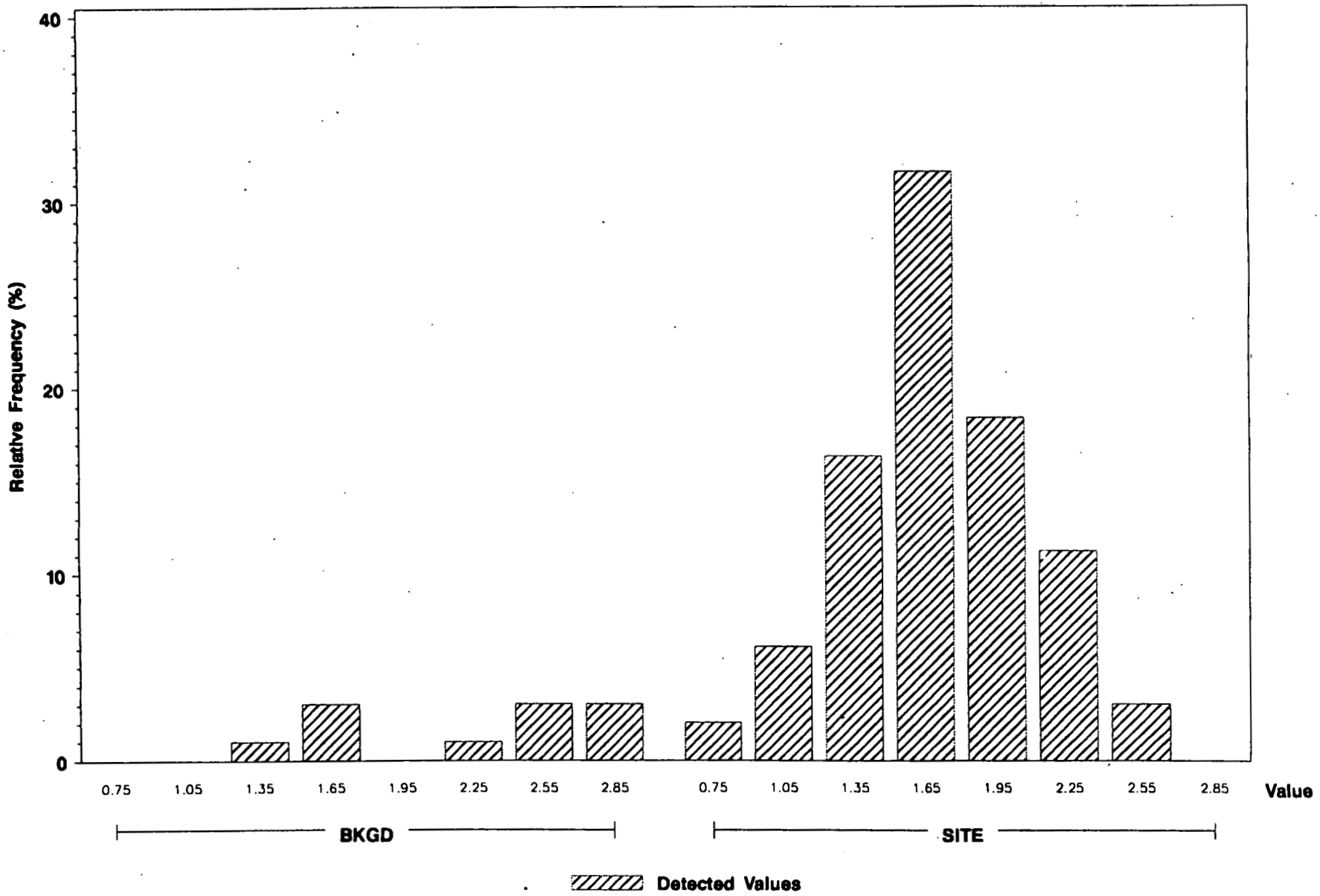
ANALYTE = RADIUM-226



# Background vs East Landfill Pond Frequency Histogram

## RADIUM – 228 (pCi/g) in Surface Soils (0 – 2 inches)

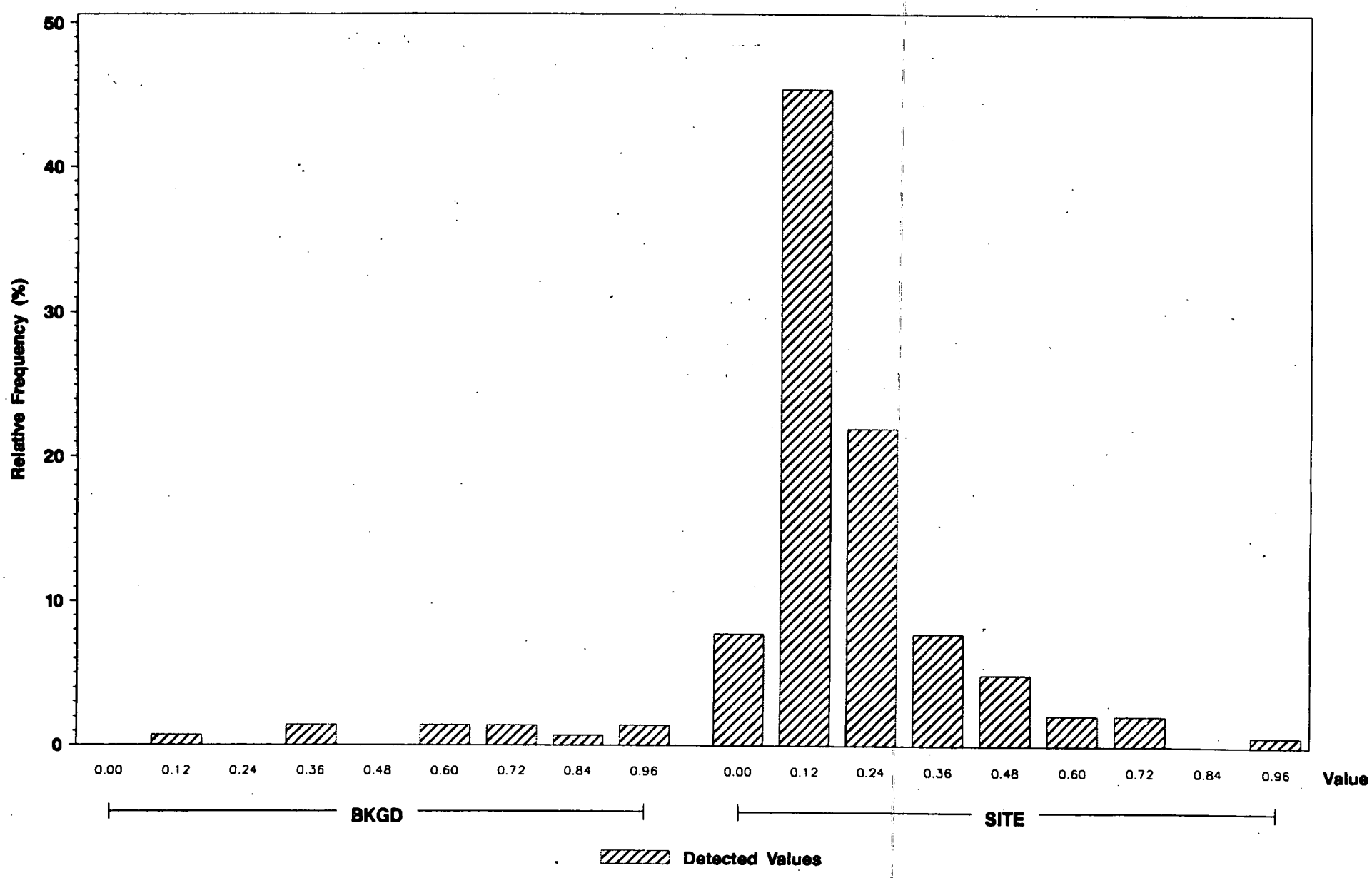
ANALYTE = RADIUM – 228



# Background vs East Landfill Pond Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Surface Soils (0 – 2 inches)

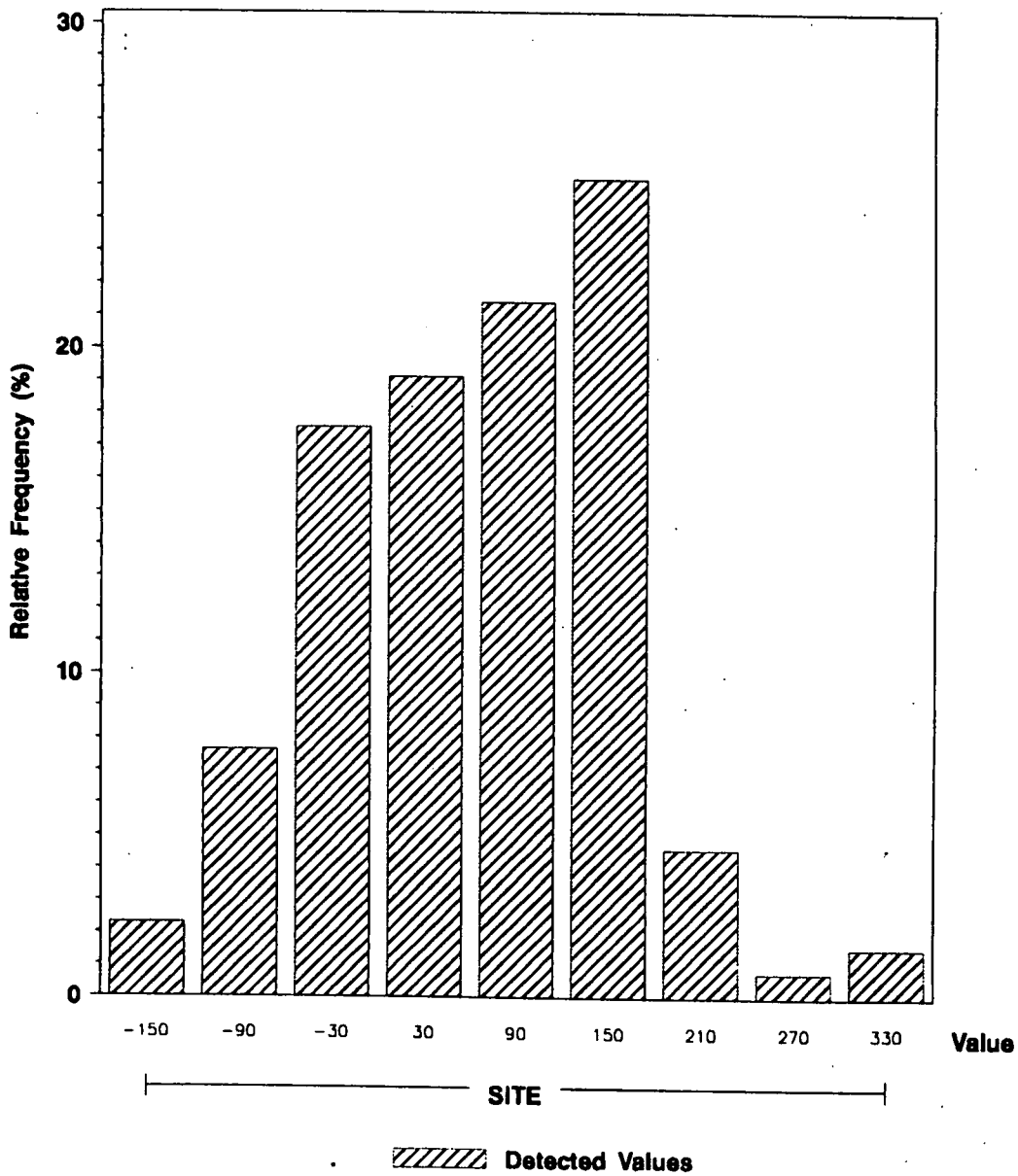
ANALYTE = STRONTIUM – 89,90



# Background vs East Landfill Pond Frequency Histogram

## TRITIUM (pCi/L) in Surface Soils (0 – 2 inches)

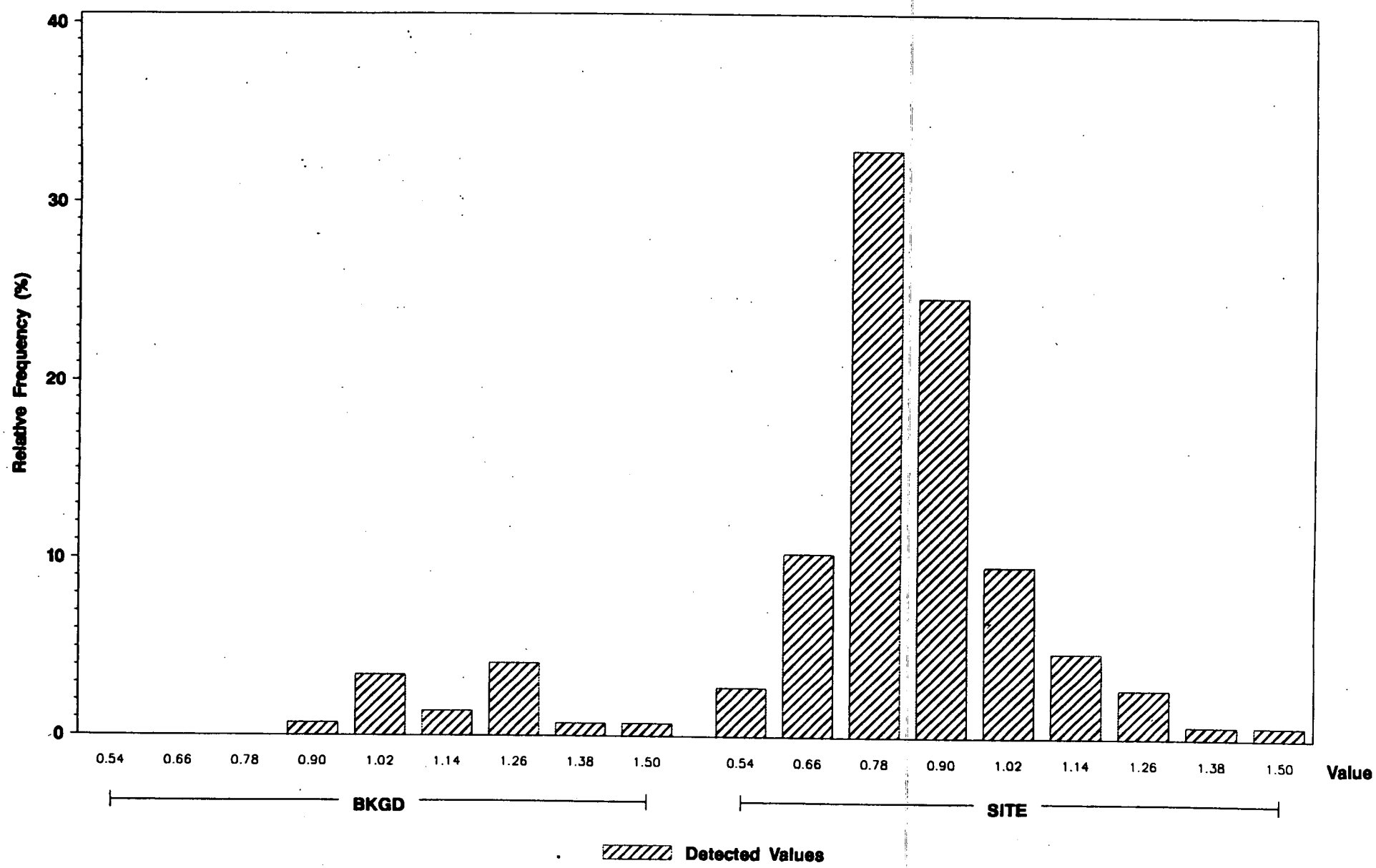
ANALYTE = TRITIUM



# Background vs East Landfill Pond Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Surface Soils (0 – 2 inches)

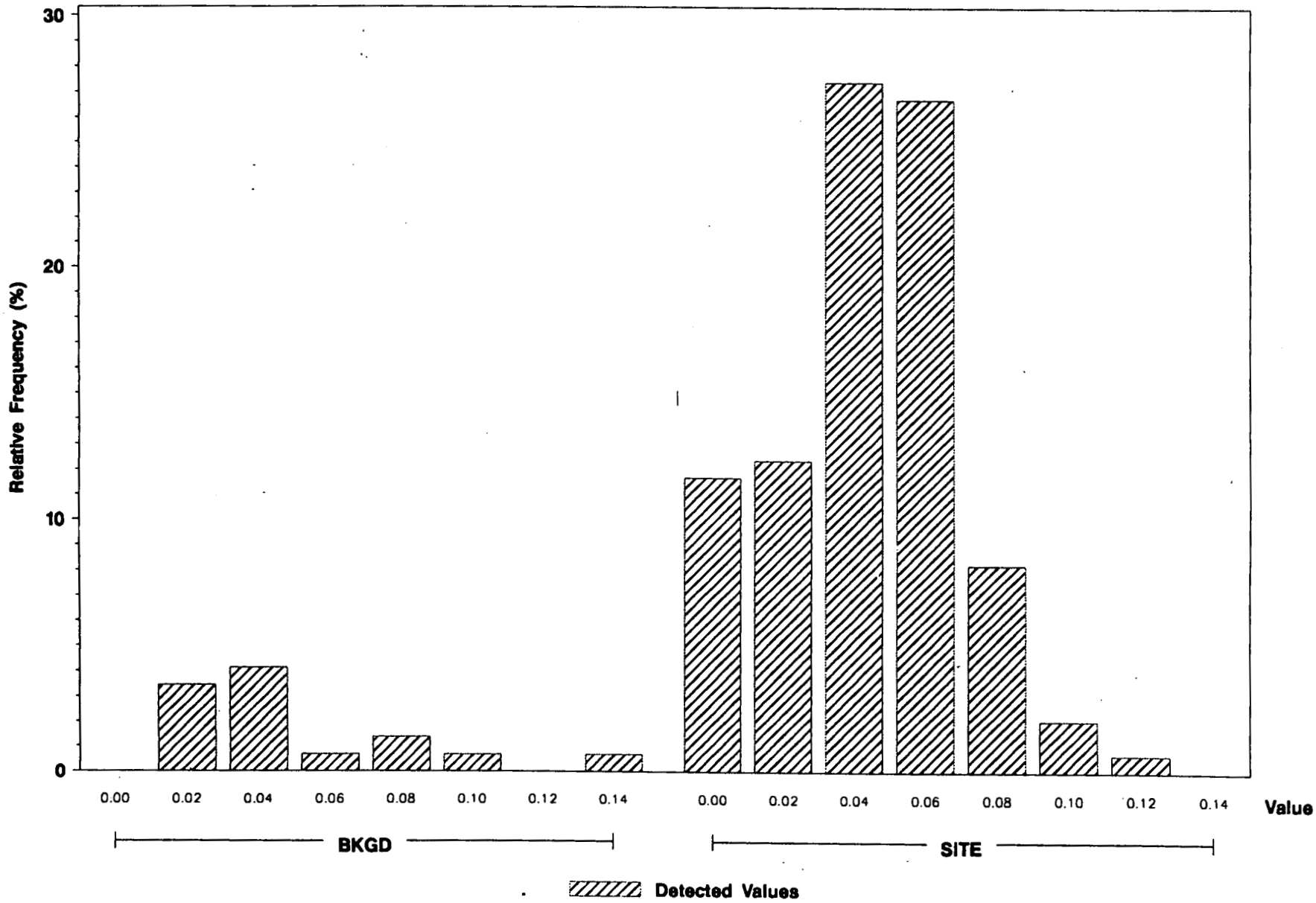
ANALYTE = URANIUM – 233, – 234



# Background vs East Landfill Pond Frequency Histogram

## URANIUM-235 (pCi/g) in Surface Soils (0-2 inches)

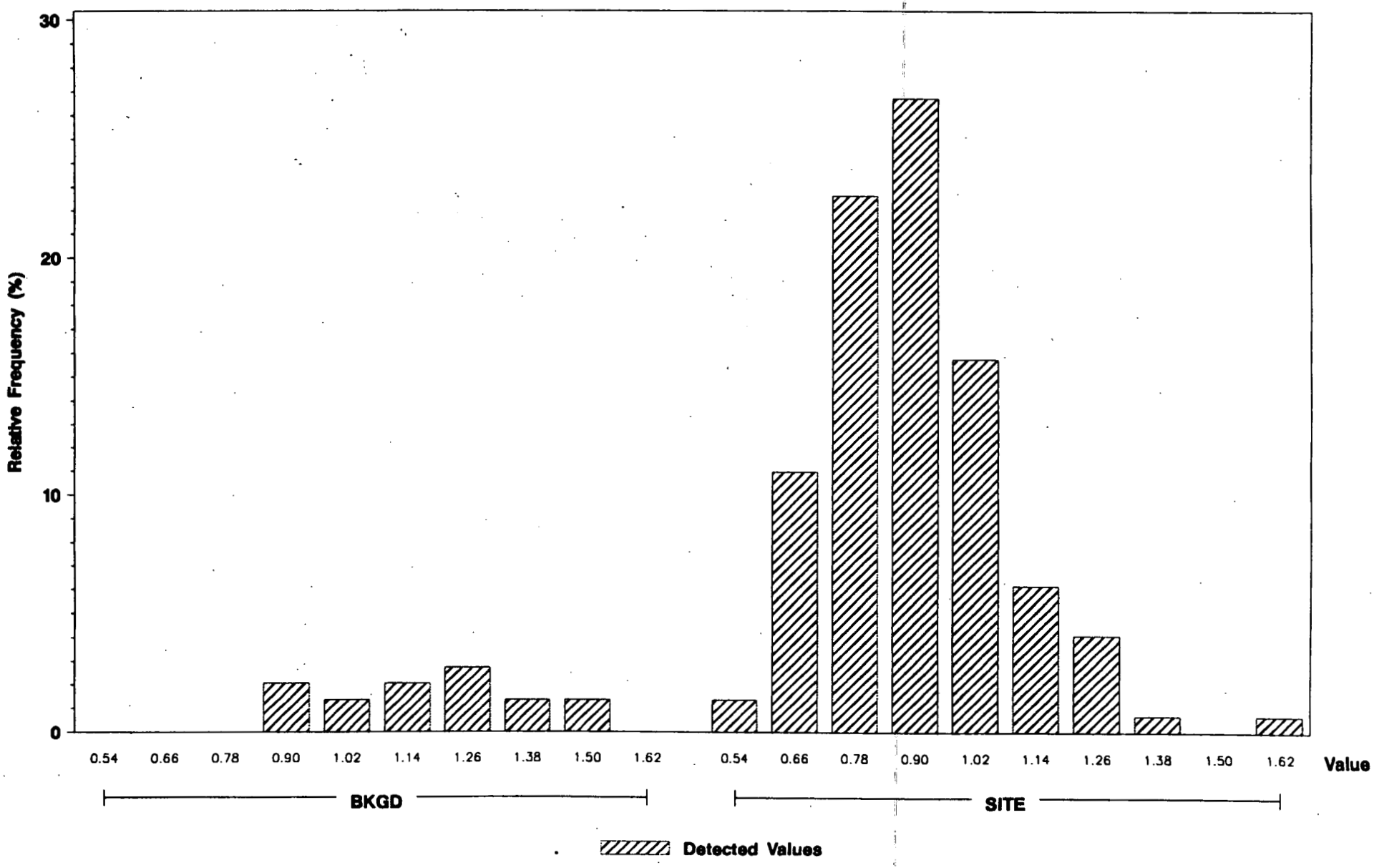
ANALYTE=URANIUM-235



# Background vs East Landfill Pond Frequency Histogram

## URANIUM-238 (pCi/g) in Surface Soils (0-2 inches)

ANALYTE = URANIUM-238



# Surface Soils

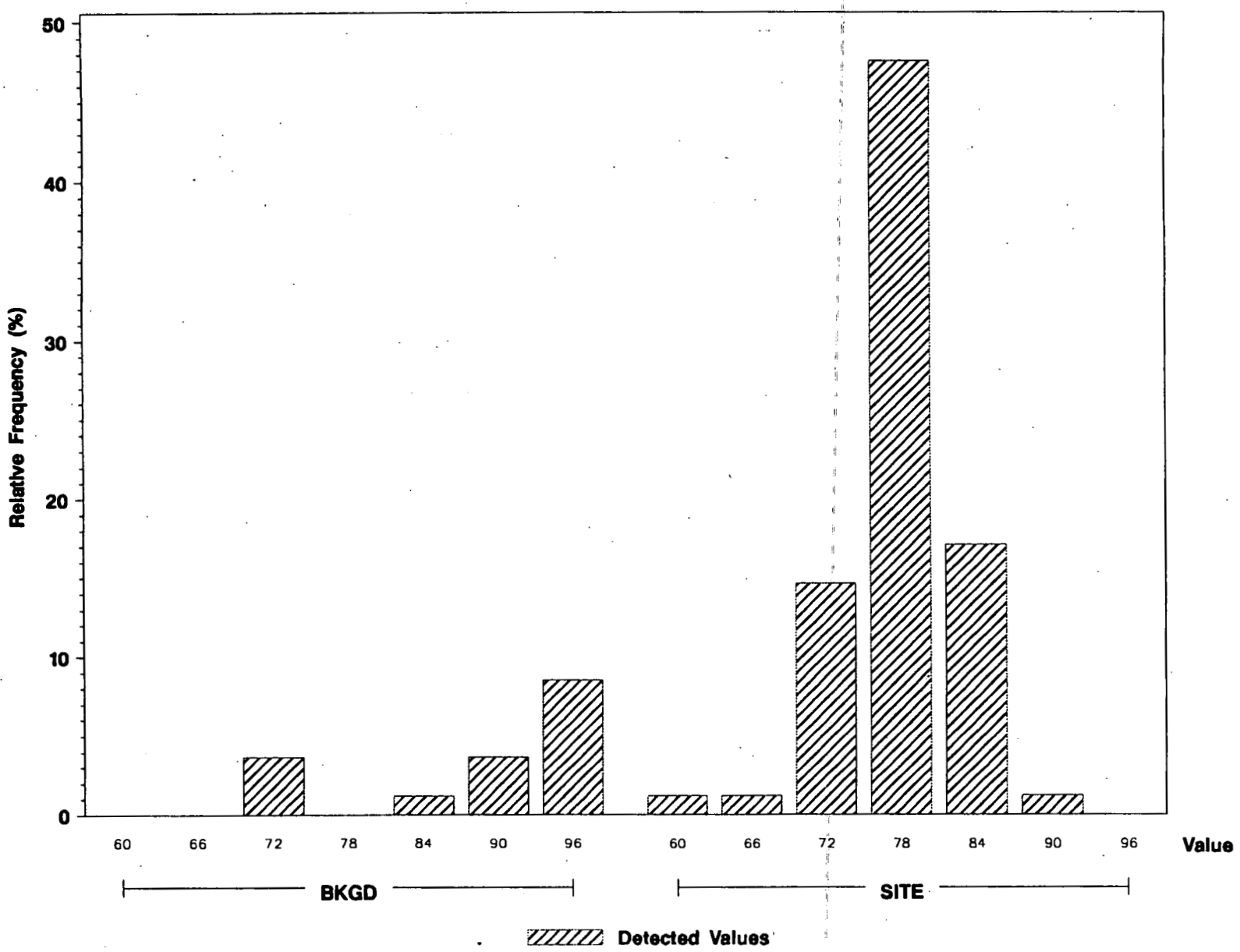
# Background vs. East Landfill Pond

# (0 to 10 inches)

# Background vs East Landfill Pond Frequency Histogram

## % SOLIDS in Surface Soils (0–10 inches)

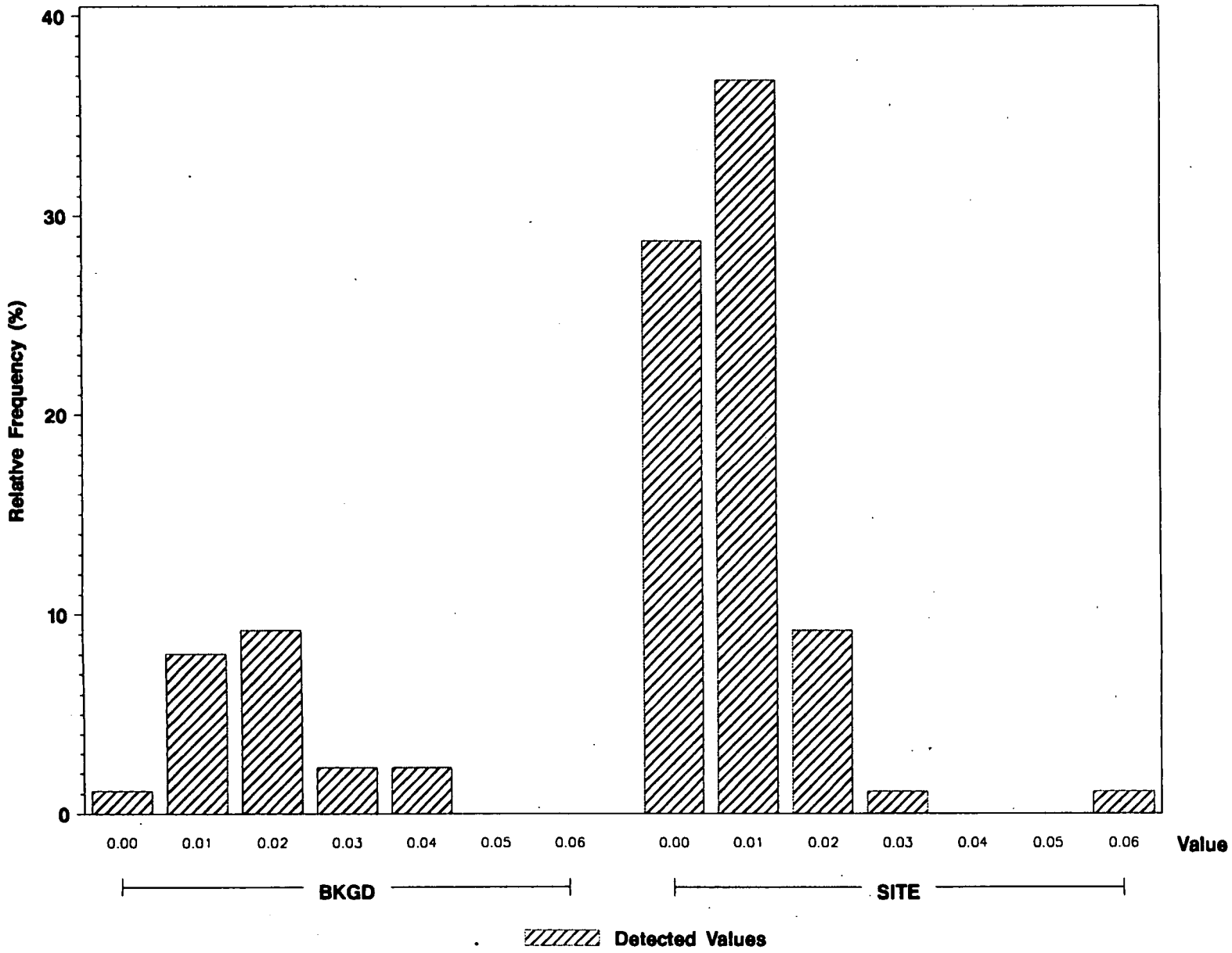
ANALYTE = % SOLIDS



# Background vs East Landfill Pond Frequency Histogram

## AMERICIUM-241 (pCi/g) in Surface Soils (0-10 inches)

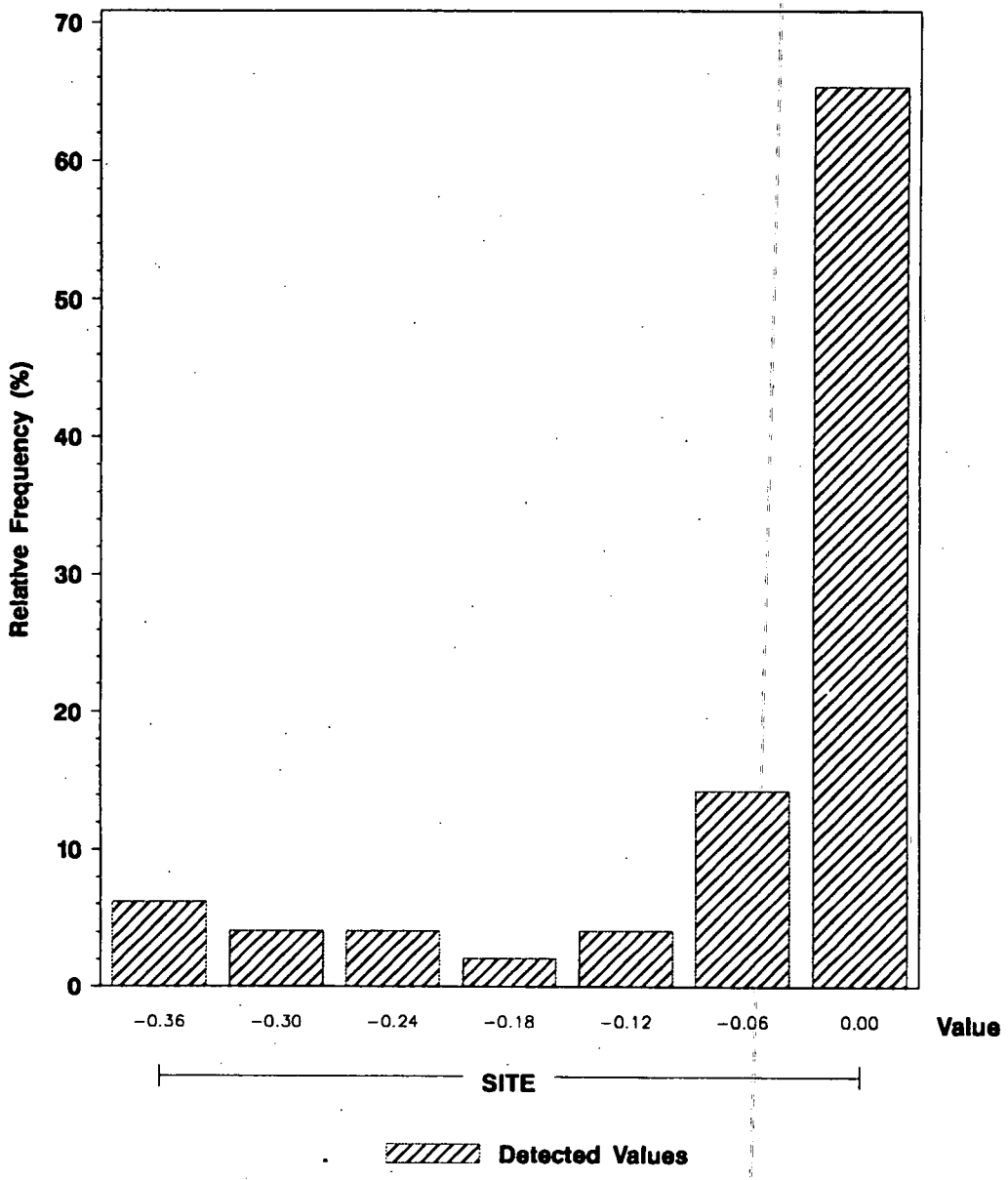
ANALYTE=AMERICIUM-241



# Background vs East Landfill Pond Frequency Histogram

## CESIUM – 134 (pCi/g) in Surface Soils (0 – 10 inches)

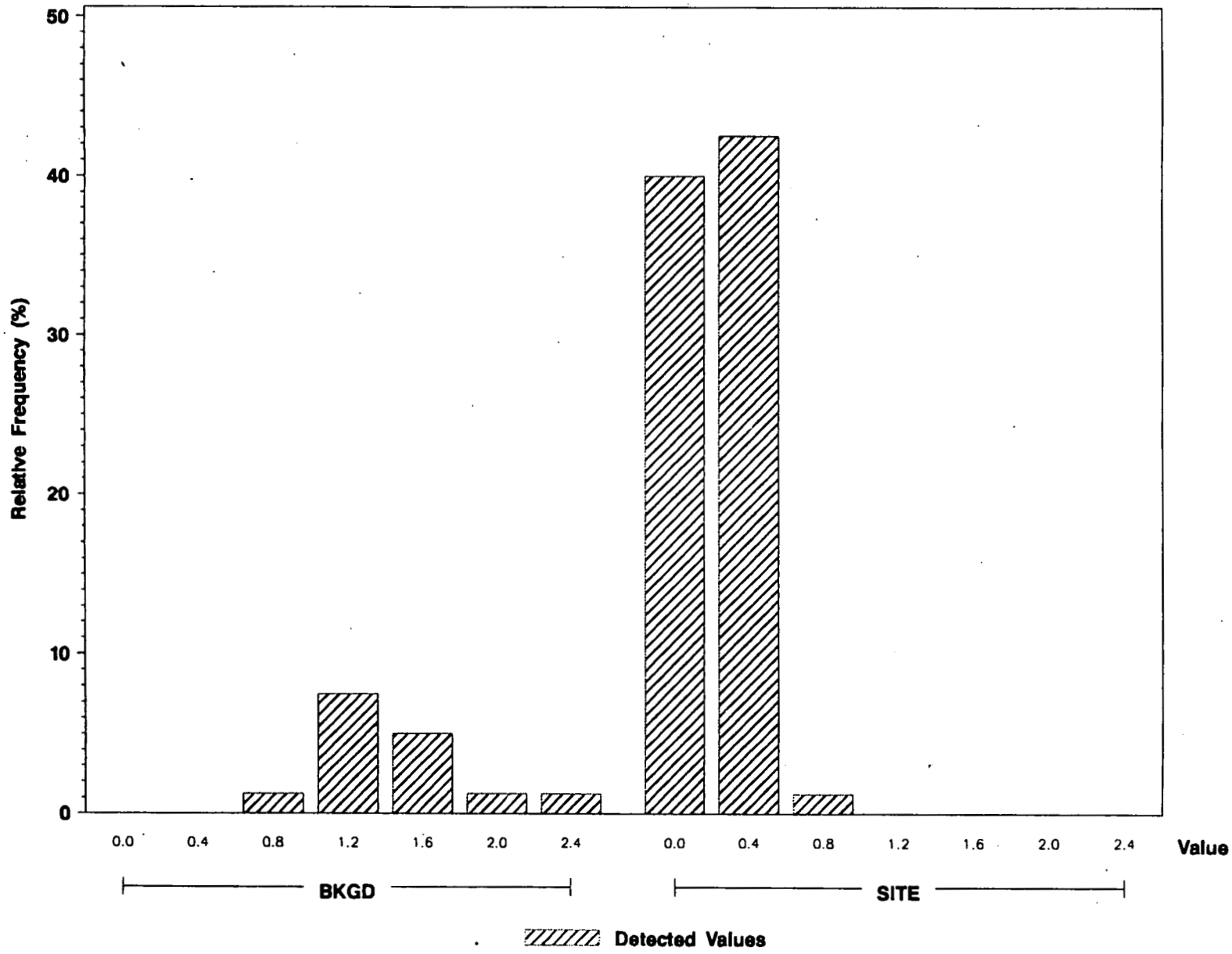
ANALYTE = CESIUM – 134



# Background vs East Landfill Pond Frequency Histogram

## CESIUM – 137 (pCi/g) in Surface Soils (0 – 10 inches)

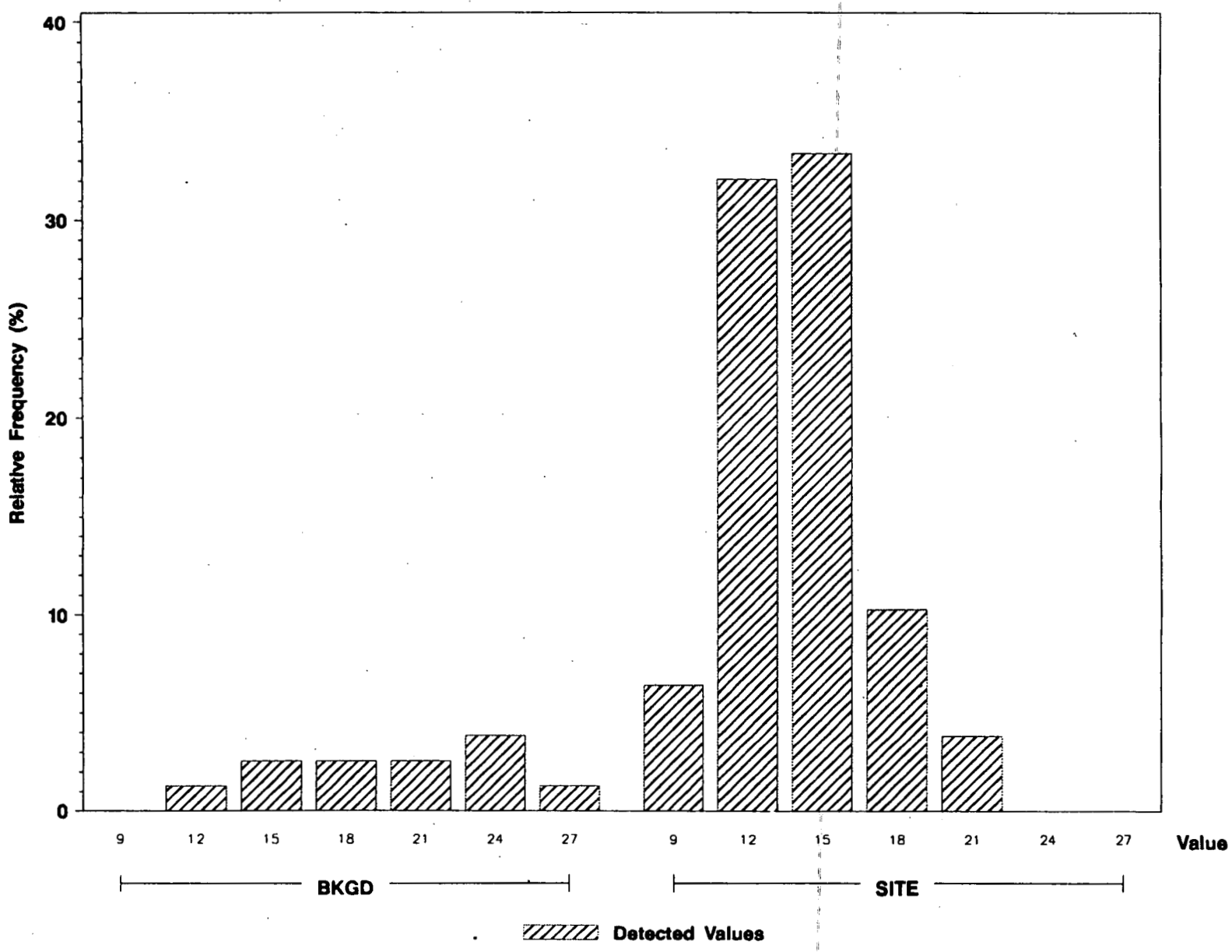
ANALYTE = CESIUM – 137



# Background vs East Landfill Pond Frequency Histogram

## GROSS ALPHA (pCi/g) in Surface Soils (0 – 10 inches)

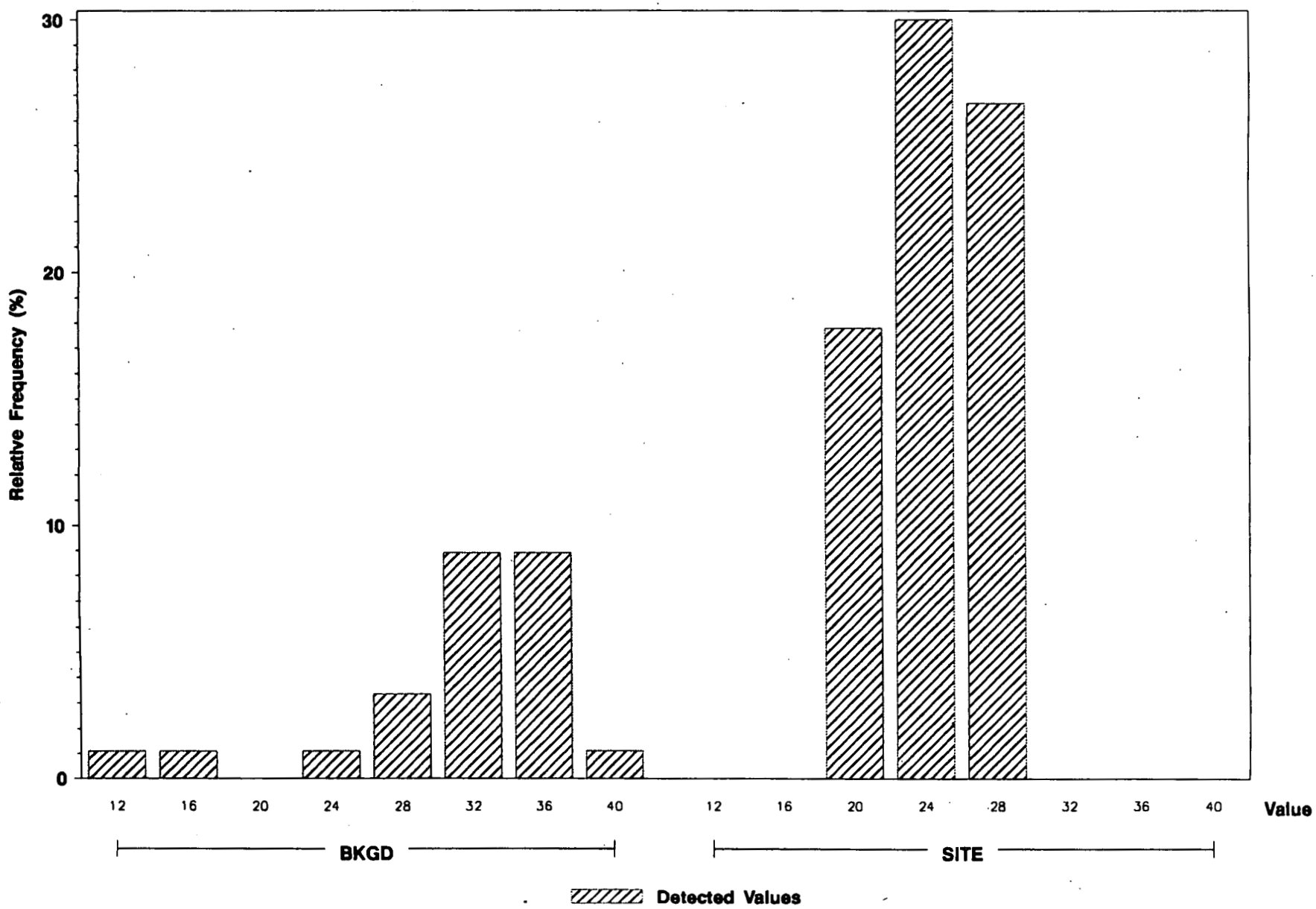
ANALYTE = GROSS ALPHA



# Background vs East Landfill Pond Frequency Histogram

## GROSS BETA (pCi/g) in Surface Soils (0–10 inches)

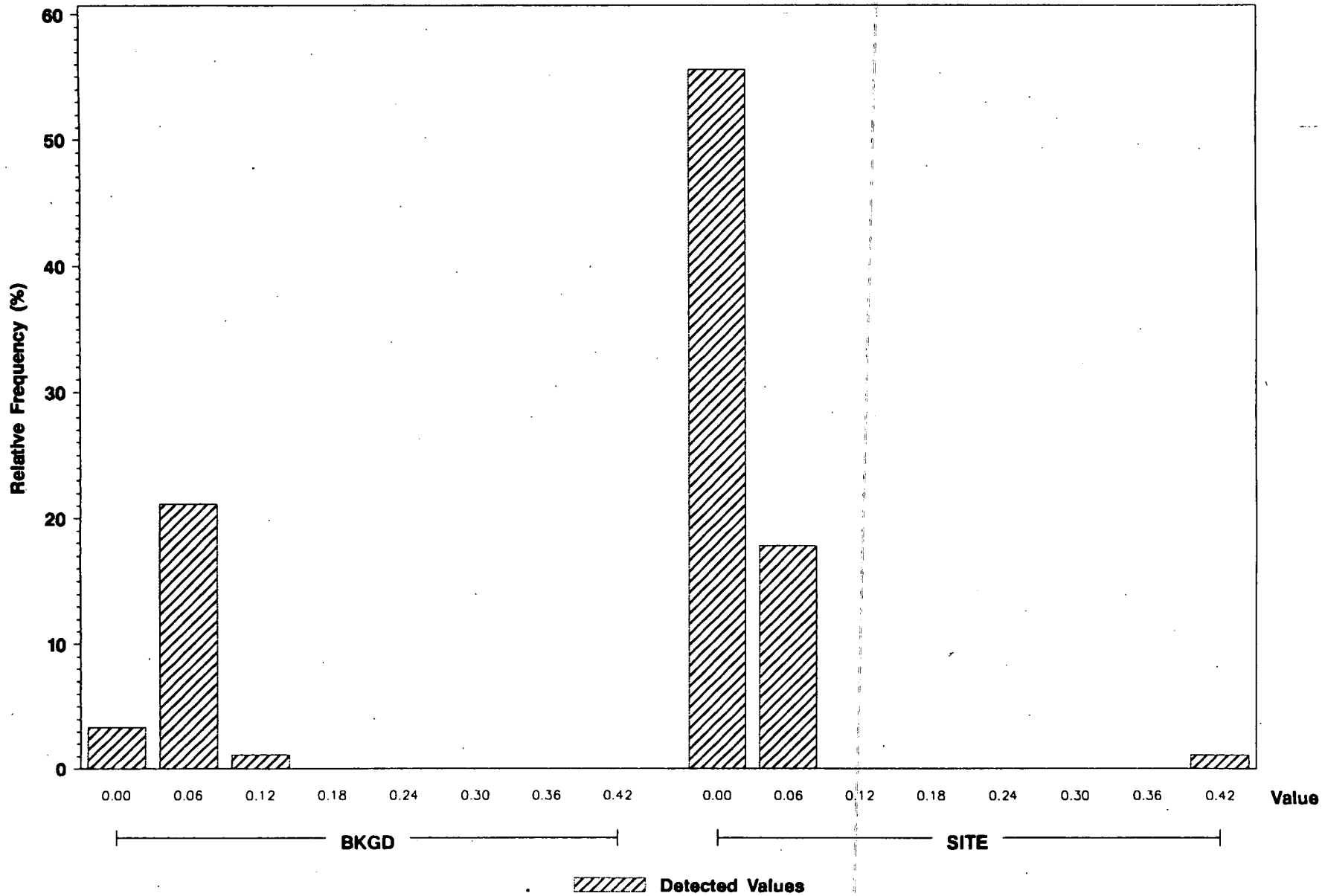
ANALYTE=GROSS BETA



# Background vs East Landfill Pond Frequency Histogram

## PLUTONIUM – 239/240 (pCi/g) in Surface Soils (0 – 10 inches)

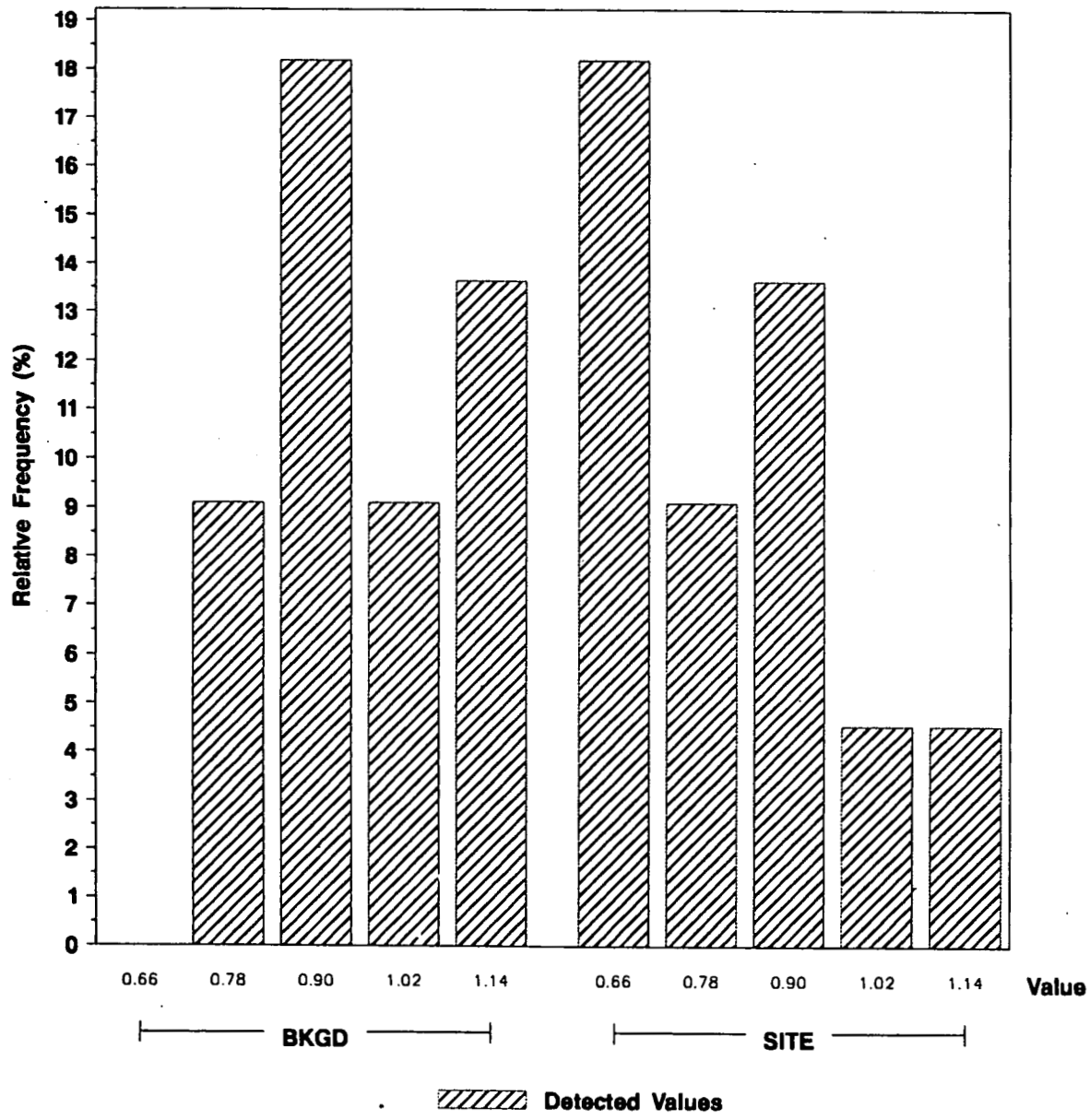
ANALYTE = PLUTONIUM – 239/240



# Background vs East Landfill Pond Frequency Histogram

## RADIUM – 226 (pCi/g) in Surface Soils (0 – 10 inches)

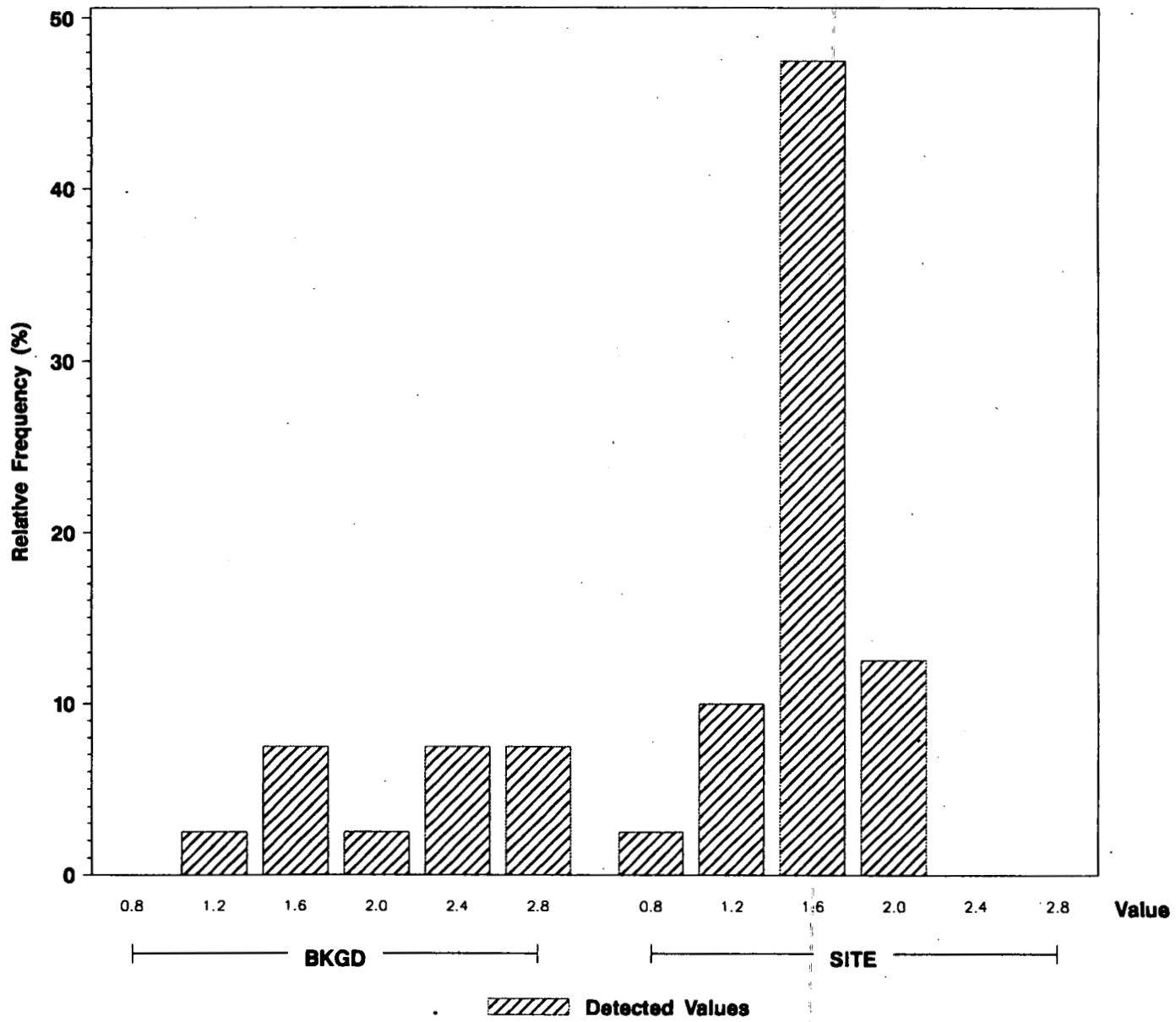
ANALYTE = RADIUM – 226



# Background vs East Landfill Pond Frequency Histogram

## RADIUM – 228 (pCi/g) in Surface Soils (0 – 10 inches)

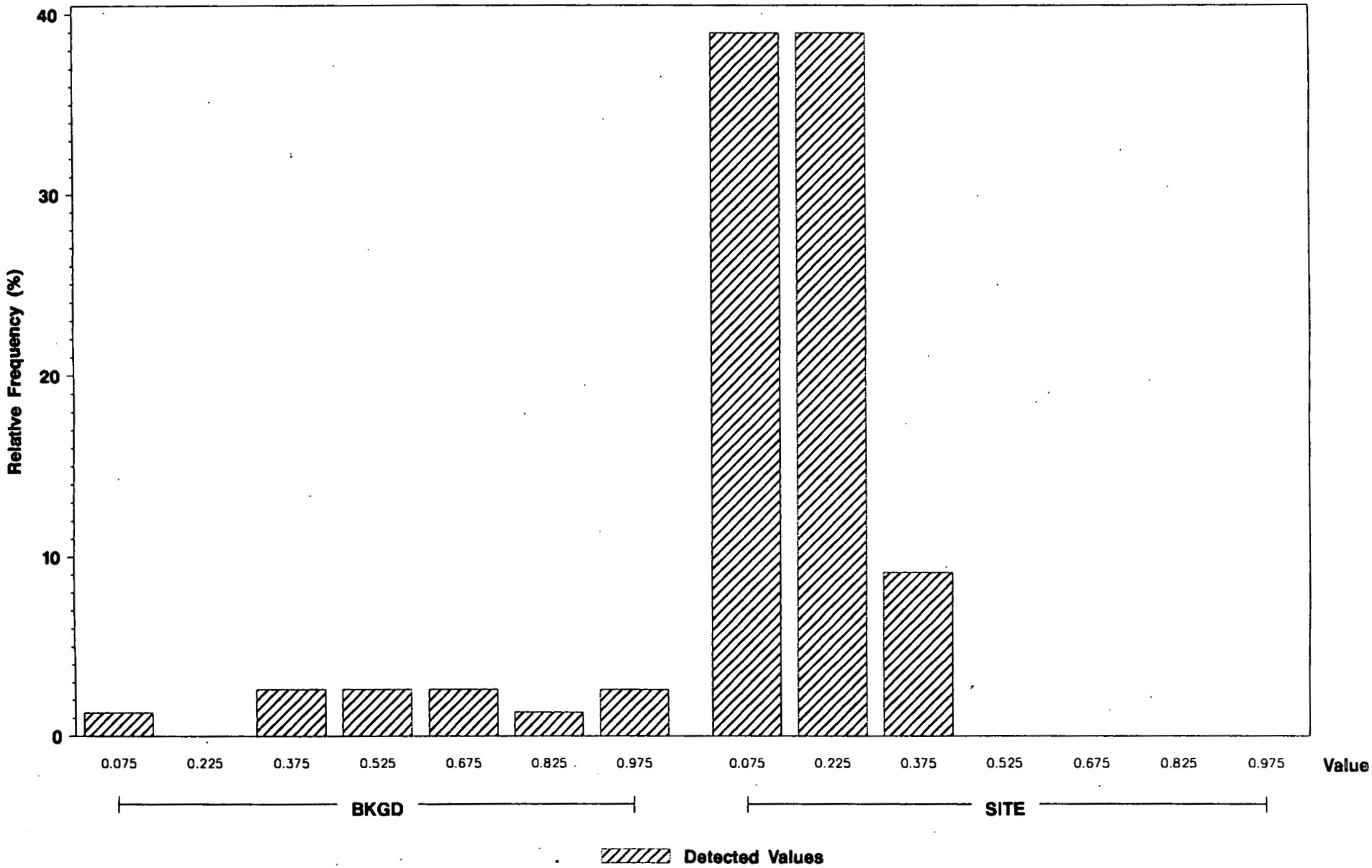
ANALYTE = RADIUM – 228



# Background vs East Landfill Pond Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Surface Soils (0 – 10 inches)

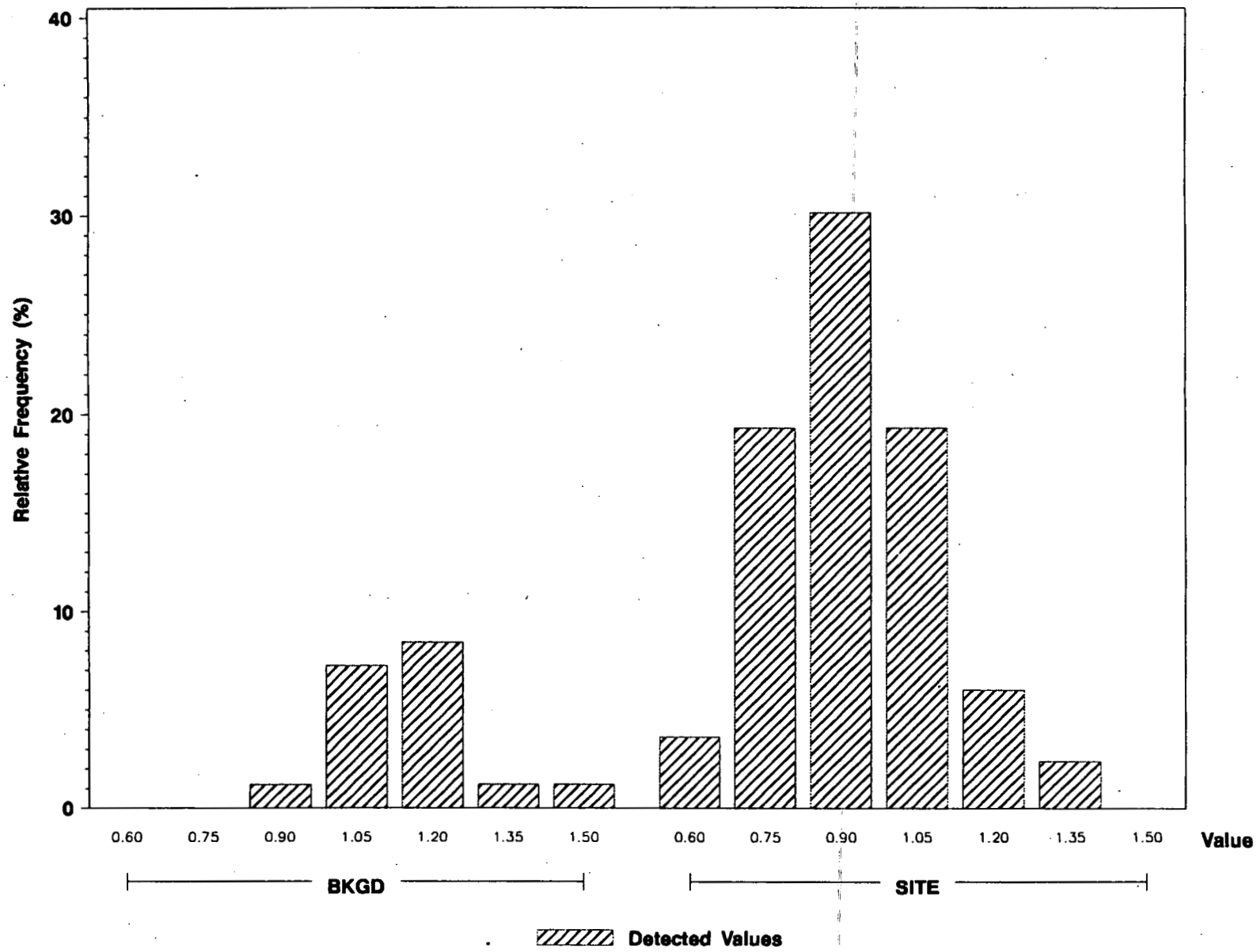
ANALYTE = STRONTIUM – 89,90



# Background vs East Landfill Pond Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Surface Soils (0 – 10 inches)

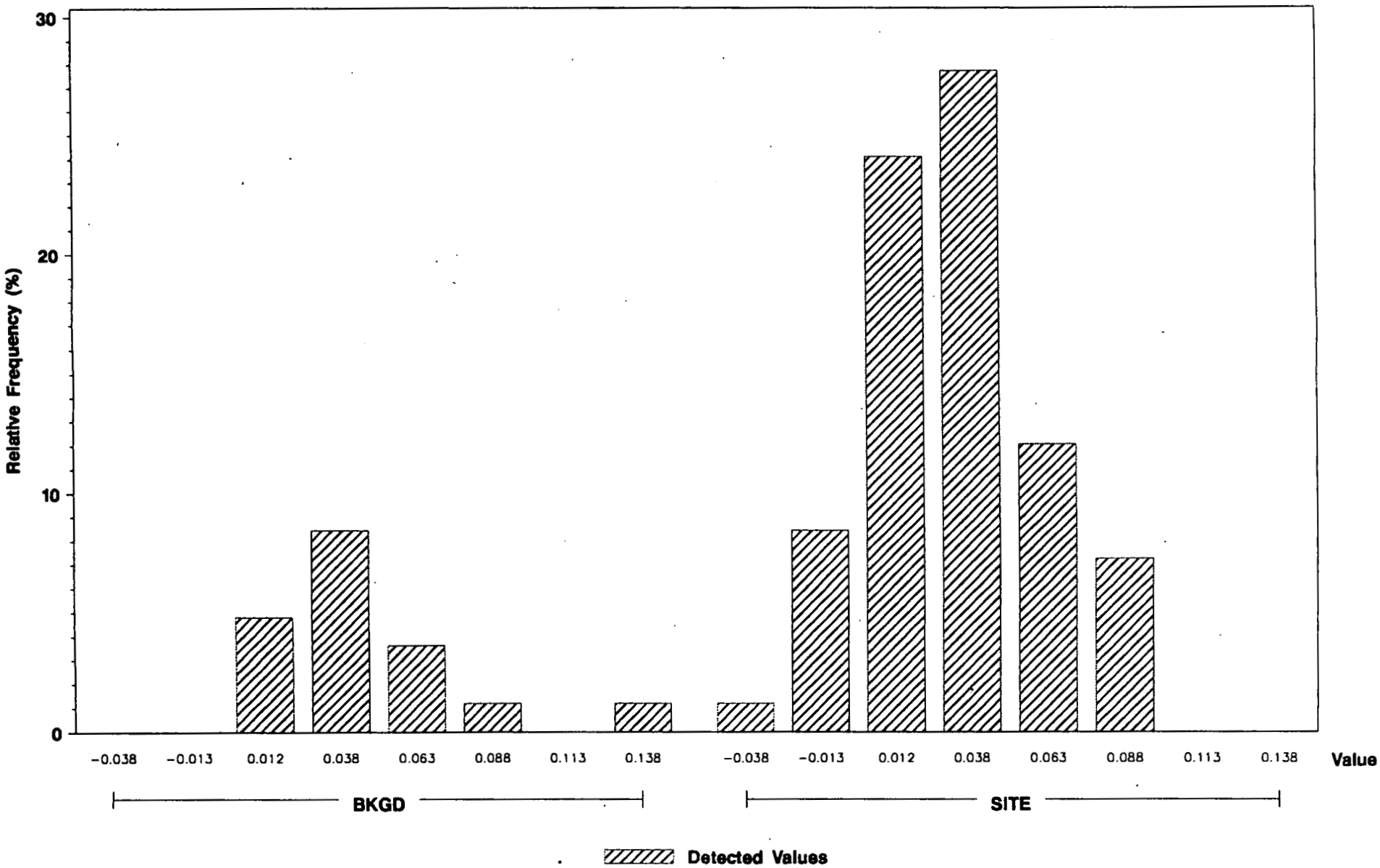
ANALYTE = URANIUM – 233, – 234



# Background vs East Landfill Pond Frequency Histogram

## URANIUM – 235 (pCi/g) in Surface Soils (0 – 10 inches)

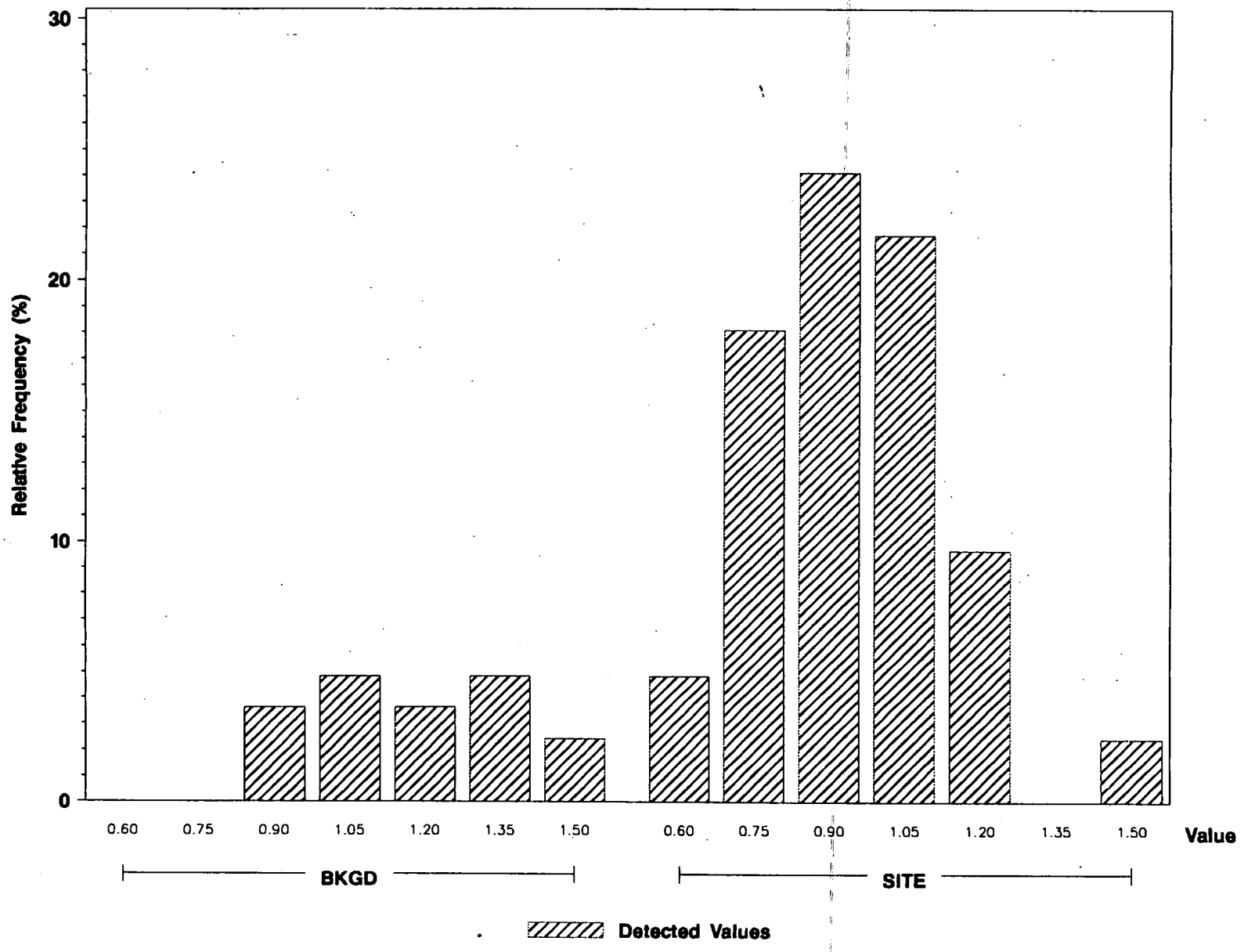
ANALYTE = URANIUM – 235



# Background vs East Landfill Pond Frequency Histogram

## URANIUM – 238 (pCi/g) in Surface Soils (0 – 10 inches)

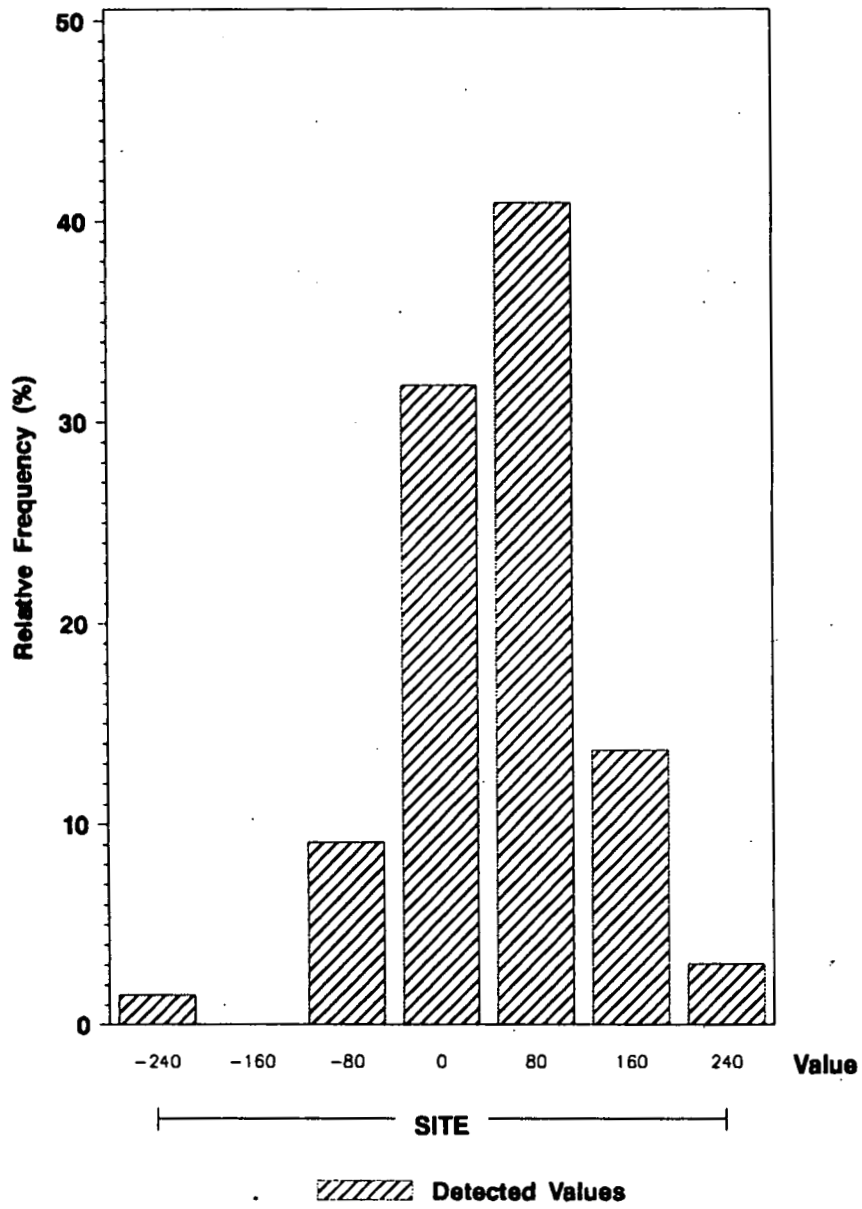
ANALYTE = URANIUM – 238



# Background vs East Landfill Pond Frequency Histogram

## TRITIUM (pCi/L) in Surface Soils (0 – 10 inches)

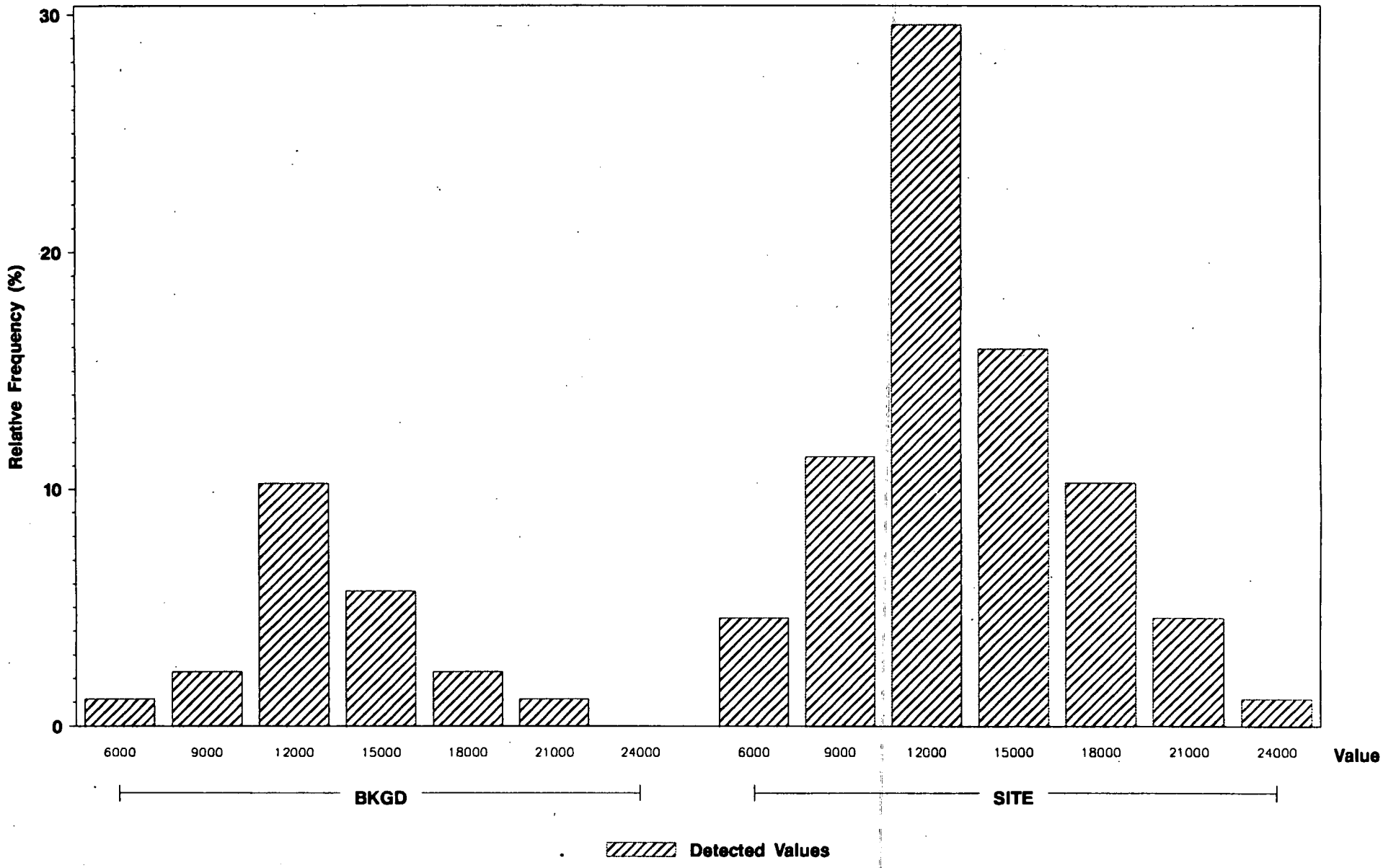
ANALYTE = TRITIUM



# Background vs East Landfill Pond Frequency Histogram

## ALUMINUM (mg/Kg) in Surface Soils (0 – 10 inches)

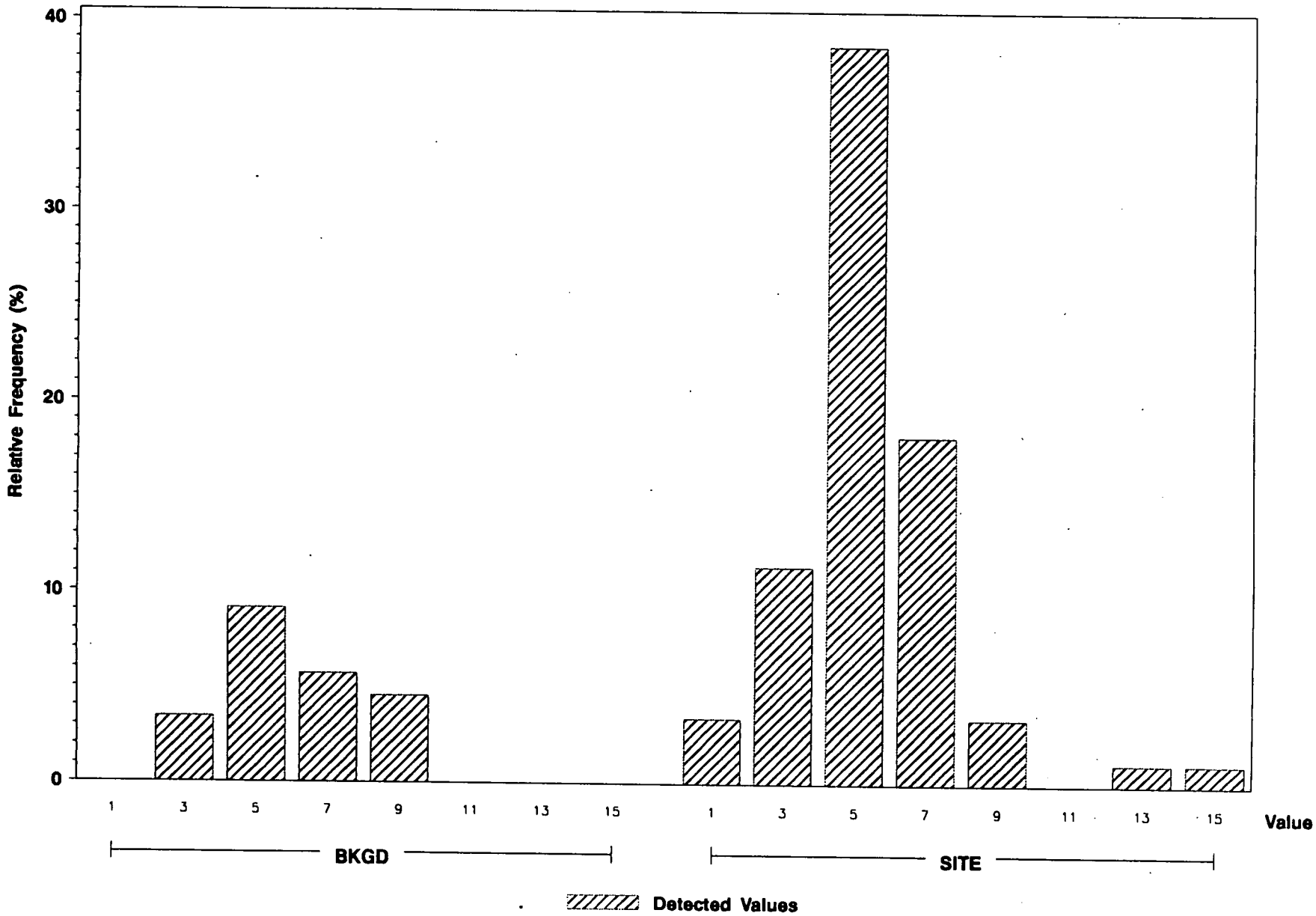
ANALYTE = ALUMINUM



# Background vs East Landfill Pond Frequency Histogram

## ARSENIC (mg/Kg) in Surface Soils (0 – 10 inches)

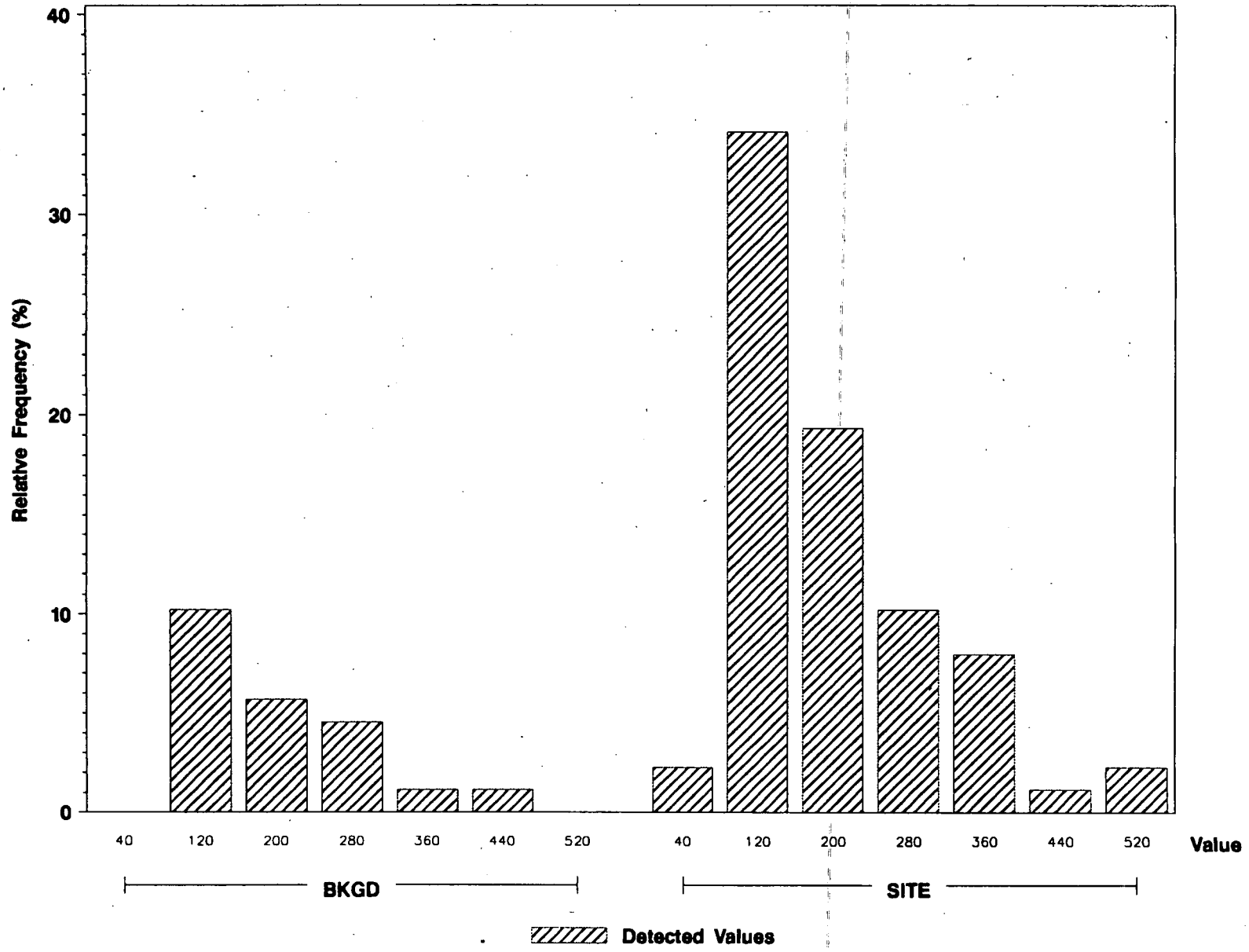
ANALYTE = ARSENIC



# Background vs East Landfill Pond Frequency Histogram

## BARIUM (mg/Kg) in Surface Soils (0 – 10 inches)

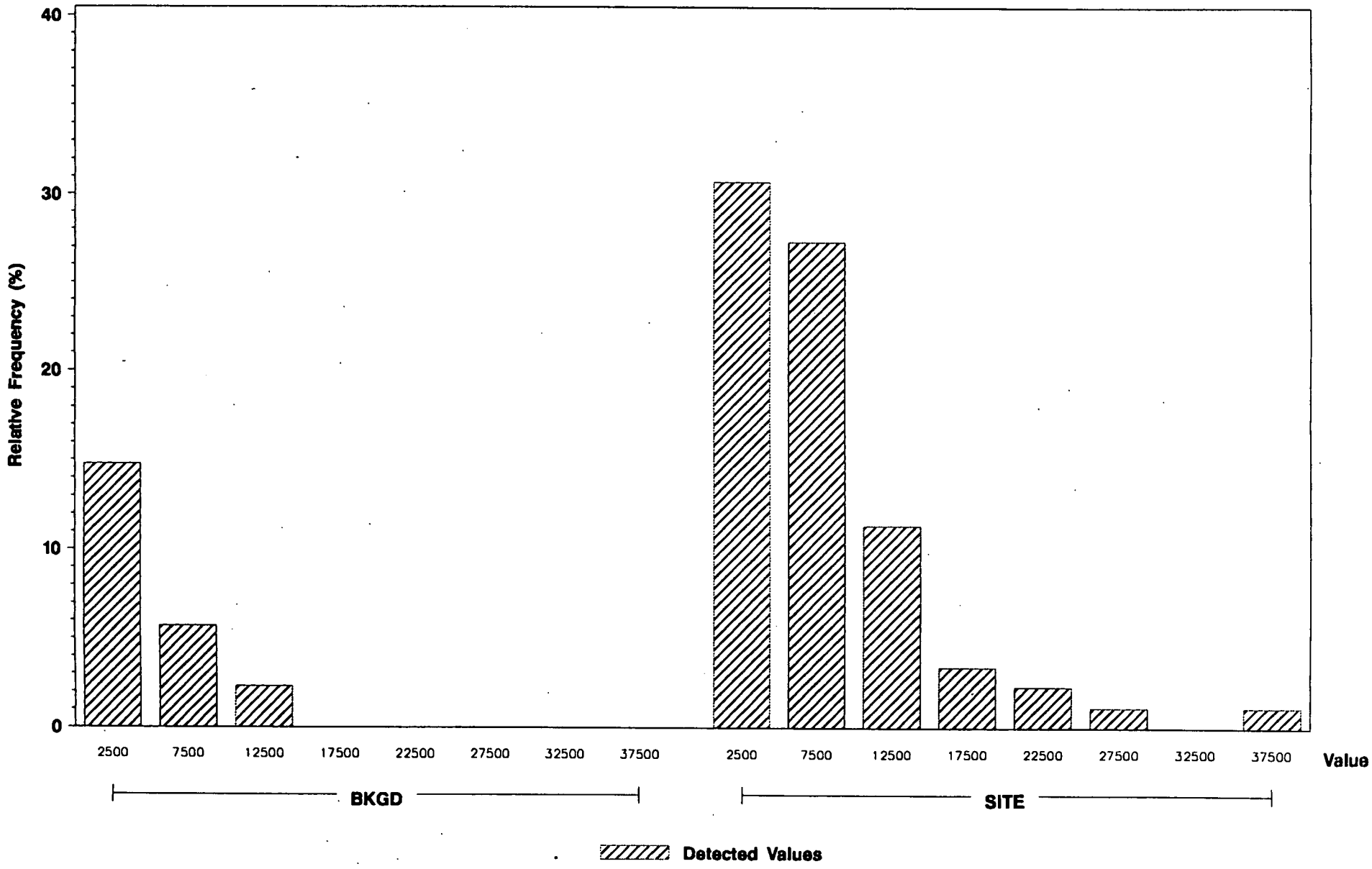
ANALYTE = BARIUM



# Background vs East Landfill Pond Frequency Histogram

## CALCIUM (mg/Kg) in Surface Soils (0 – 10 inches)

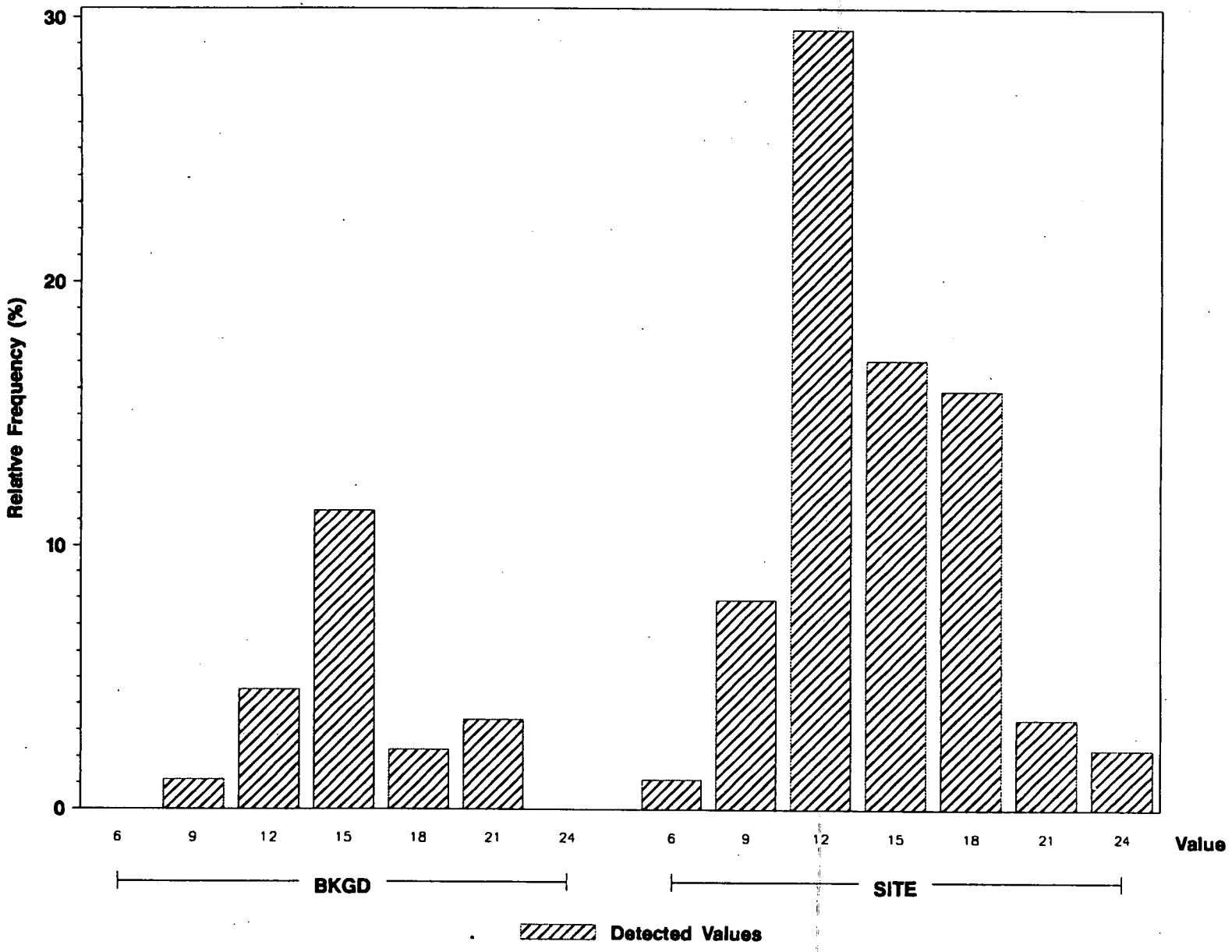
ANALYTE = CALCIUM



# Background vs East Landfill Pond Frequency Histogram

## CHROMIUM (mg/Kg) in Surface Soils (0 – 10 inches)

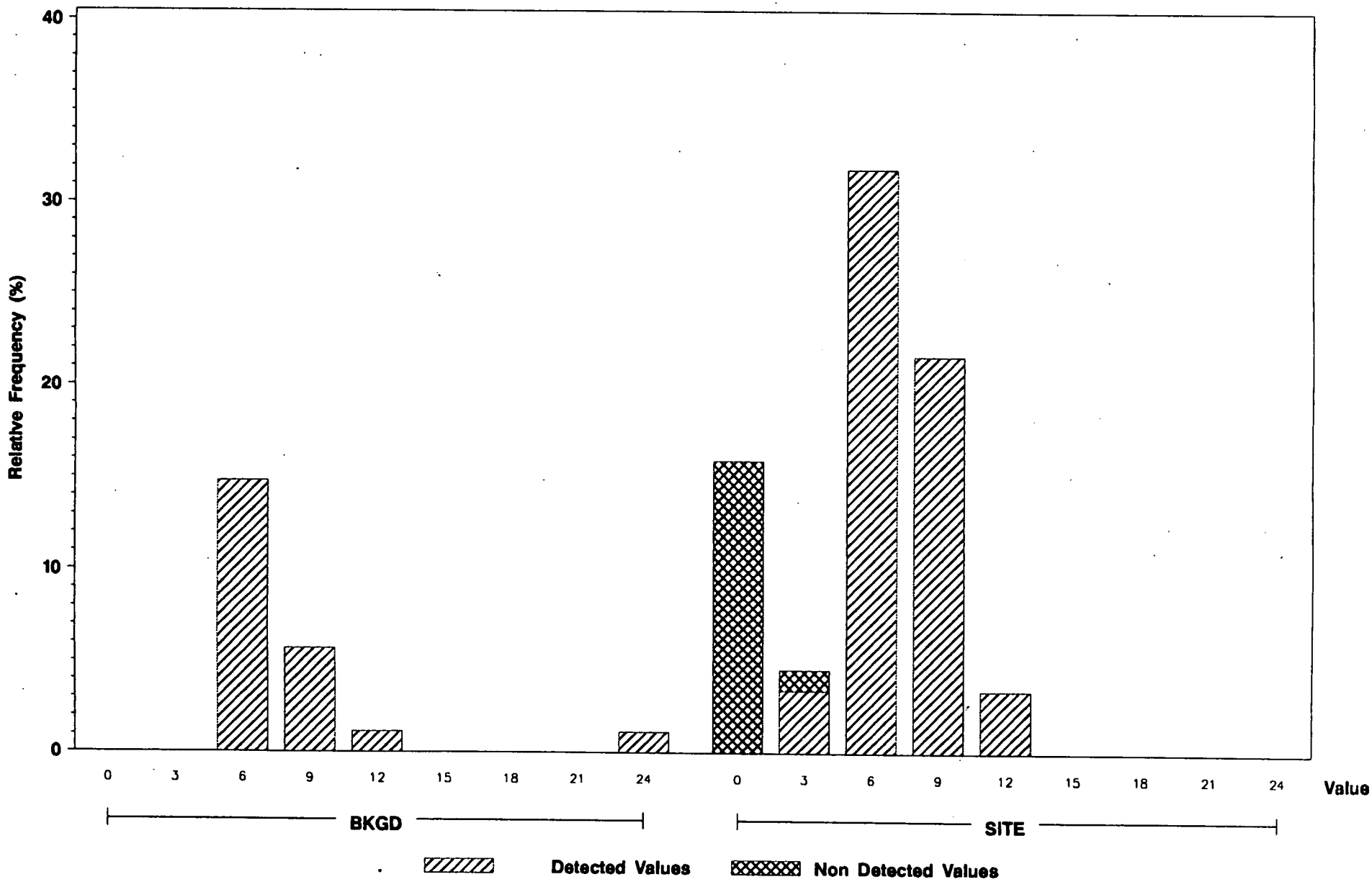
ANALYTE = CHROMIUM



# Background vs East Landfill Pond Frequency Histogram

## COBALT (mg/Kg) in Surface Soils (0 – 10 inches)

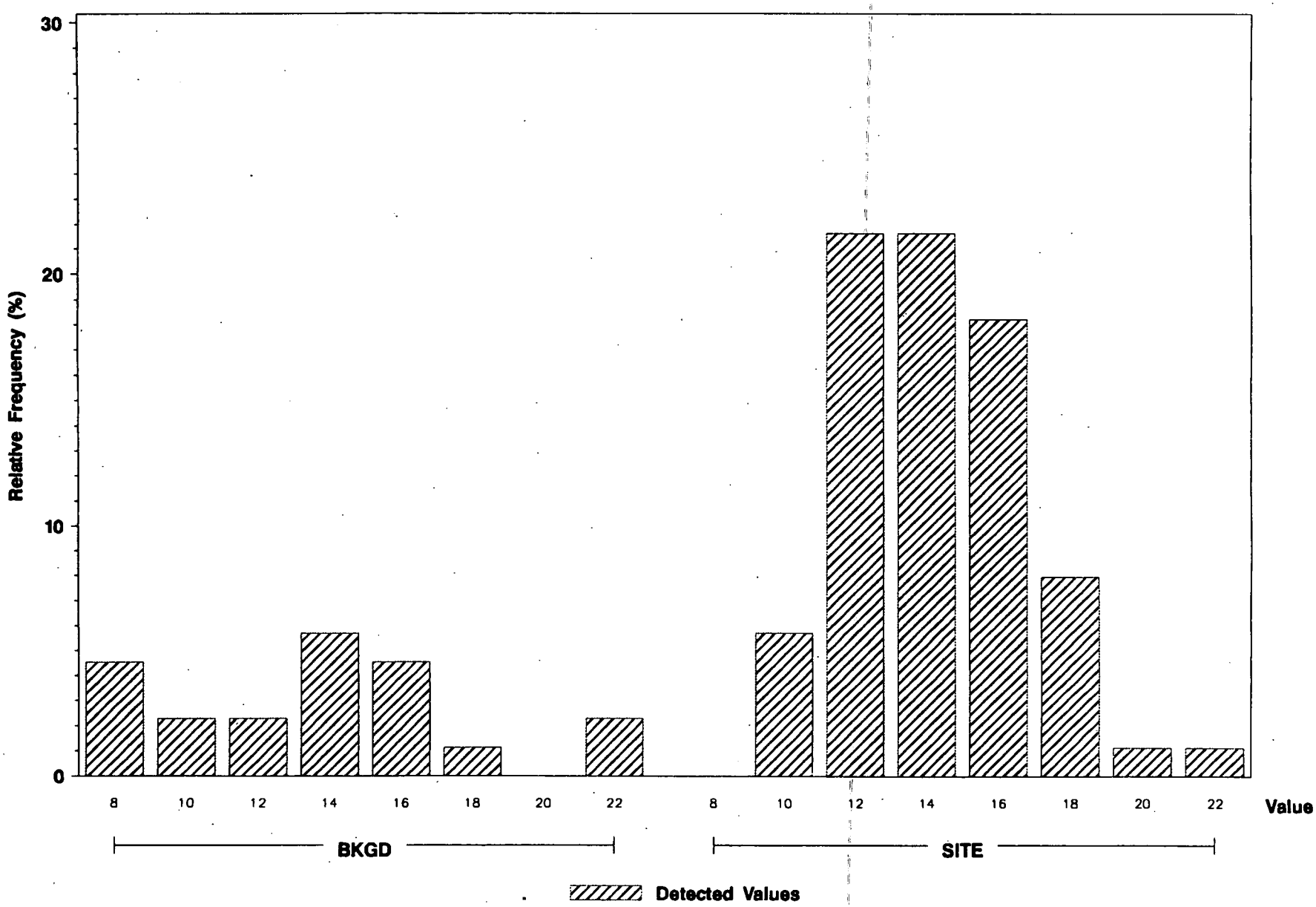
ANALYTE = COBALT



# Background vs East Landfill Pond Frequency Histogram

## COPPER (mg/Kg) in Surface Soils (0 – 10 inches)

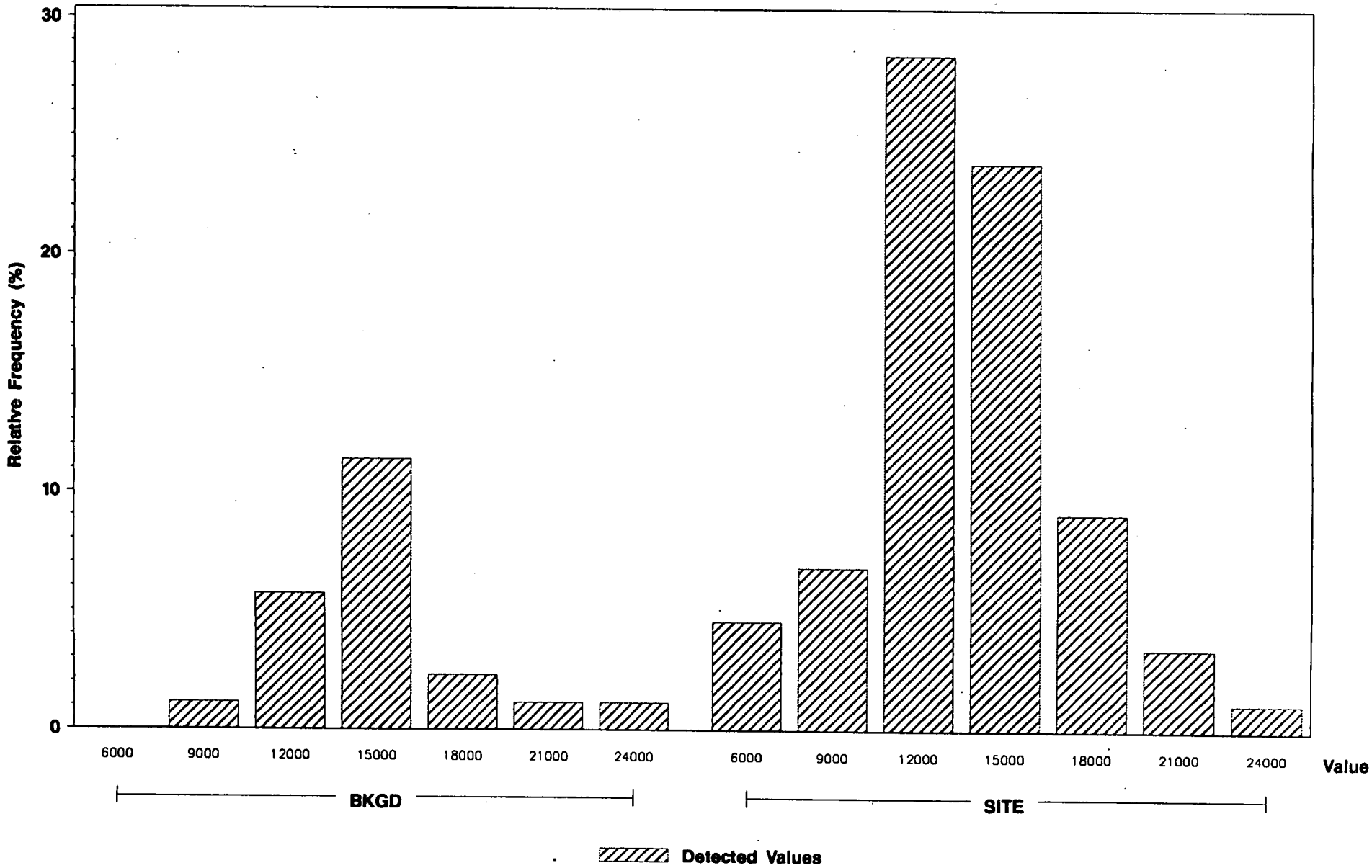
ANALYTE = COPPER



# Background vs East Landfill Pond Frequency Histogram

## IRON (mg/Kg) in Surface Soils (0 – 10 inches)

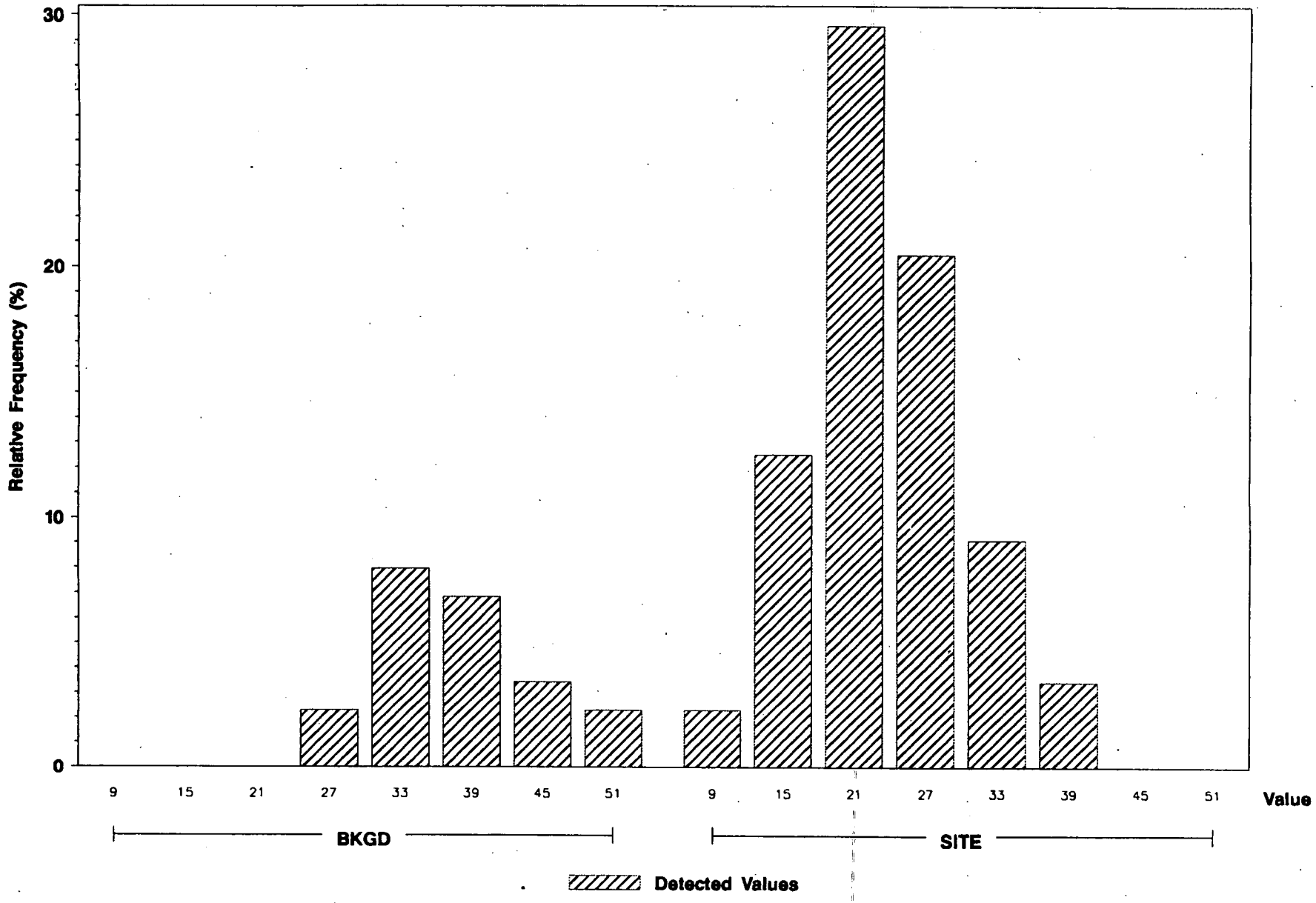
ANALYTE = IRON



# Background vs East Landfill Pond Frequency Histogram

## LEAD (mg/Kg) in Surface Soils (0 – 10 inches)

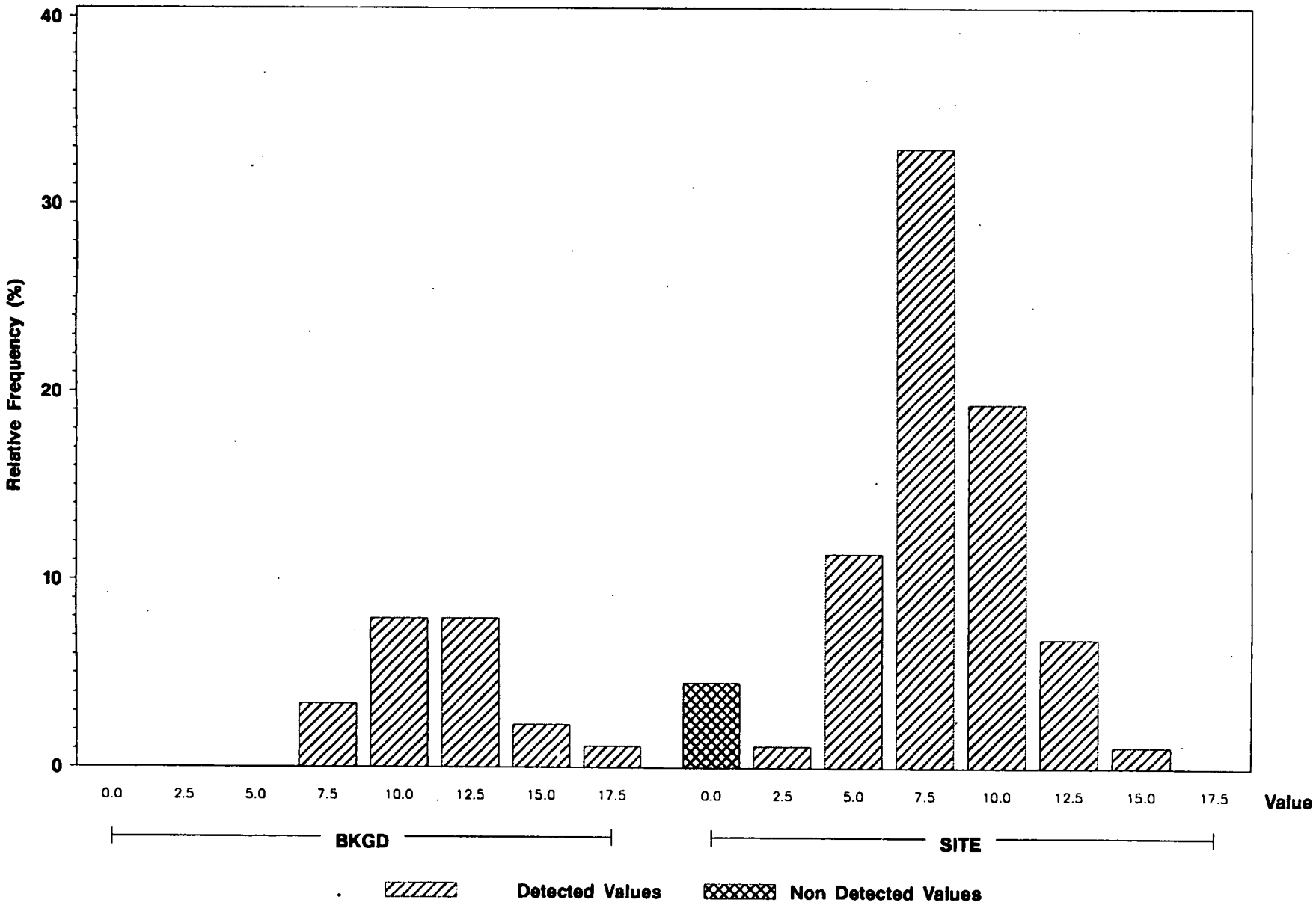
ANALYTE = LEAD



# Background vs East Landfill Pond Frequency Histogram

## LITHIUM (mg/Kg) in Surface Soils (0–10 inches)

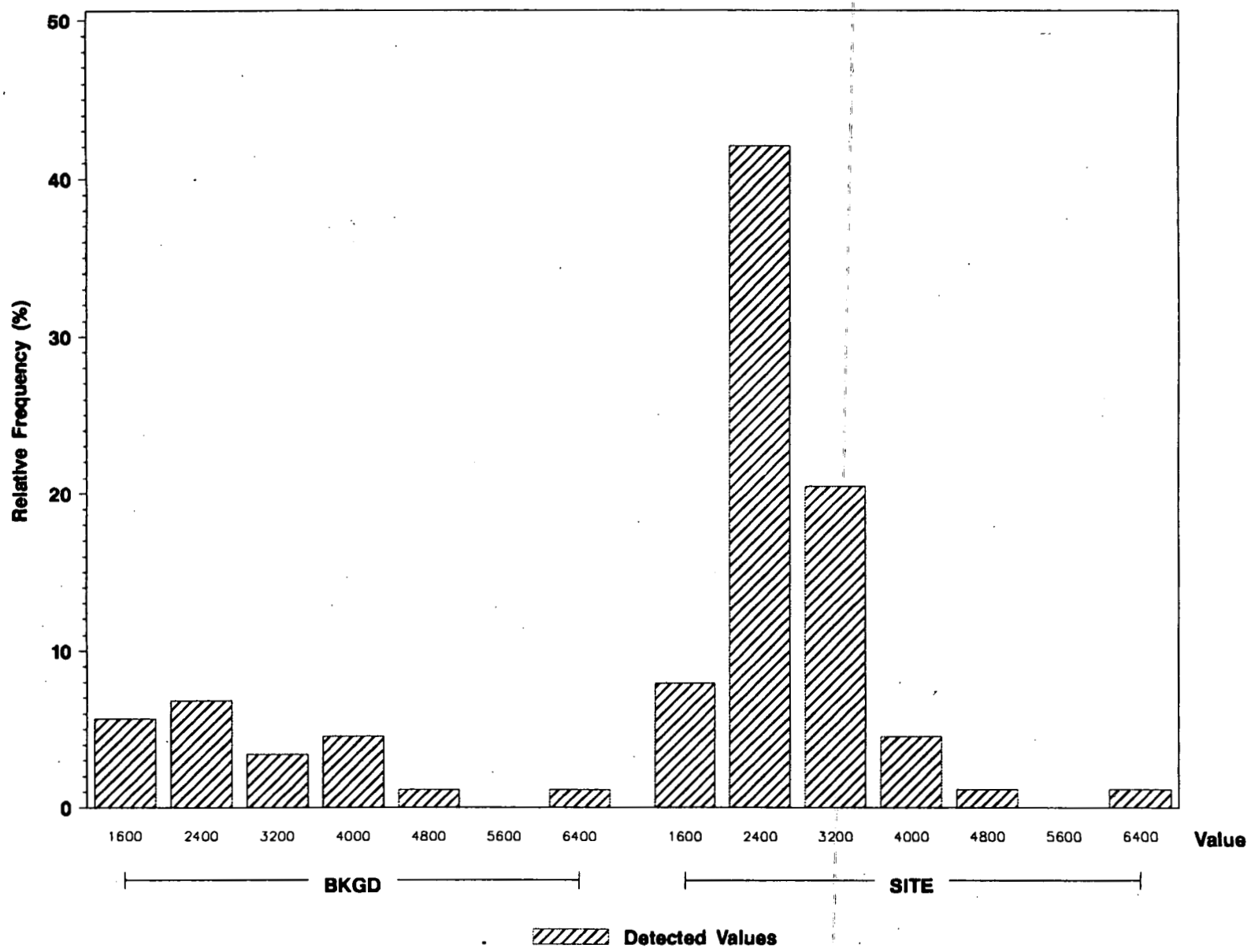
ANALYTE = LITHIUM



# Background vs East Landfill Pond Frequency Histogram

## MAGNESIUM (mg/Kg) in Surface Soils (0–10 inches)

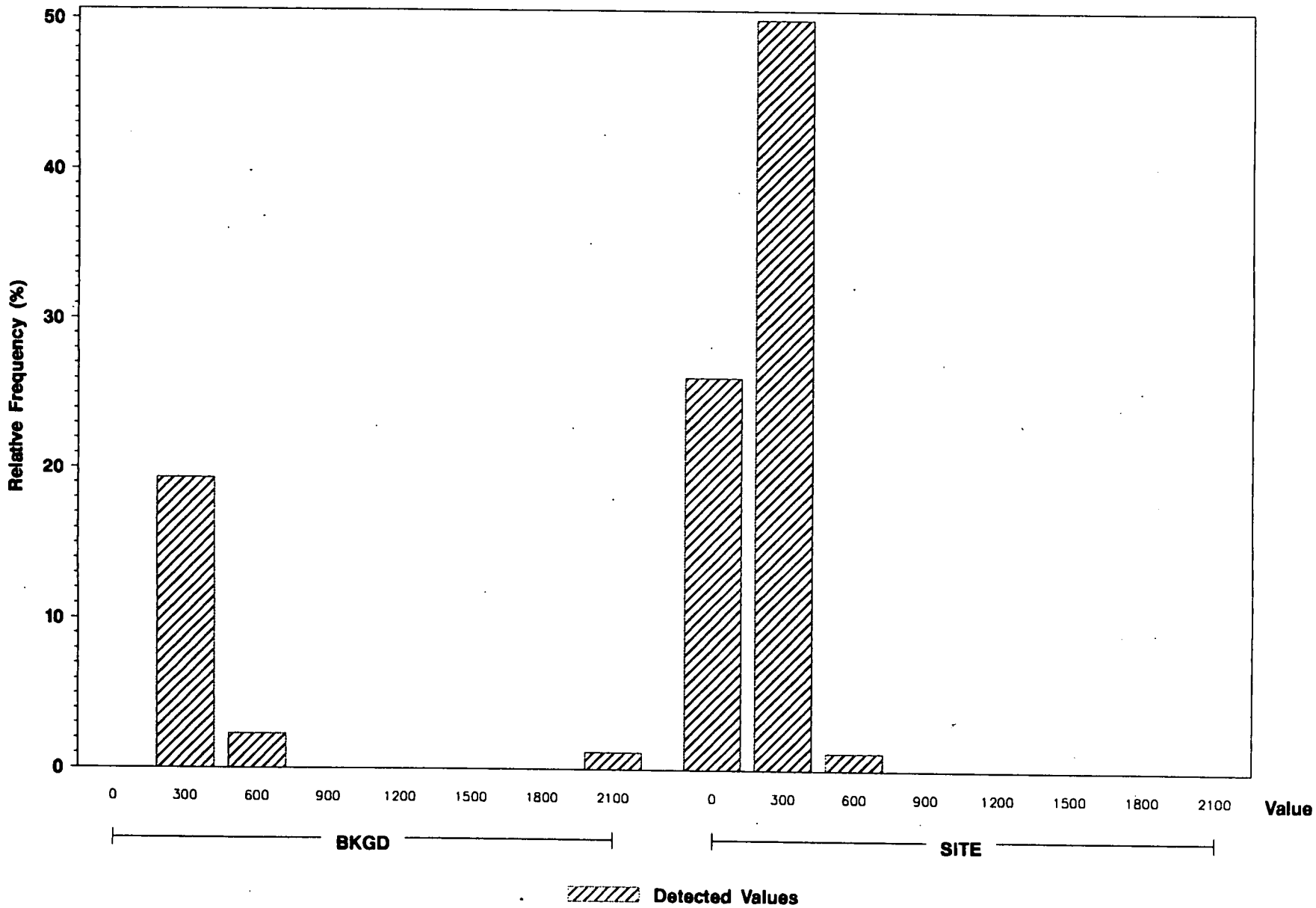
ANALYTE = MAGNESIUM



# Background vs East Landfill Pond Frequency Histogram

## MANGANESE (mg/Kg) in Surface Soils (0–10 inches)

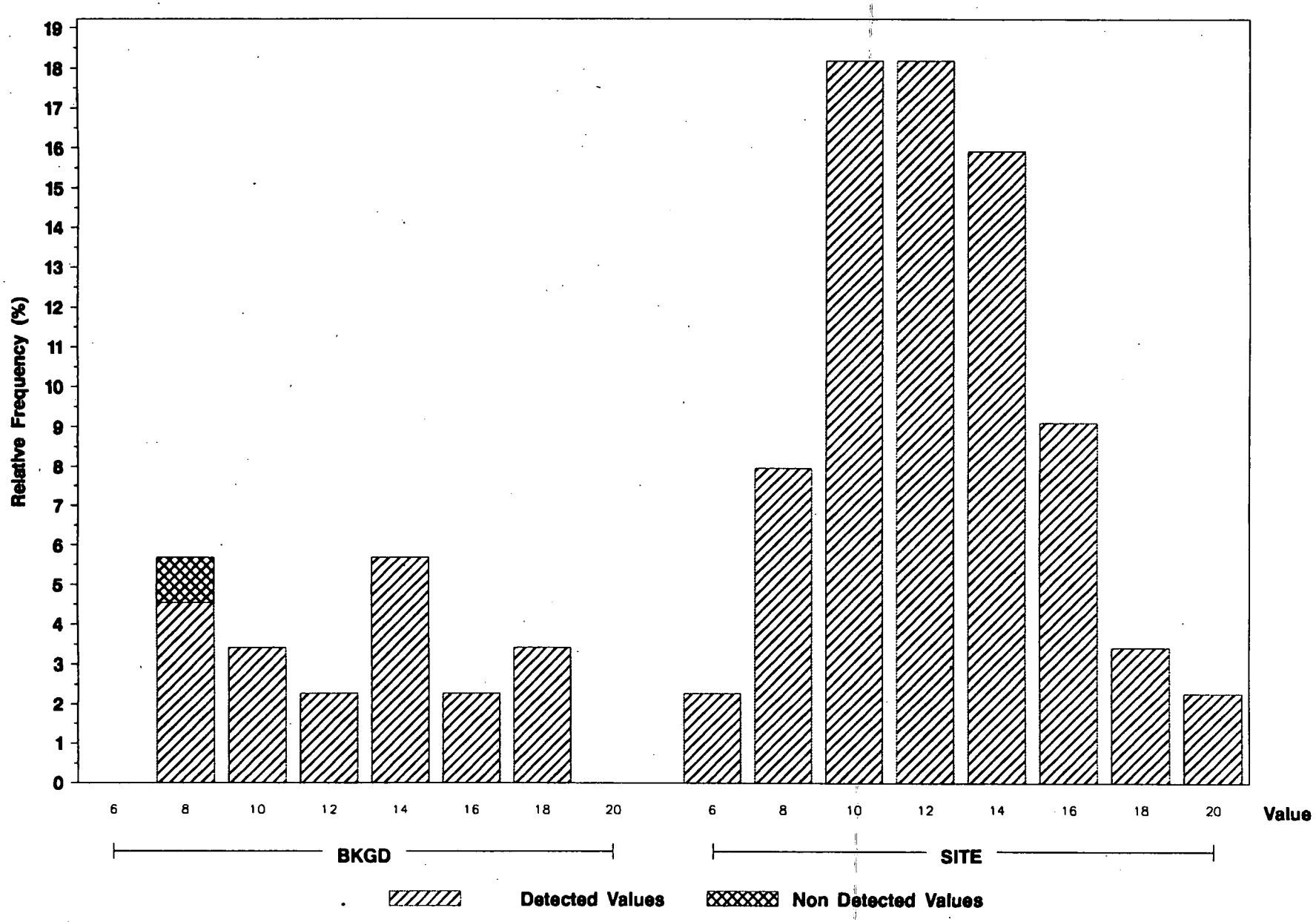
ANALYTE = MANGANESE



# Background vs East Landfill Pond Frequency Histogram

## NICKEL (mg/Kg) in Surface Soils (0 – 10 inches)

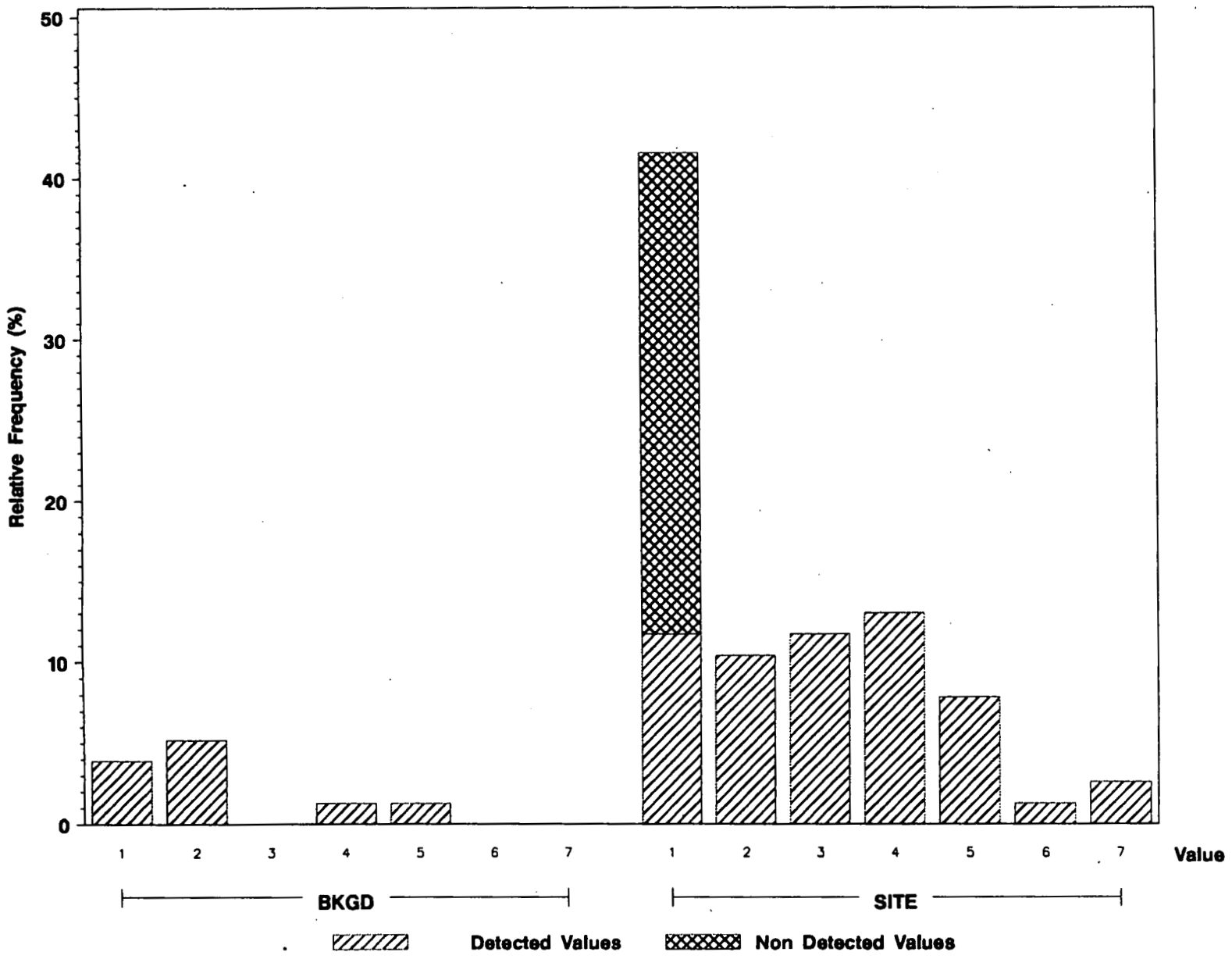
ANALYTE = NICKEL



# Background vs East Landfill Pond Frequency Histogram

## NITRATE/NITRITE (mg/Kg) in Surface Soils (0 – 10 inches)

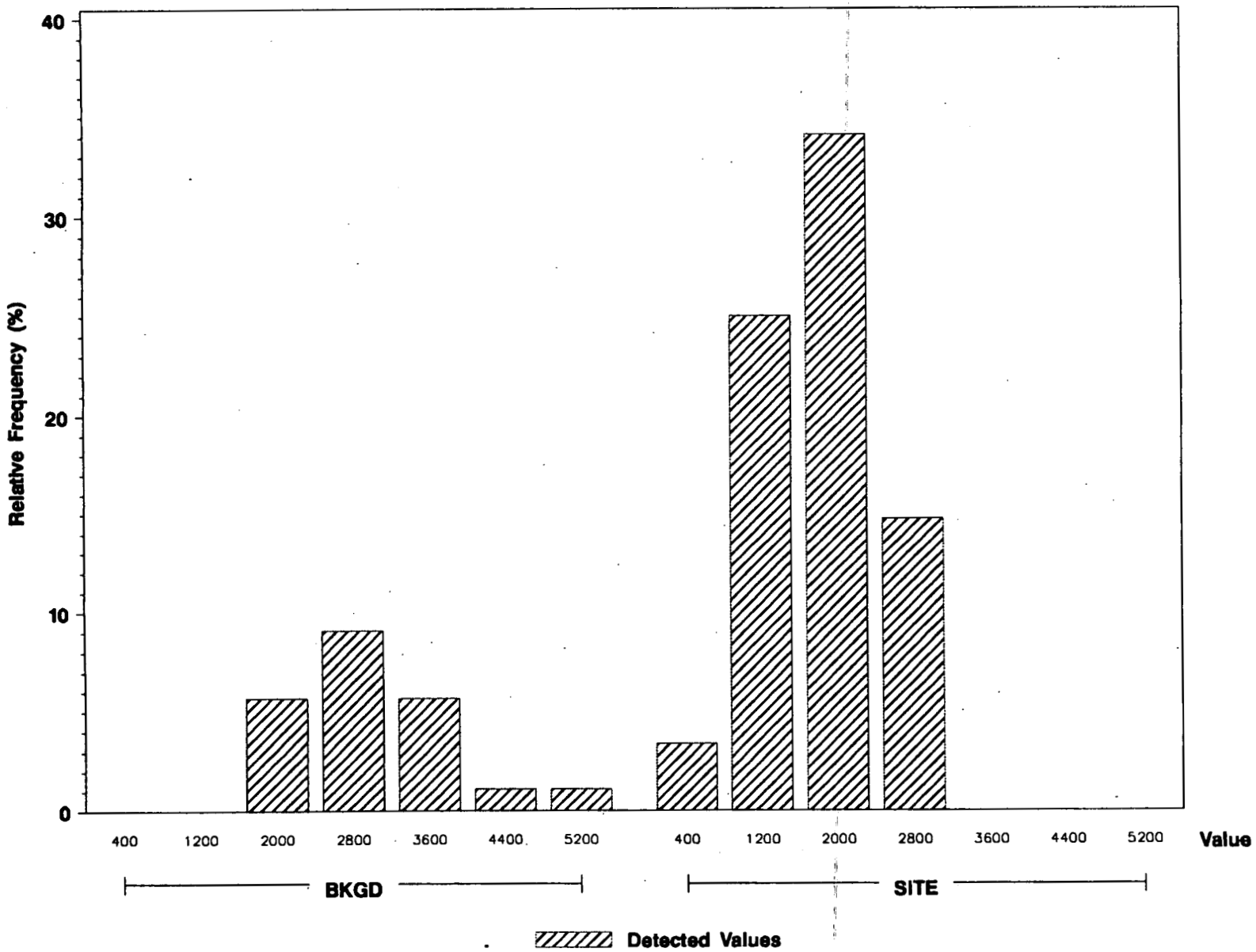
ANALYTE = NITRATE/NITRITE



# Background vs East Landfill Pond Frequency Histogram

## POTASSIUM (mg/Kg) in Surface Soils (0–10 inches)

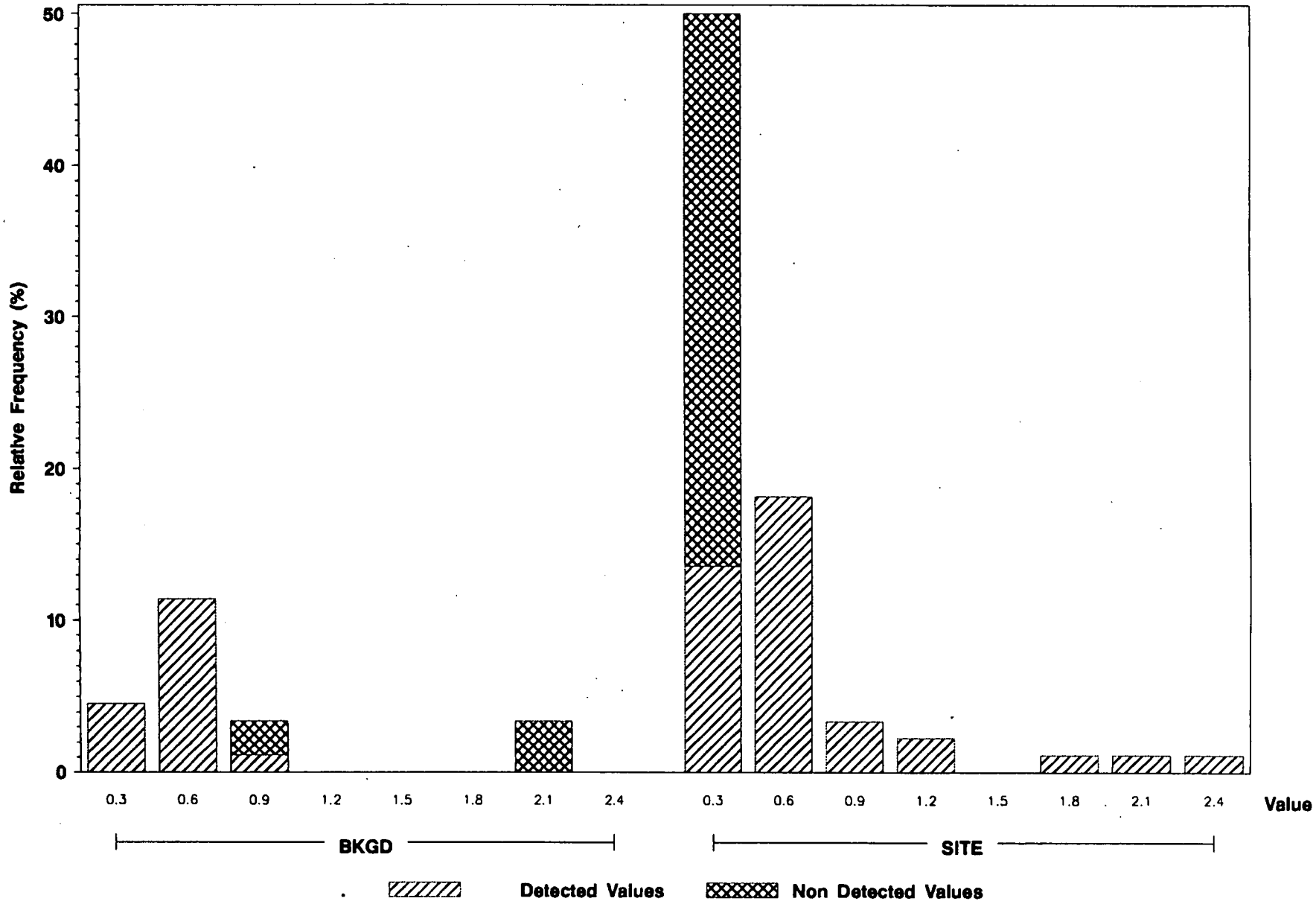
ANALYTE = POTASSIUM



# Background vs East Landfill Pond Frequency Histogram

## SELENIUM (mg/Kg) in Surface Soils (0–10 inches)

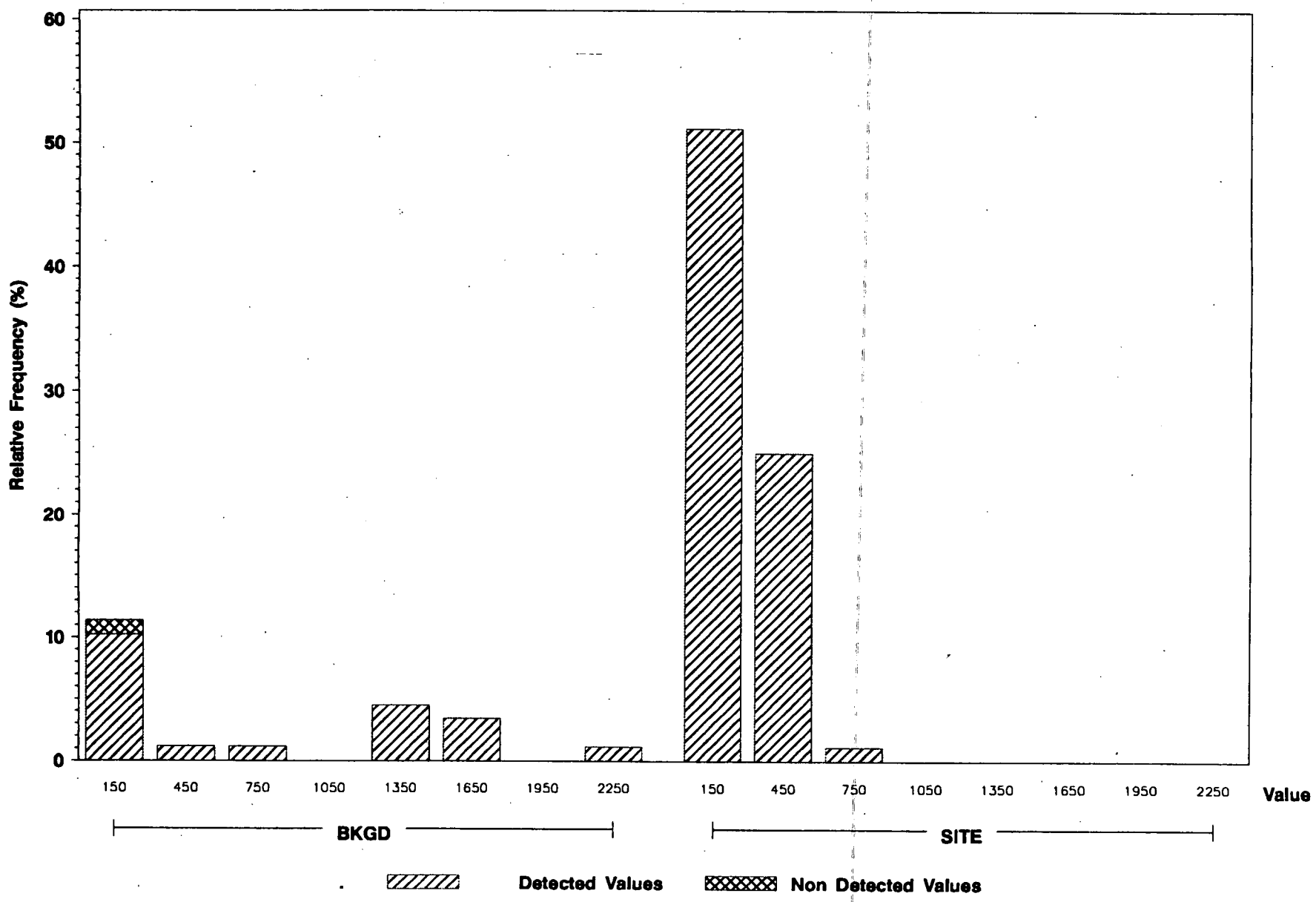
ANALYTE = SELENIUM



# Background vs East Landfill Pond Frequency Histogram

## SILICON (mg/Kg) in Surface Soils (0–10 inches)

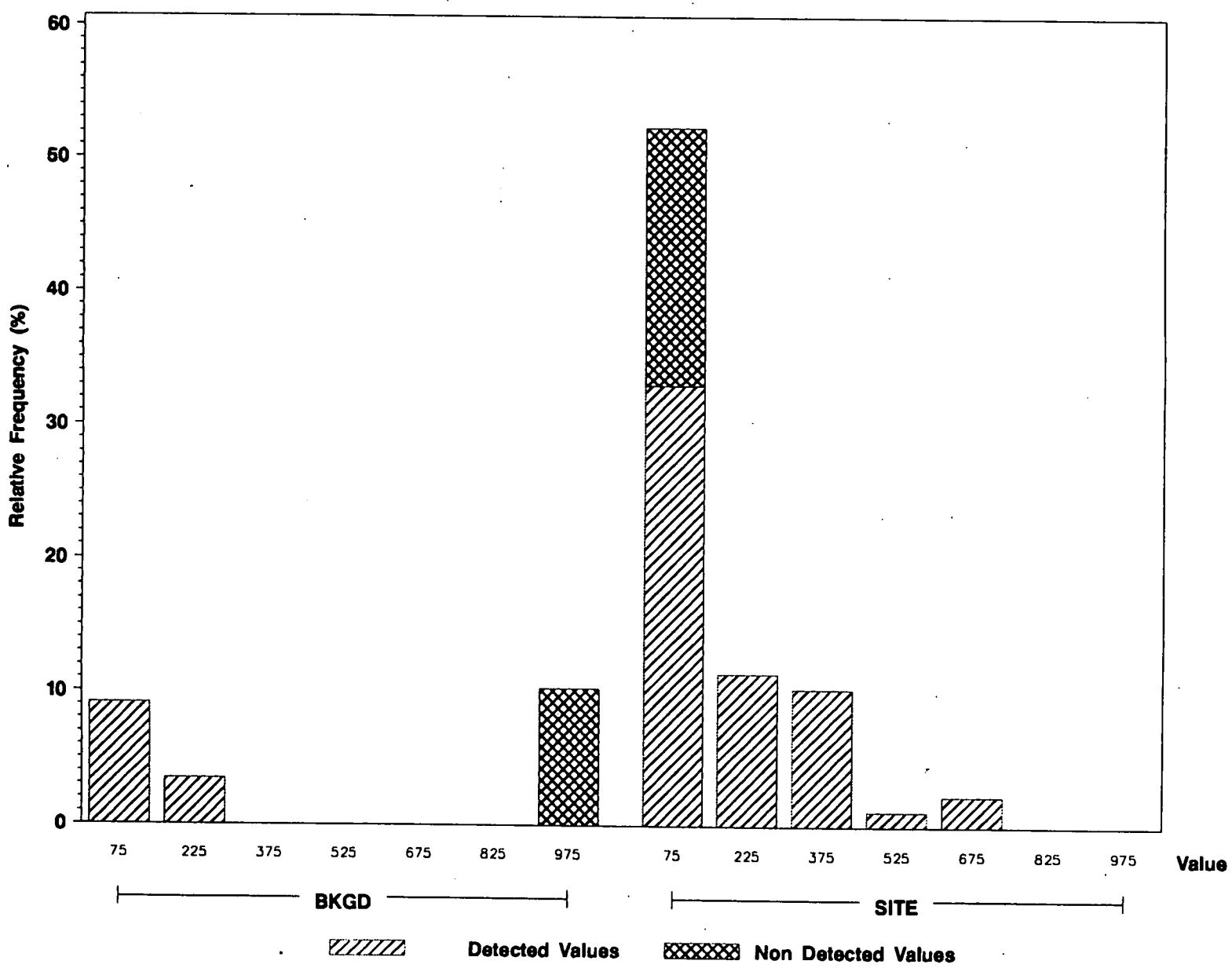
ANALYTE=SILICON



# Background vs East Landfill Pond Frequency Histogram

## SODIUM (mg/Kg) in Surface Soils (0–10 inches)

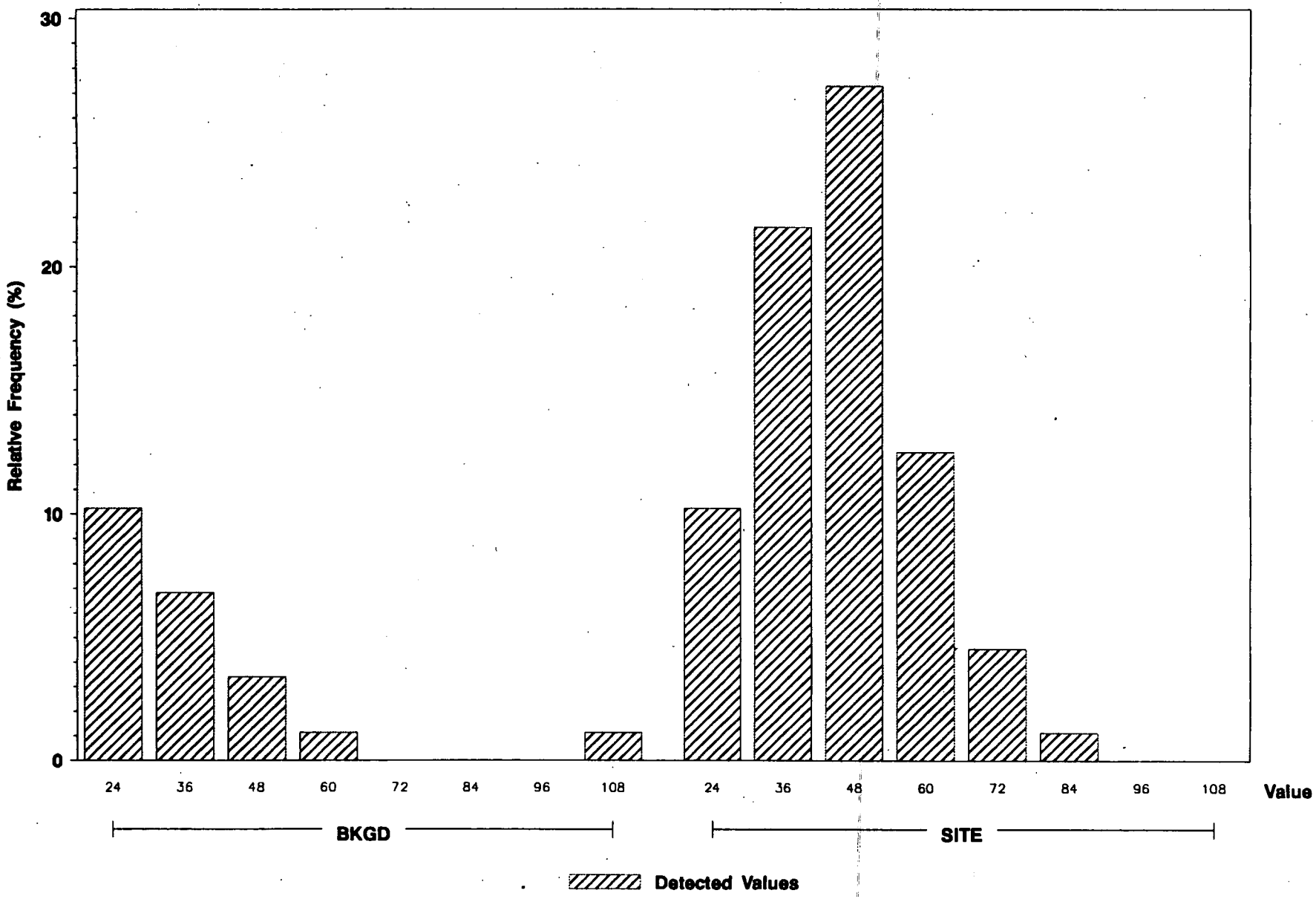
ANALYTE=SODIUM



# Background vs East Landfill Pond Frequency Histogram

## STRONTIUM (mg/Kg) in Surface Soils (0 – 10 inches)

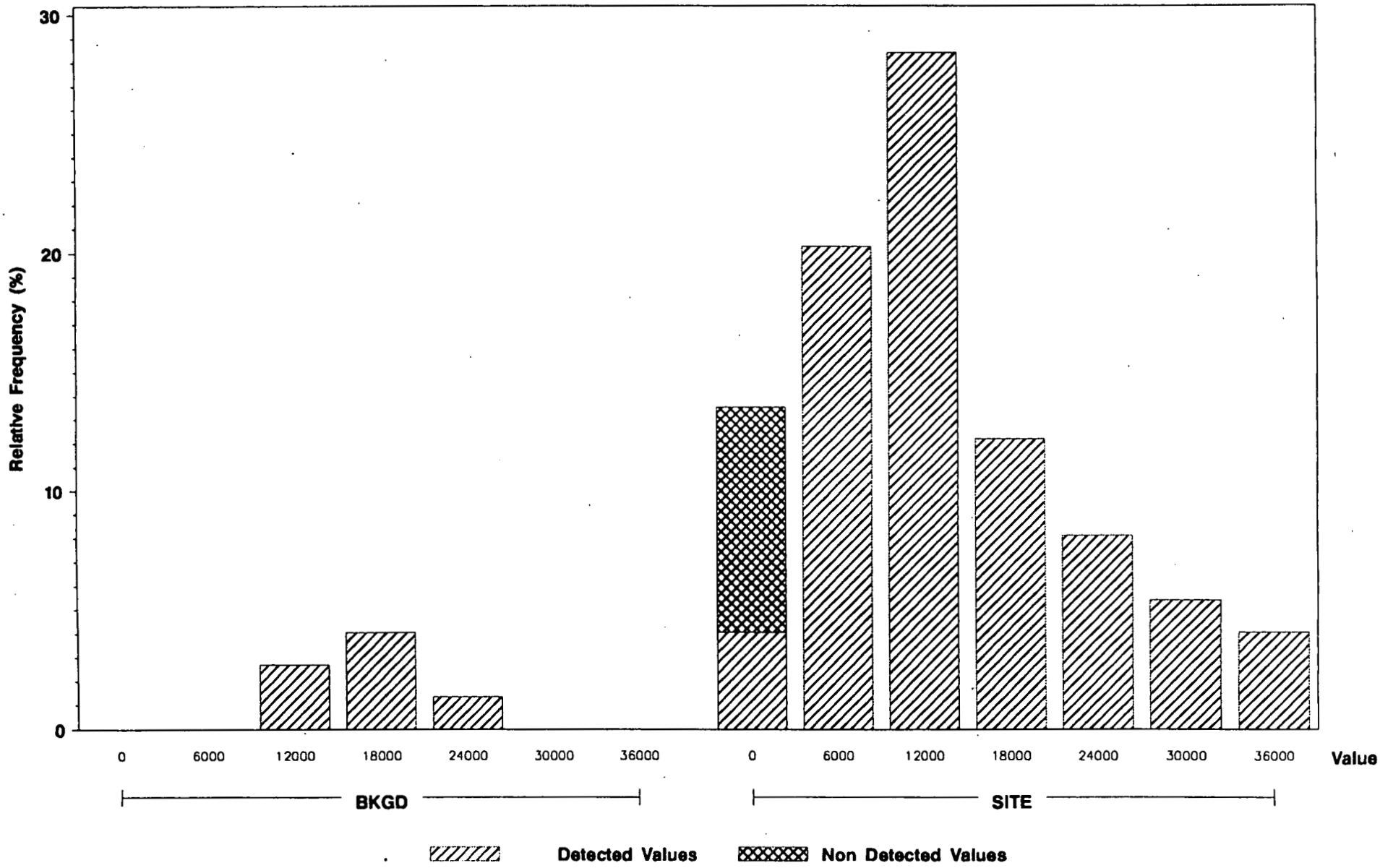
ANALYTE = STRONTIUM



# Background vs East Landfill Pond Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Surface Soils (0 – 10 inches)

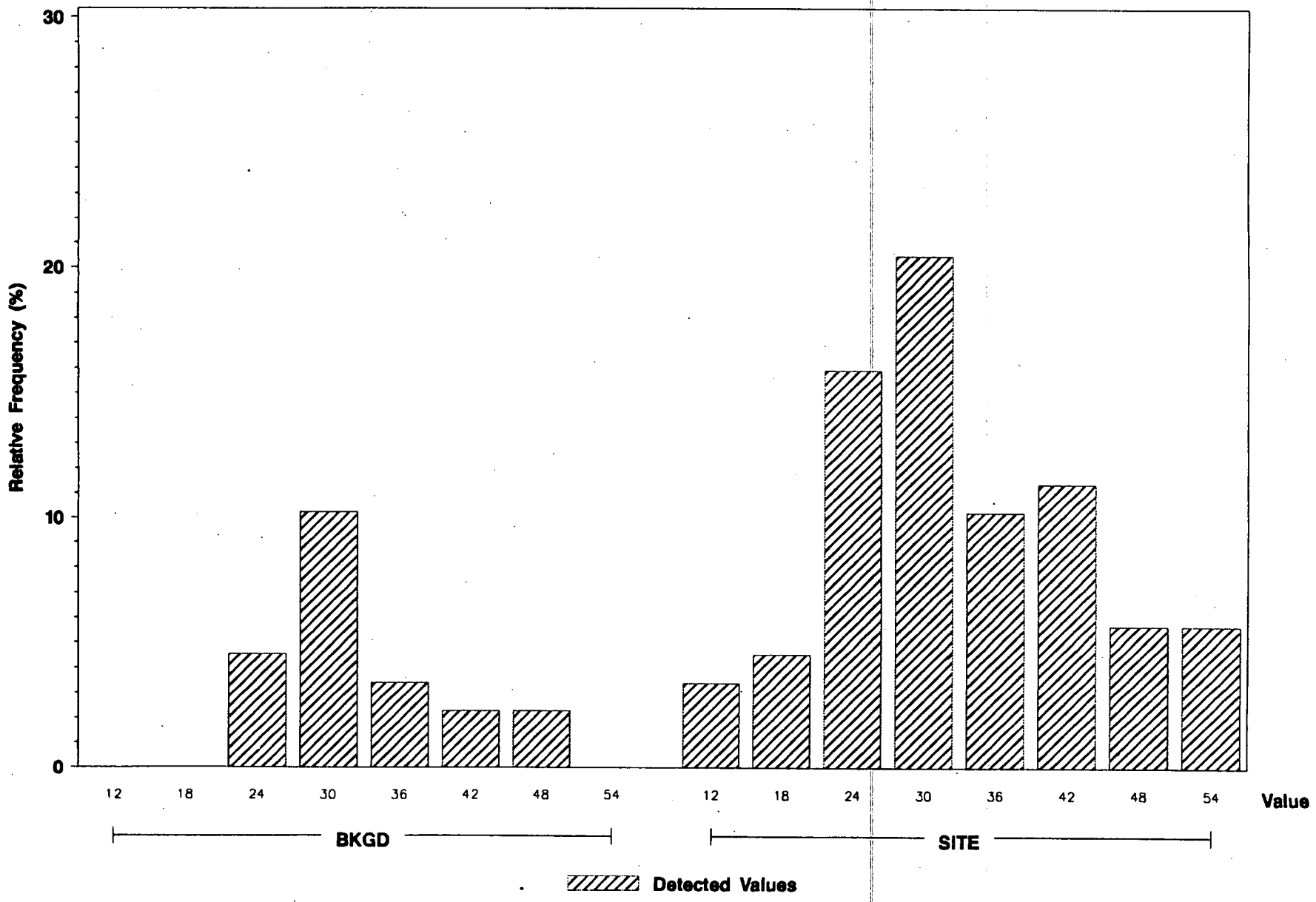
ANALYTE = TOTAL ORGANIC CARBON



# Background vs East Landfill Pond Frequency Histogram

## VANADIUM (mg/Kg) in Surface Soils (0–10 inches)

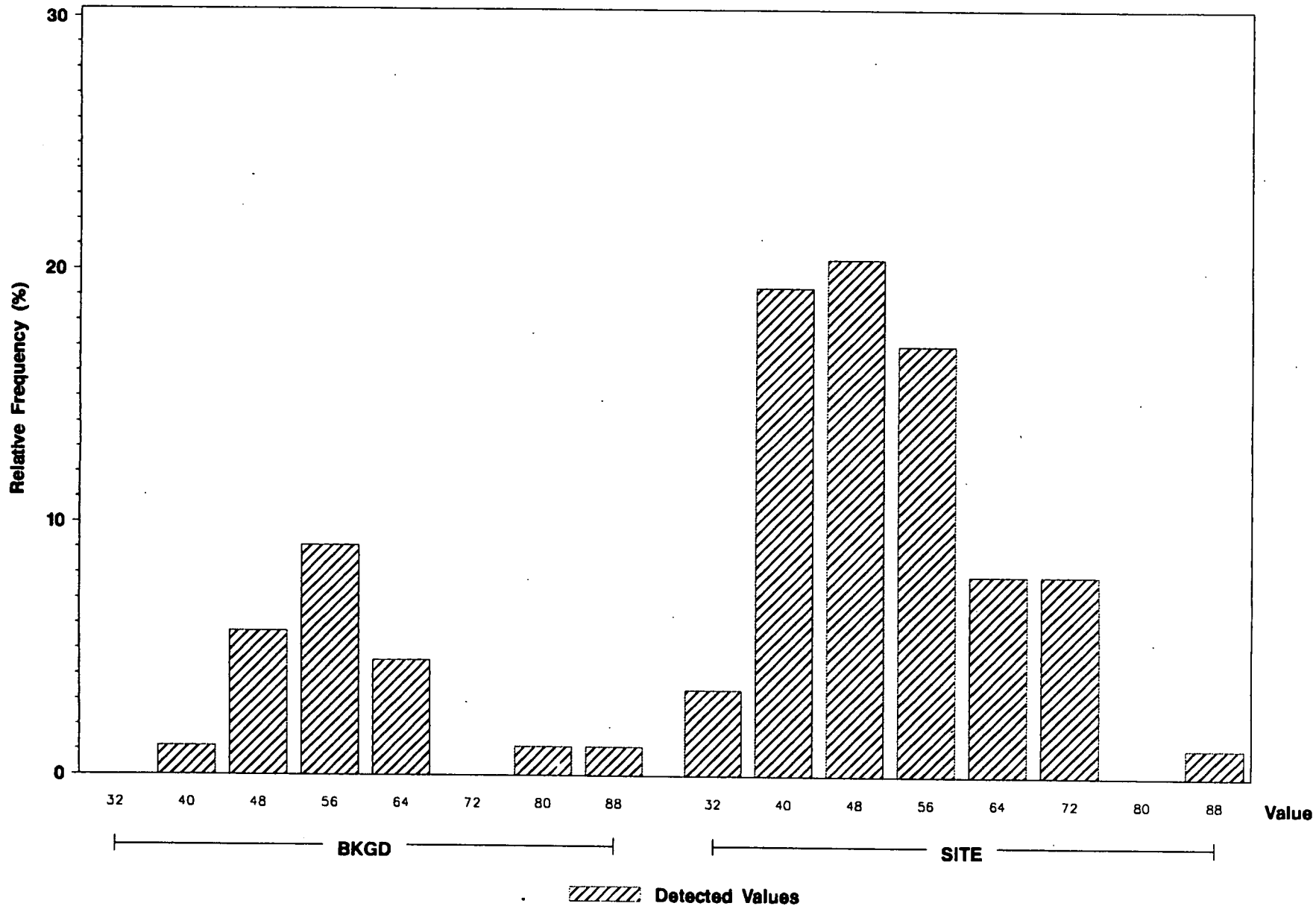
ANALYTE = VANADIUM



# Background vs East Landfill Pond Frequency Histogram

## ZINC (mg/Kg) in Surface Soils (0 – 10 inches)

ANALYTE = ZINC



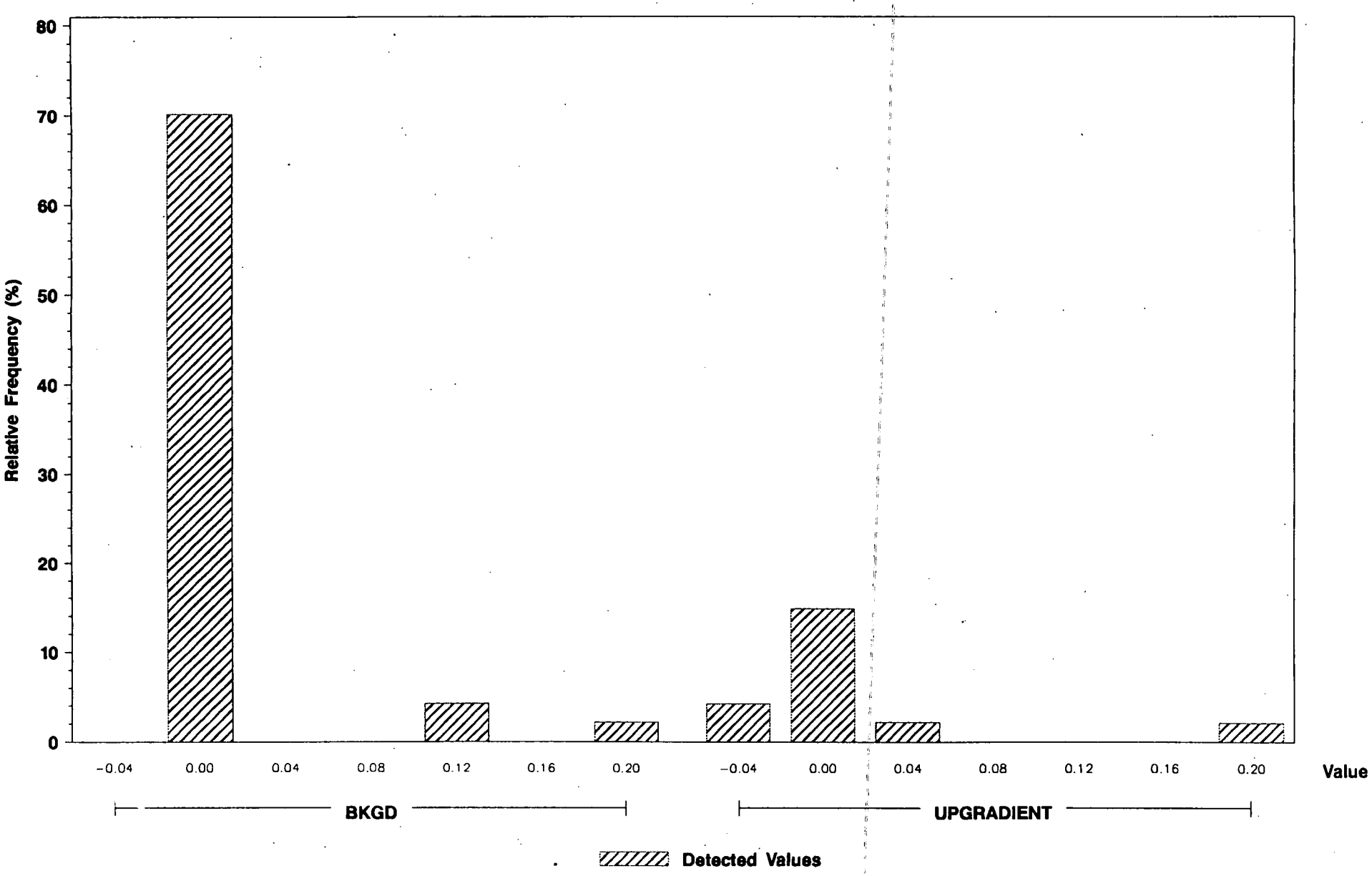
# Subsurface Geologic Materials

# Background vs. Ou 7 Upgradient Qrf

# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## CESIUM-137 (pCi/g) in Subsurface Geologic Materials

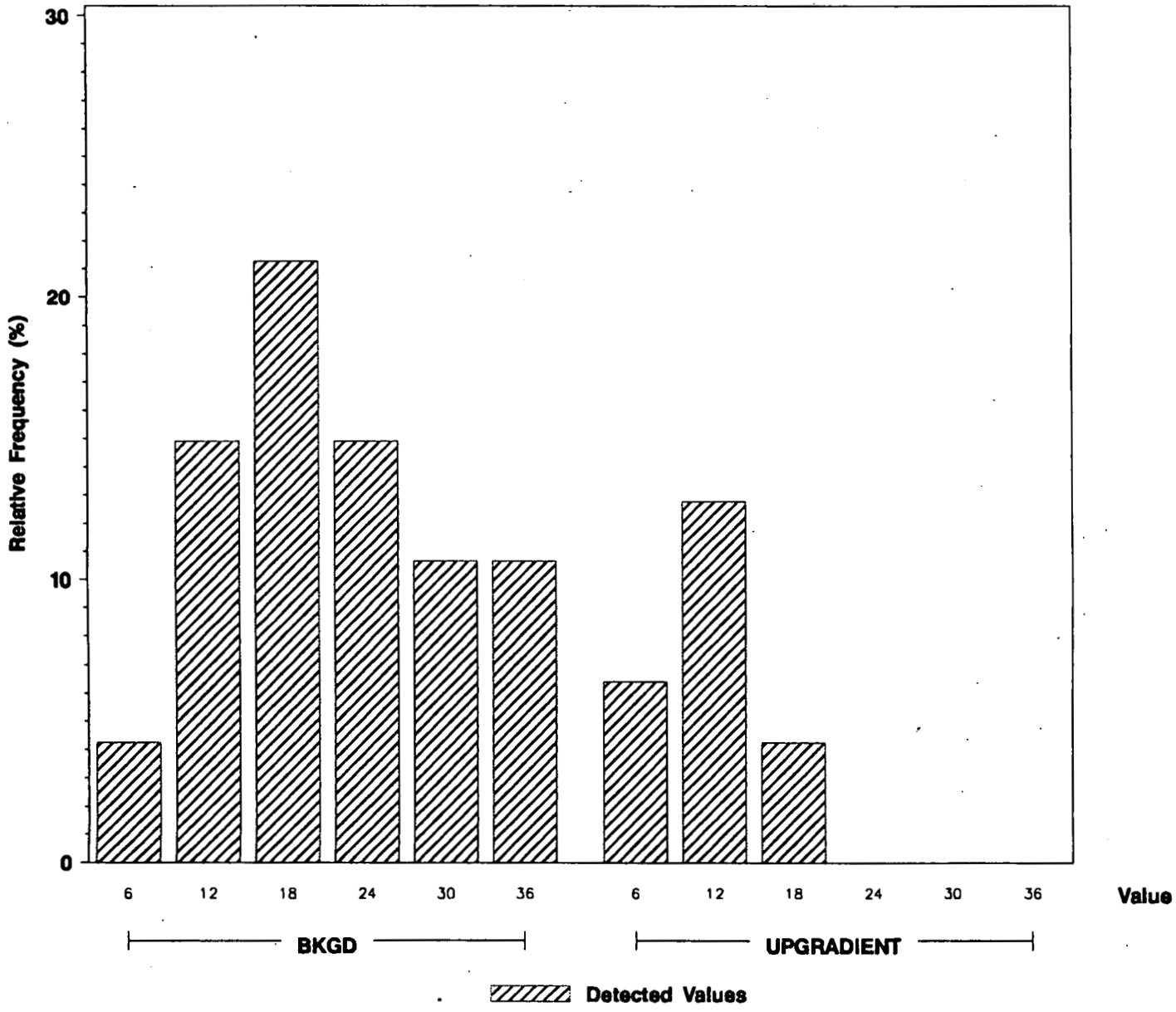
ANALYTE = CESIUM-137



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## GROSS ALPHA (pCi/g) in Subsurface Geologic Materials

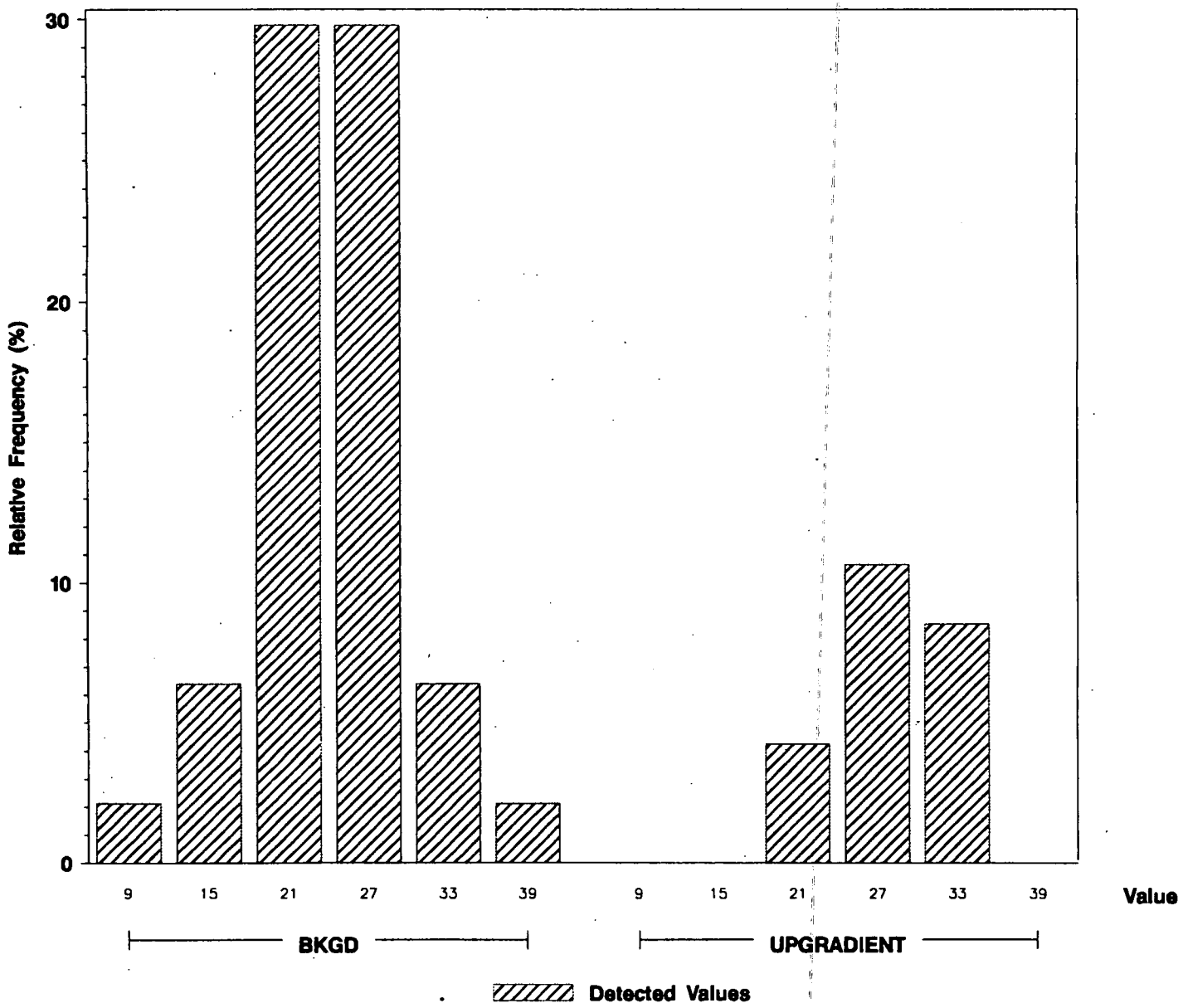
ANALYTE = GROSS ALPHA



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## GROSS BETA (pCi/g) in Subsurface Geologic Materials

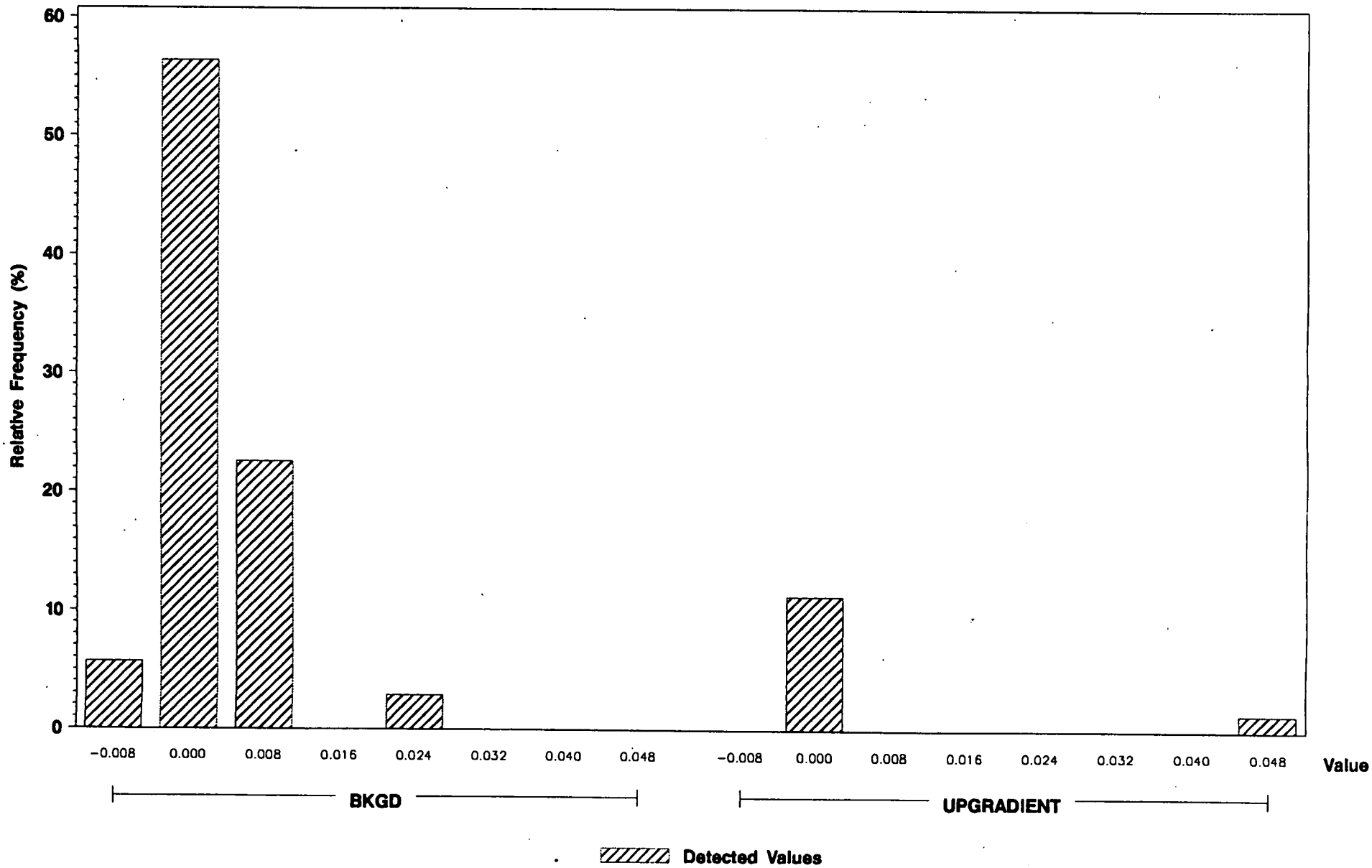
ANALYTE=GROSS BETA



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## PLUTONIUM – 239,240 (pCi/g) in Subsurface Geologic Materials

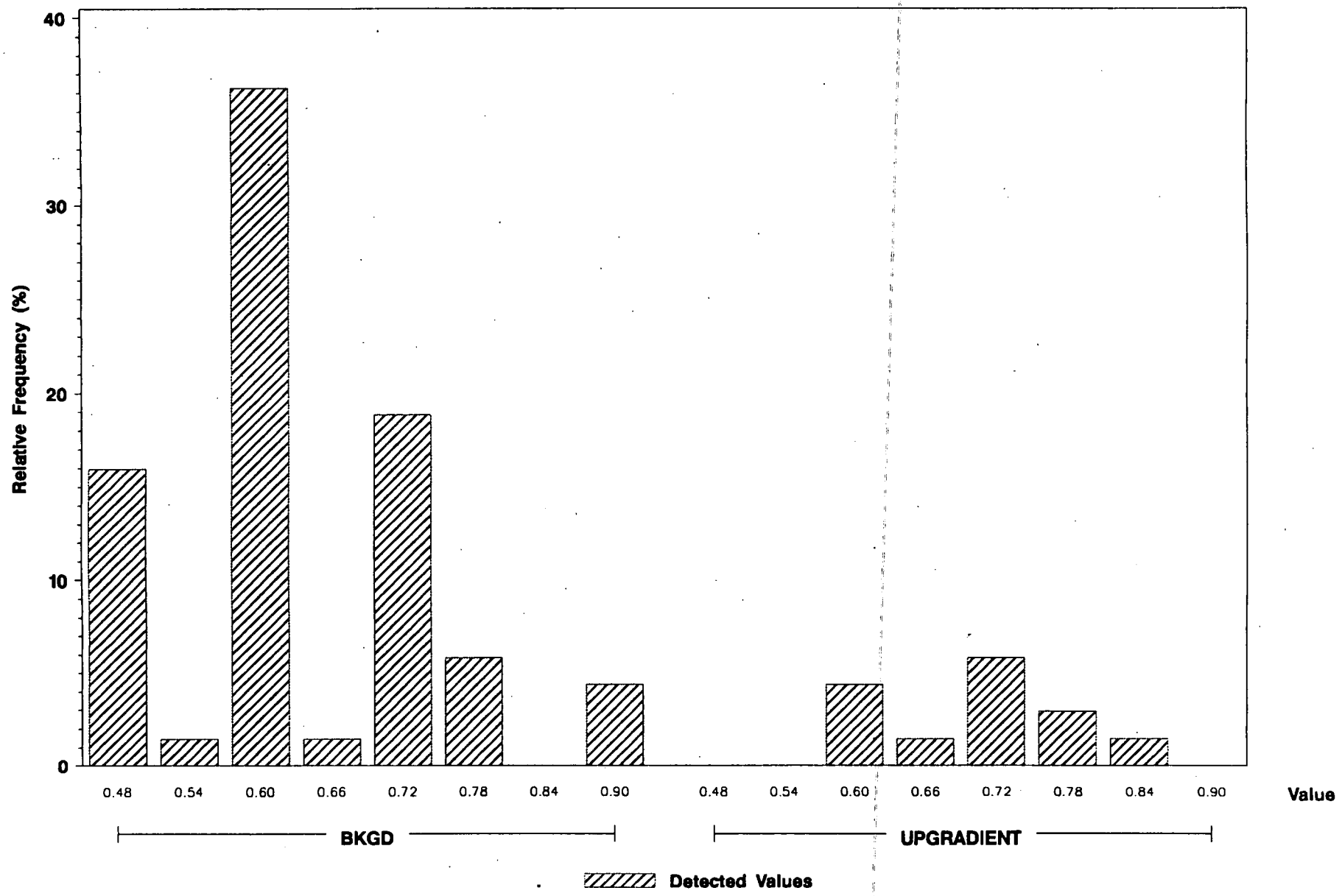
ANALYTE = PLUTONIUM – 239,240



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## RADIUM – 226 (pCi/g) in Subsurface Geologic Materials

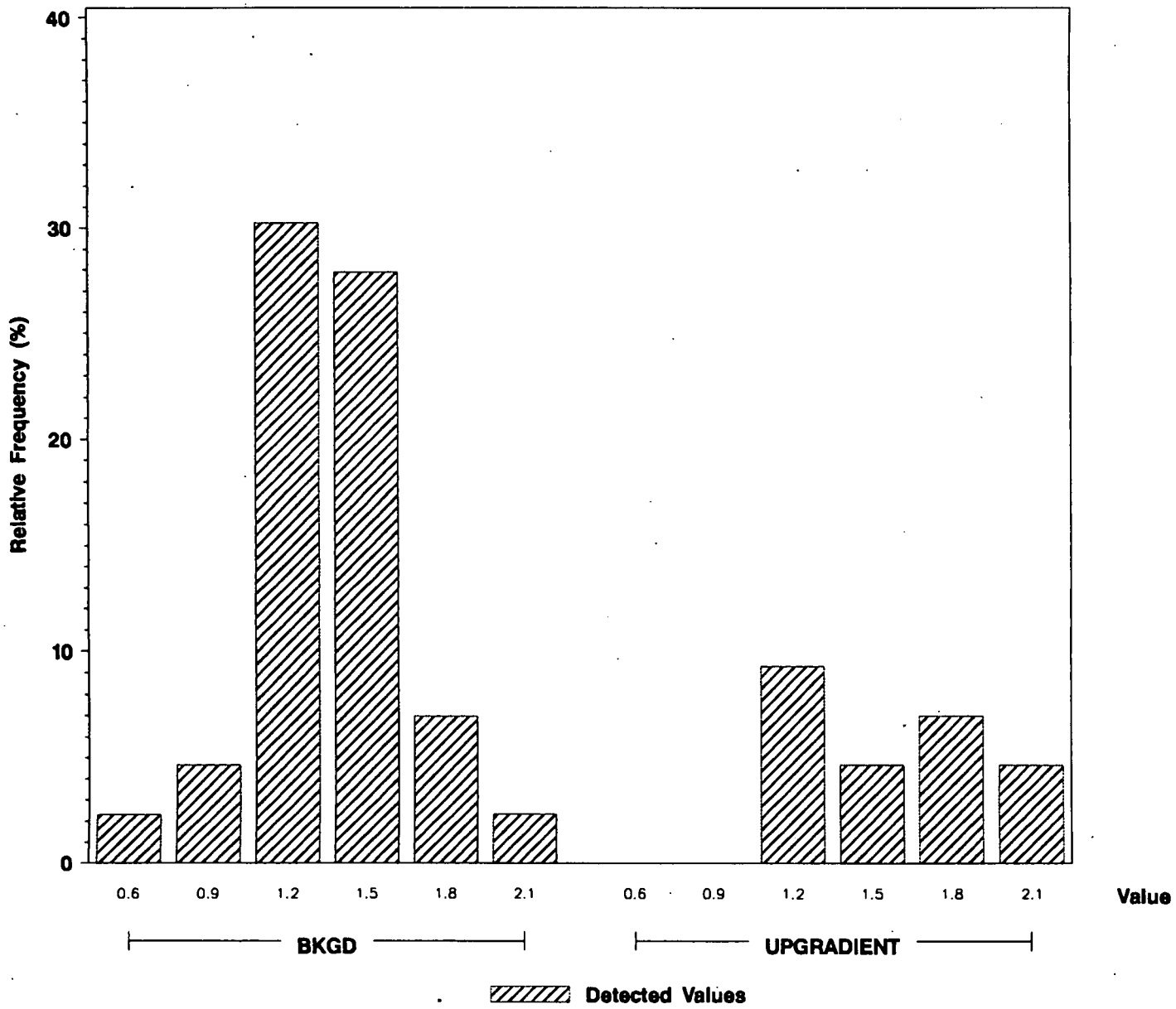
ANALYTE = RADIUM – 226



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## RADIUM – 228 (pCi/g) in Subsurface Geologic Materials

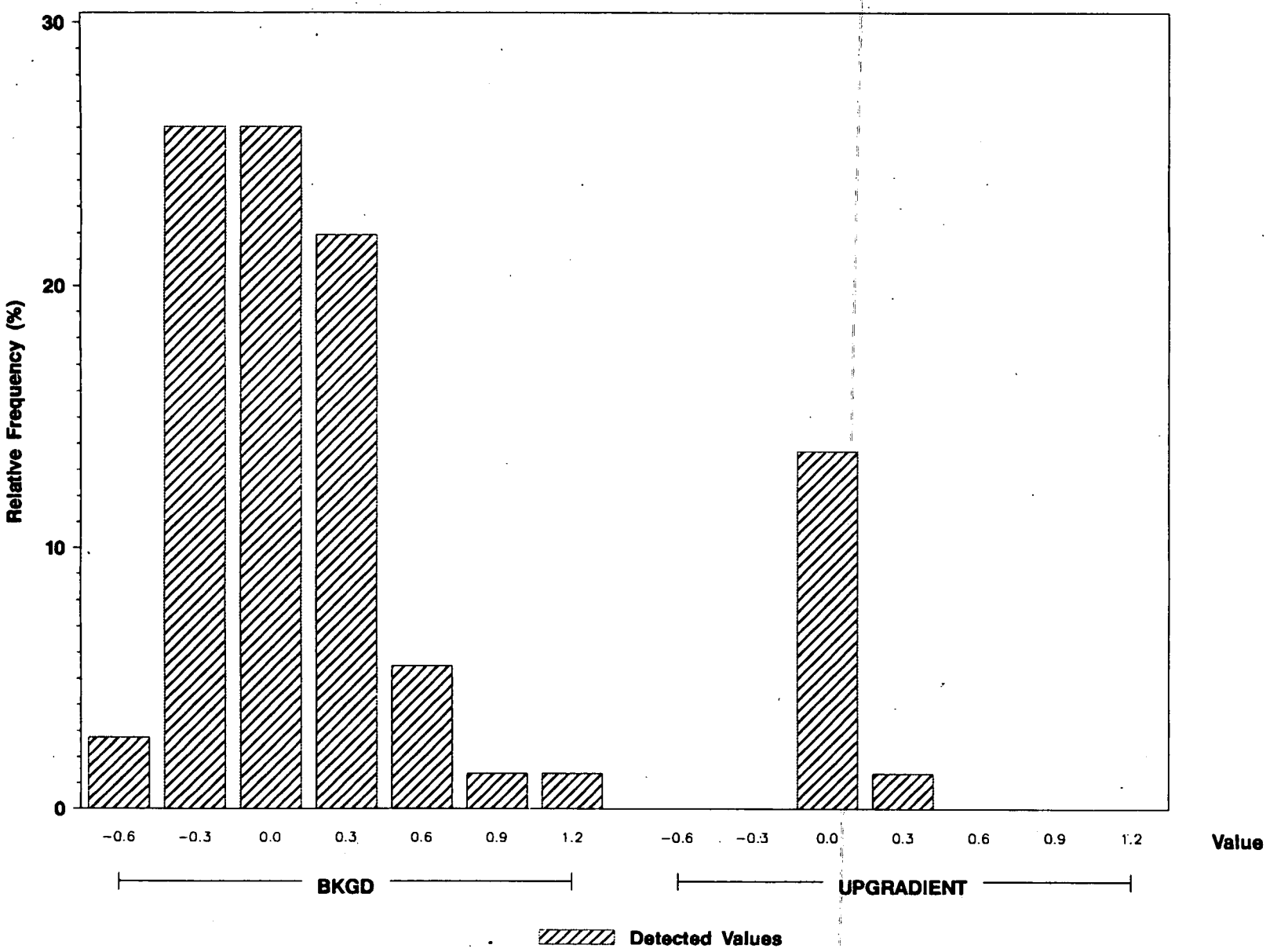
ANALYTE = RADIUM – 228



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Subsurface Geologic Materials

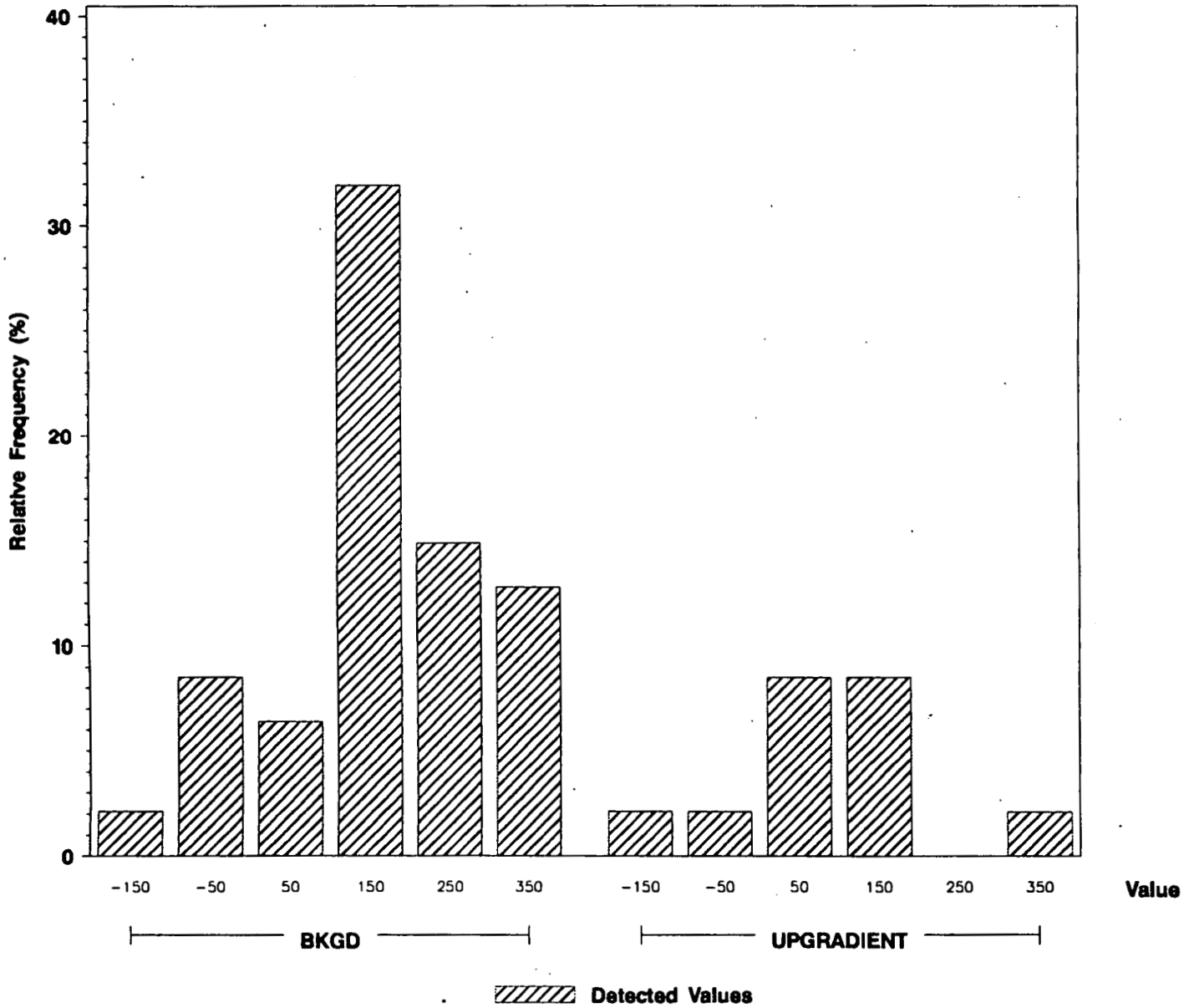
ANALYTE = STRONTIUM – 89,90



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## TRITIUM (pCi/L) in Subsurface Geologic Materials

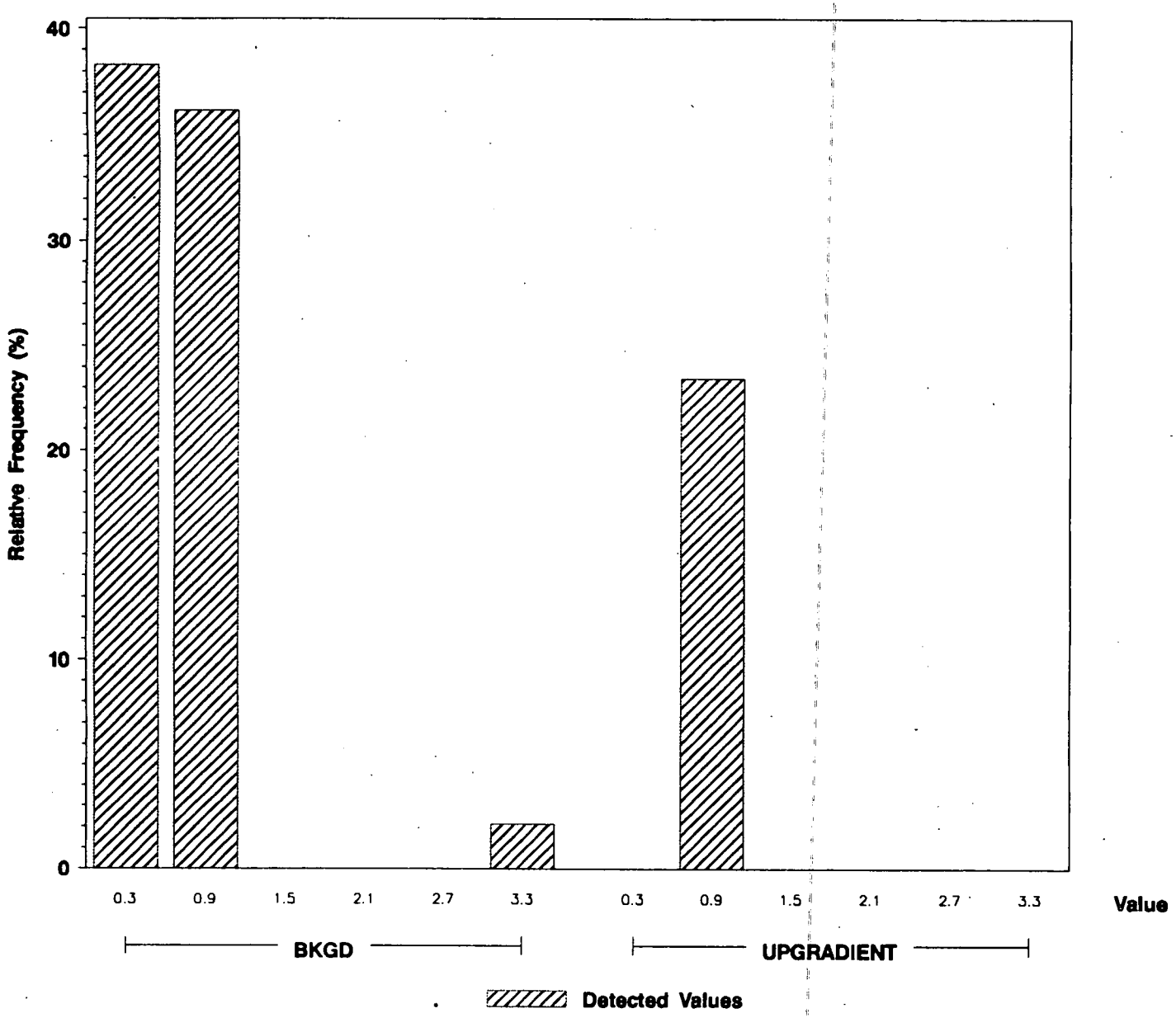
ANALYTE = TRITIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Subsurface Geologic Materials

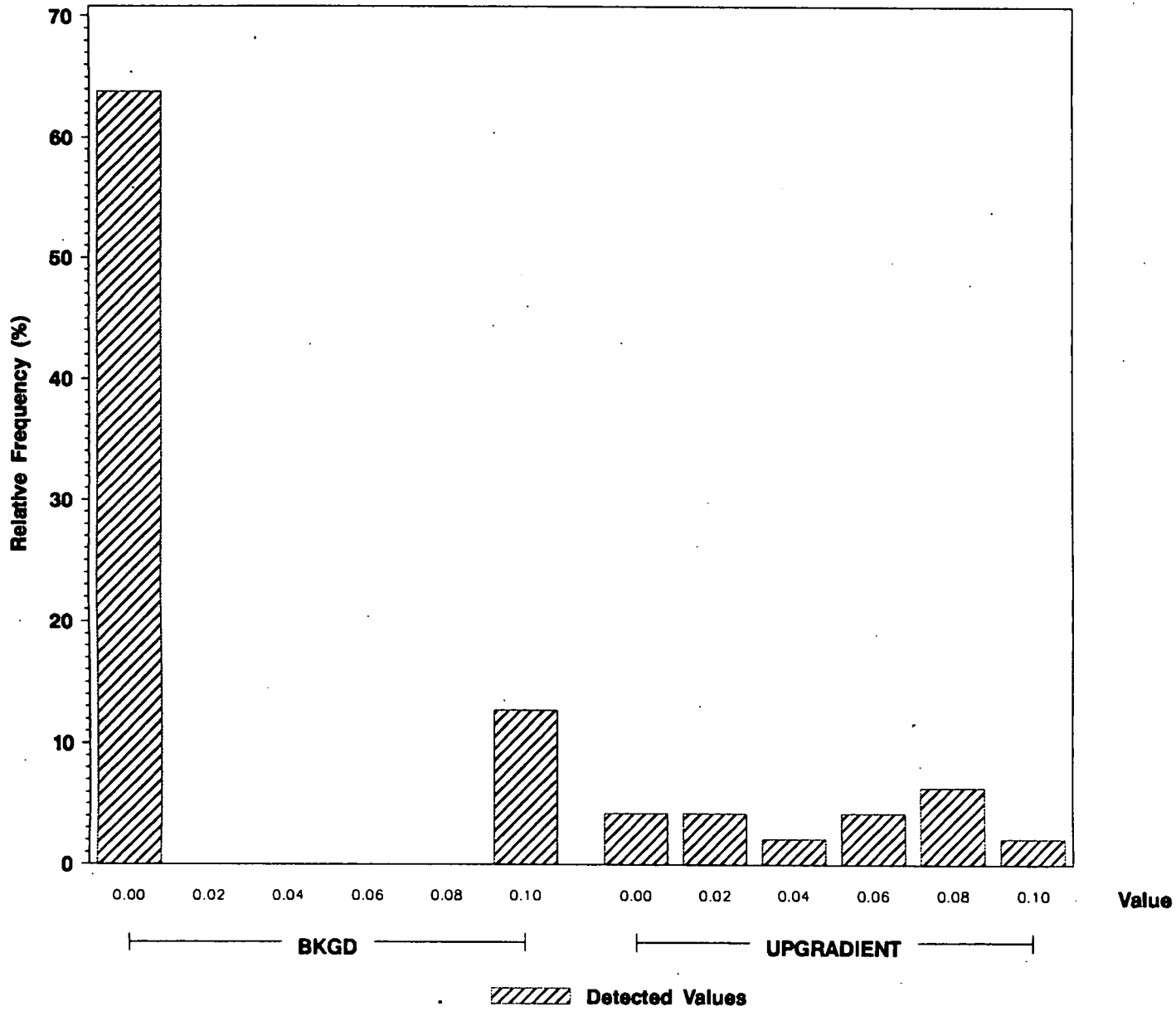
ANALYTE = URANIUM – 233, – 234



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## URANIUM-235 (pCi/g) in Subsurface Geologic Materials

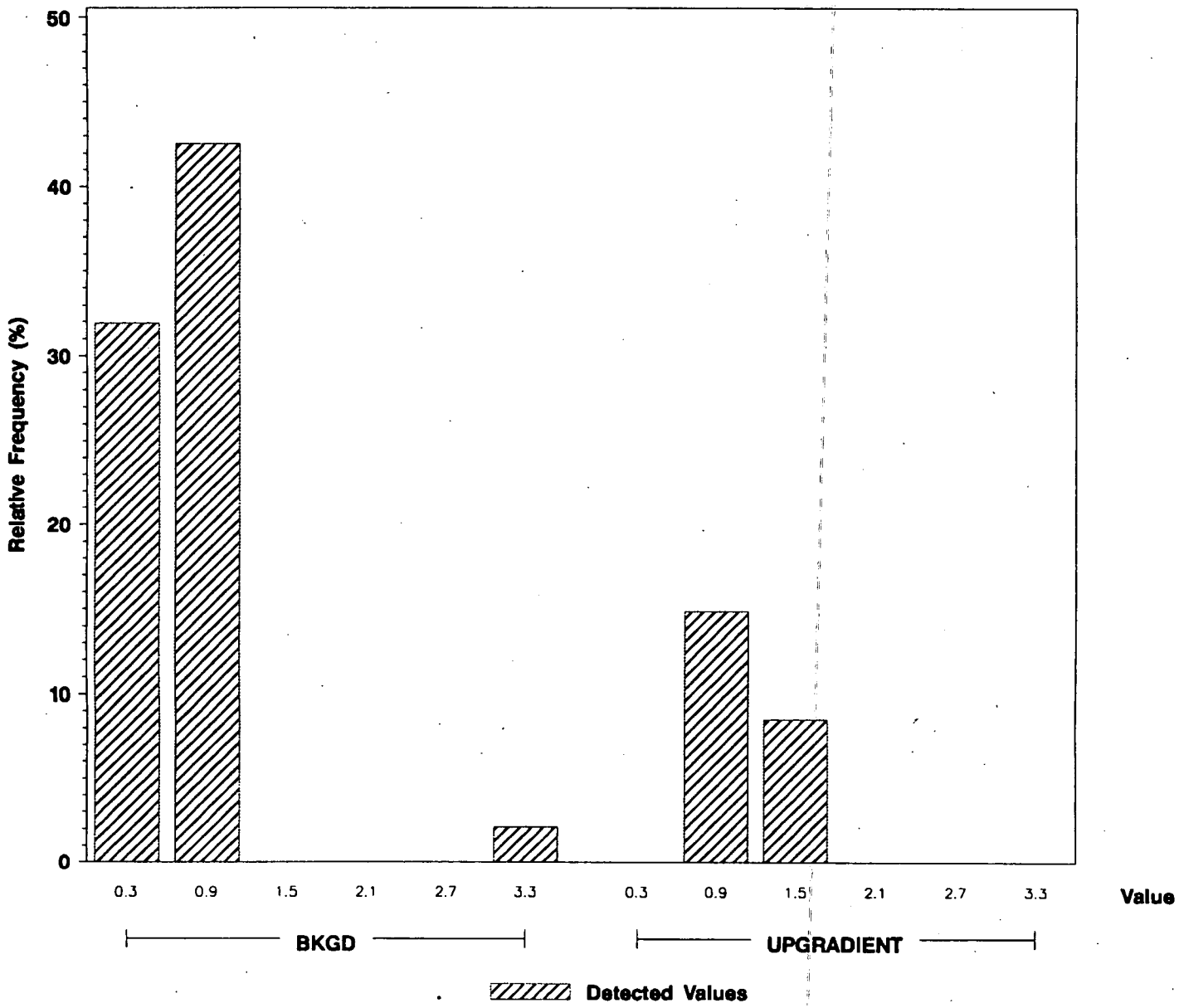
ANALYTE=URANIUM-235



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## URANIUM – 238 (pCi/g) in Subsurface Geologic Materials

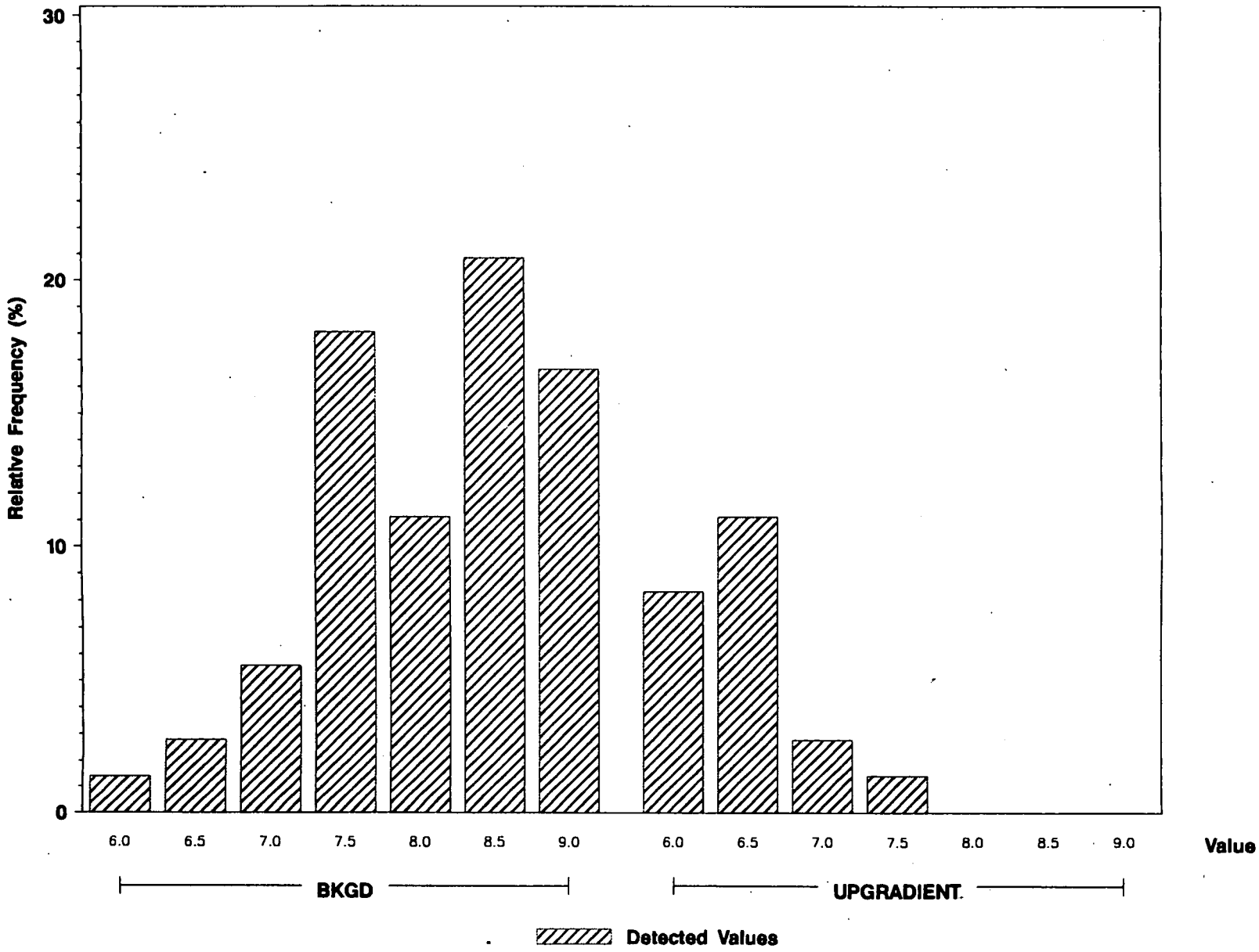
ANALYTE = URANIUM – 238



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## pH in Subsurface Geologic Materials

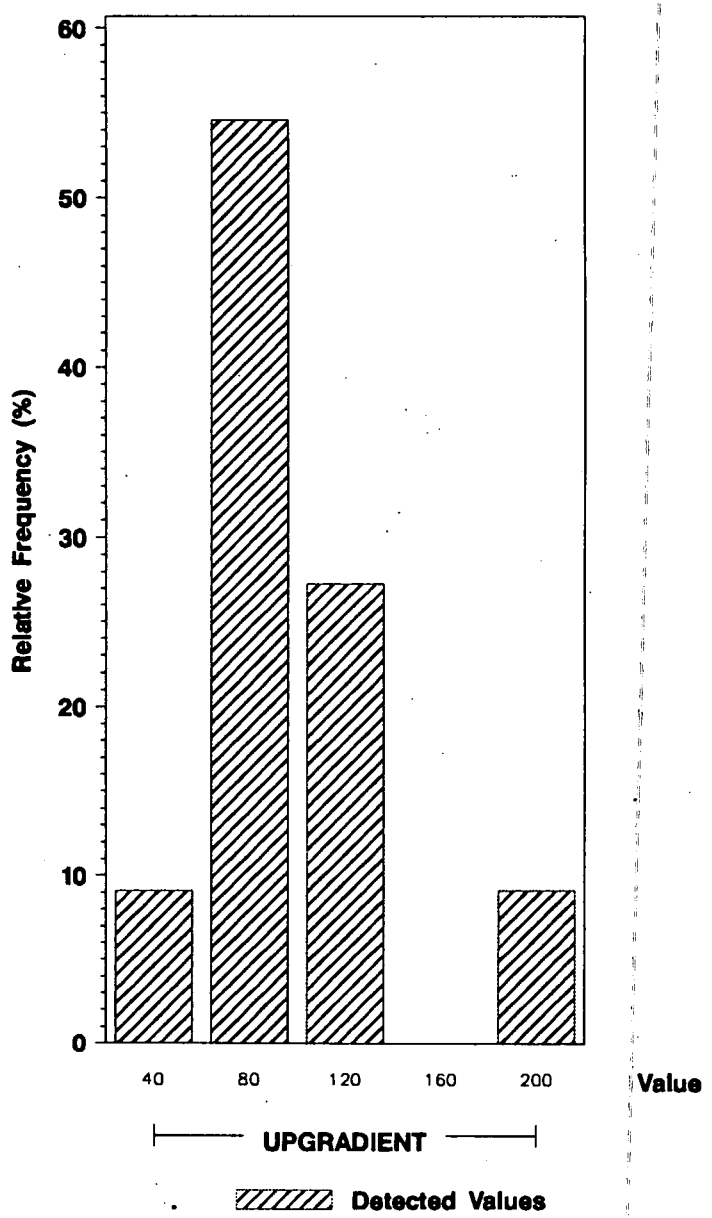
ANALYTE = pH



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## TOLUENE (ug/Kg) in Subsurface Geologic Materials

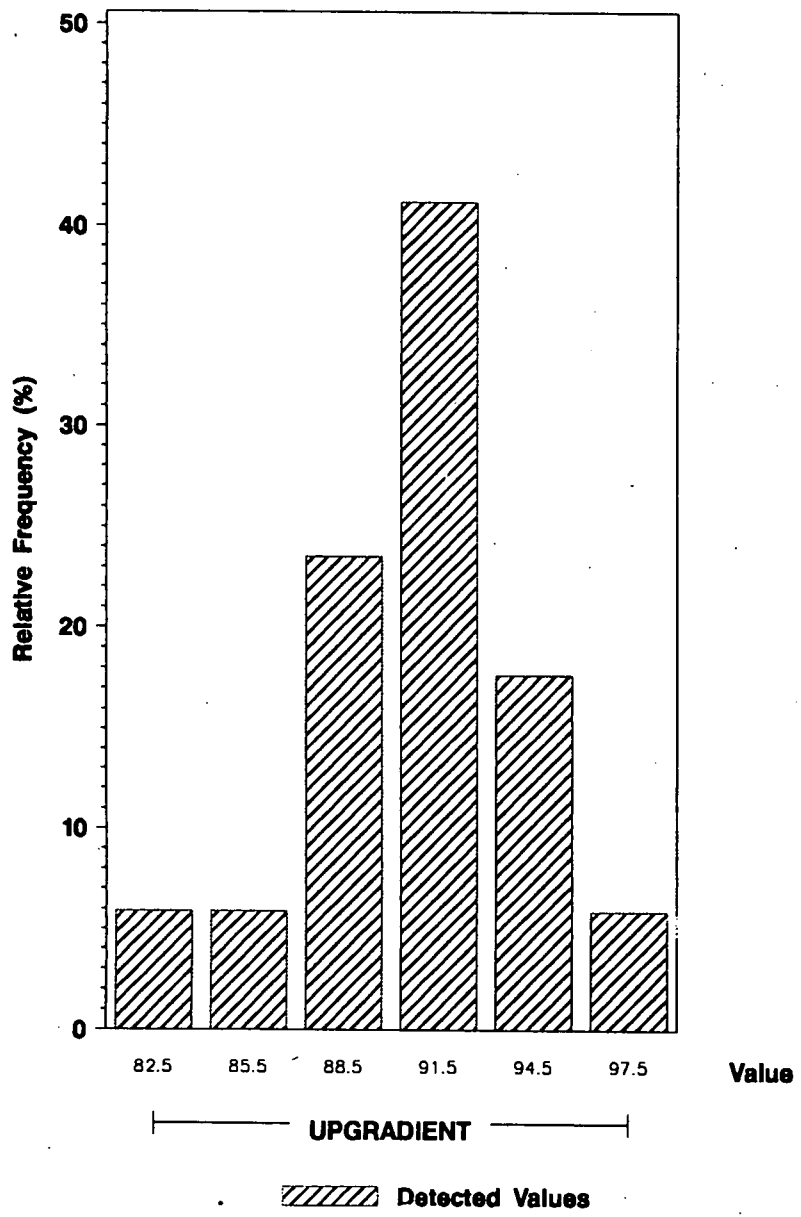
ANALYTE = TOLUENE



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## % SOLIDS (%) in Subsurface Geologic Materials

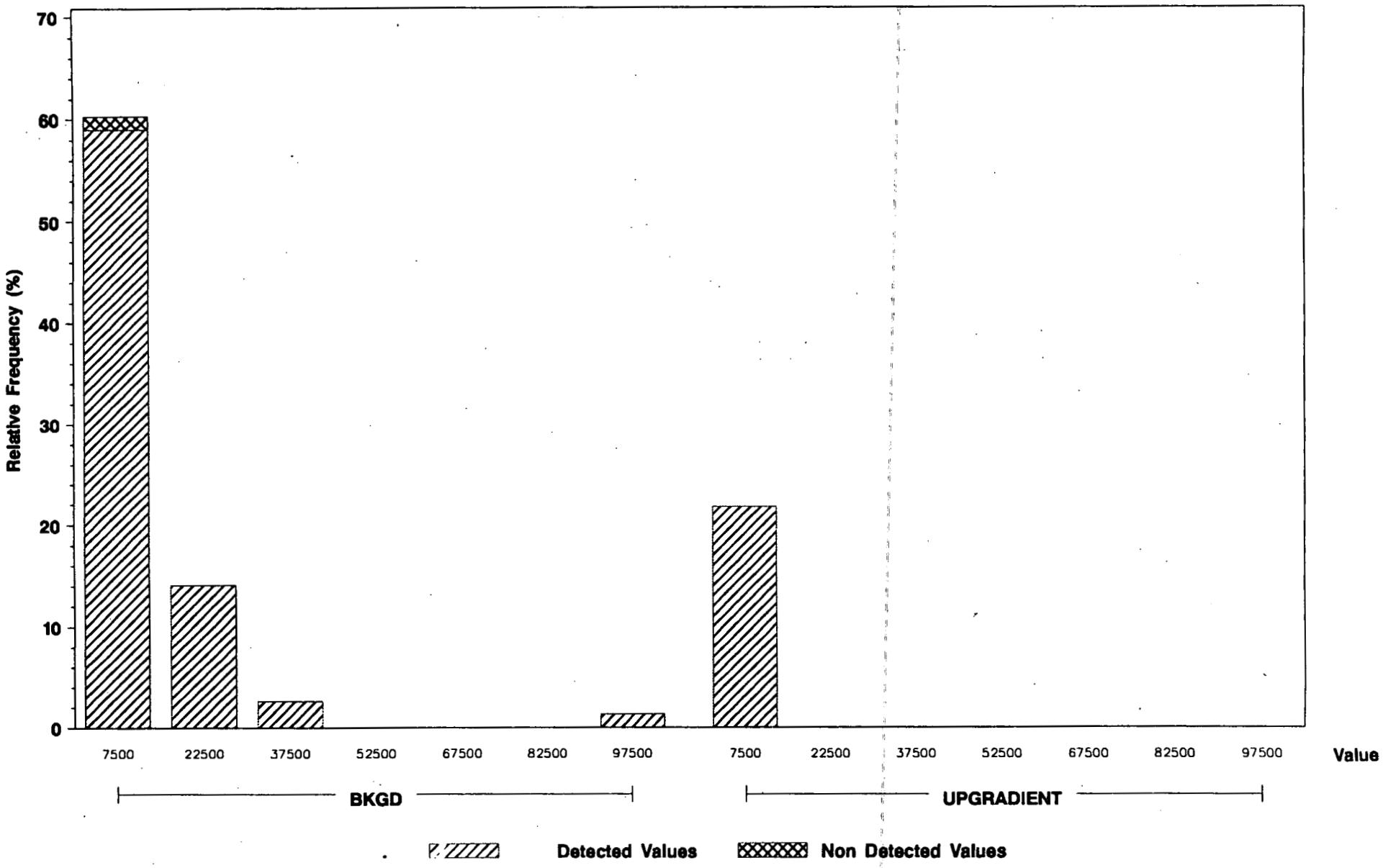
ANALYTE = % SOLIDS



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## ALUMINUM (mg/Kg) in Subsurface Geologic Materials

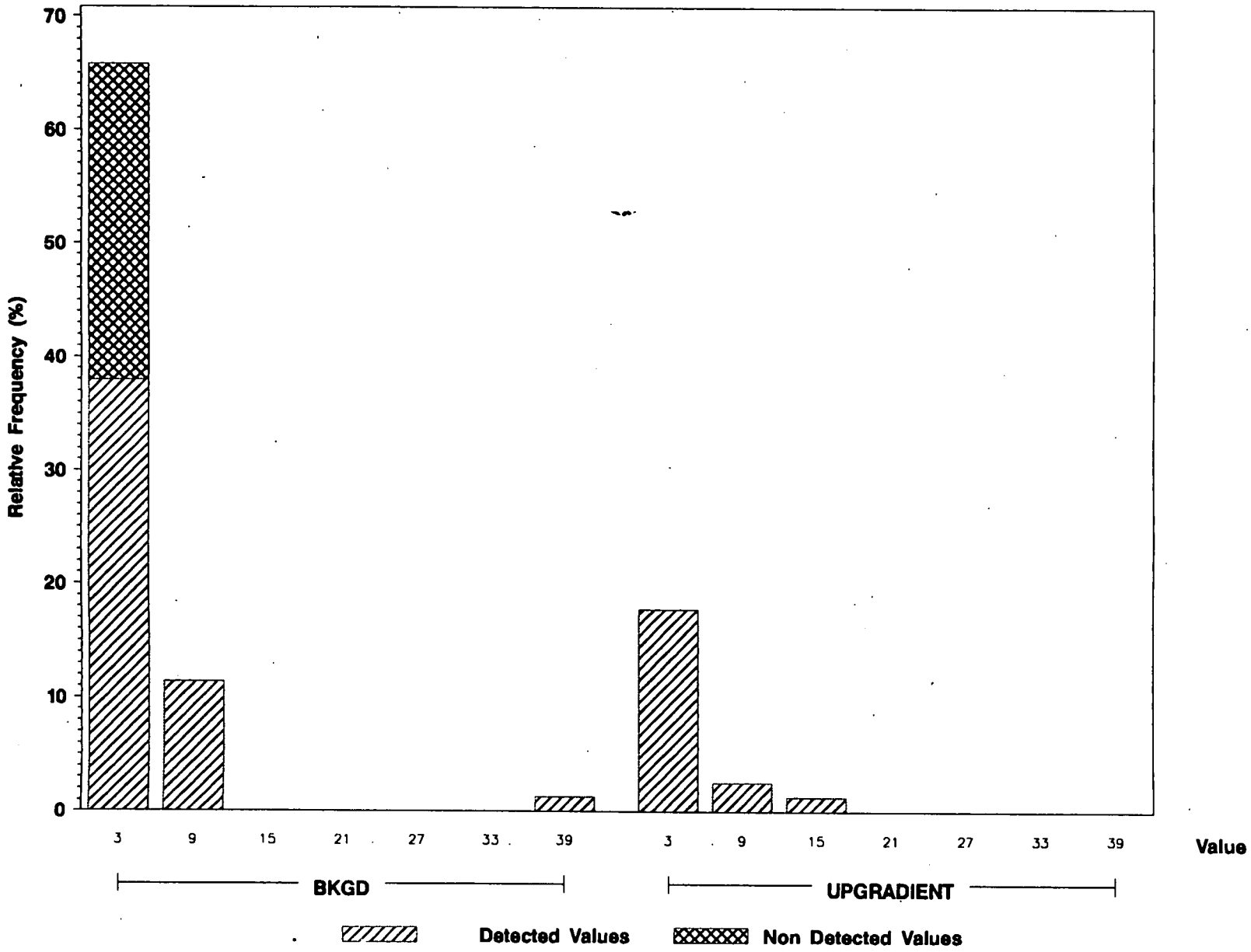
ANALYTE = ALUMINUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## ARSENIC (mg/Kg) in Subsurface Geologic Materials

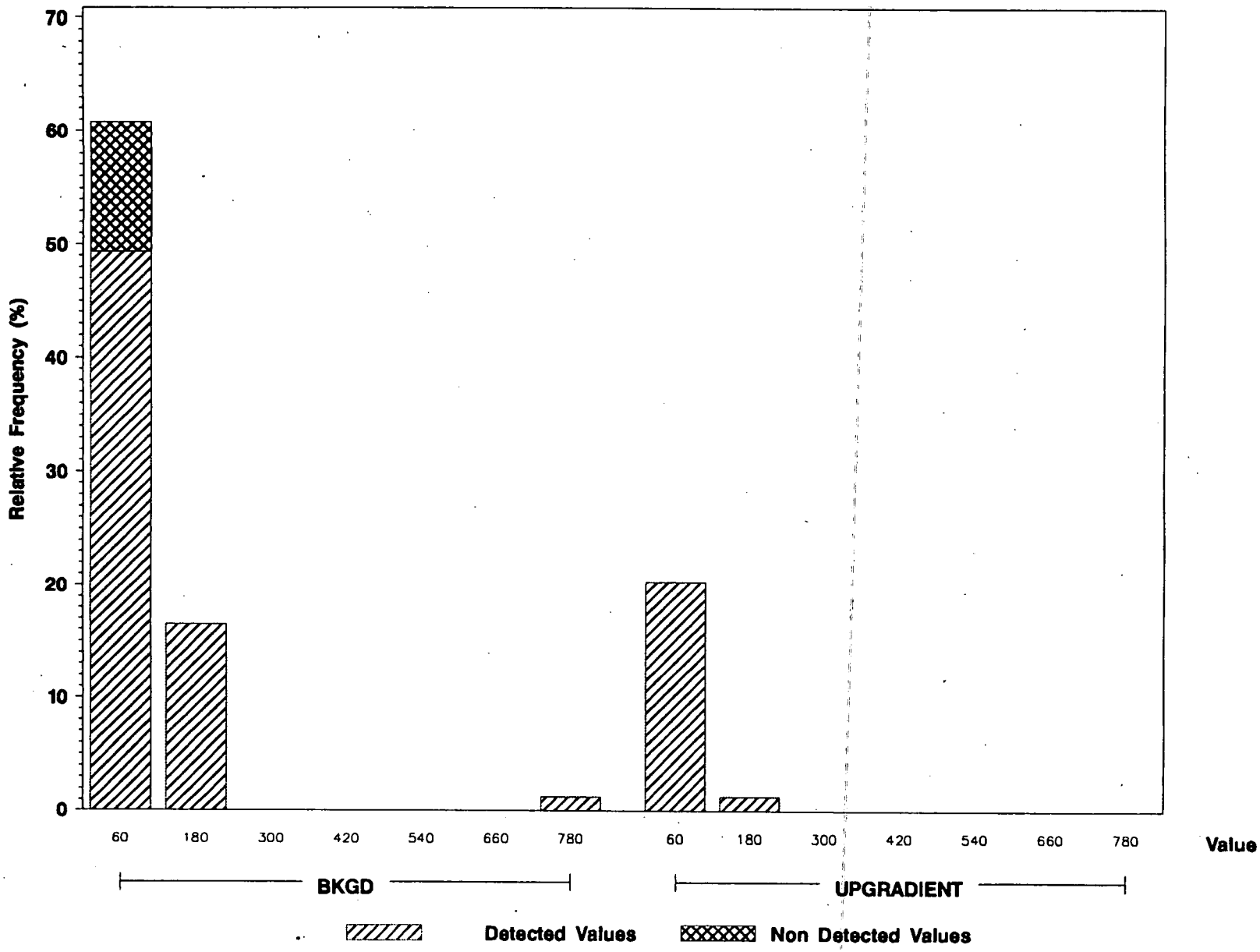
ANALYTE = ARSENIC



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## BARIUM (mg/Kg) in Subsurface Geologic Materials

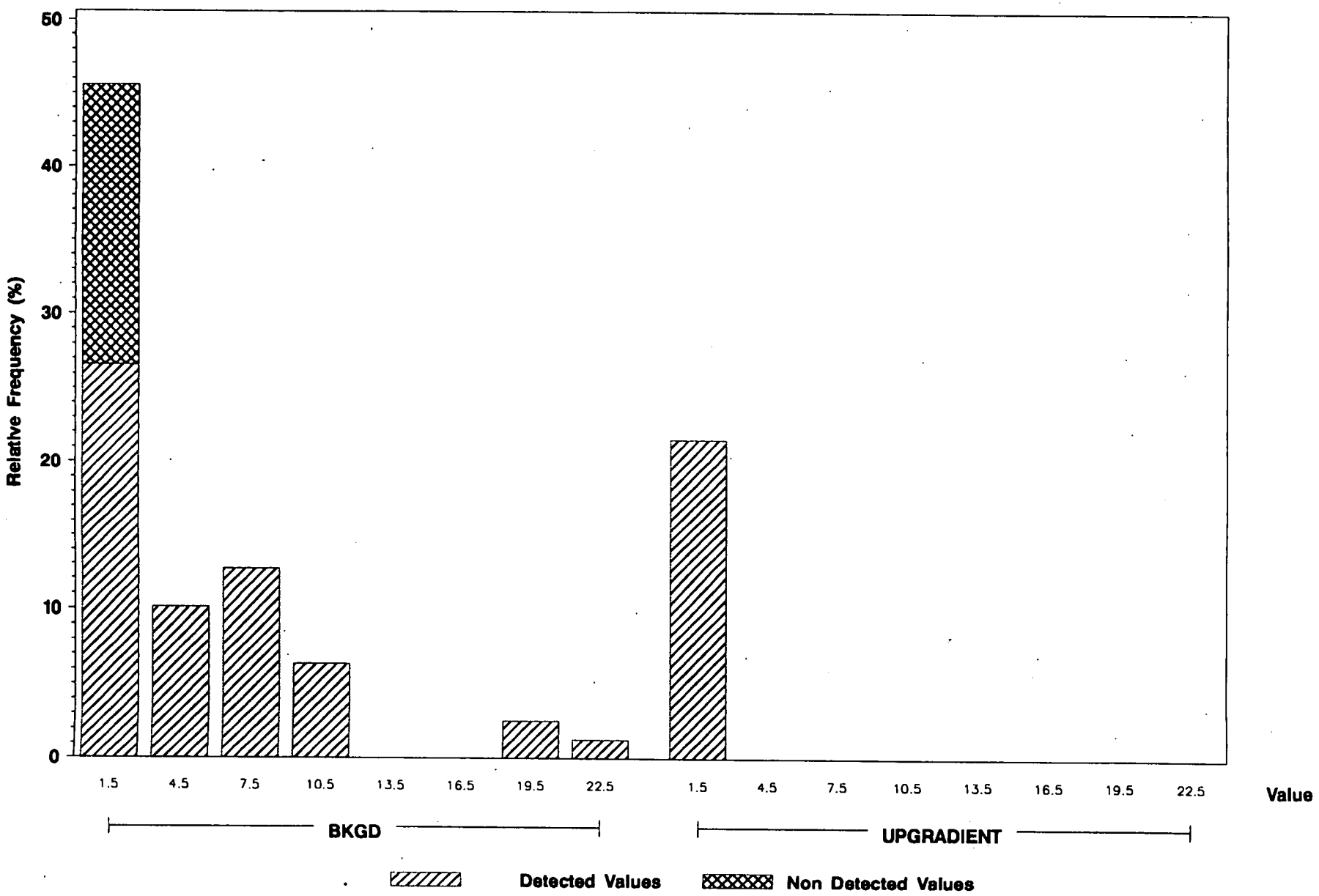
ANALYTE = BARIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## BERYLLIUM (mg/Kg) in Subsurface Geologic Materials

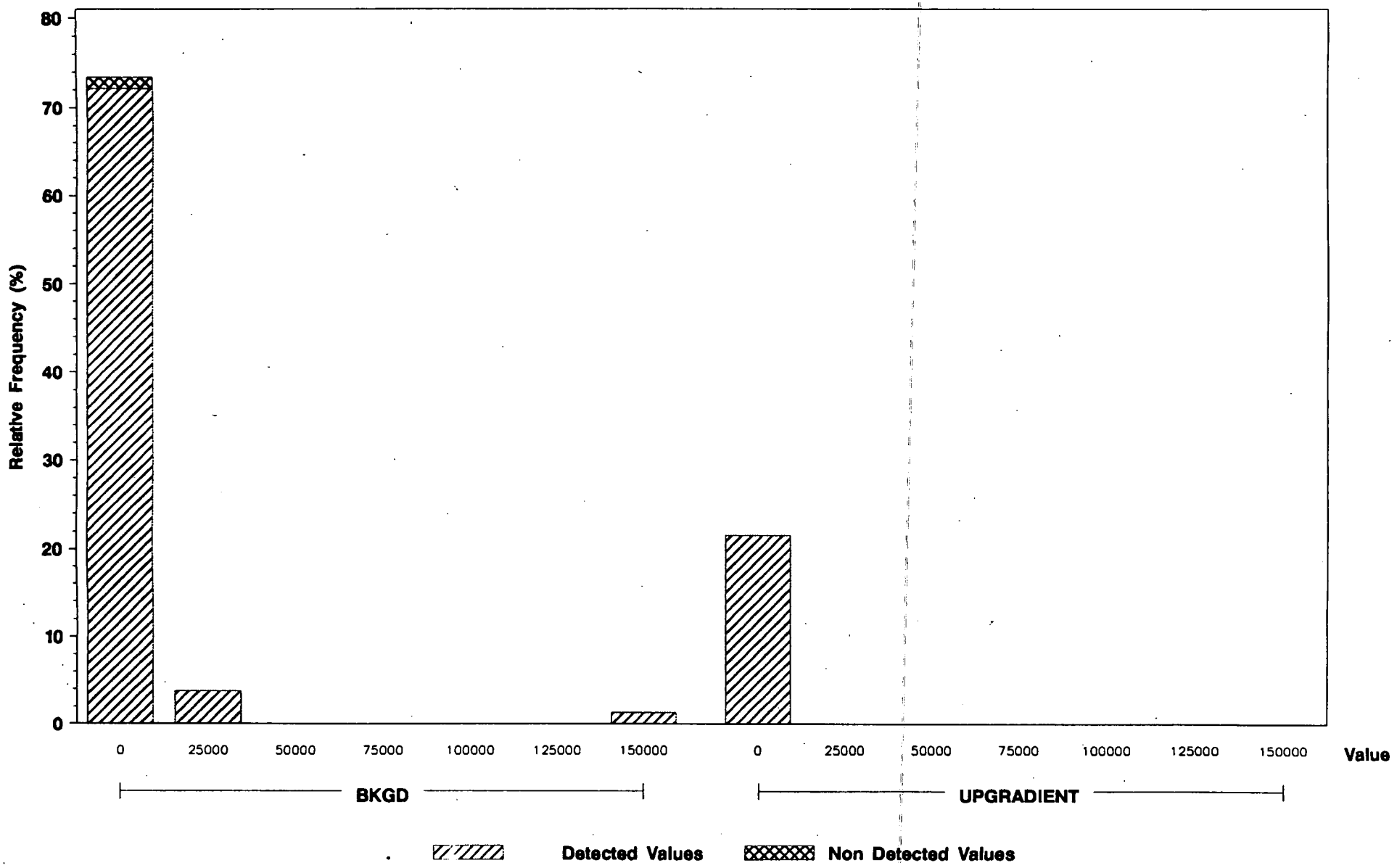
ANALYTE = BERYLLIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## CALCIUM (mg/Kg) in Subsurface Geologic Materials

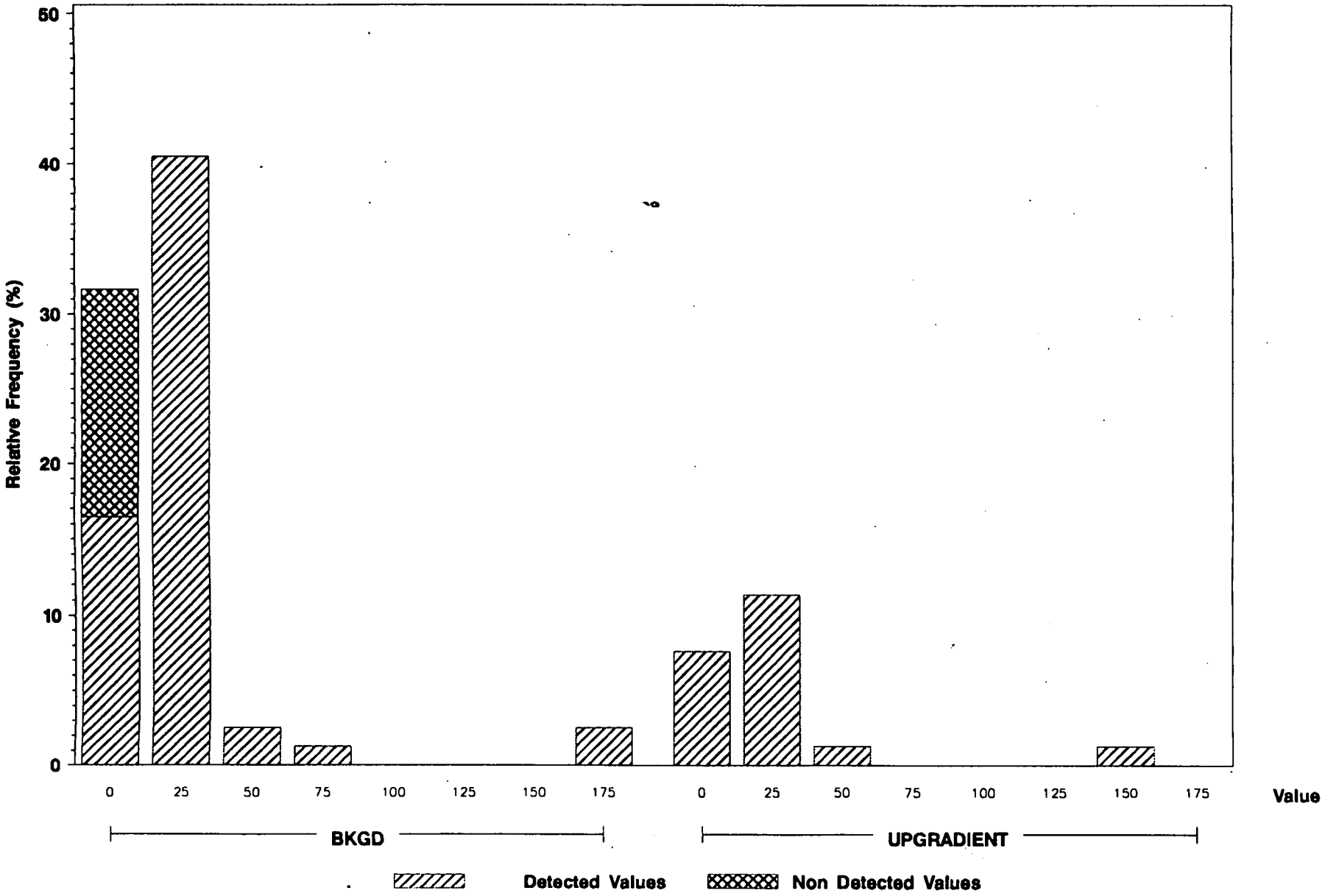
ANALYTE = CALCIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## CHROMIUM (mg/Kg) in Subsurface Geologic Materials

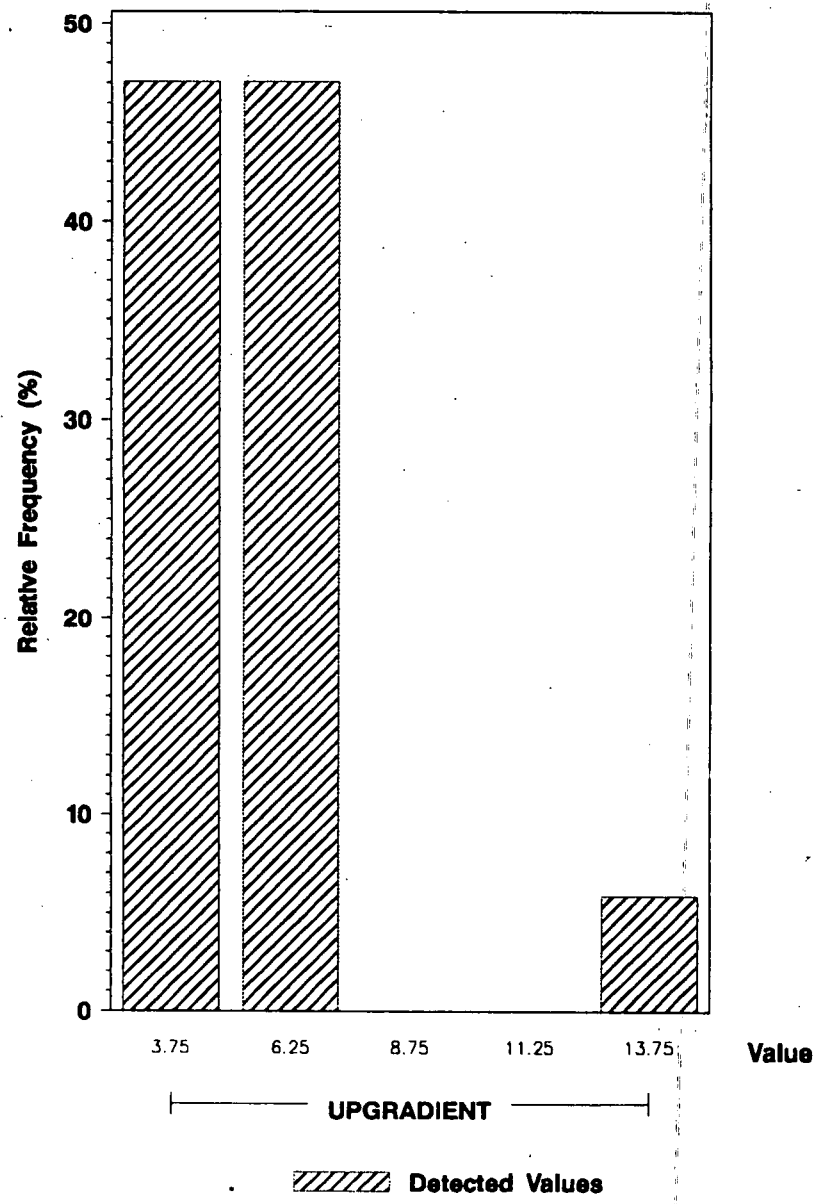
ANALYTE = CHROMIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## COBALT (mg/Kg) in Subsurface Geologic Materials

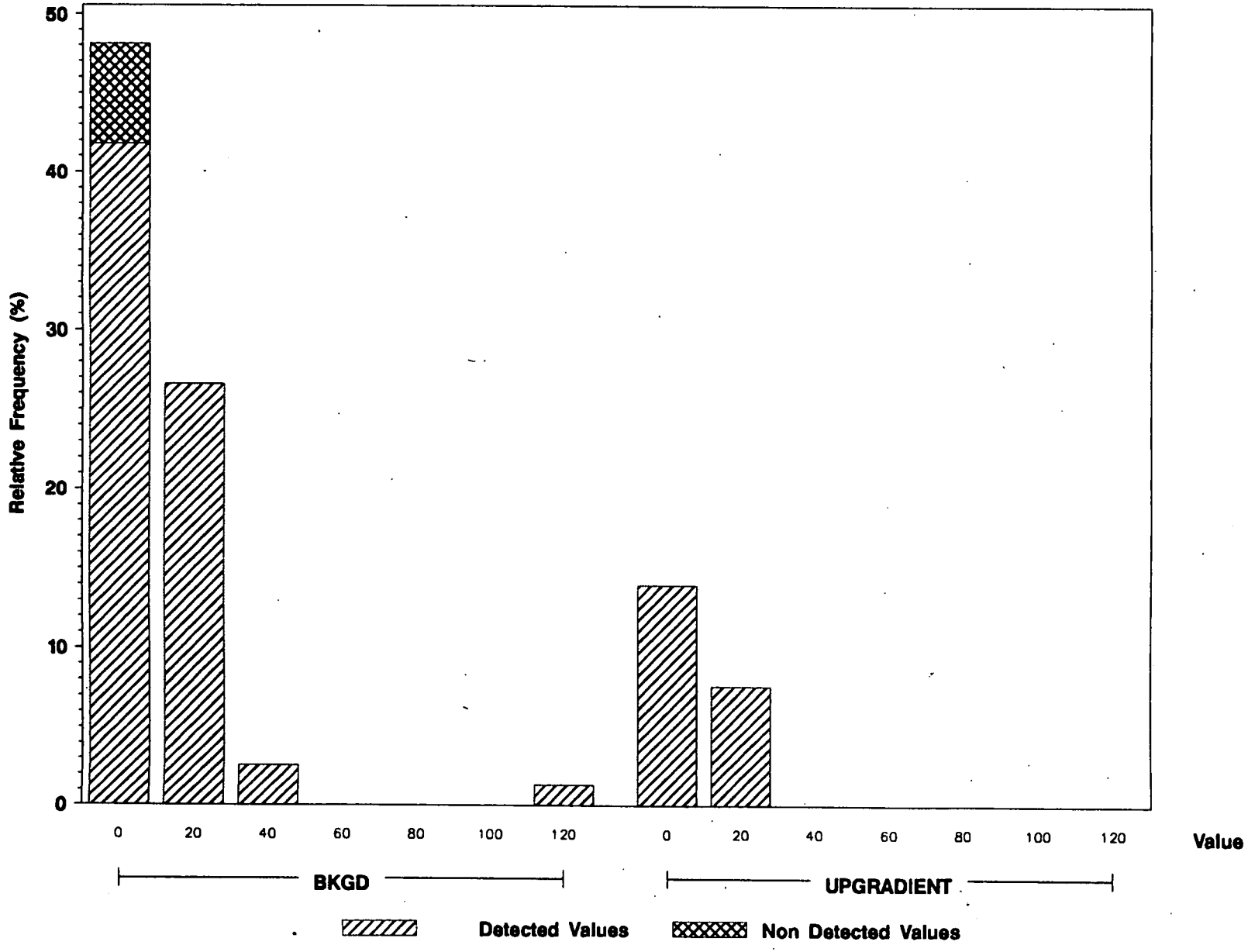
ANALYTE = COBALT



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## COPPER (mg/Kg) in Subsurface Geologic Materials

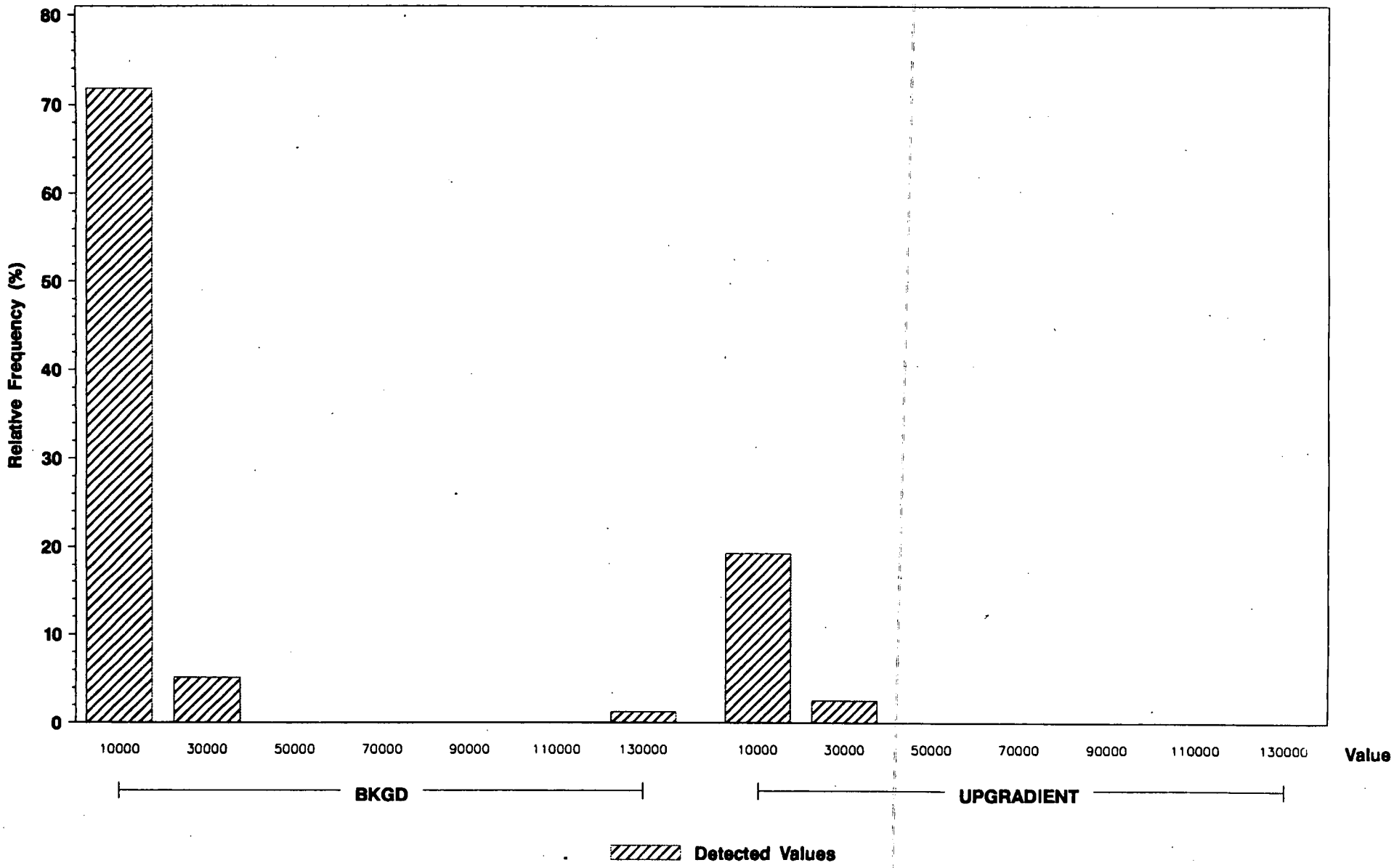
ANALYTE=COPPER



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## IRON (mg/Kg) in Subsurface Geologic Materials

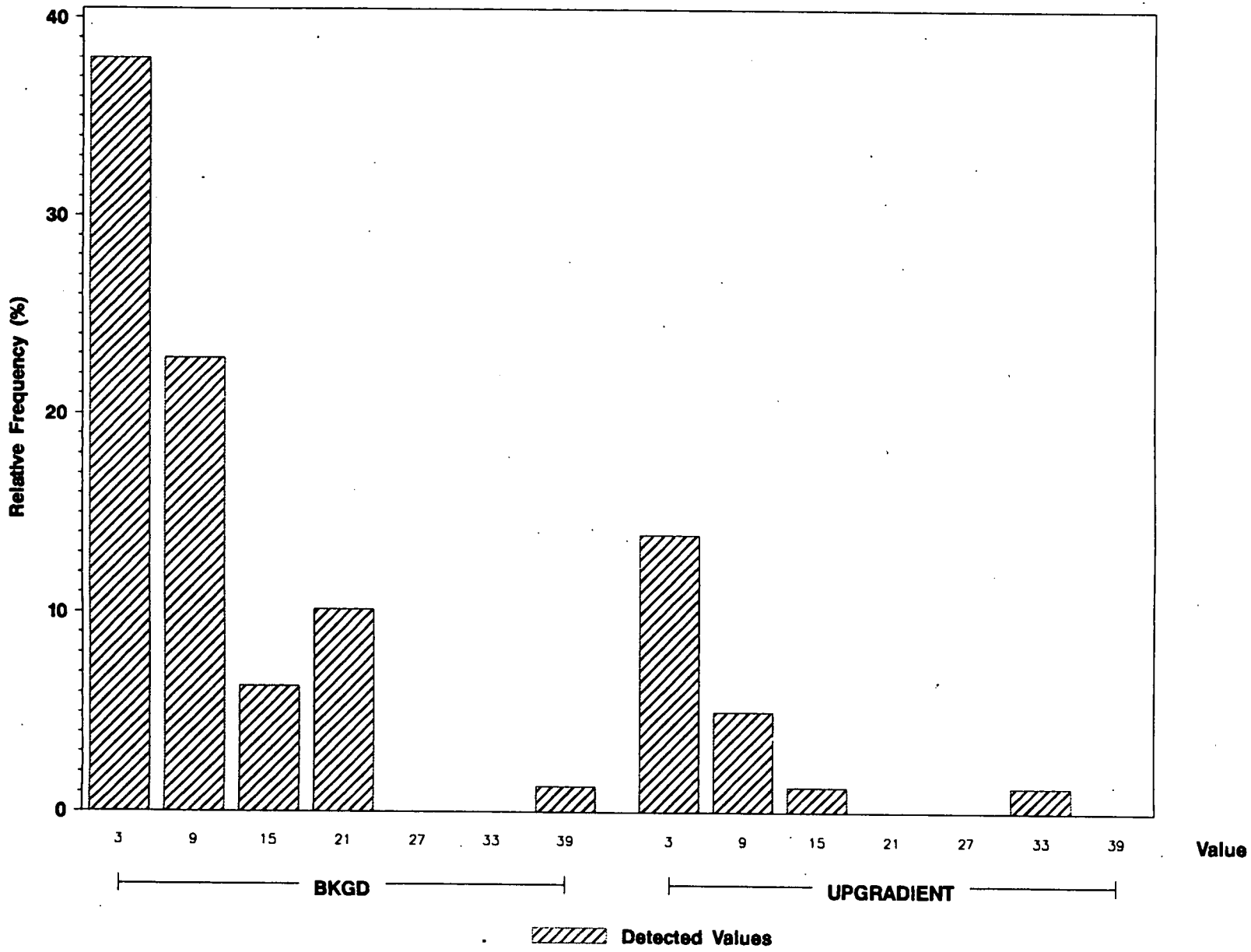
ANALYTE = IRON



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## LEAD (mg/Kg) in Subsurface Geologic Materials

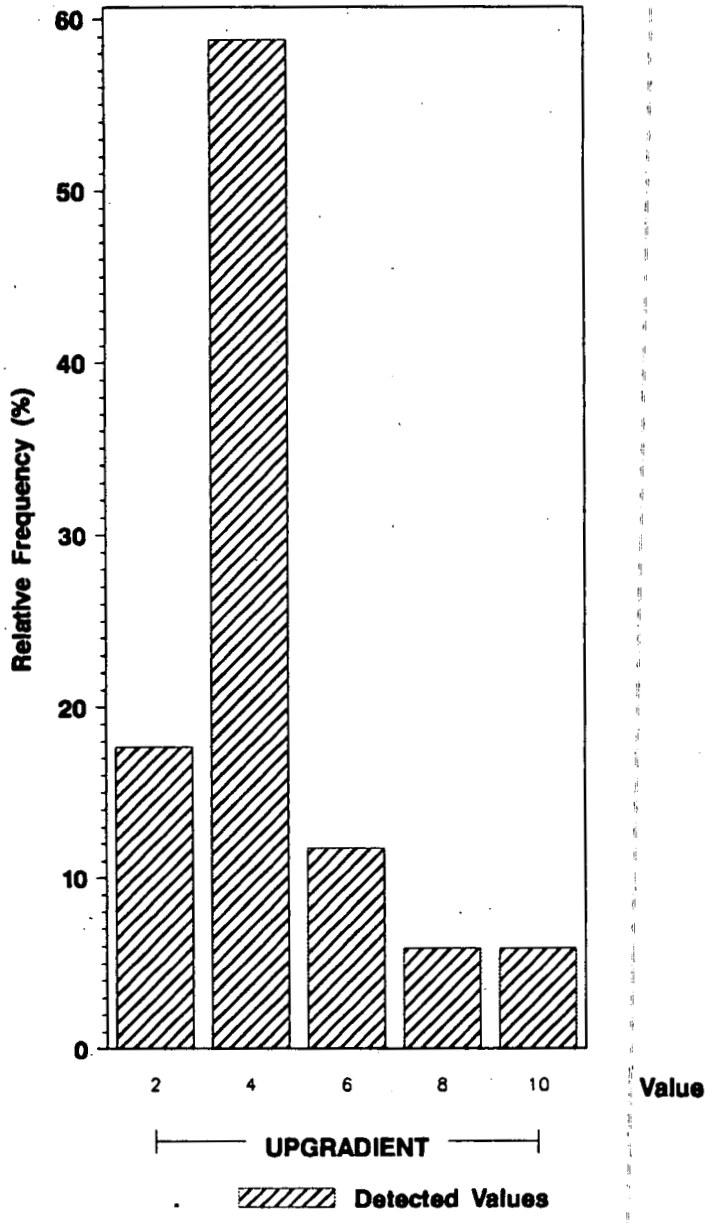
ANALYTE = LEAD



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## LITHIUM (mg/Kg) in Subsurface Geologic Materials

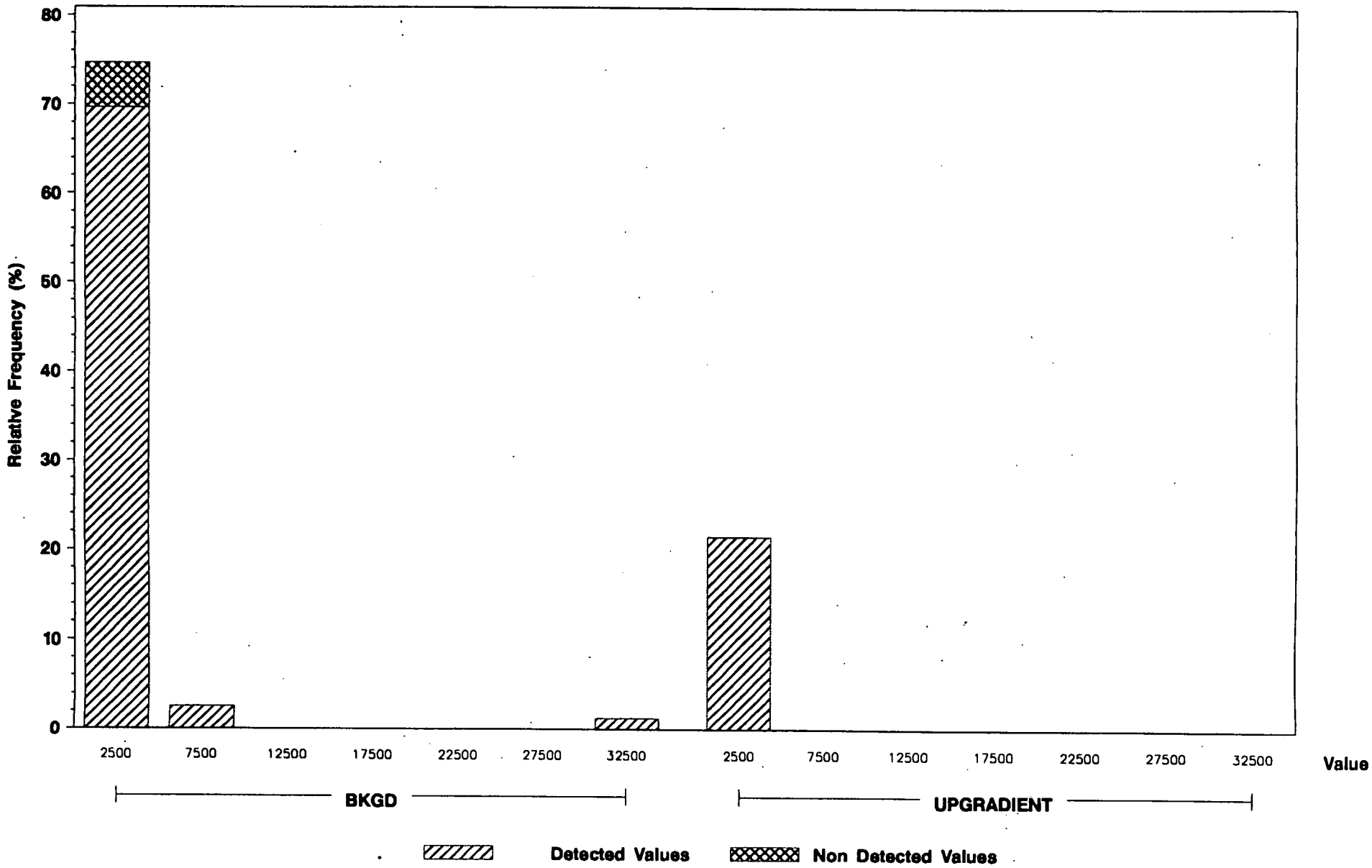
ANALYTE = LITHIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## MAGNESIUM (mg/Kg) In Subsurface Geologic Materials

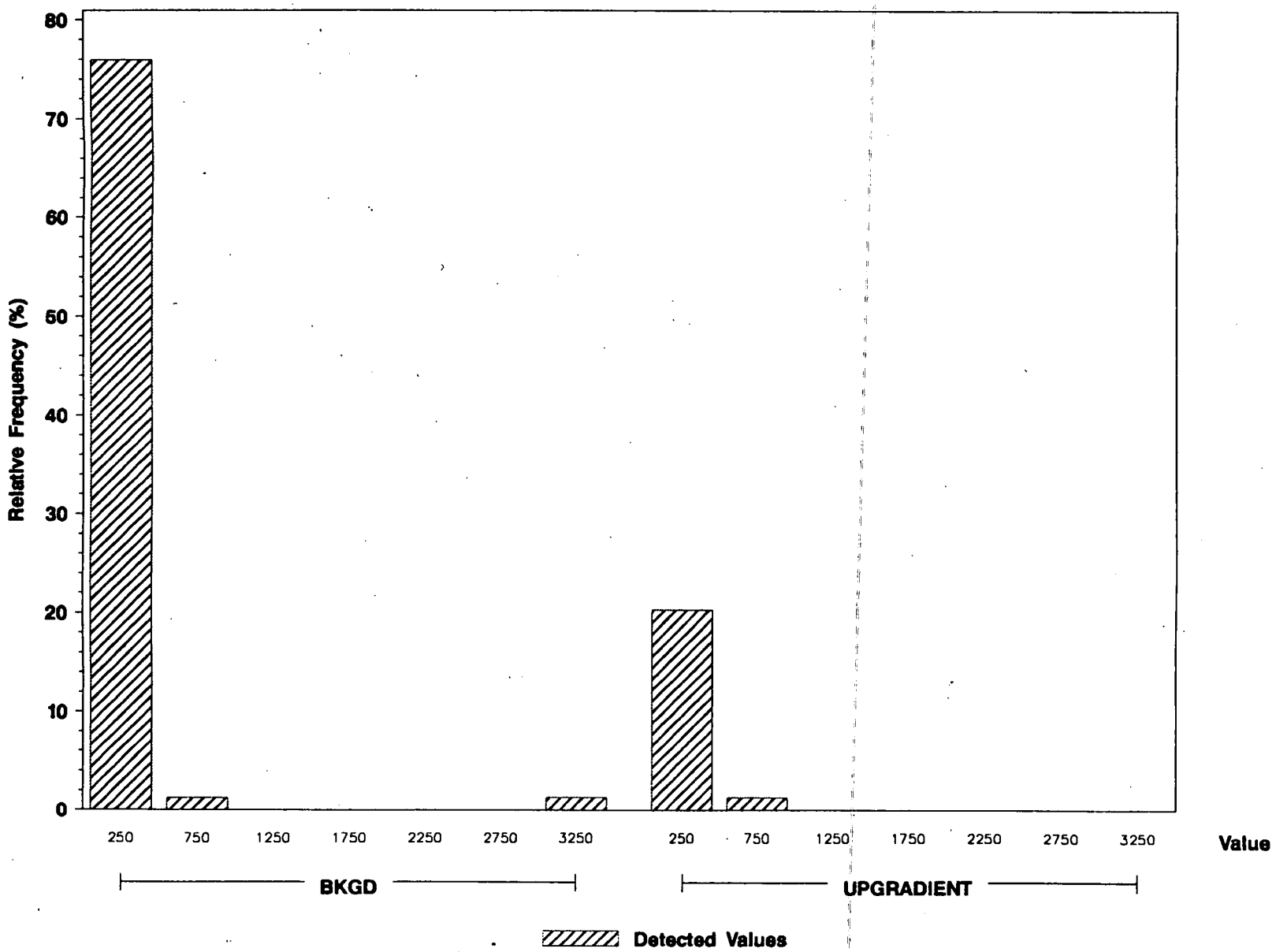
ANALYTE = MAGNESIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## MANGANESE (mg/Kg) in Subsurface Geologic Materials

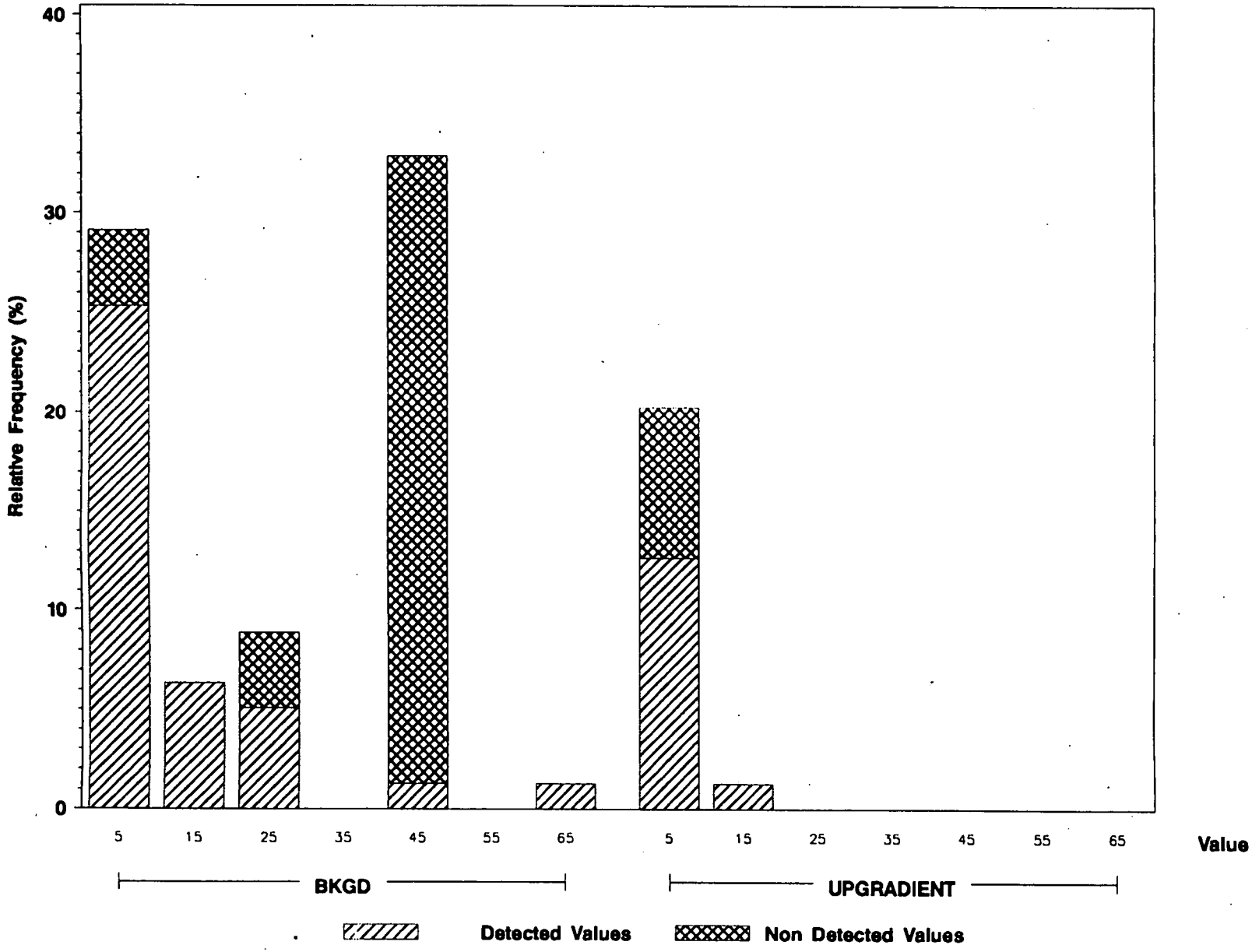
ANALYTE = MANGANESE



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## MOLYBDENUM (mg/Kg) in Subsurface Geologic Materials

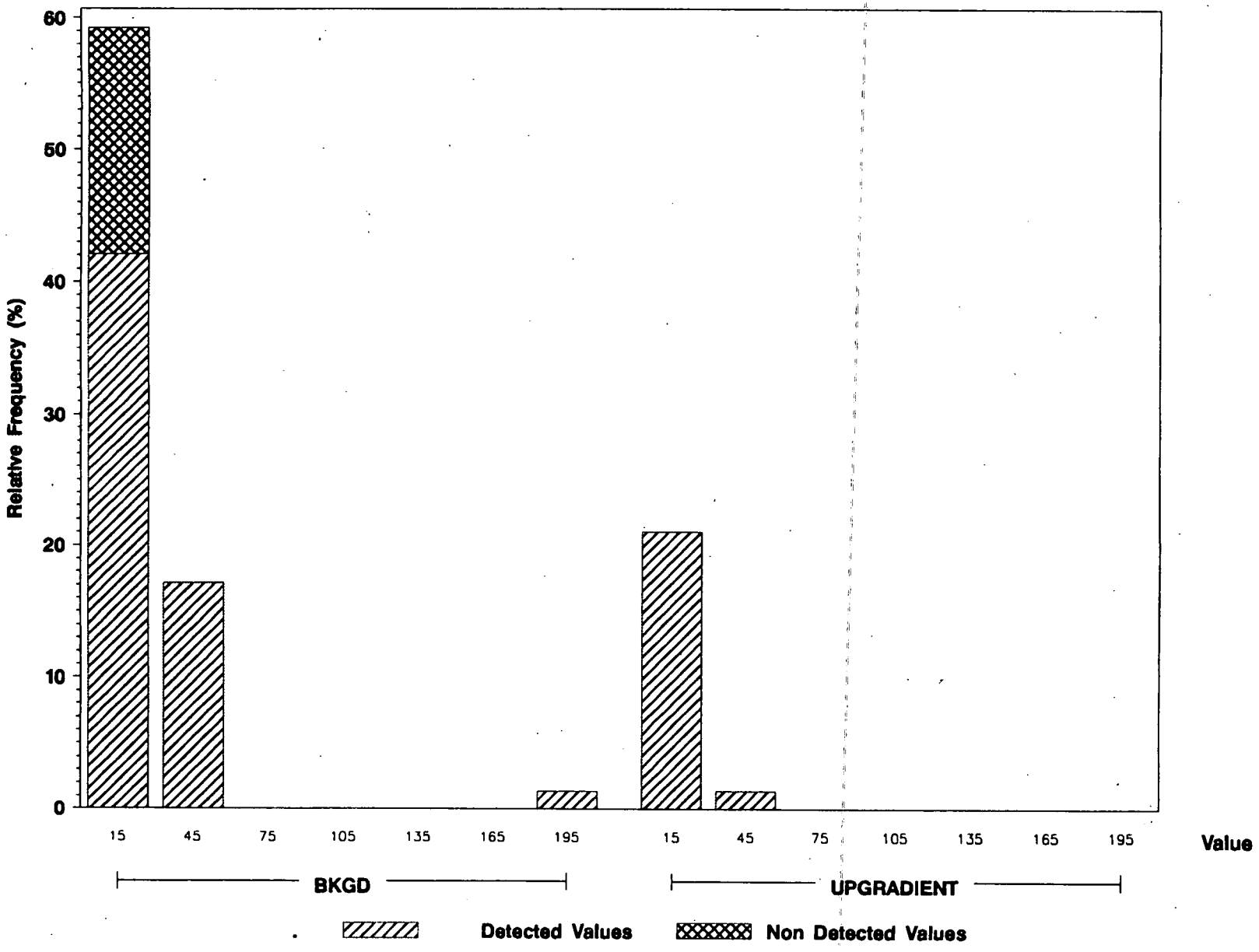
ANALYTE = MOLYBDENUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## NICKEL (mg/Kg) in Subsurface Geologic Materials

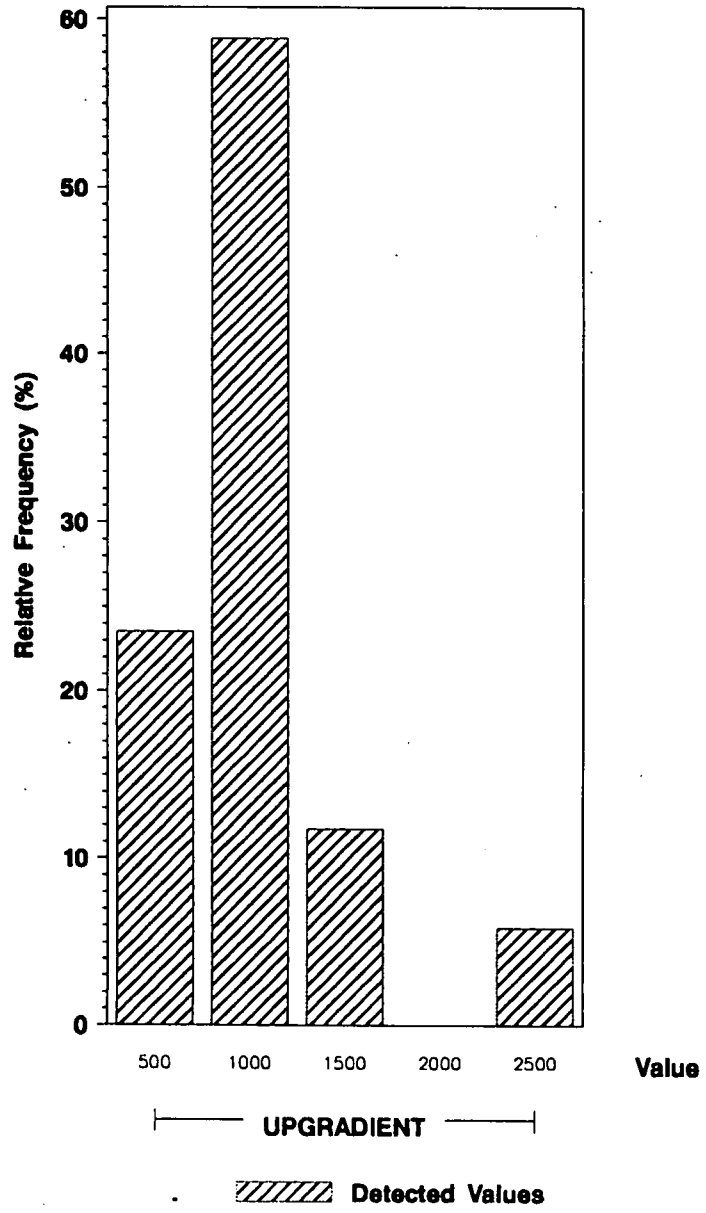
ANALYTE=NICKEL



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## POTASSIUM (mg/Kg) in Subsurface Geologic Materials

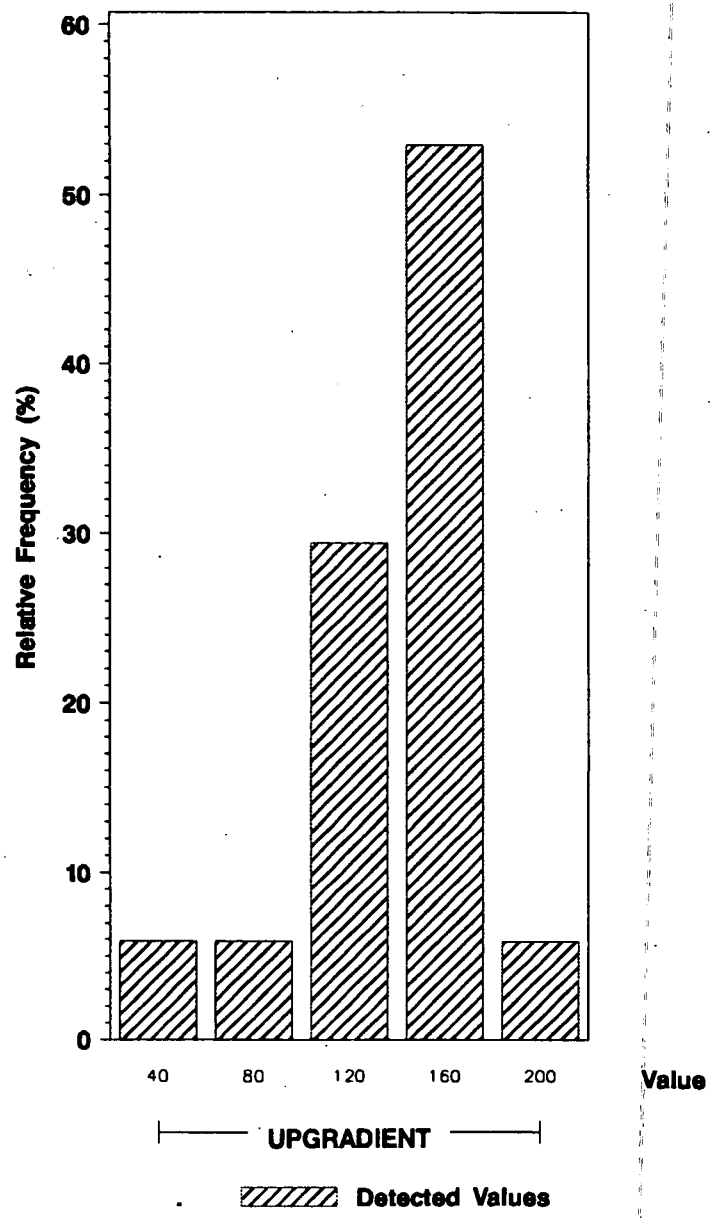
ANALYTE = POTASSIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## SILICON (mg/Kg) In Subsurface Geologic Materials

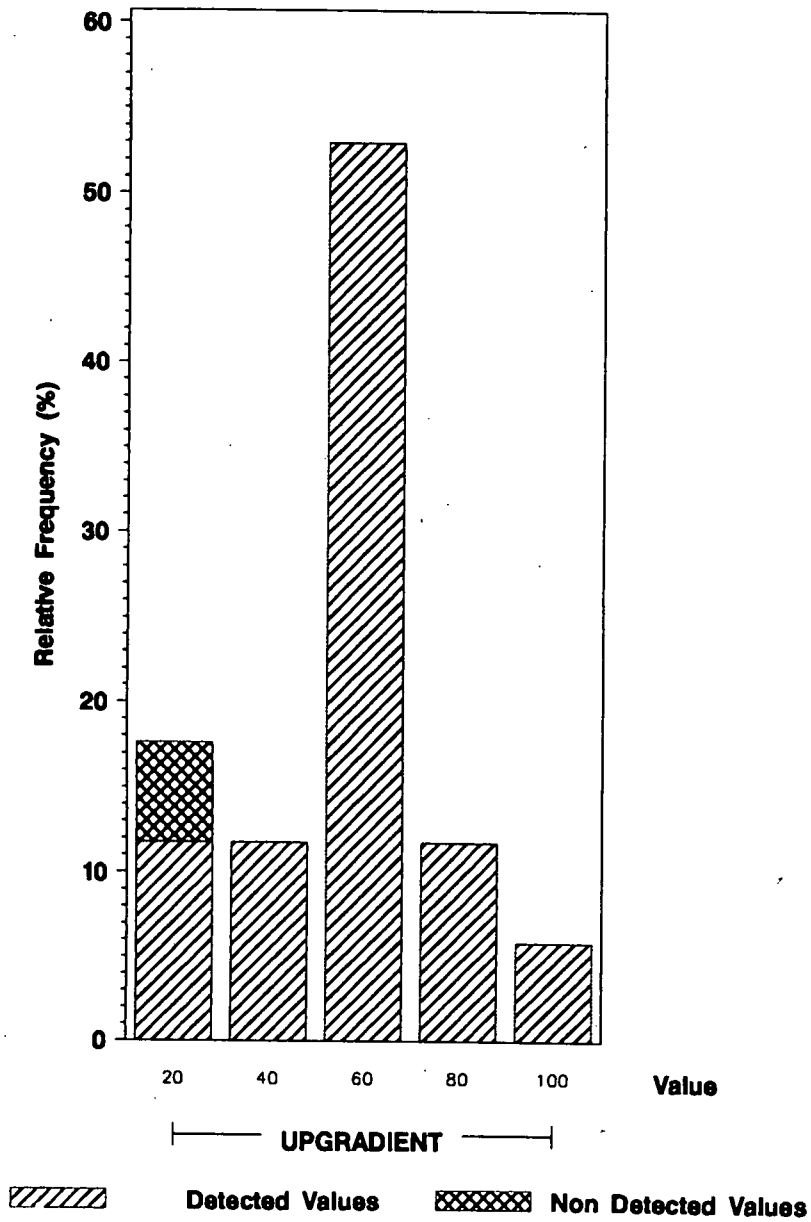
ANALYTE = SILICON



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## SODIUM (mg/Kg) in Subsurface Geologic Materials

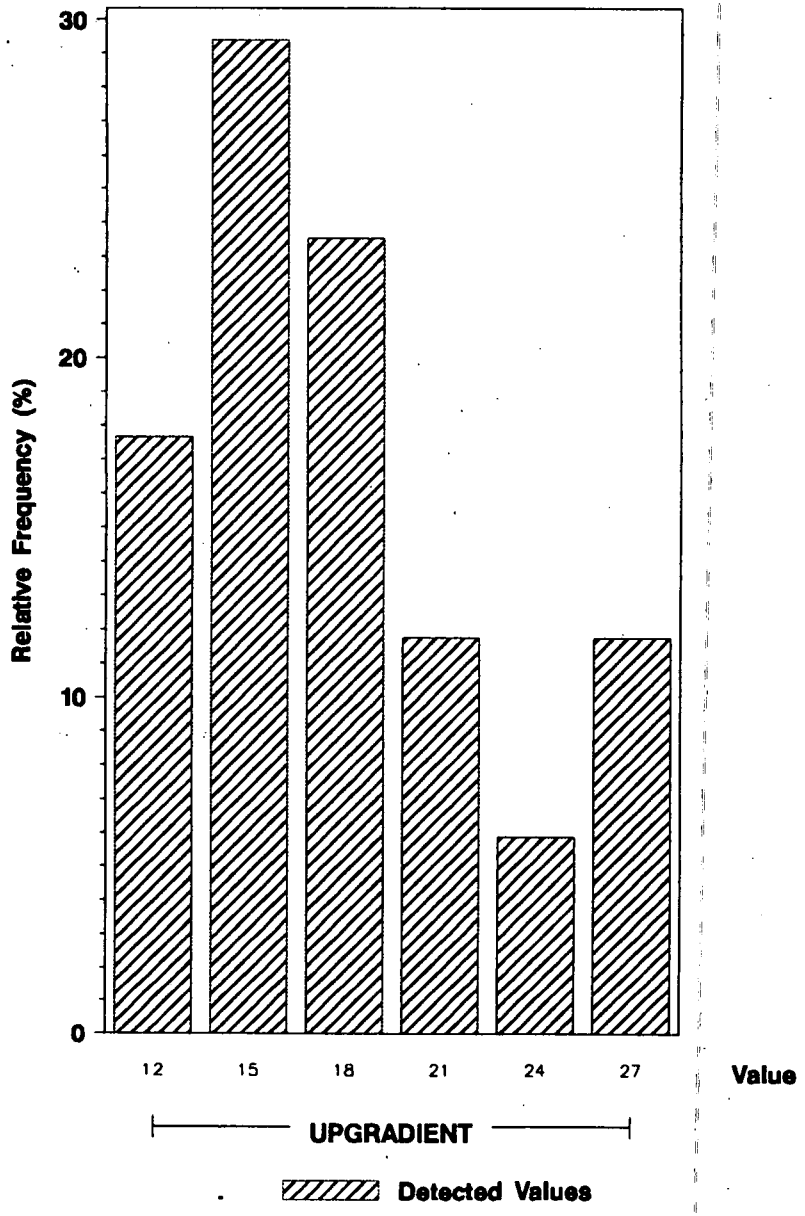
ANALYTE = SODIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## STRONTIUM (mg/Kg) in Subsurface Geologic Materials

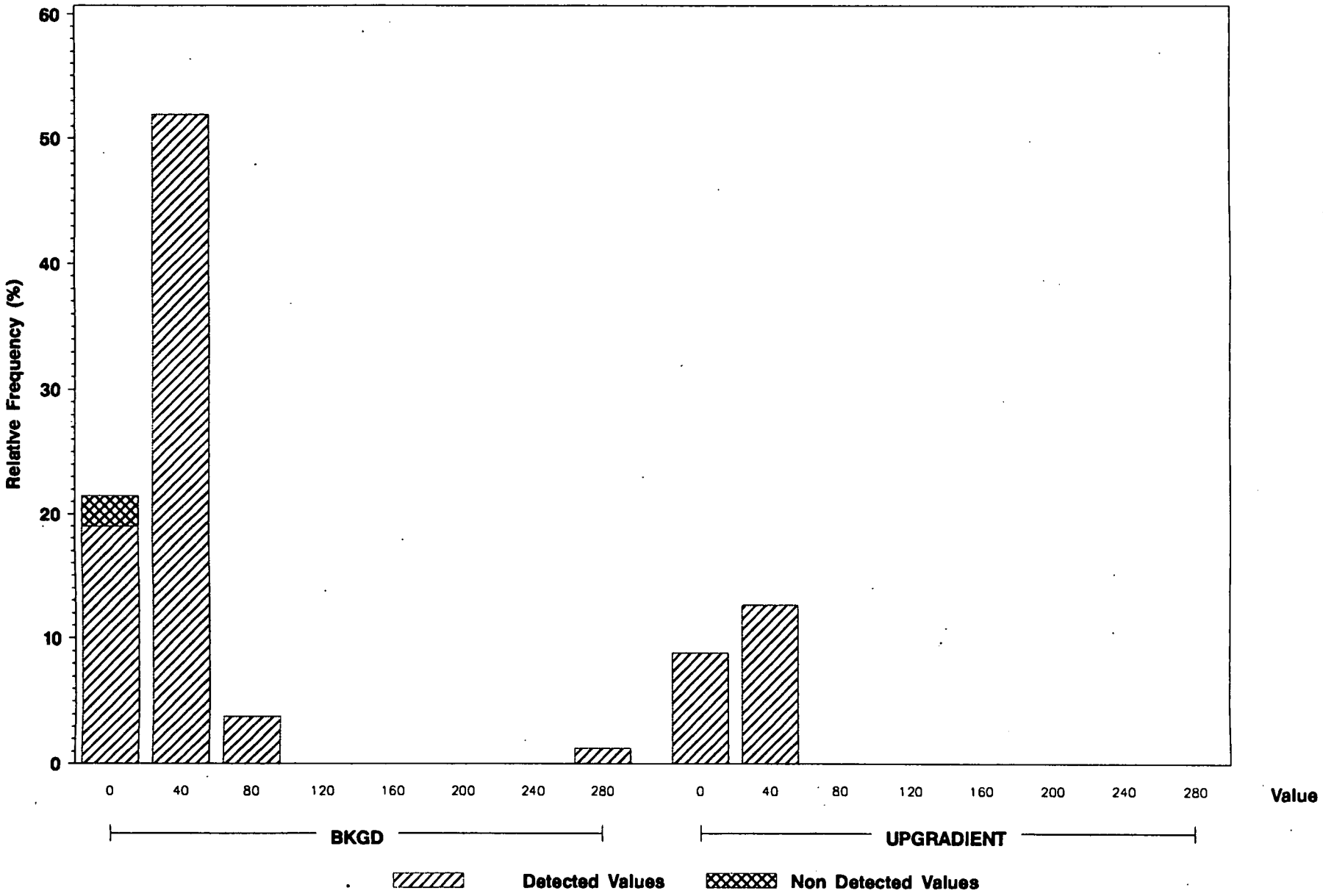
ANALYTE = STRONTIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## VANADIUM (mg/Kg) in Subsurface Geologic Materials

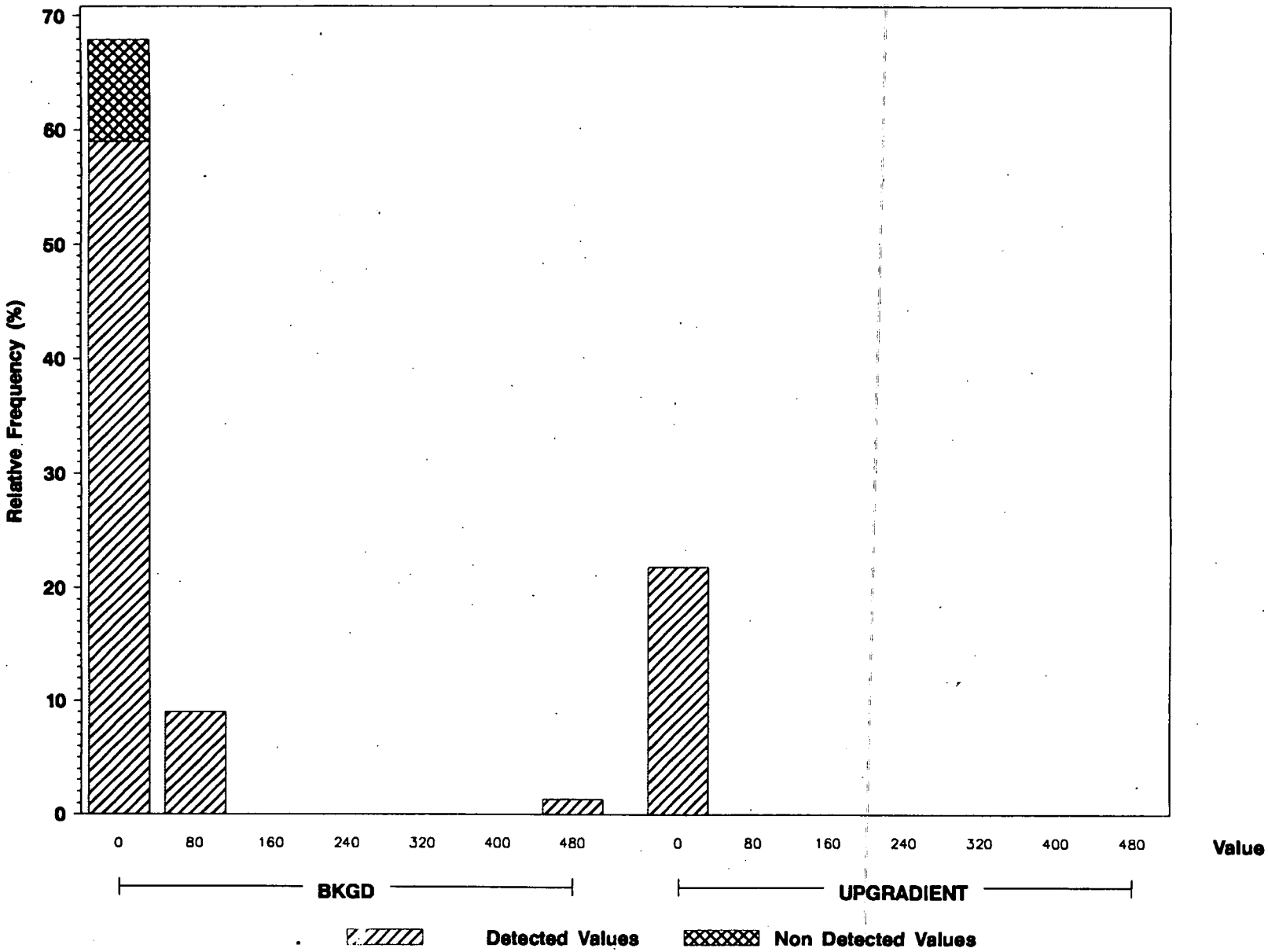
ANALYTE = VANADIUM



# Background Qrf vs Upgradient OU7 Qrf Frequency Histogram

## ZINC (mg/Kg) in Subsurface Geologic Materials

ANALYTE=ZINC



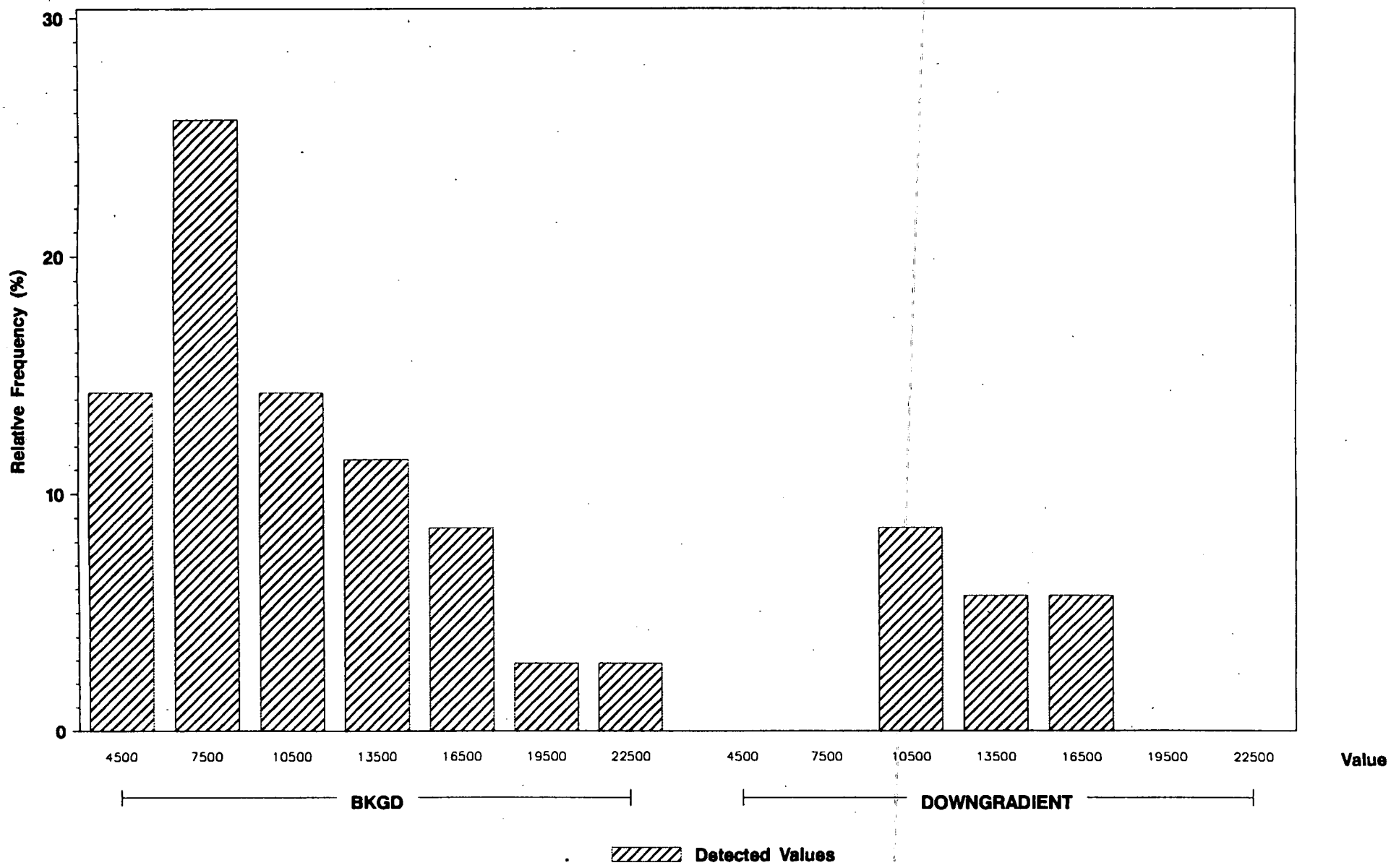
# Subsurface Geologic Materials

## Background vs. OU 7 Downgradient Qc

# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## ALUMINUM (mg/Kg) in Subsurface Geologic Materials

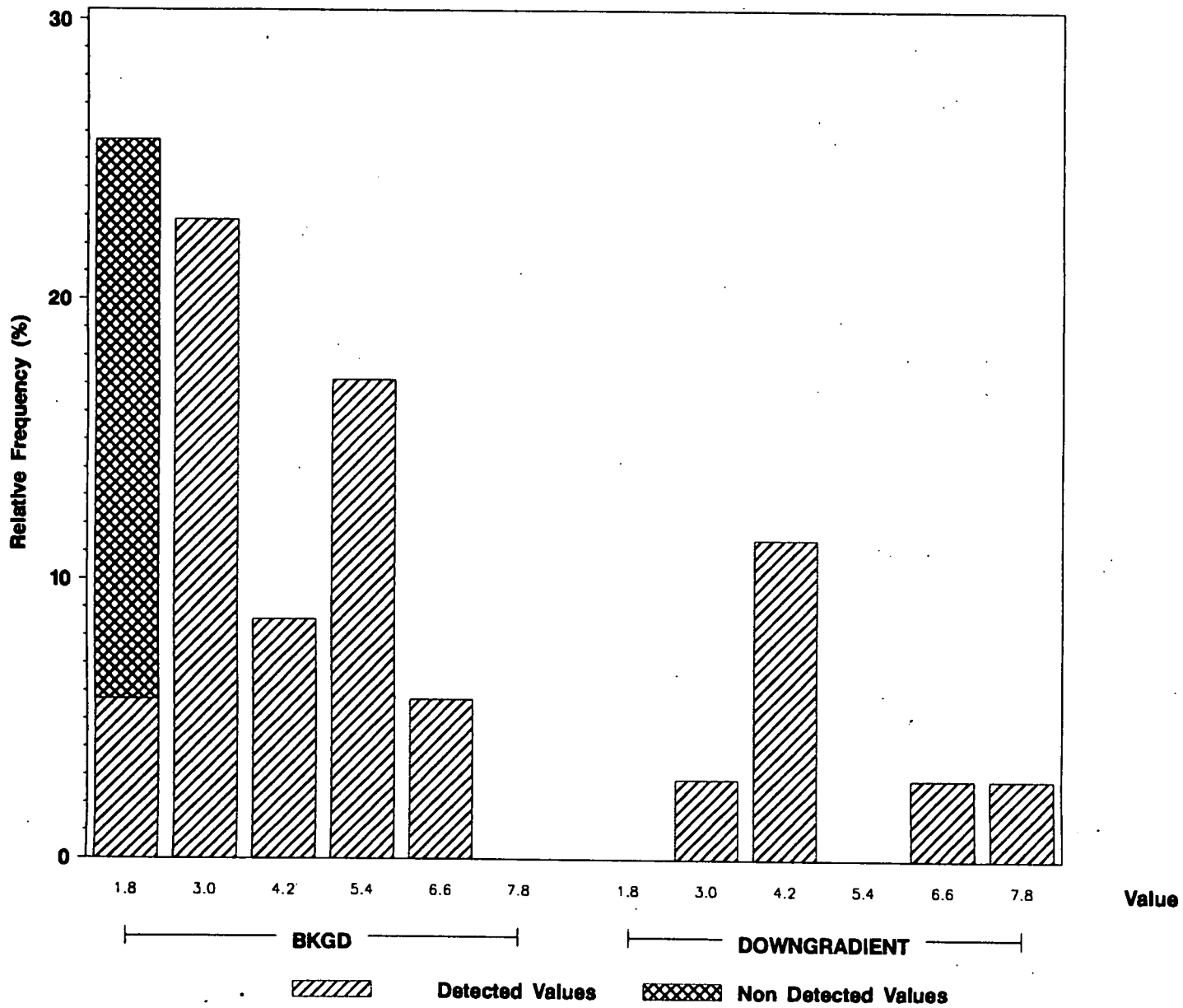
ANALYTE = ALUMINUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## ARSENIC (mg/Kg) in Subsurface Geologic Materials

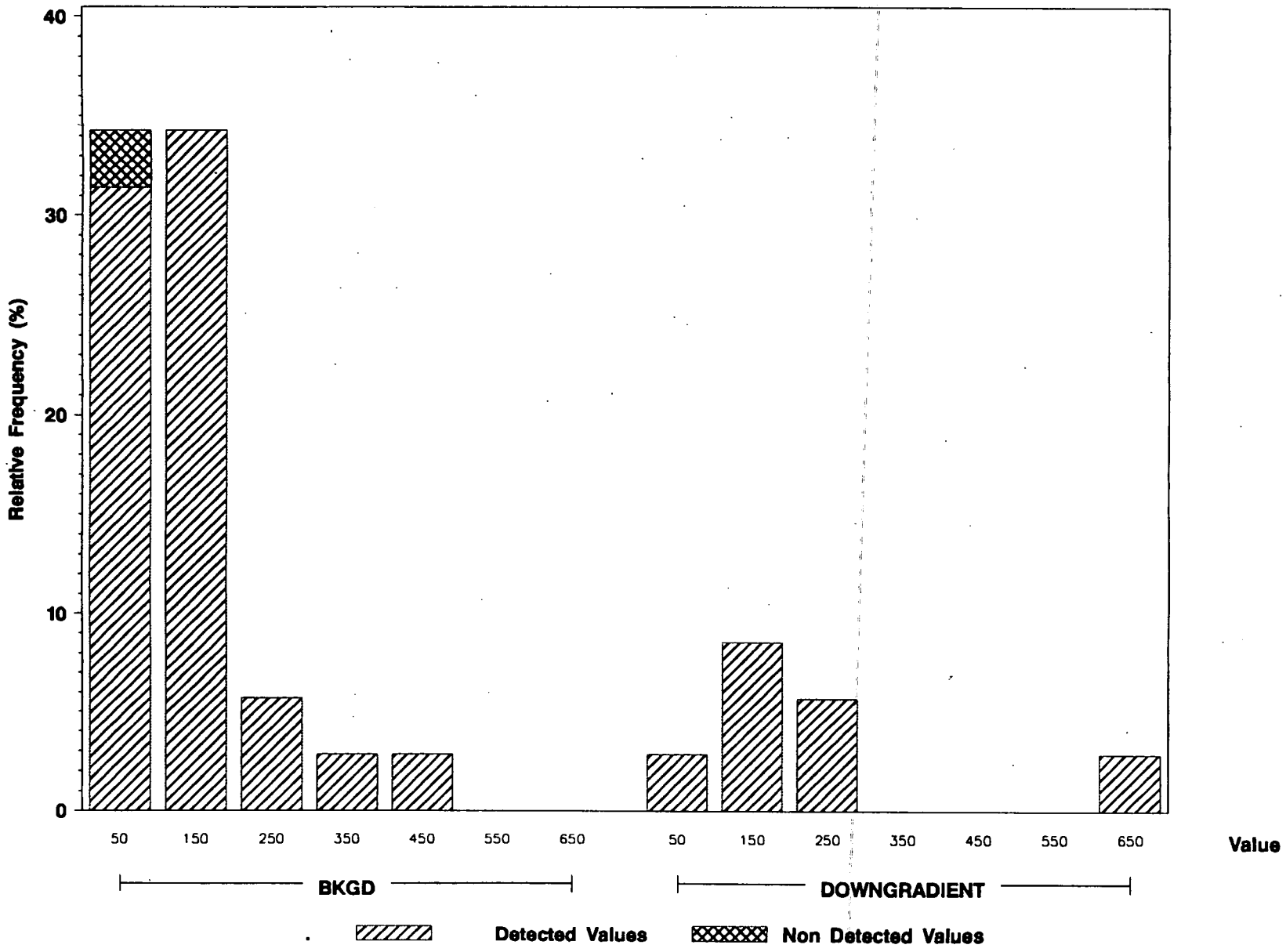
ANALYTE = ARSENIC



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## BARIUM (mg/Kg) in Subsurface Geologic Materials

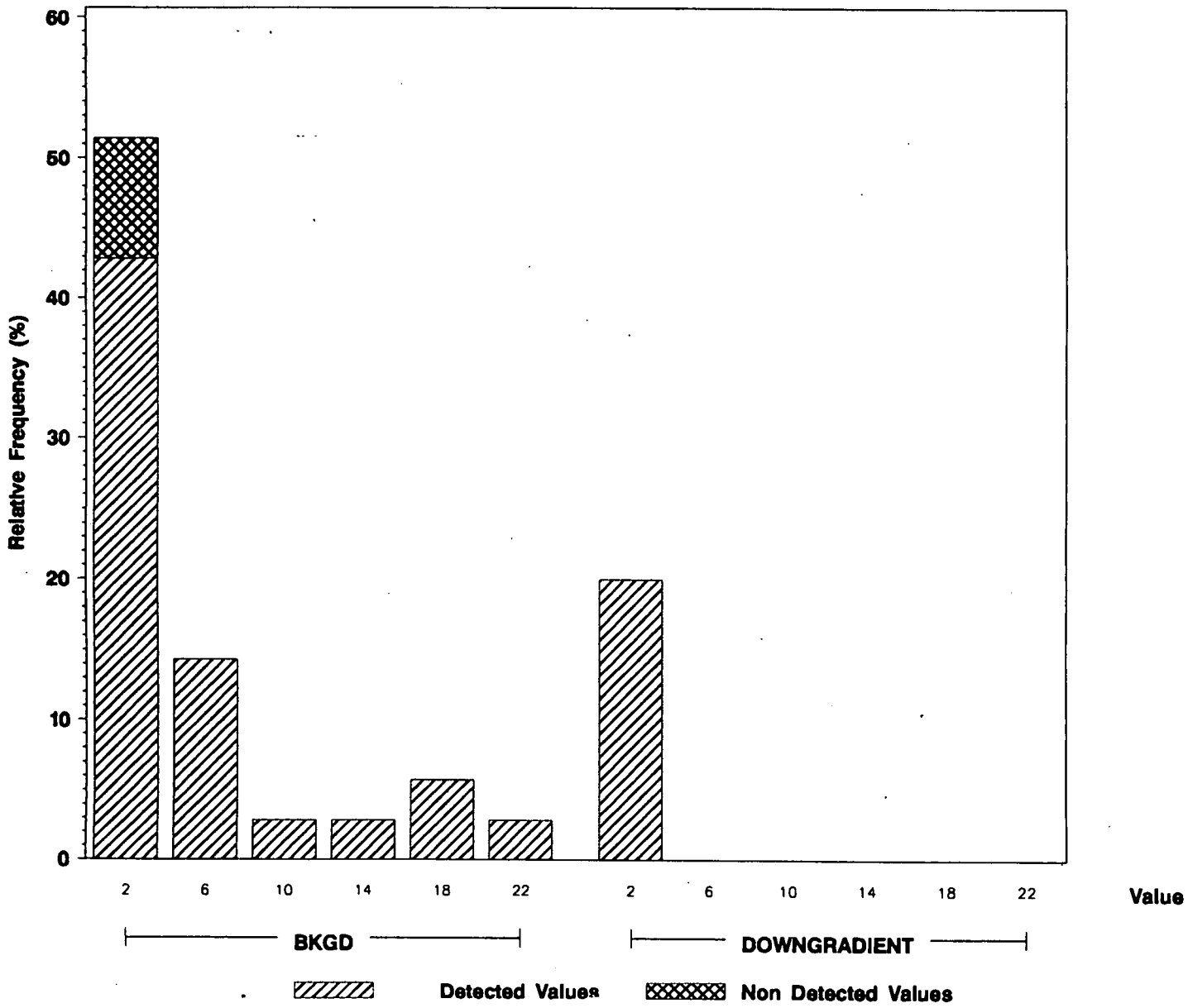
ANALYTE = BARIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## BERYLLIUM (mg/Kg) in Subsurface Geologic Materials

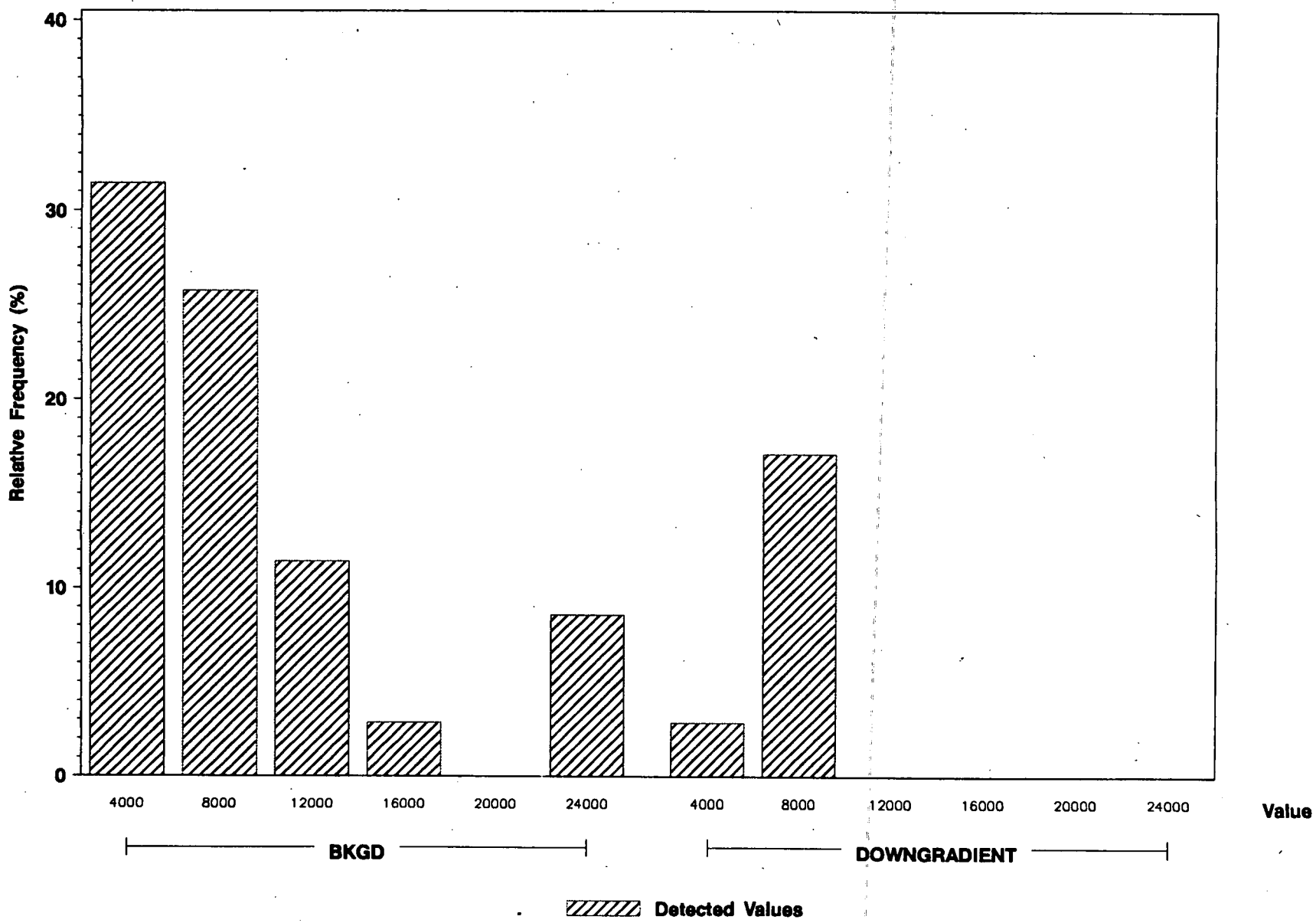
ANALYTE = BERYLLIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## CALCIUM (mg/Kg) in Subsurface Geologic Materials

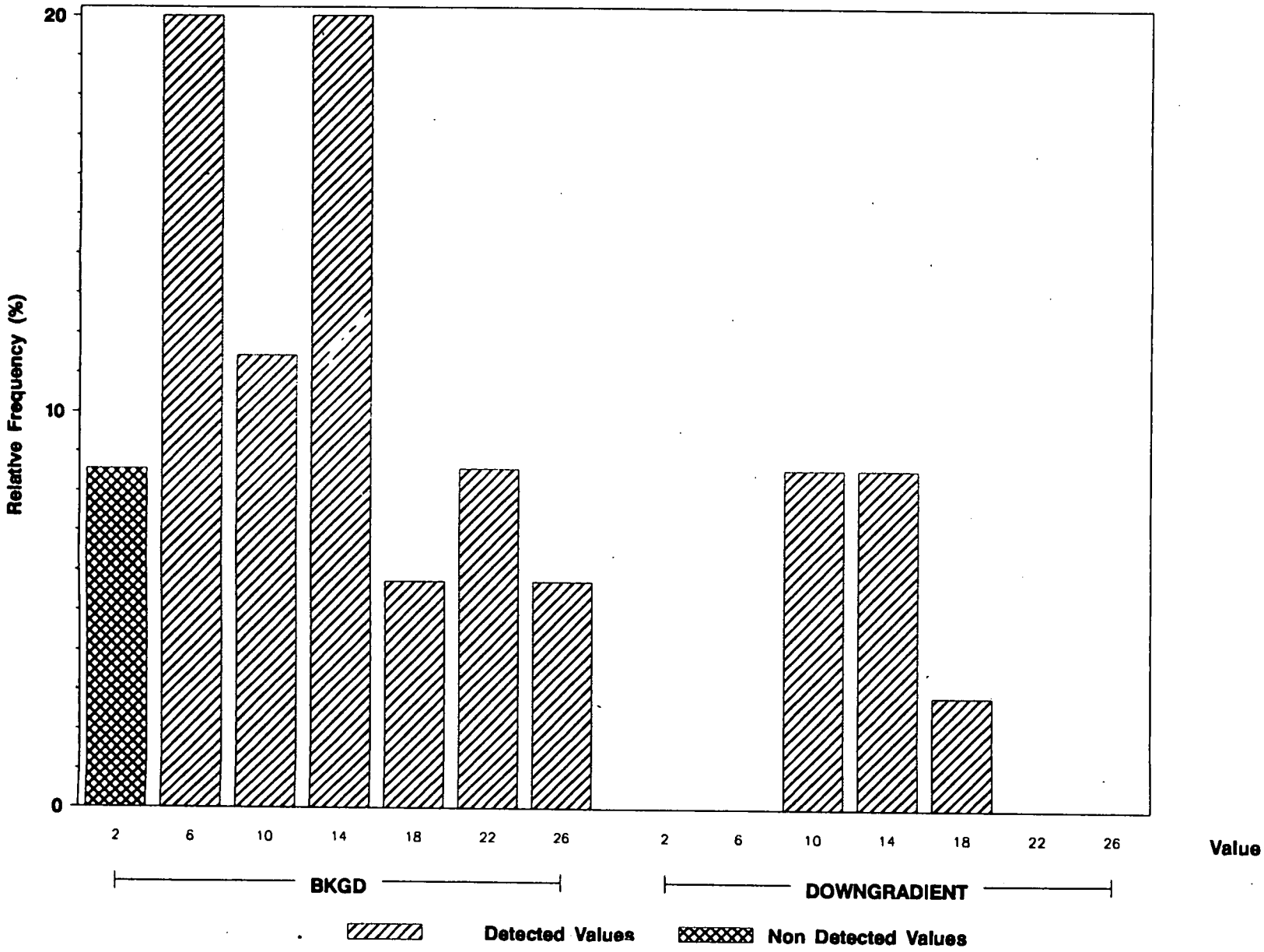
ANALYTE=CALCIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## CHROMIUM (mg/Kg) in Subsurface Geologic Materials

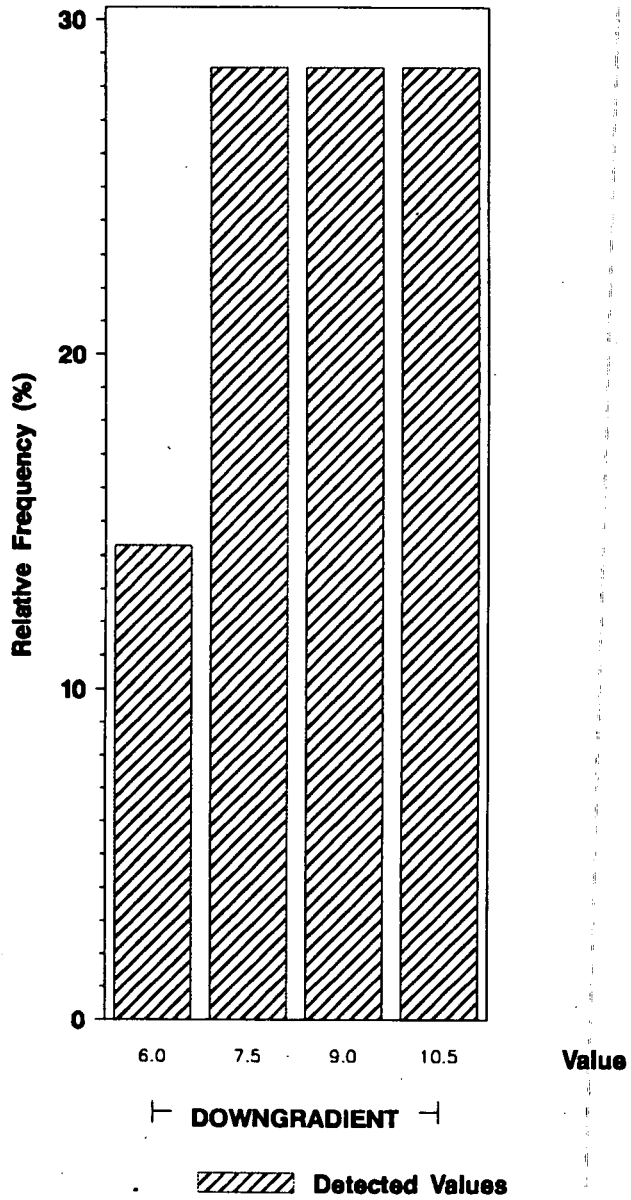
ANALYTE = CHROMIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## COBALT (mg/Kg) in Subsurface Geologic Materials

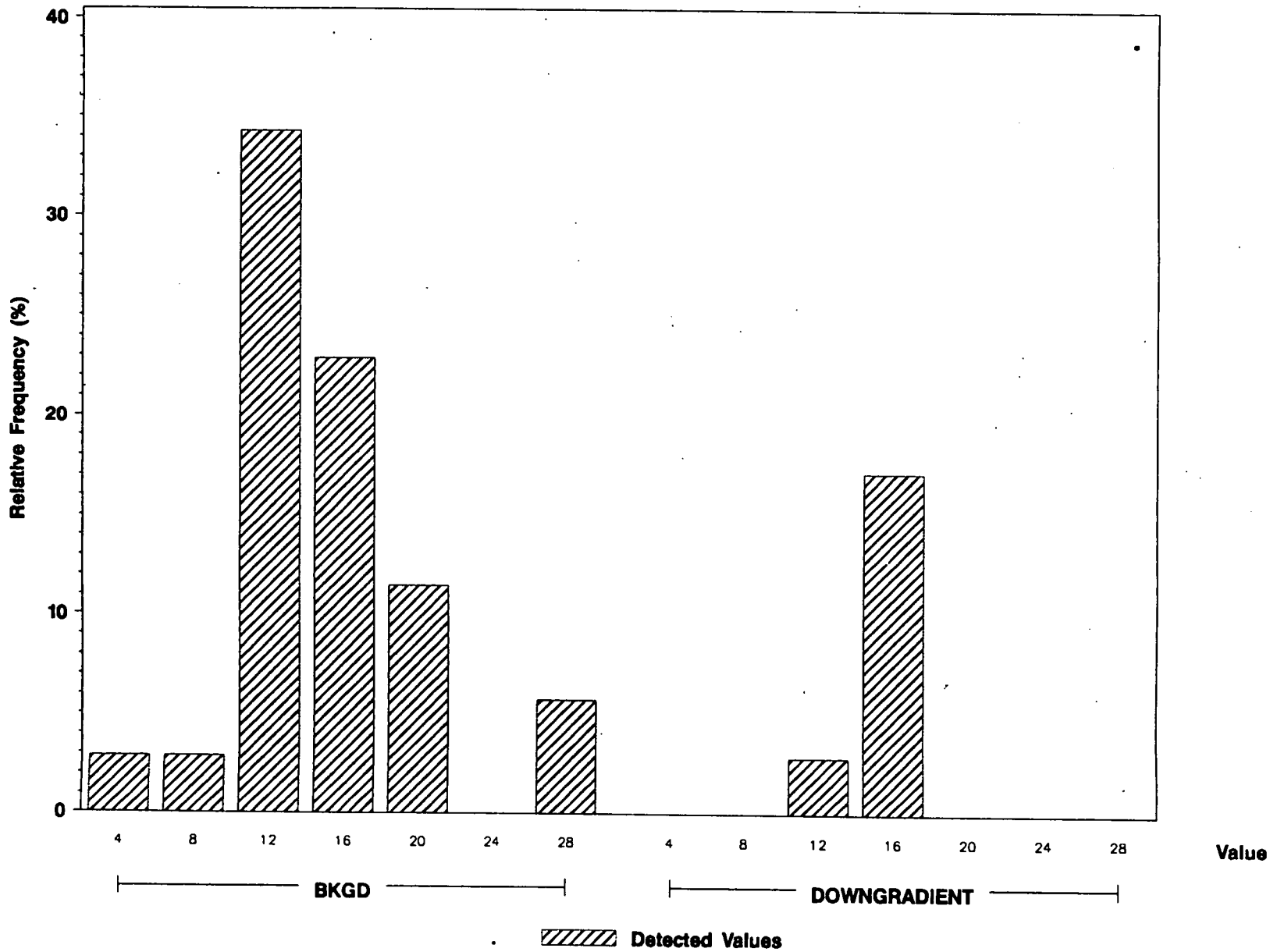
ANALYTE = COBALT



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## COPPER (mg/Kg) in Subsurface Geologic Materials

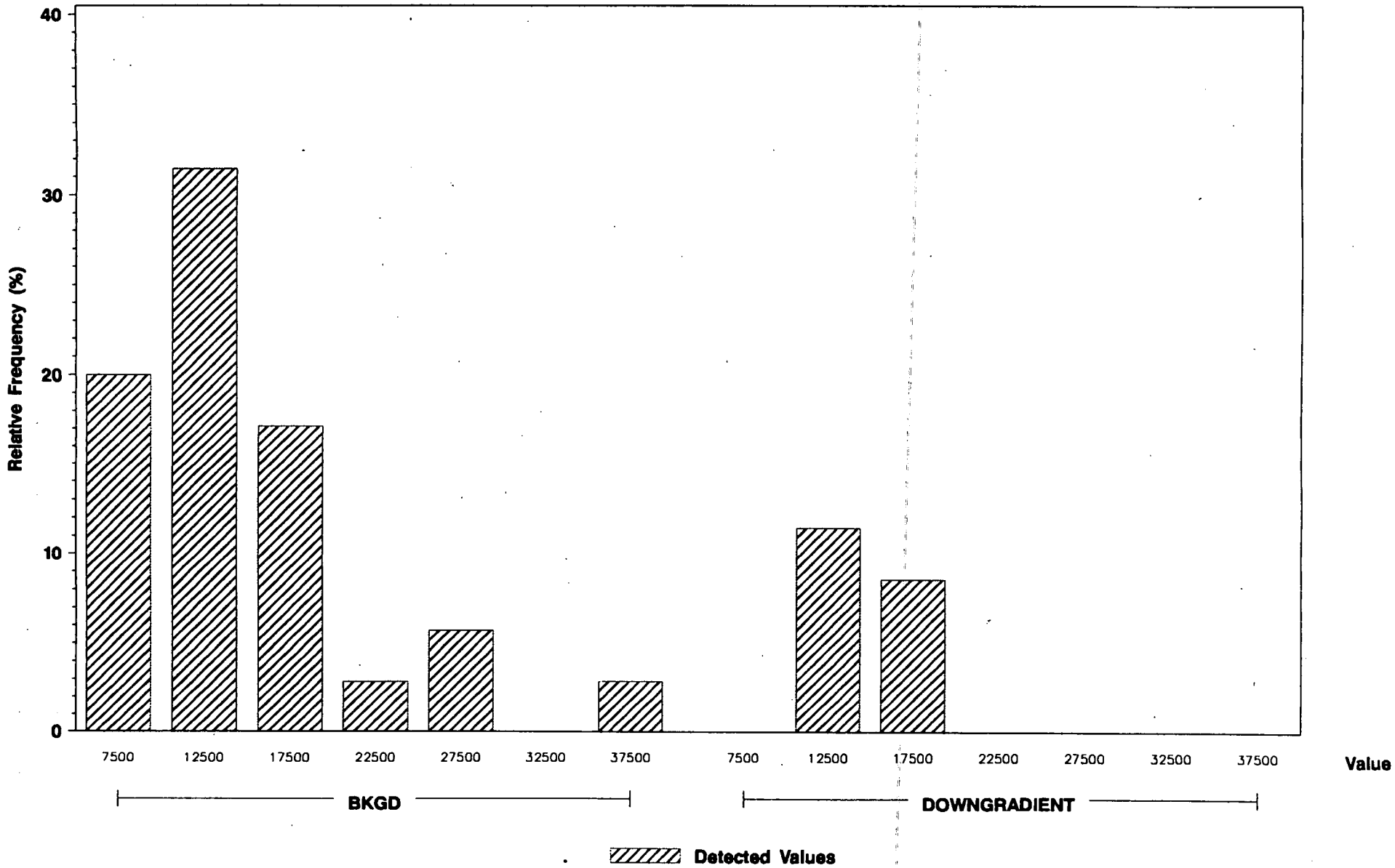
ANALYTE=COPPER



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## IRON (mg/Kg) in Subsurface Geologic Materials

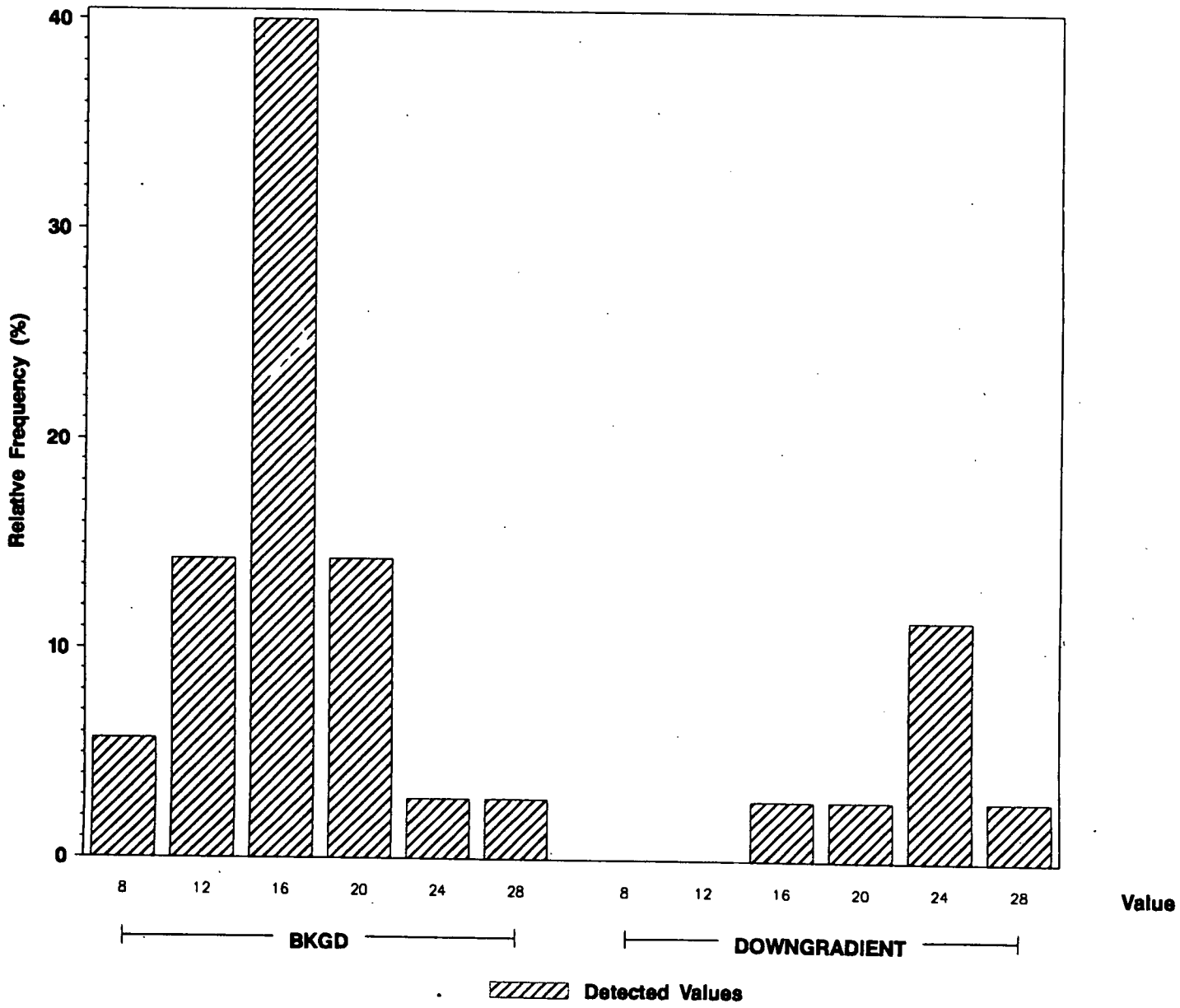
ANALYTE = IRON



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## LEAD (mg/Kg) in Subsurface Geologic Materials

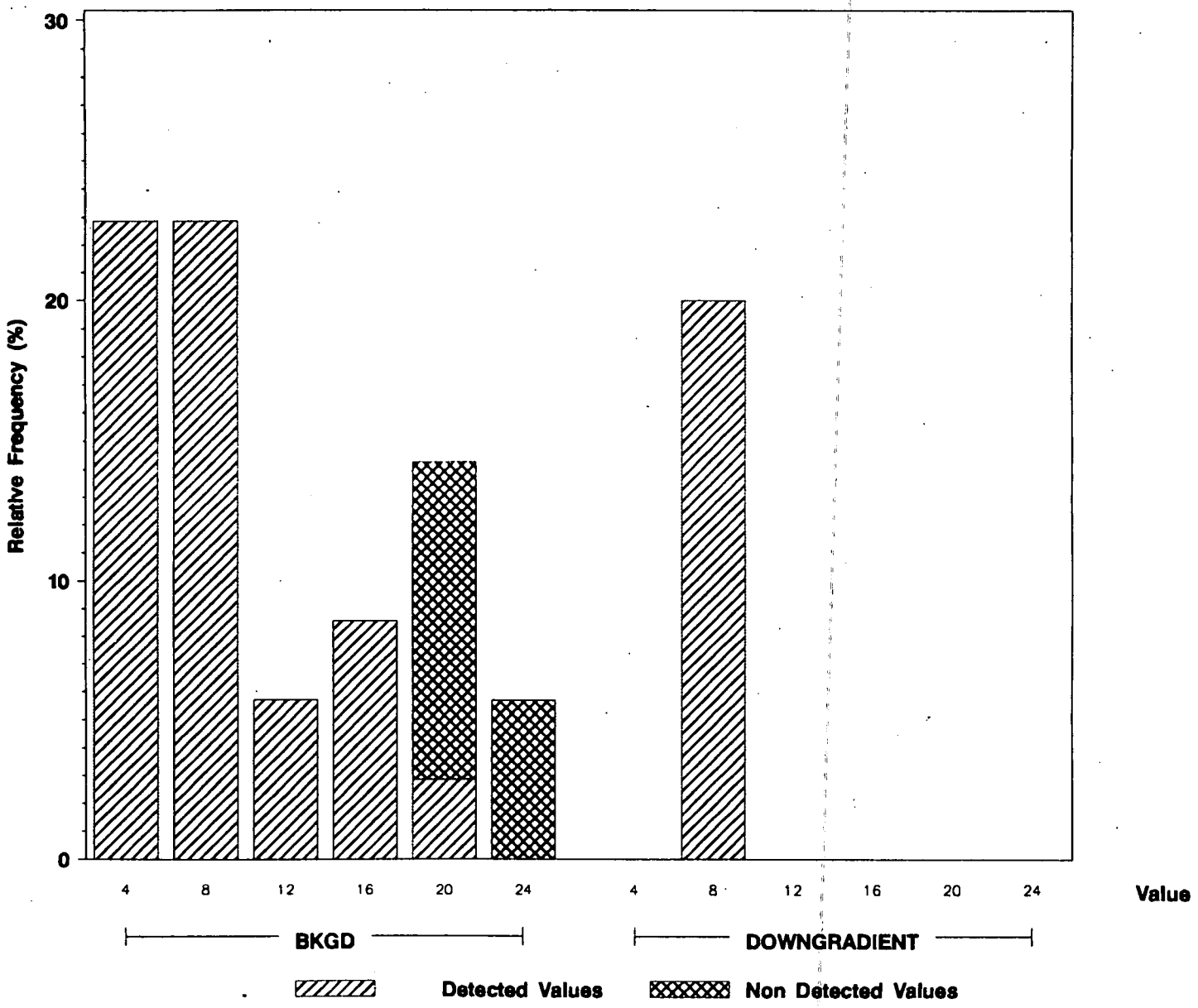
ANALYTE = LEAD



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## LITHIUM (mg/Kg) in Subsurface Geologic Materials

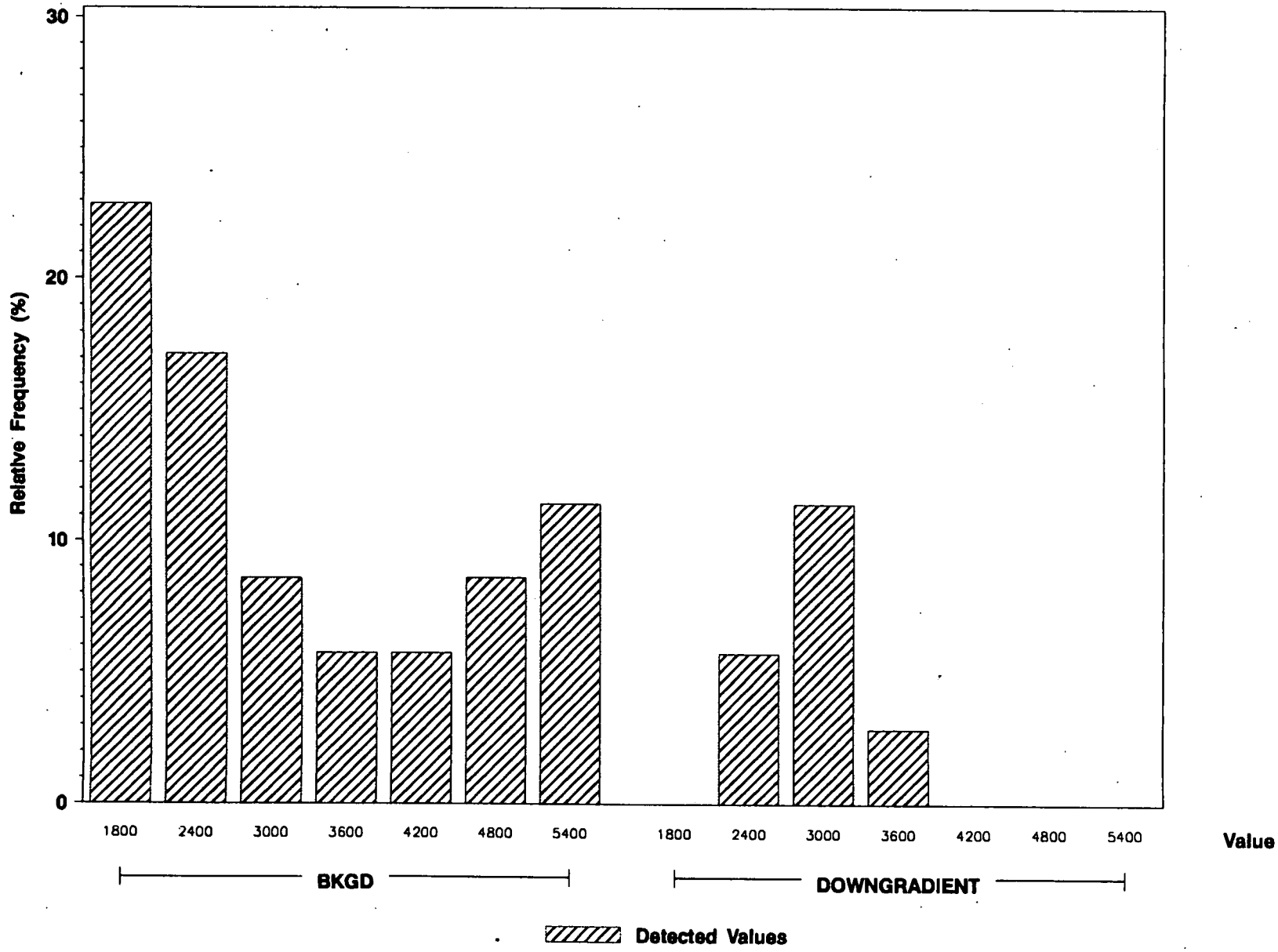
ANALYTE = LITHIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## MAGNESIUM (mg/Kg) in Subsurface Geologic Materials

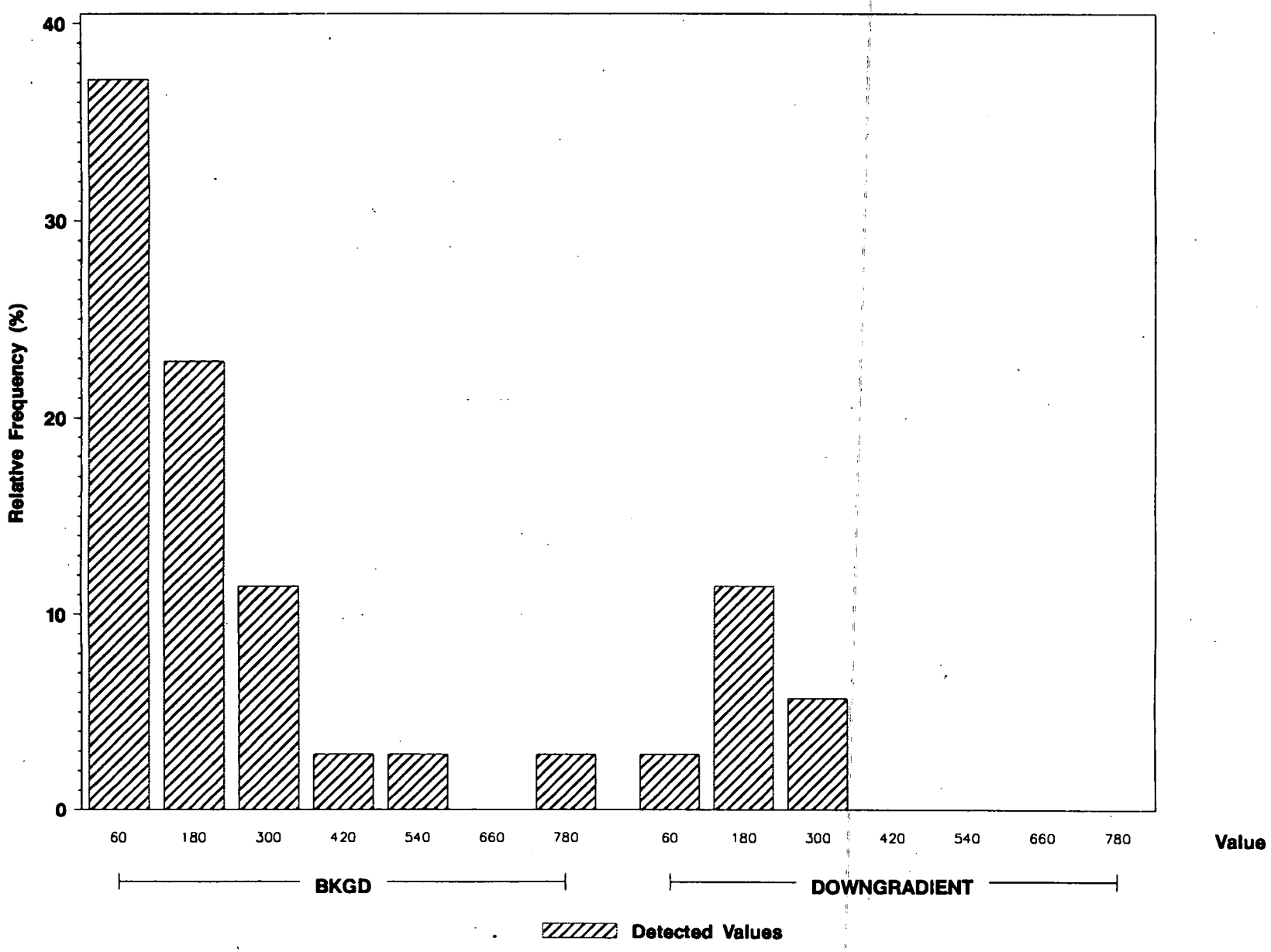
ANALYTE = MAGNESIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## MANGANESE (mg/Kg) in Subsurface Geologic Materials

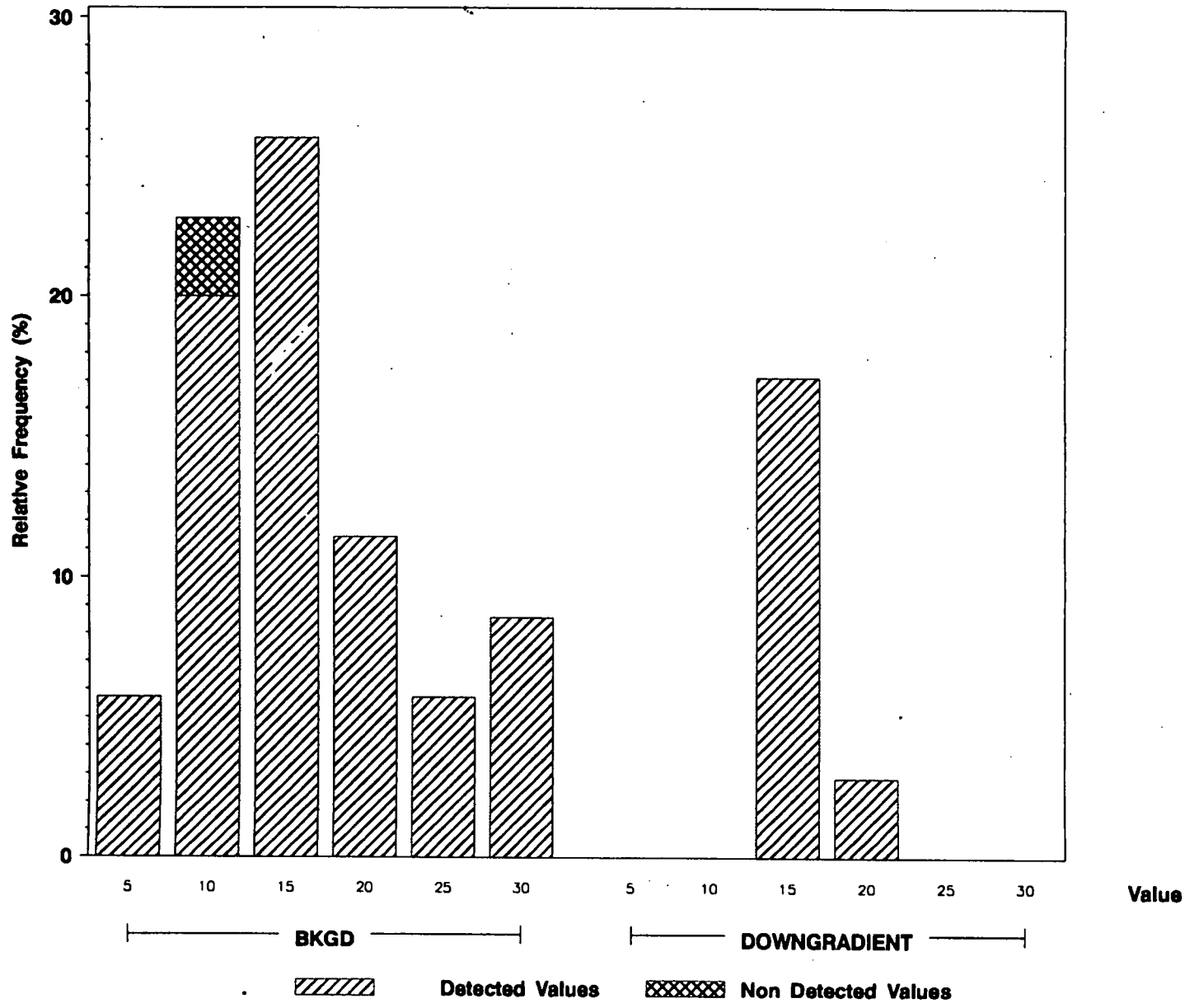
ANALYTE = MANGANESE



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## NICKEL (mg/Kg) in Subsurface Geologic Materials

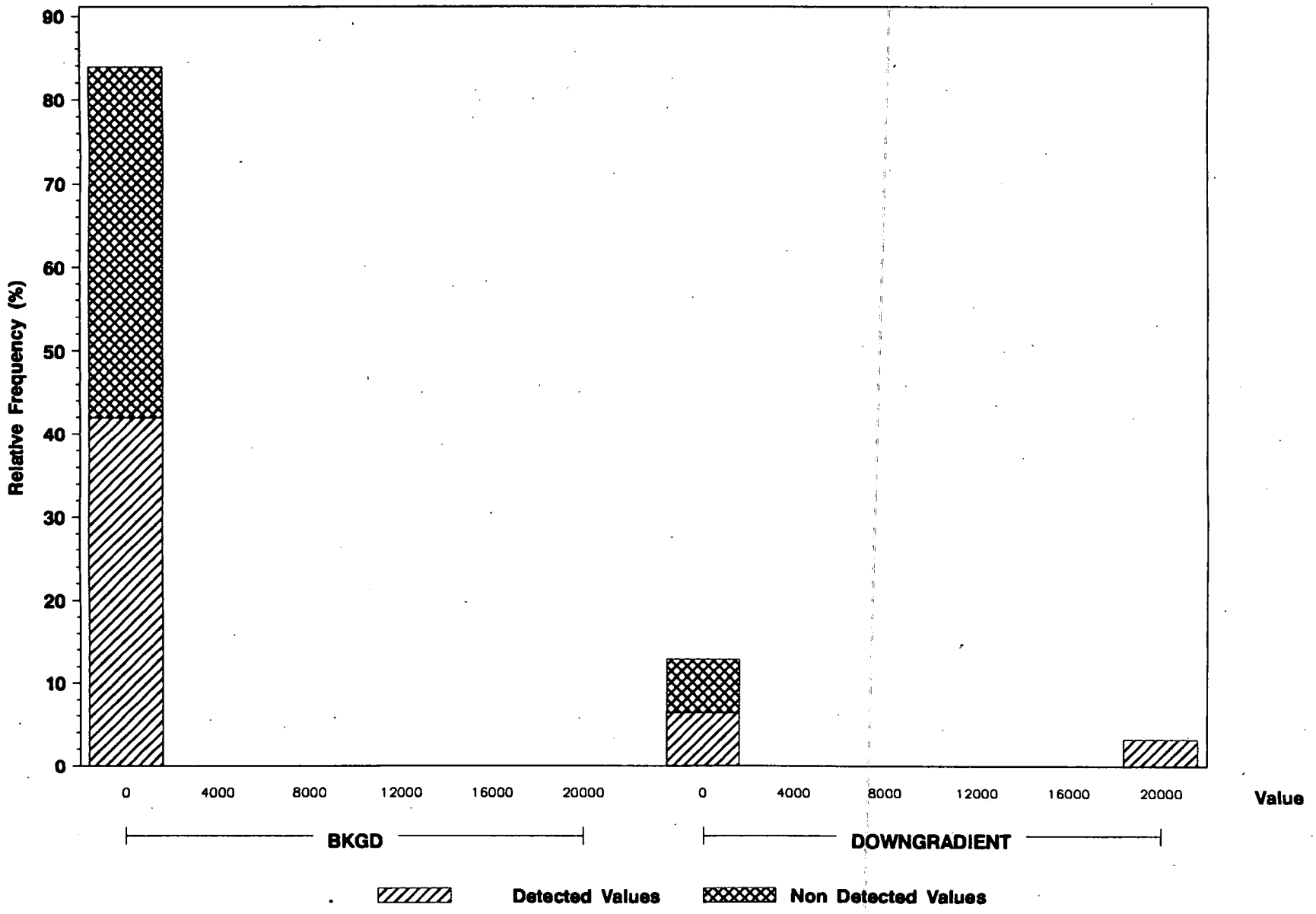
ANALYTE = NICKEL



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## NITRATE/NITRITE (mg/Kg) in Subsurface Geologic Materials

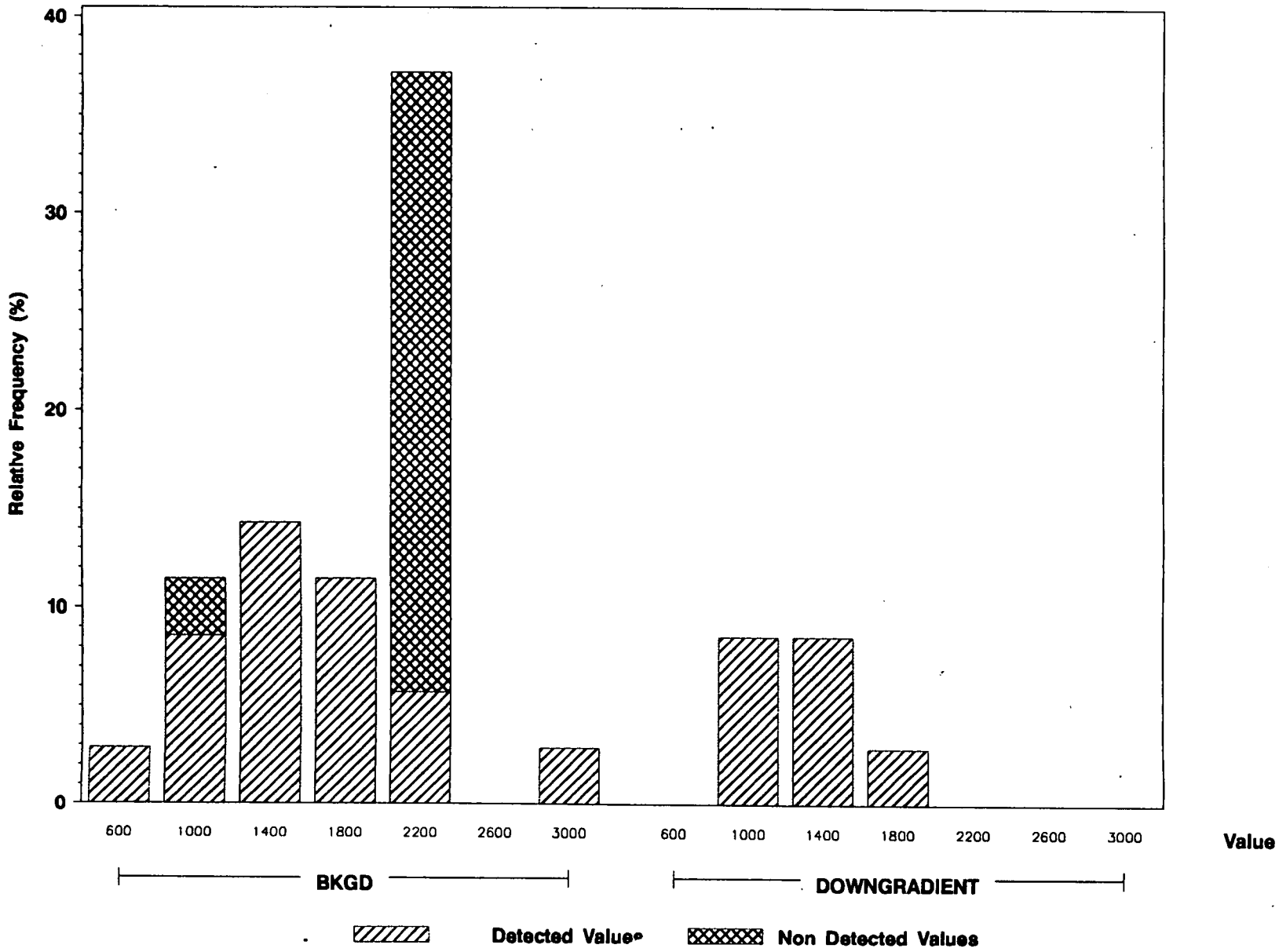
ANALYTE=NITRATE/NITRITE



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## POTASSIUM (mg/Kg) in Subsurface Geologic Materials

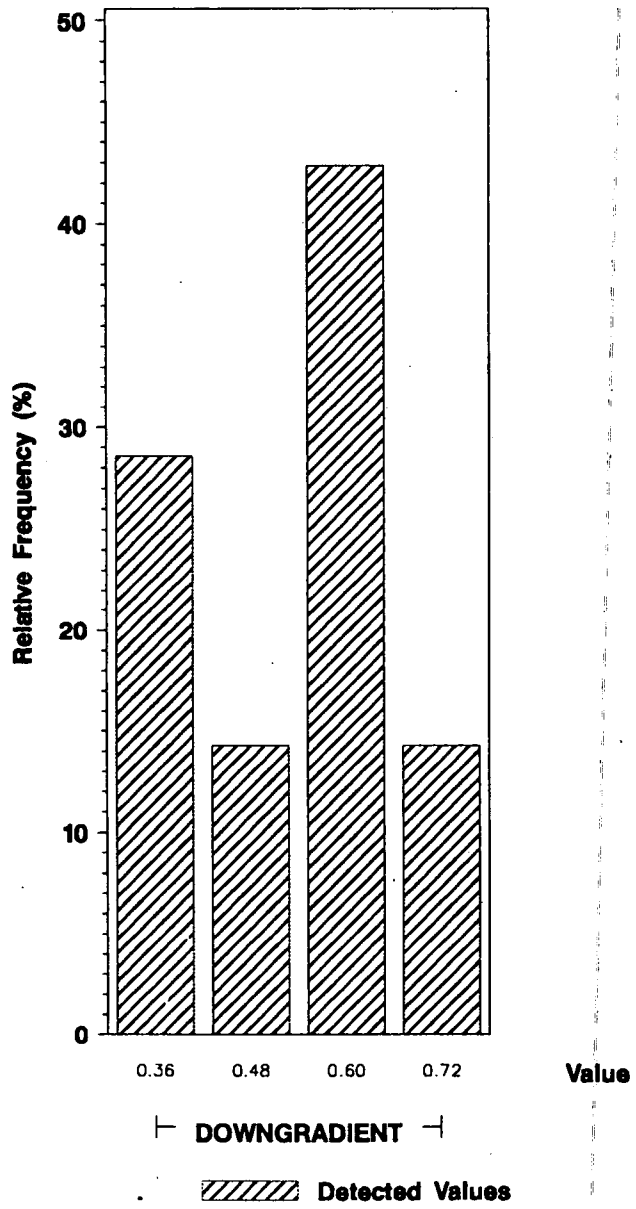
ANALYTE = POTASSIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## SELENIUM (mg/Kg) in Subsurface Geologic Materials

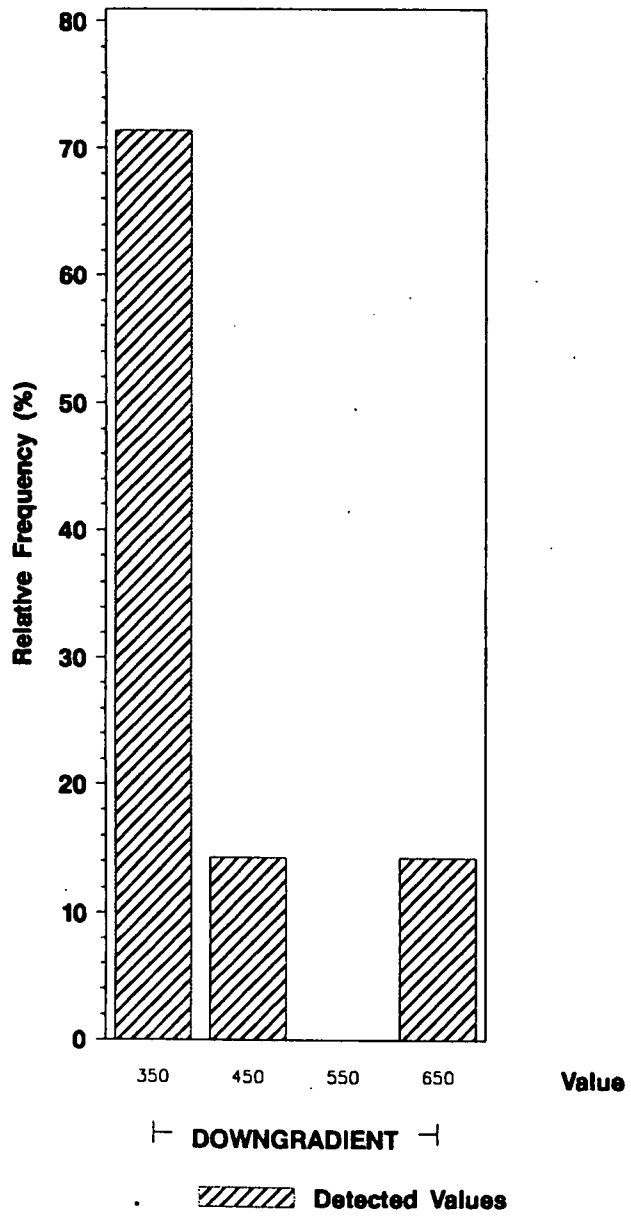
ANALYTE = SELENIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## SILICON (mg/Kg) in Subsurface Geologic Materials

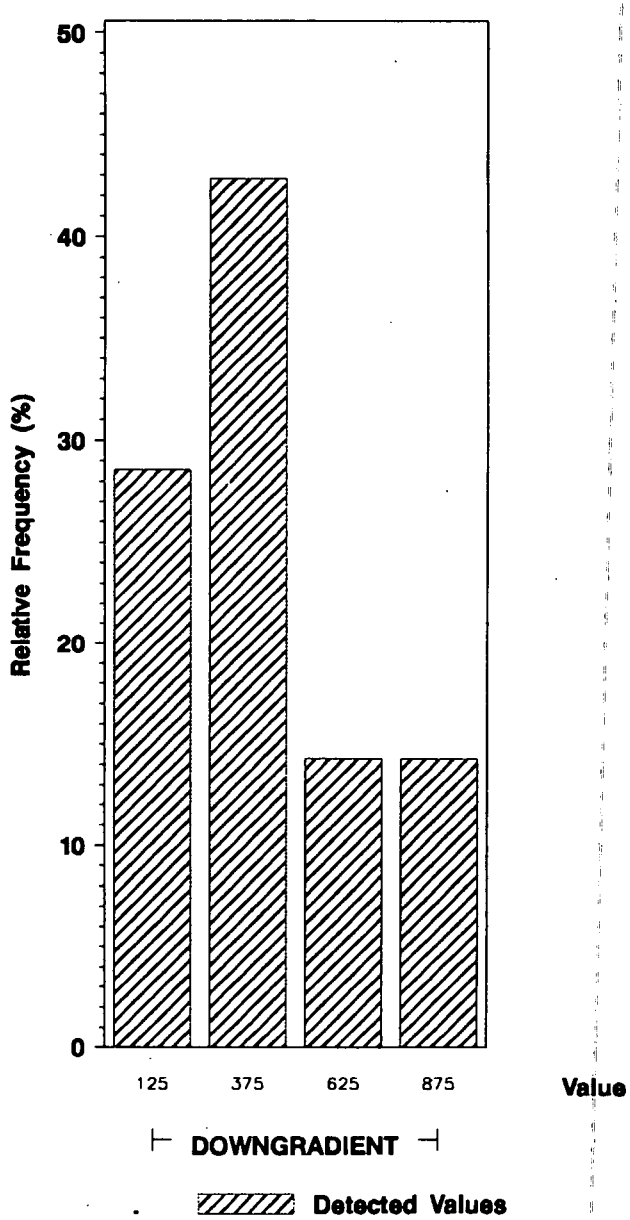
ANALYTE = SILICON



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## SODIUM (mg/Kg) in Subsurface Geologic Materials

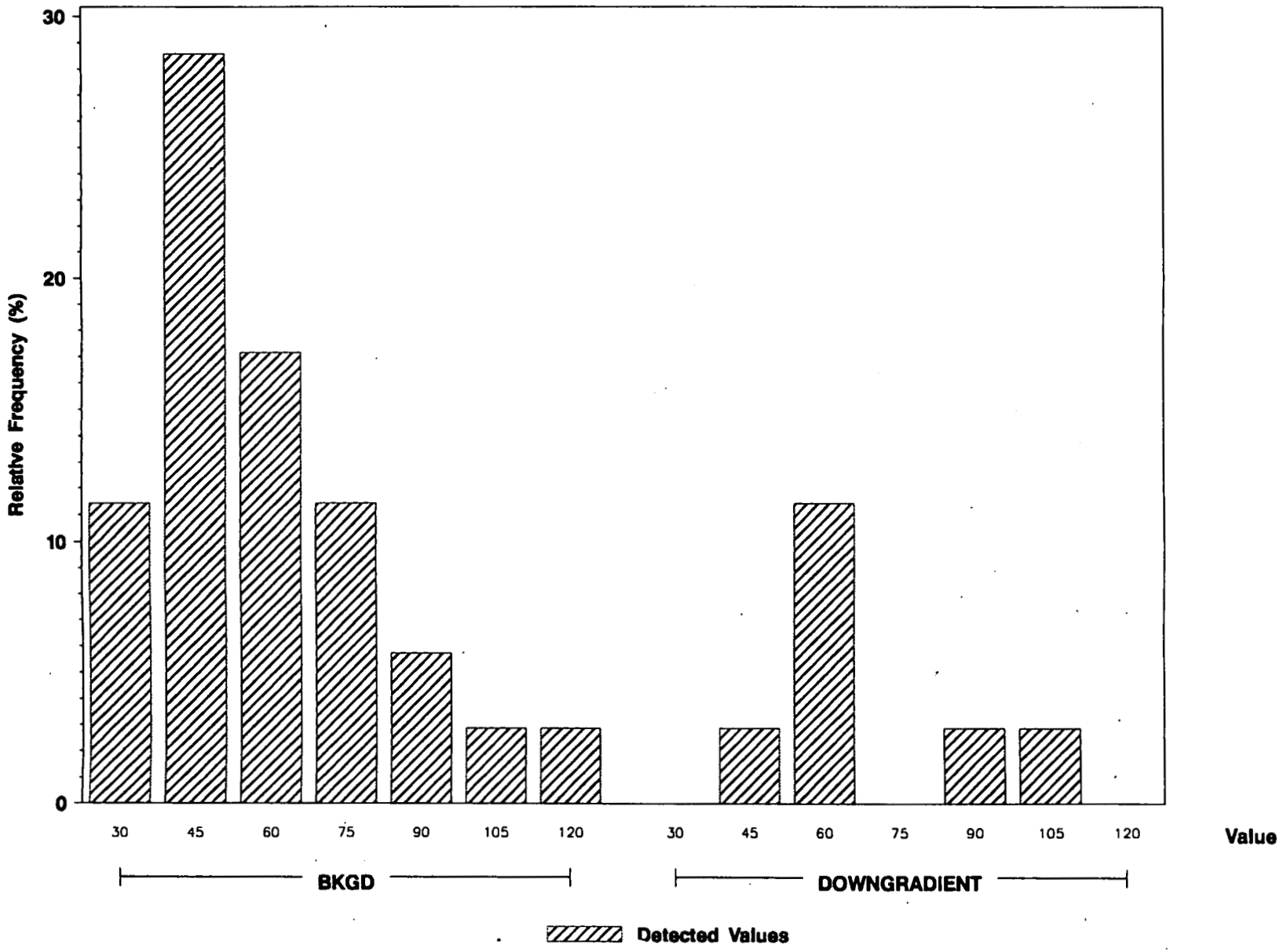
ANALYTE = SODIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## STRONTIUM (mg/Kg) in Subsurface Geologic Materials

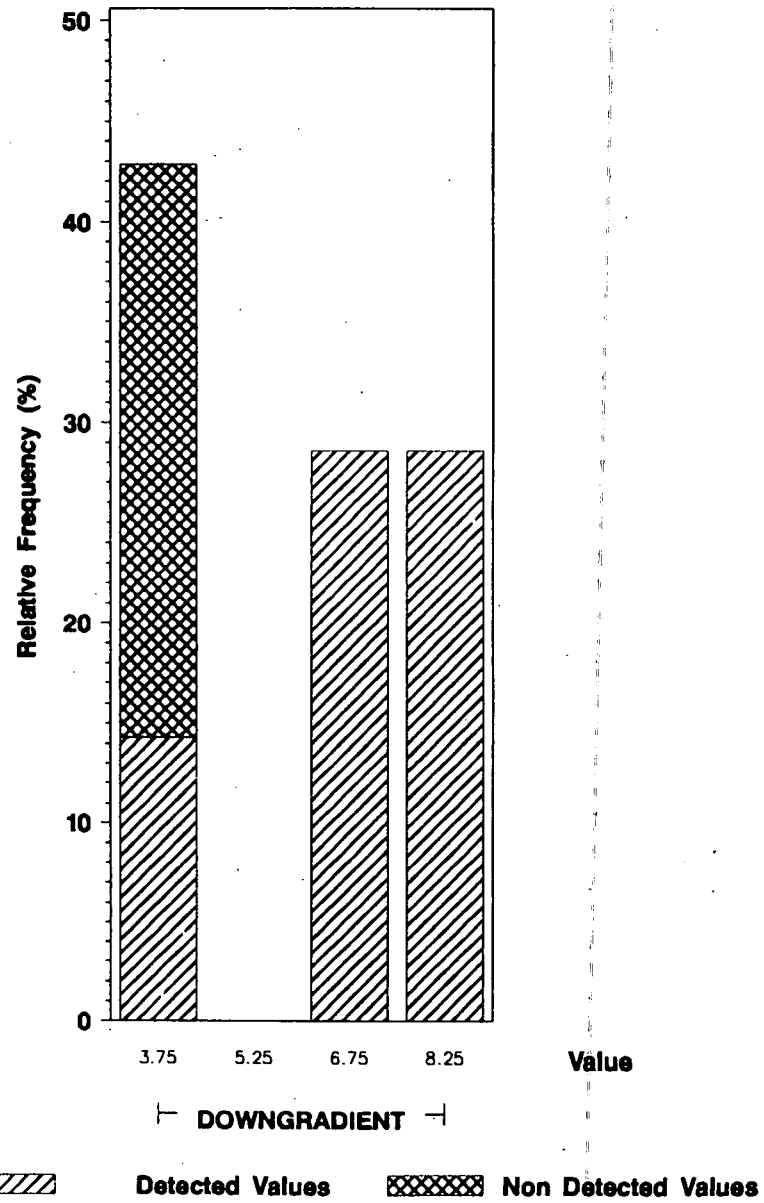
ANALYTE = STRONTIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## TIN (mg/Kg) in Subsurface Geologic Materials

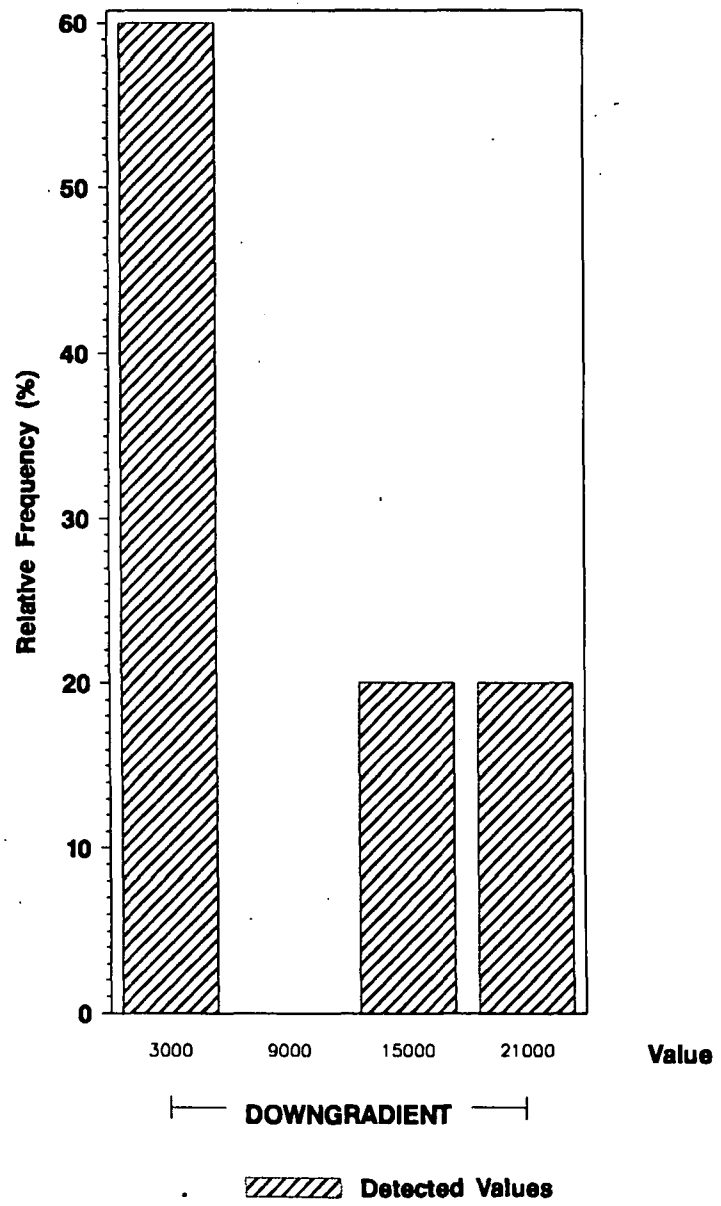
ANALYTE = TIN



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Subsurface Geologic Materials

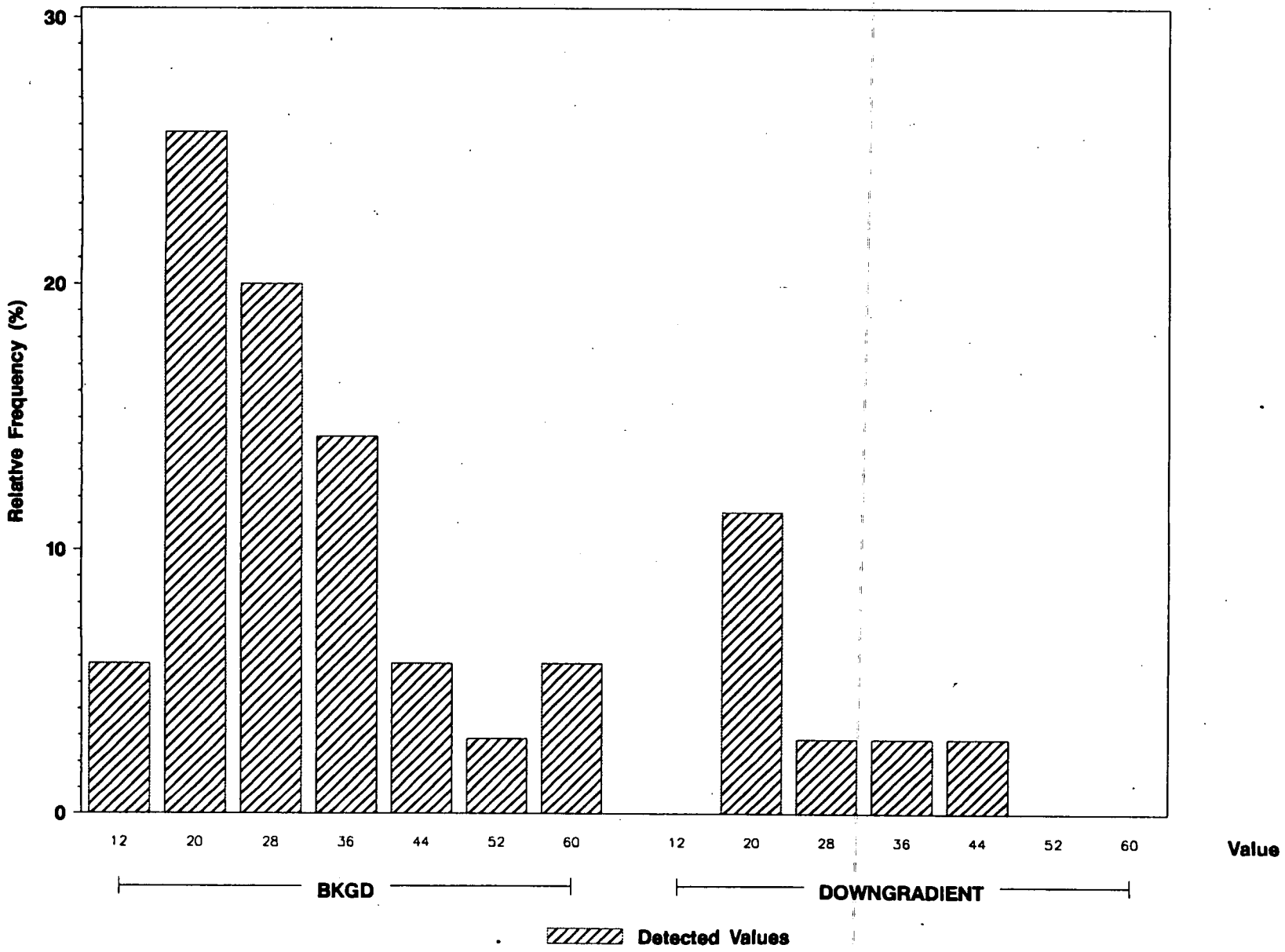
ANALYTE=TOTAL ORGANIC CARBON



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## VANADIUM (mg/Kg) in Subsurface Geologic Materials

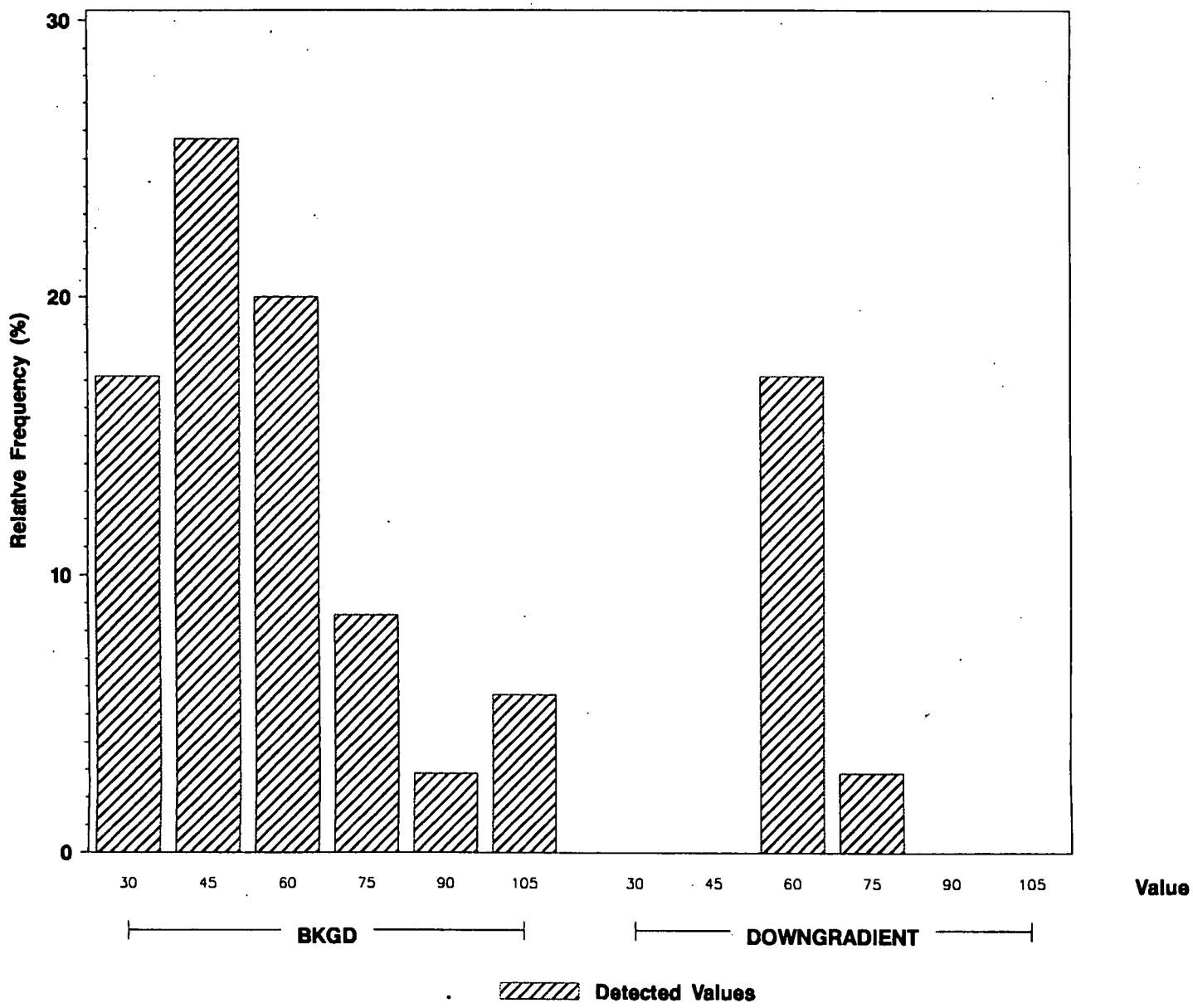
ANALYTE = VANADIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## ZINC (mg/Kg) in Subsurface Geologic Materials

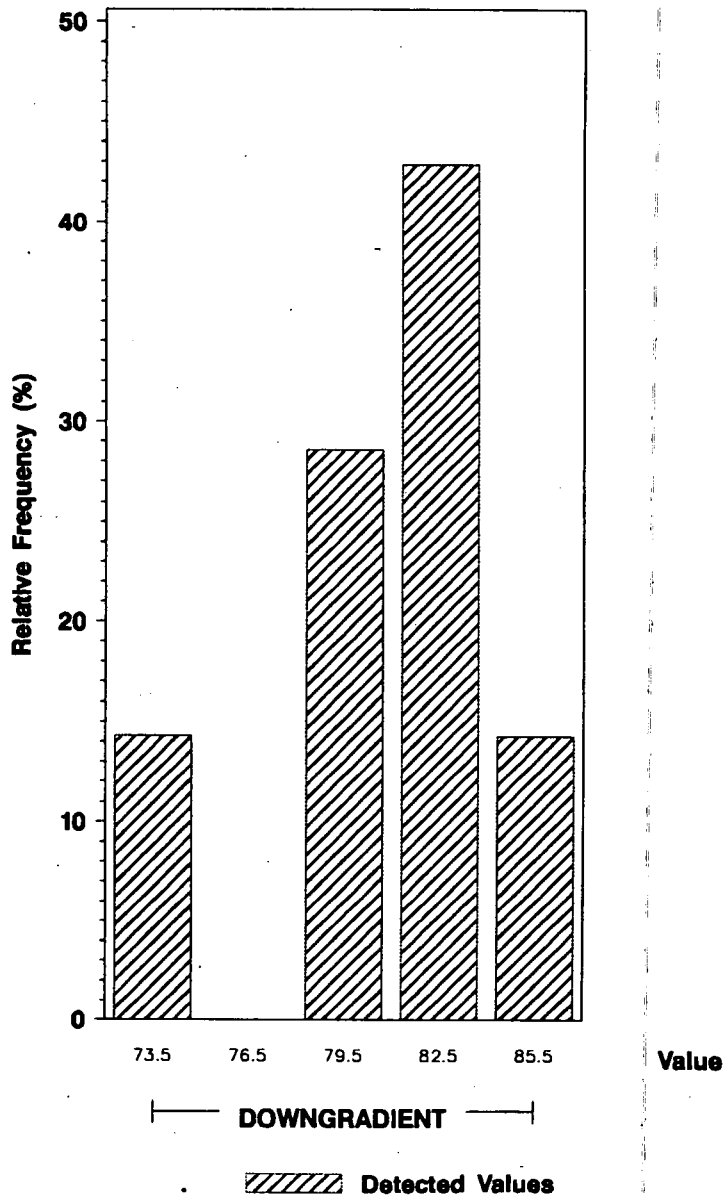
ANALYTE=ZINC



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## % SOLIDS (%) in Subsurface Geologic Materials

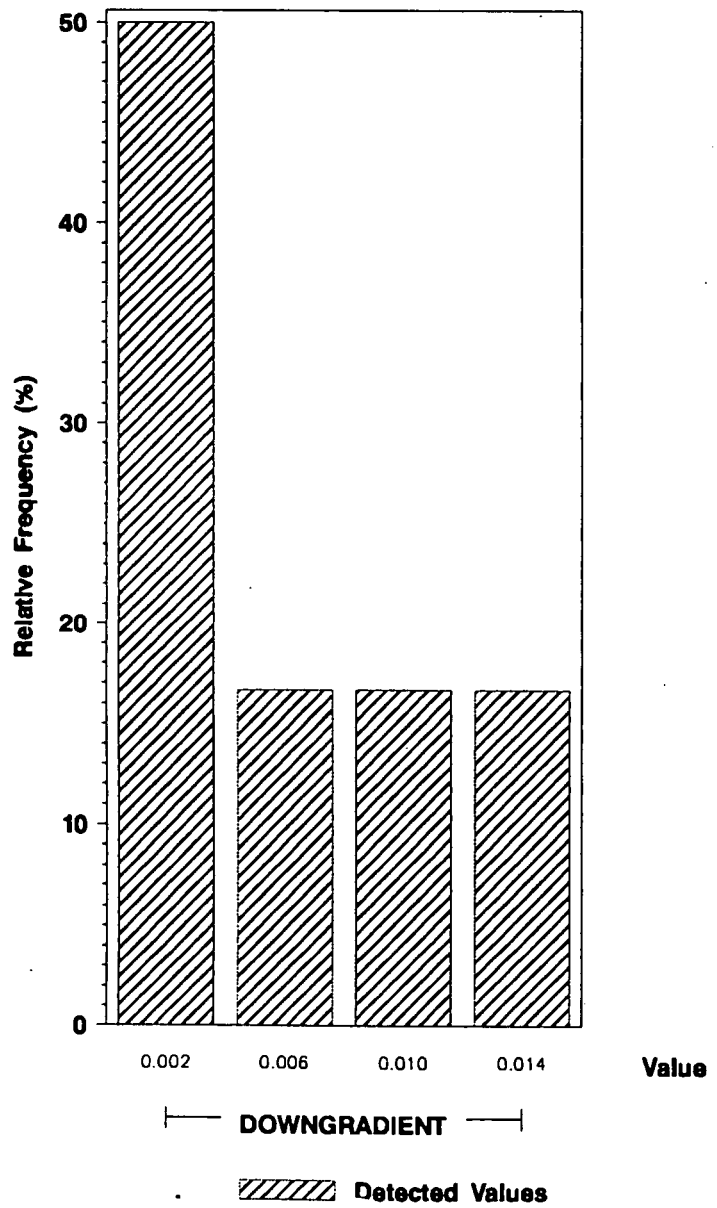
ANALYTE = % SOLIDS



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Subsurface Geologic Materials

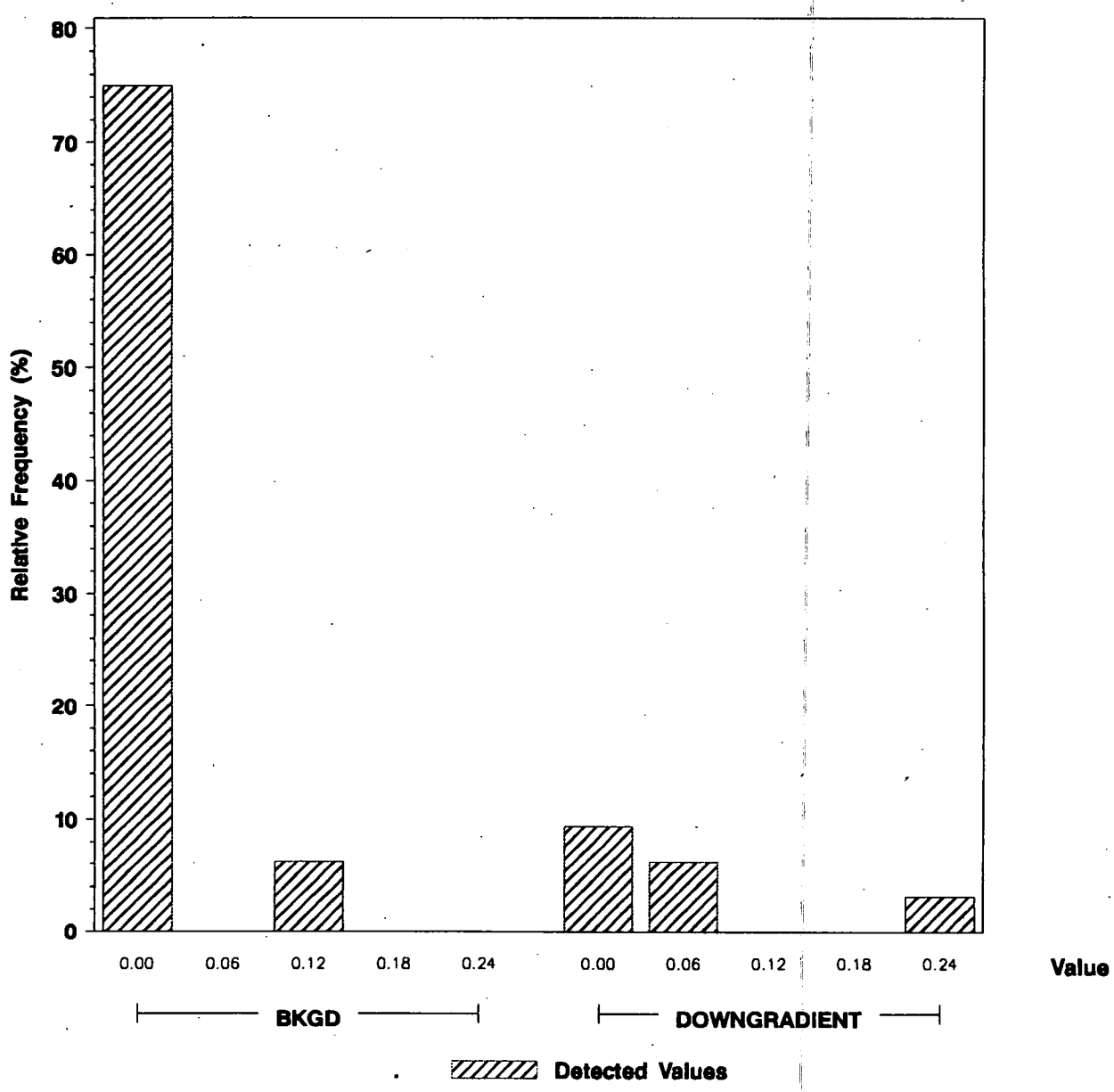
ANALYTE = AMERICIUM – 241



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## CESIUM-137 (pCi/g) in Subsurface Geologic Materials

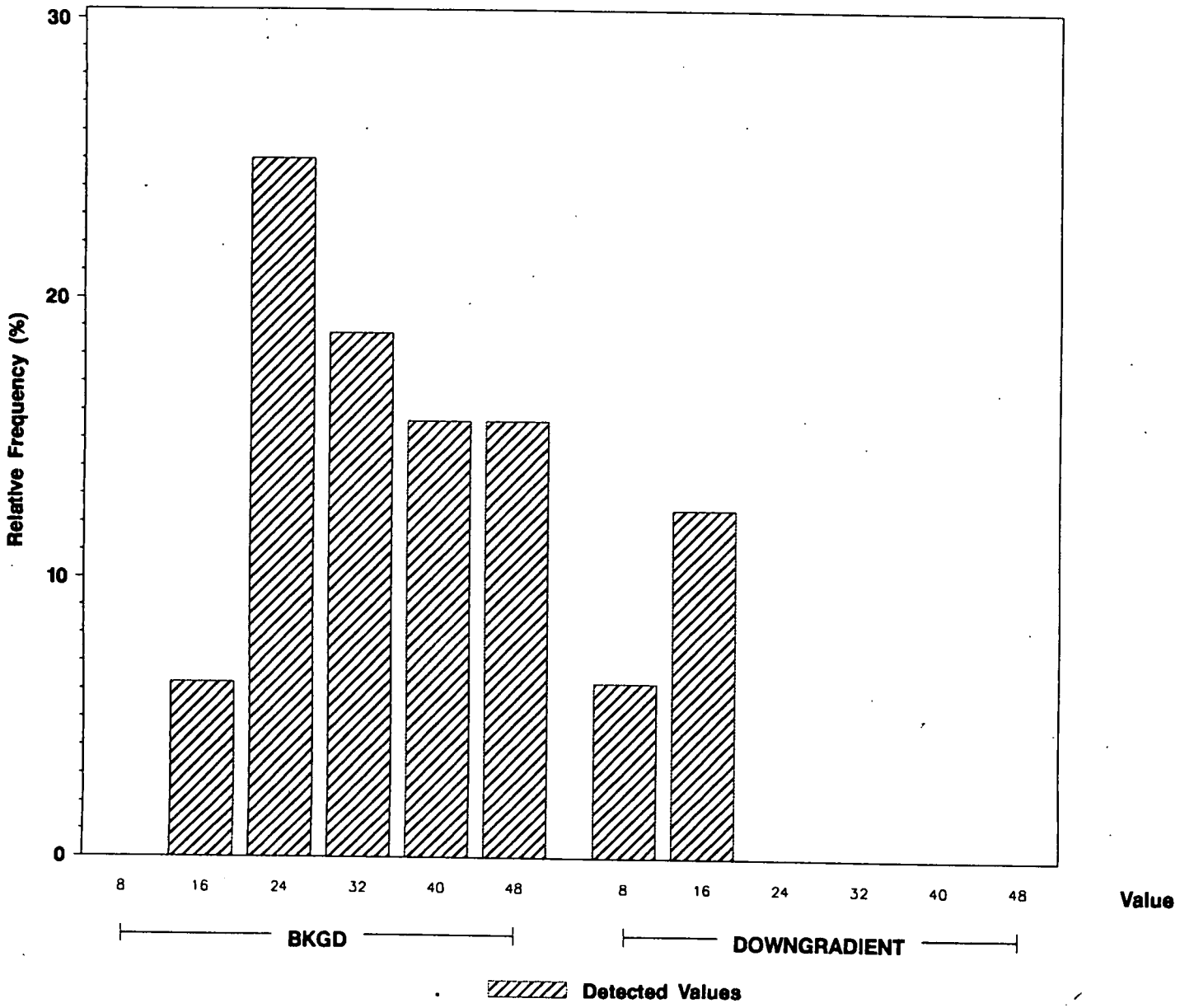
ANALYTE = CESIUM-137



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## GROSS ALPHA (pCi/g) in Subsurface Geologic Materials

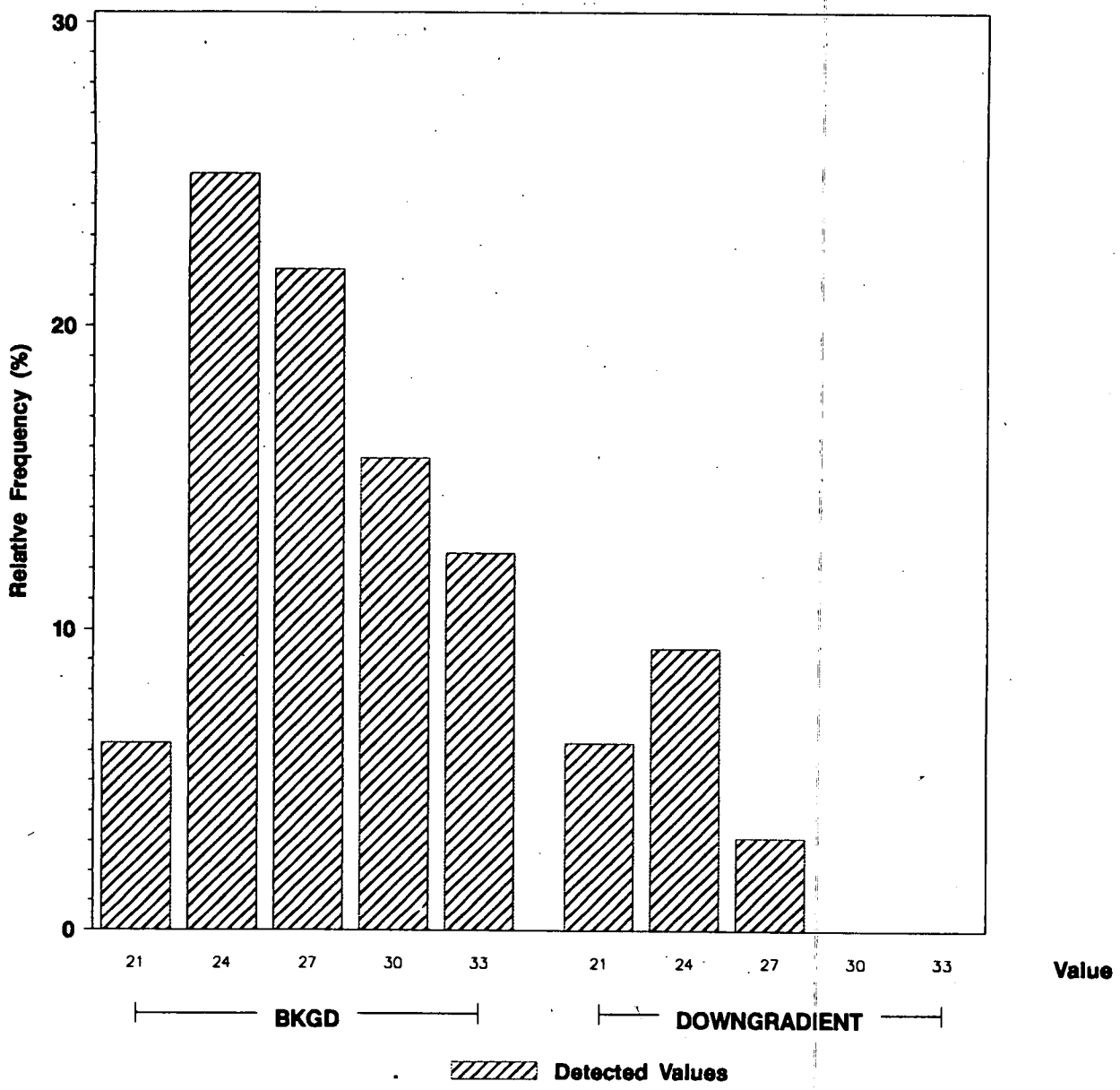
ANALYTE=GROSS ALPHA



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## GROSS BETA (pCi/g) in Subsurface Geologic Materials

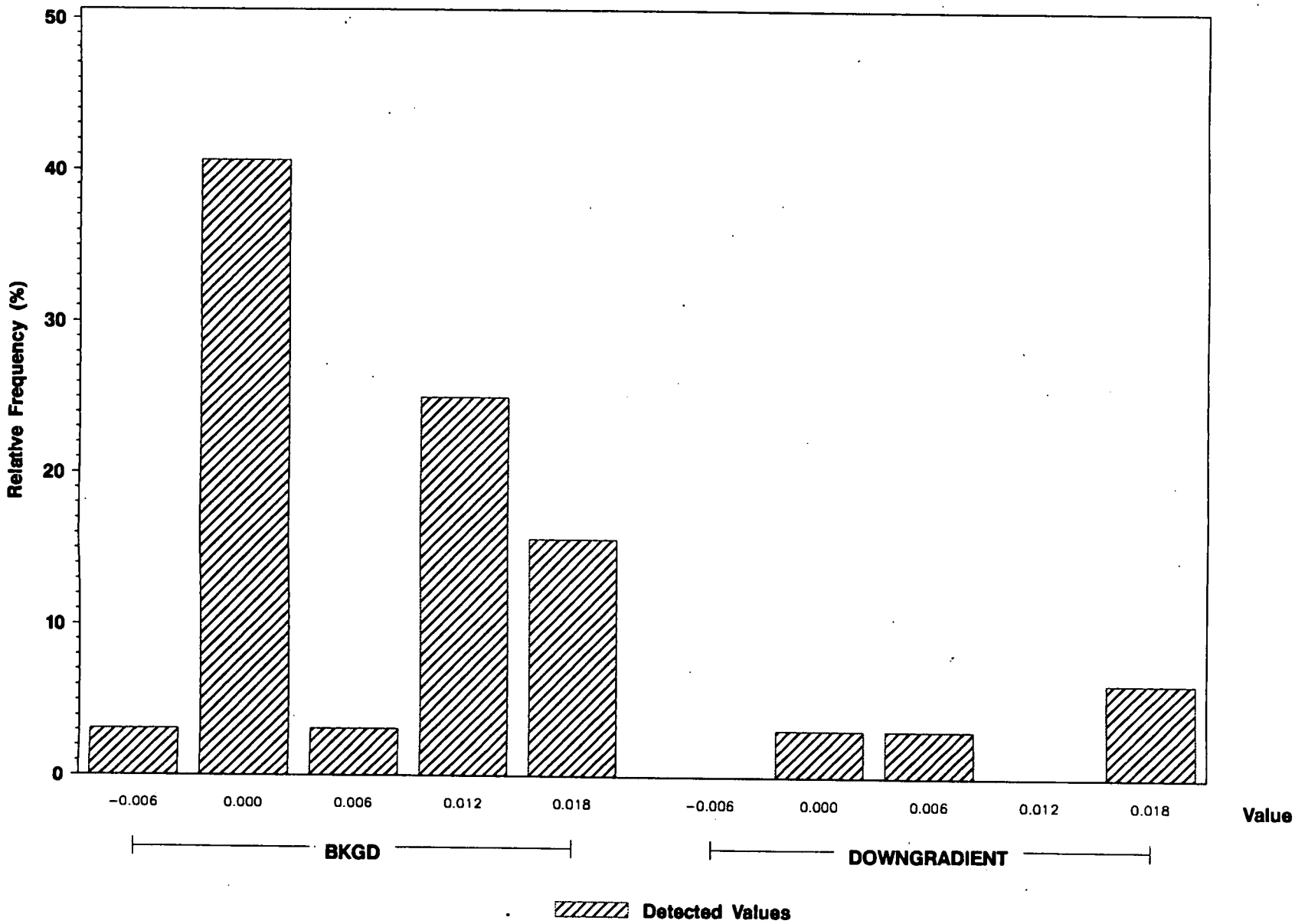
ANALYTE=GROSS BETA



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## PLUTONIUM – 239,240 (pCi/g) in Subsurface Geologic Materials

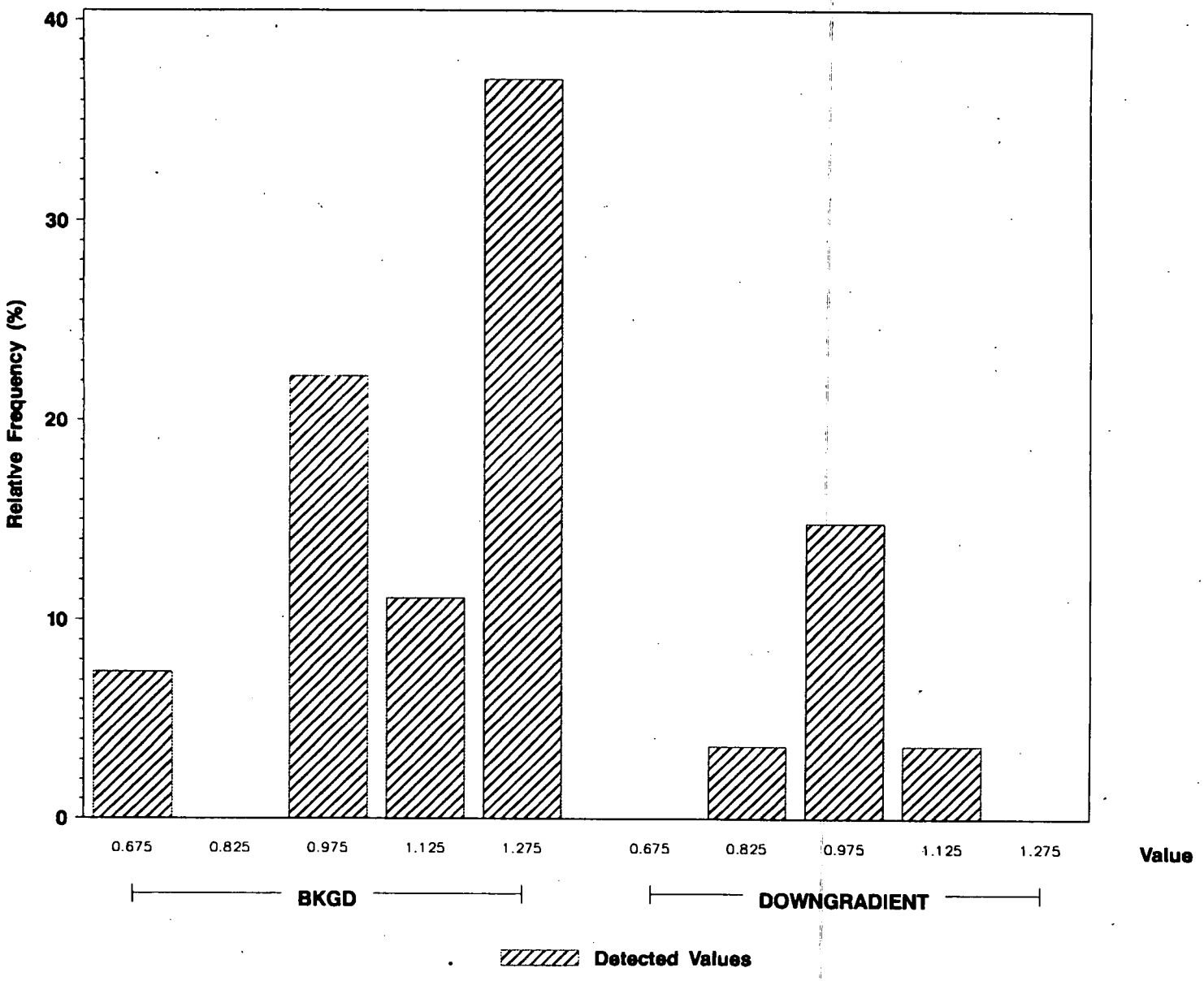
ANALYTE = PLUTONIUM – 239,240



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## RADIUM – 226 (pCi/g) in Subsurface Geologic Materials

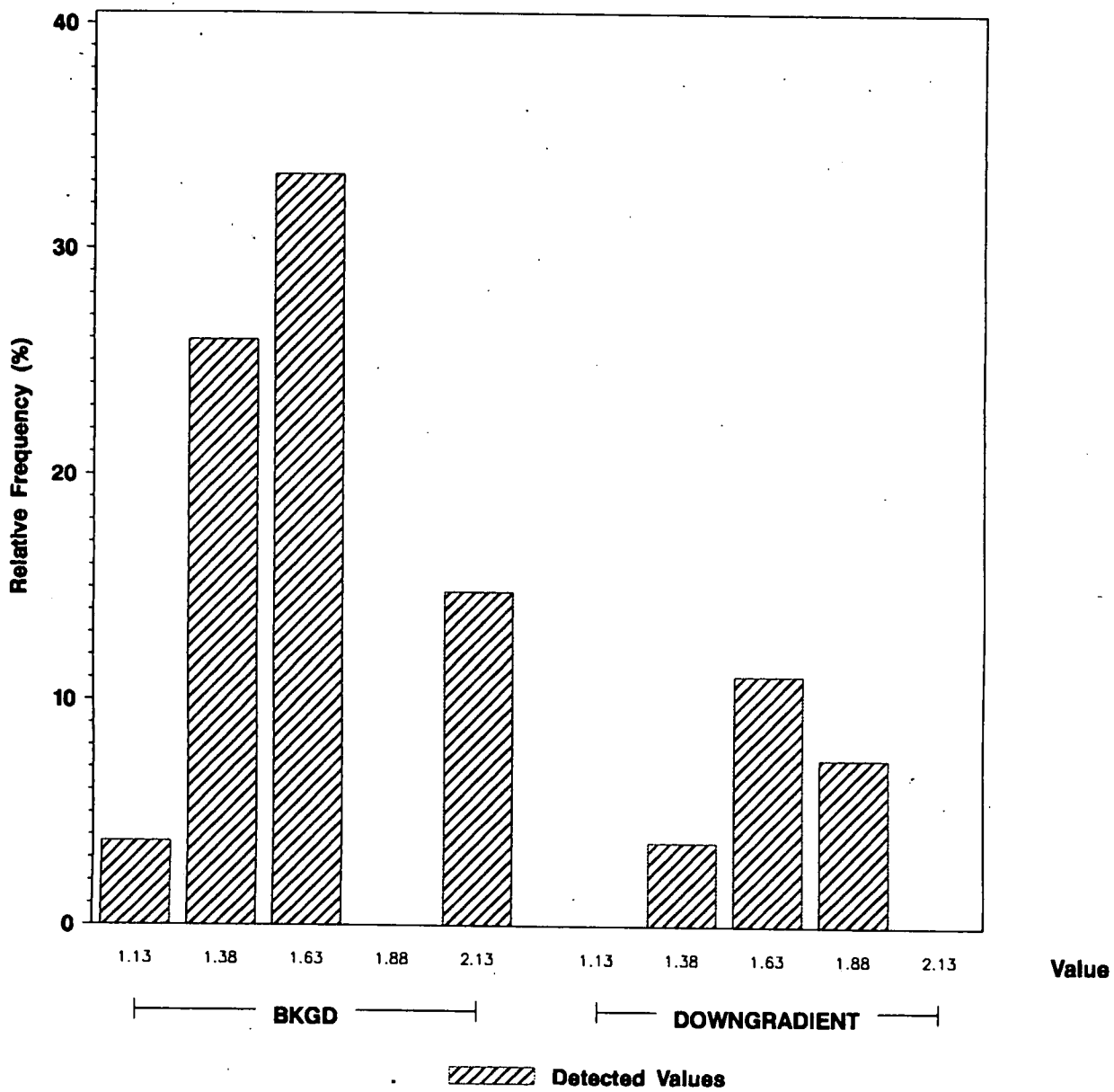
ANALYTE = RADIUM – 226



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## RADIUM – 228 (pCi/g) in Subsurface Geologic Materials

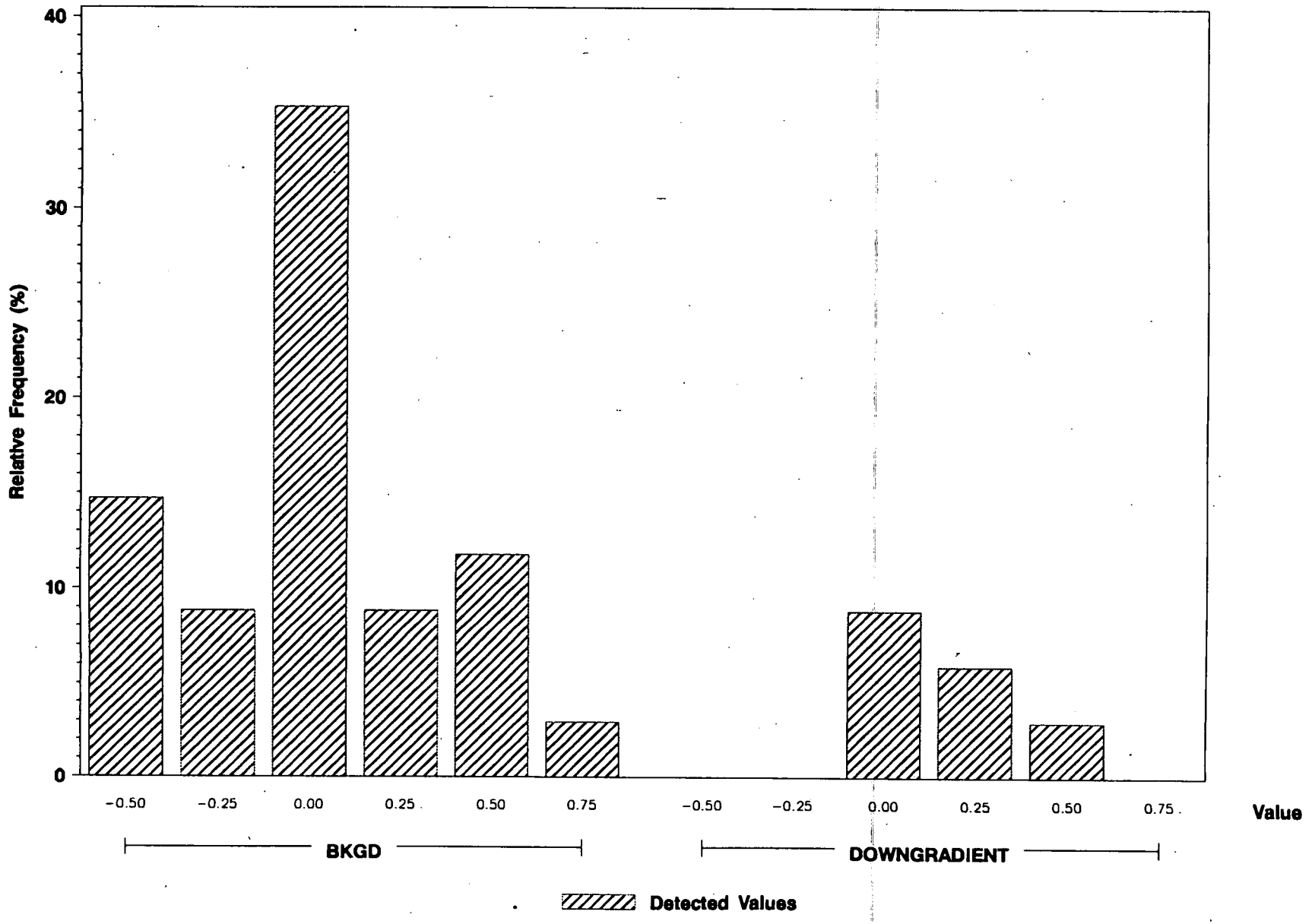
ANALYTE = RADIUM – 228



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Subsurface Geologic Materials

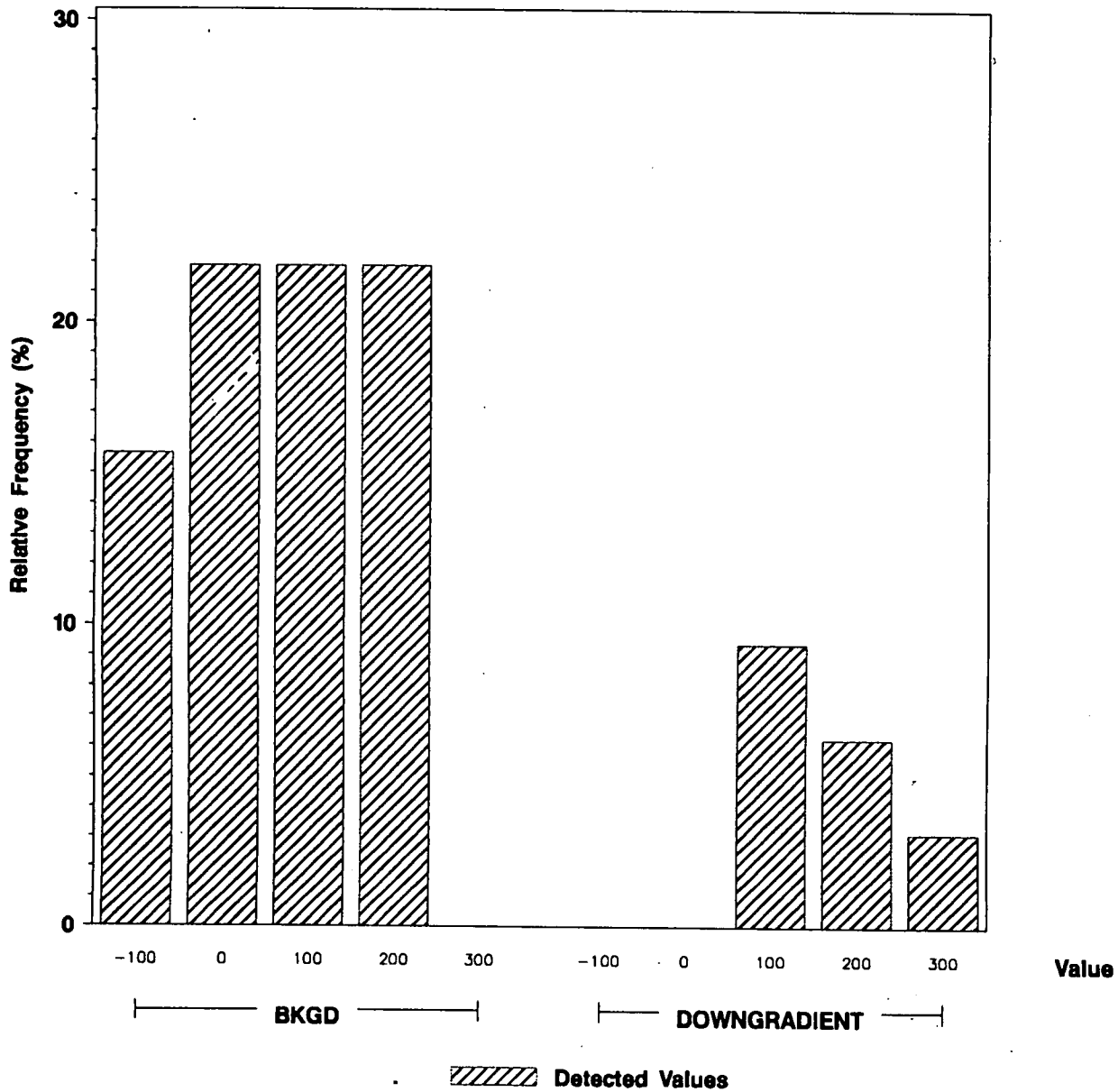
ANALYTE = STRONTIUM – 89,90



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## TRITIUM (pCi/L) in Subsurface Geologic Materials

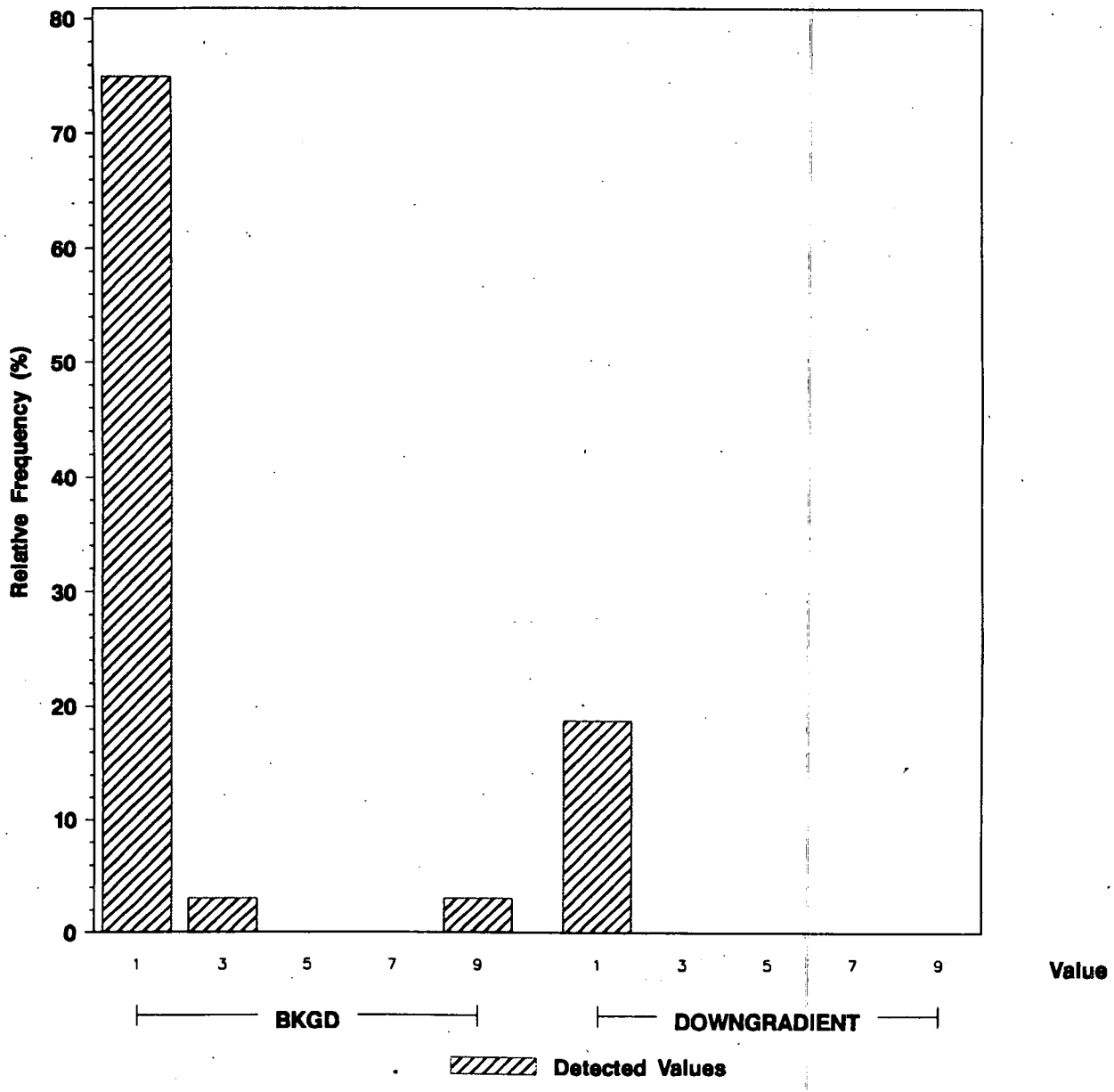
ANALYTE = TRITIUM



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Subsurface Geologic Materials

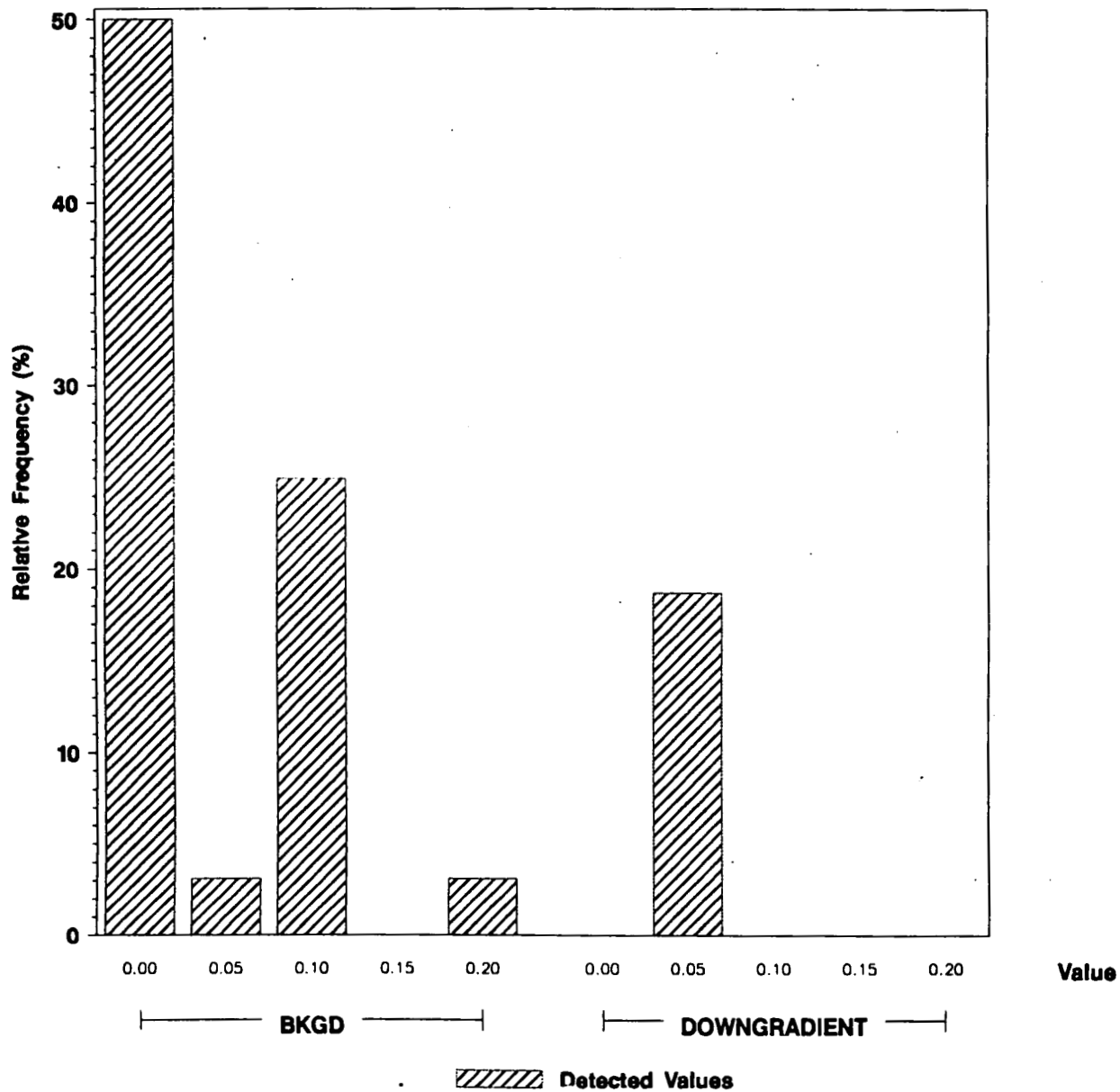
ANALYTE = URANIUM – 233, – 234



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## URANIUM – 235 (pCi/g) in Subsurface Geologic Materials

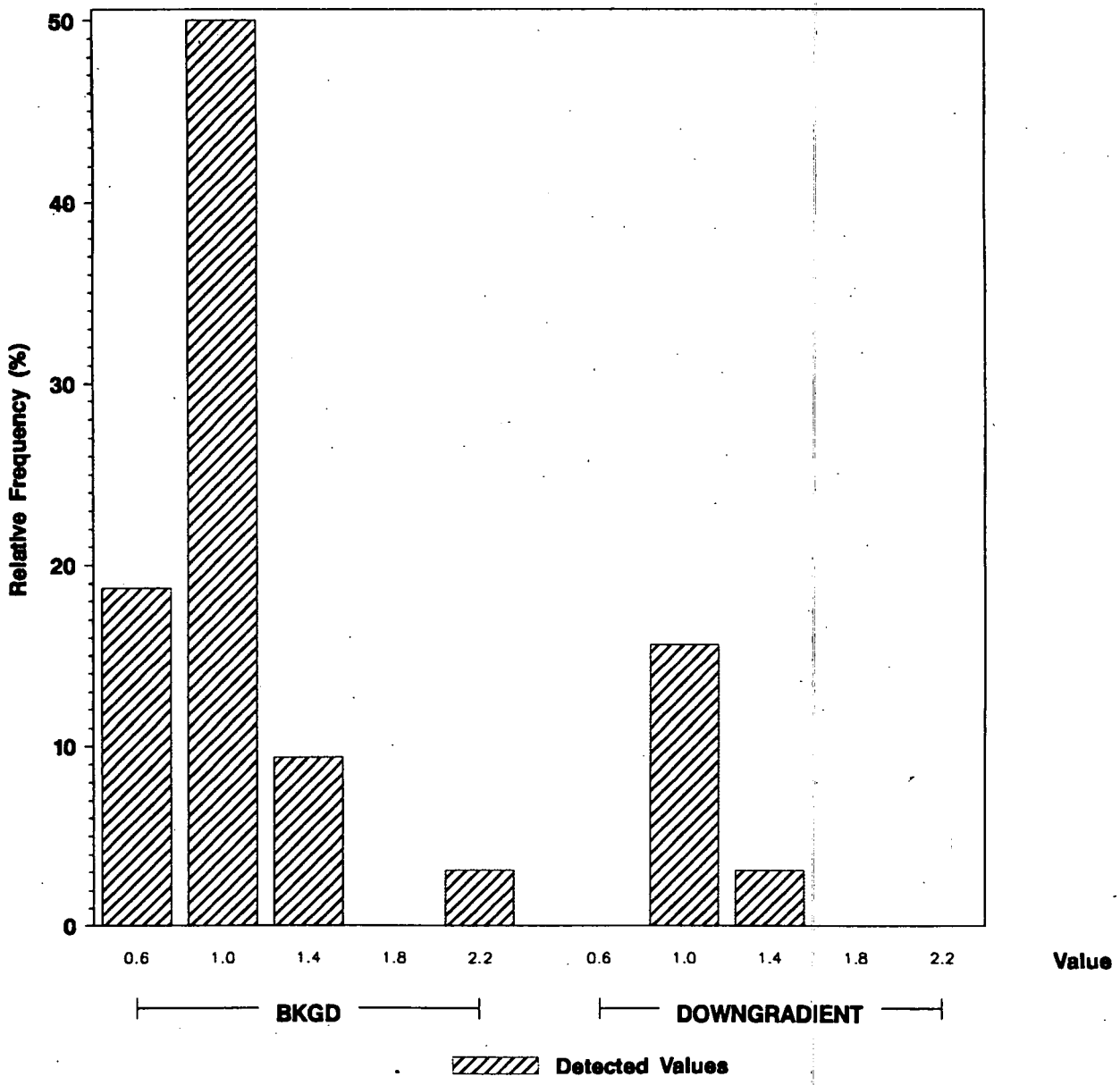
ANALYTE = URANIUM – 235



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## URANIUM – 238 (pCi/g) in Subsurface Geologic Materials

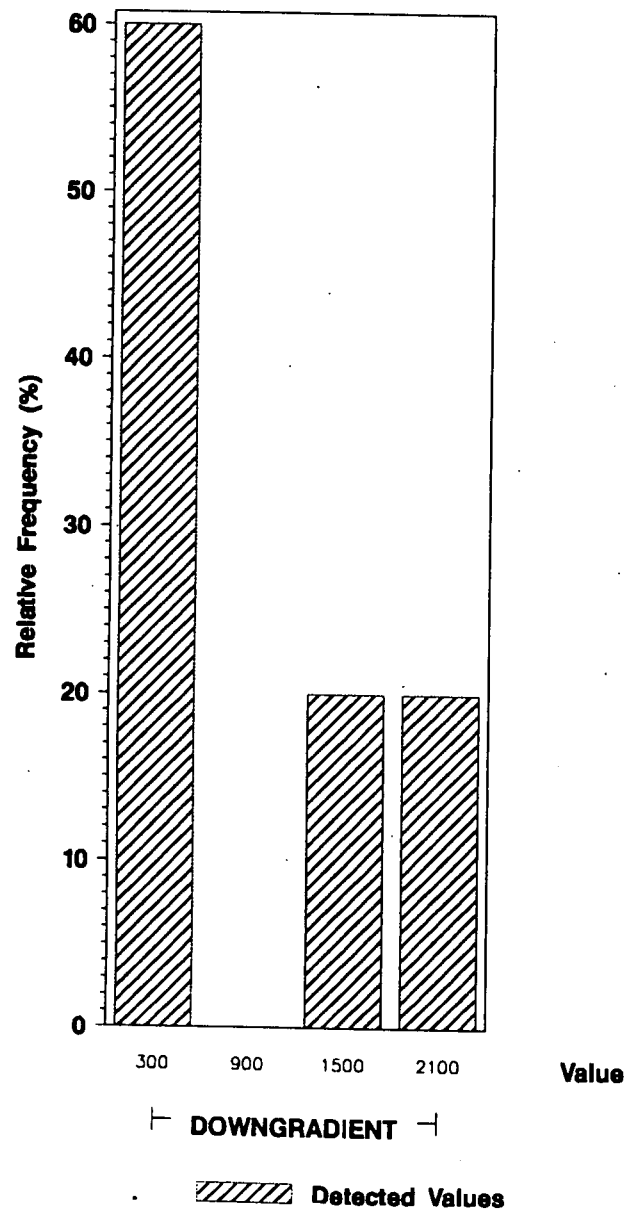
ANALYTE = URANIUM – 238



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## TOLUENE (ug/Kg) in Subsurface Geologic Materials

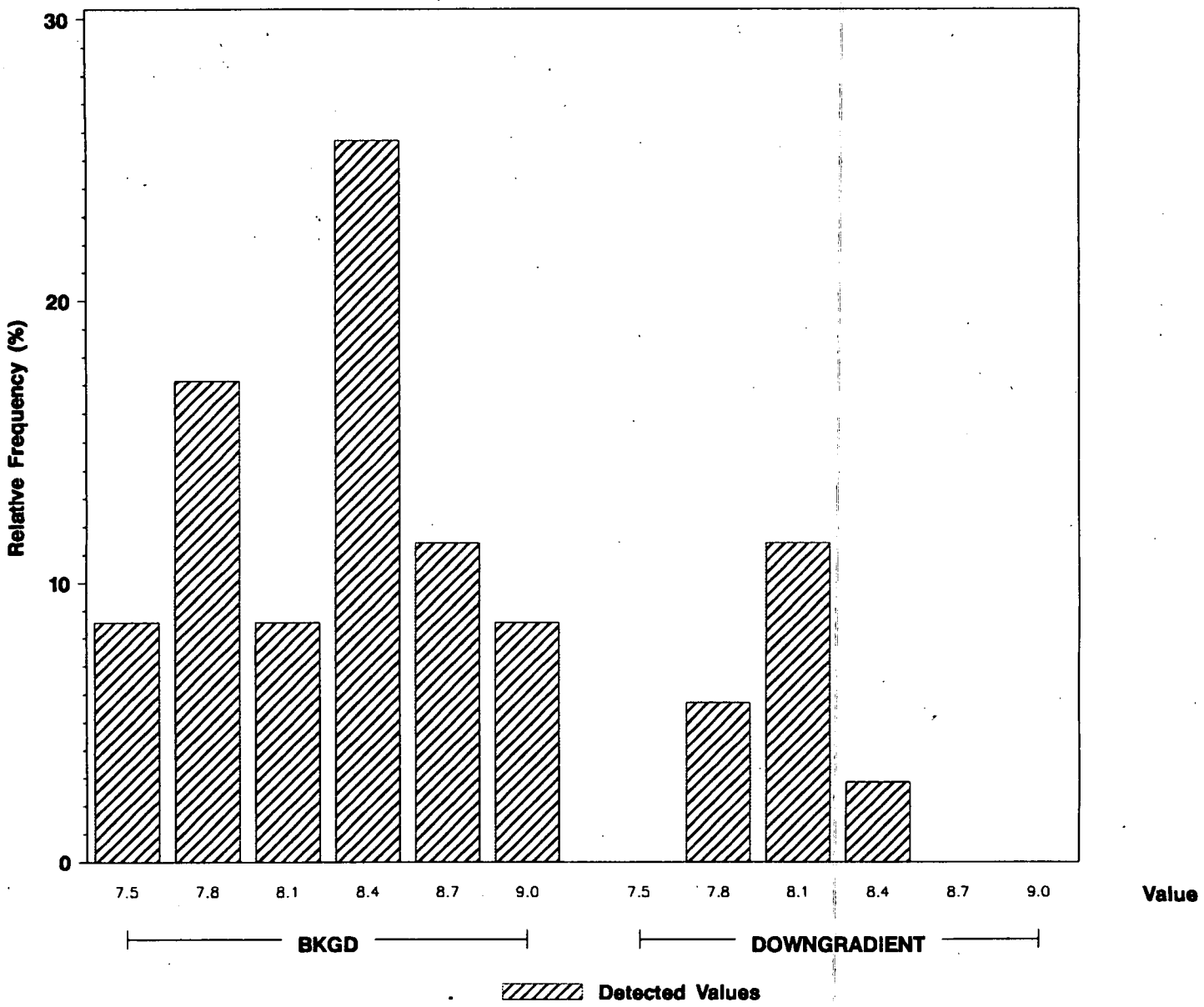
ANALYTE = TOLUENE



# Background Qc vs Downgradient OU7 Qc Frequency Histogram

## pH in Subsurface Geologic Materials

ANALYTE = pH



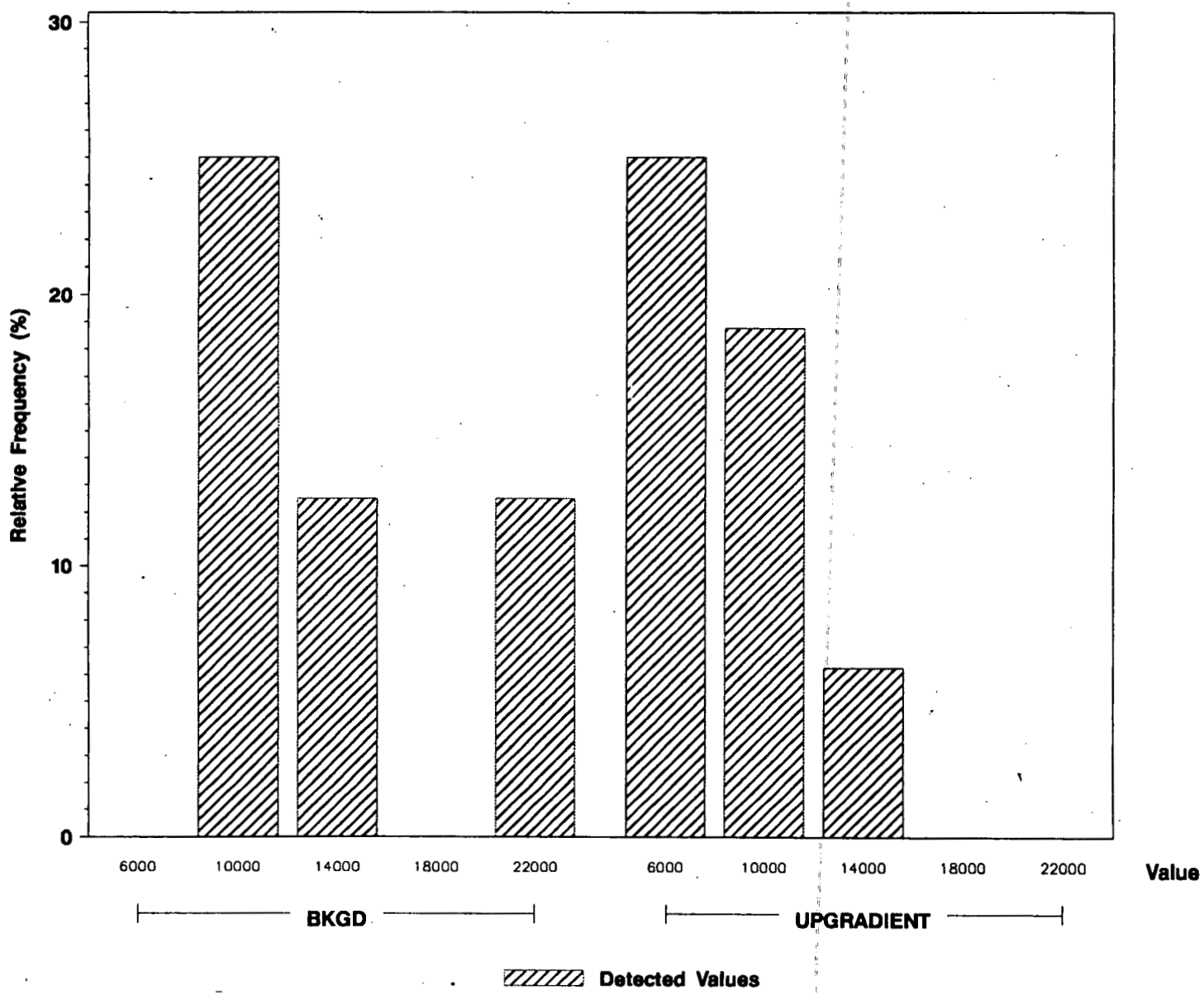
# Subsurface Geologic Materials

# Background vs. OU 7 Upgradient KaKl(w)

# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## ALUMINUM (mg\Kg) in Subsurface Geologic Materials

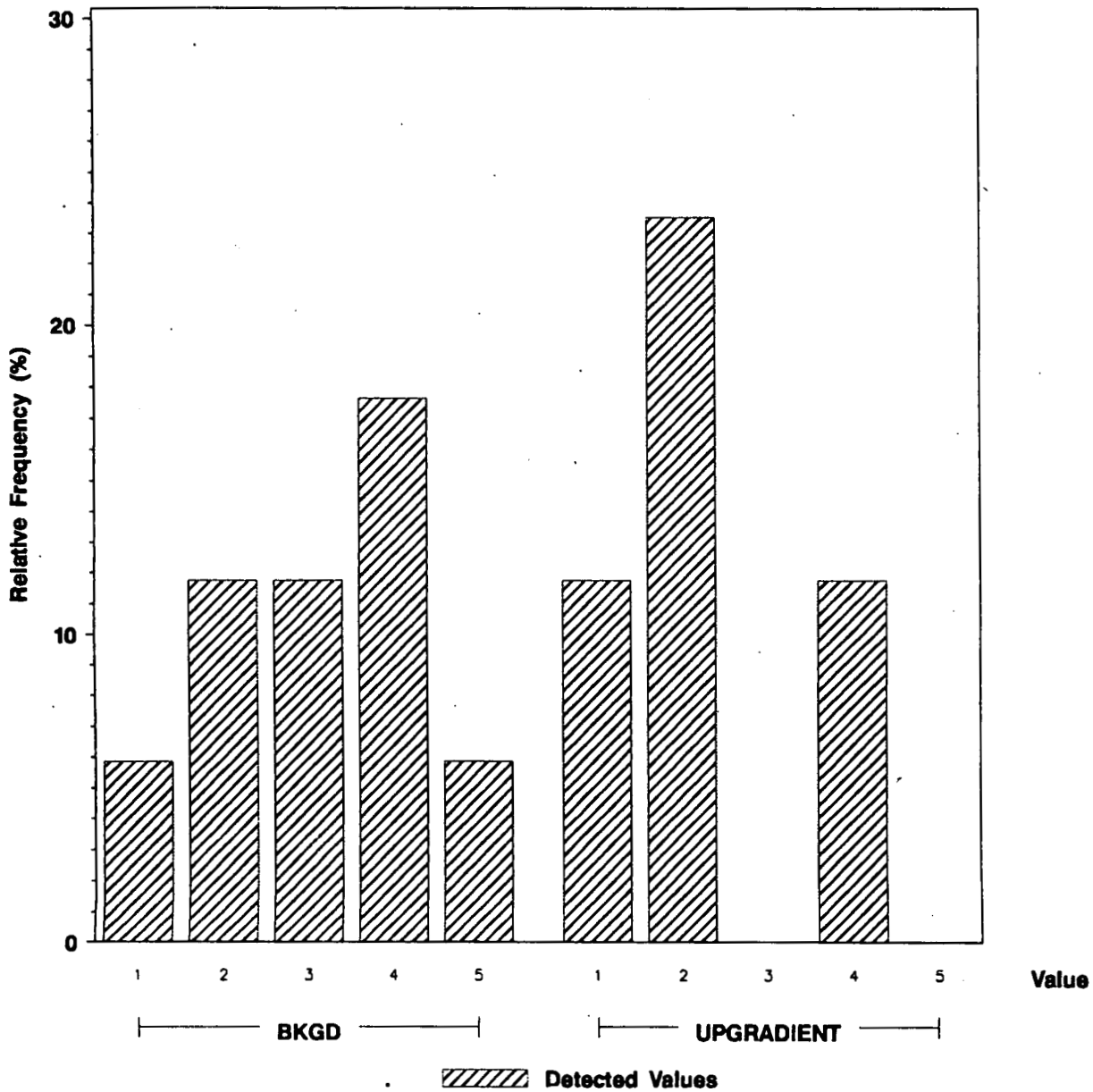
ANALYTE = ALUMINUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## ARSENIC (mg\Kg) in Subsurface Geologic Materials

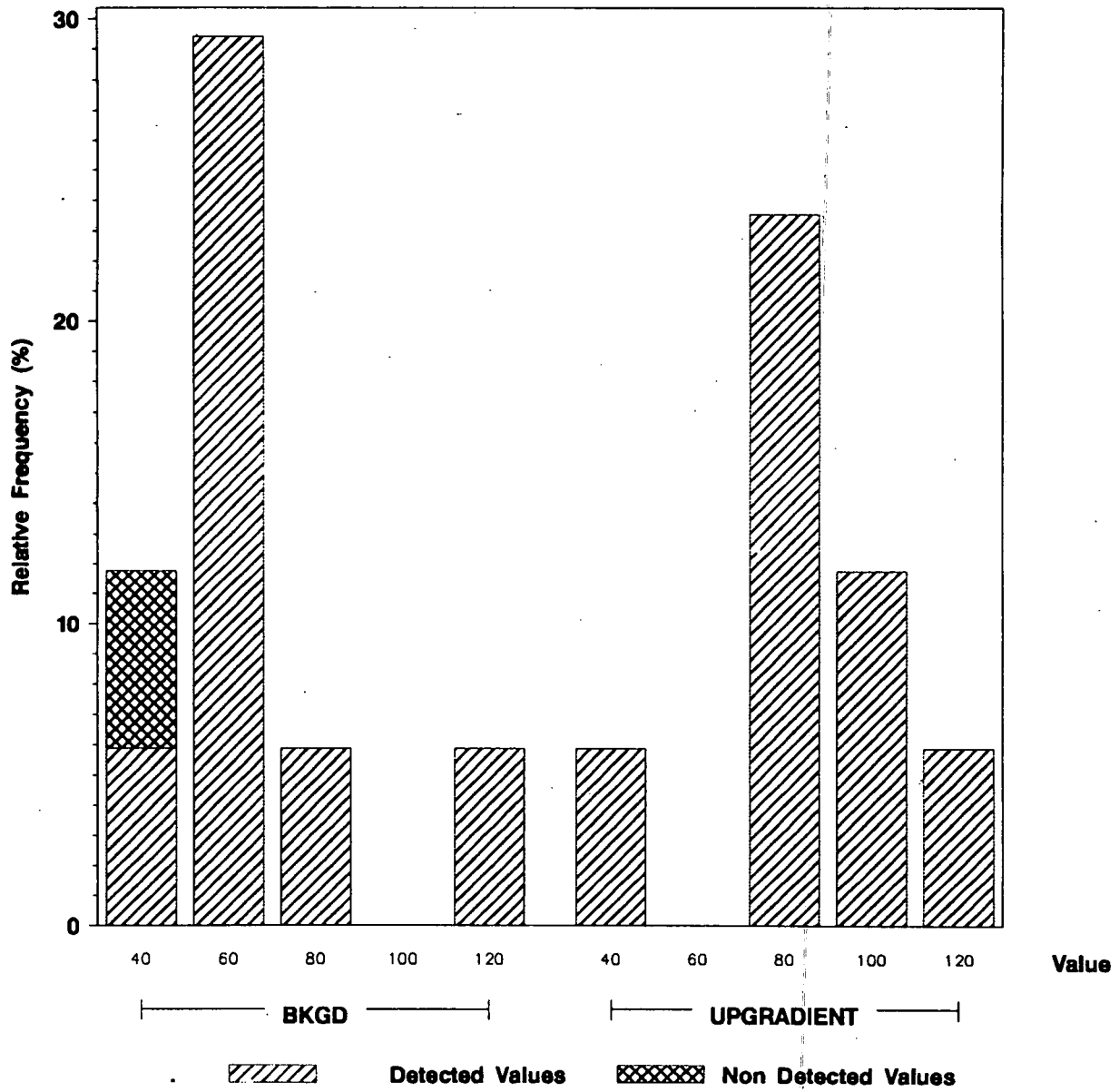
ANALYTE = ARSENIC



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## BARIUM (mg\Kg) in Subsurface Geologic Materials

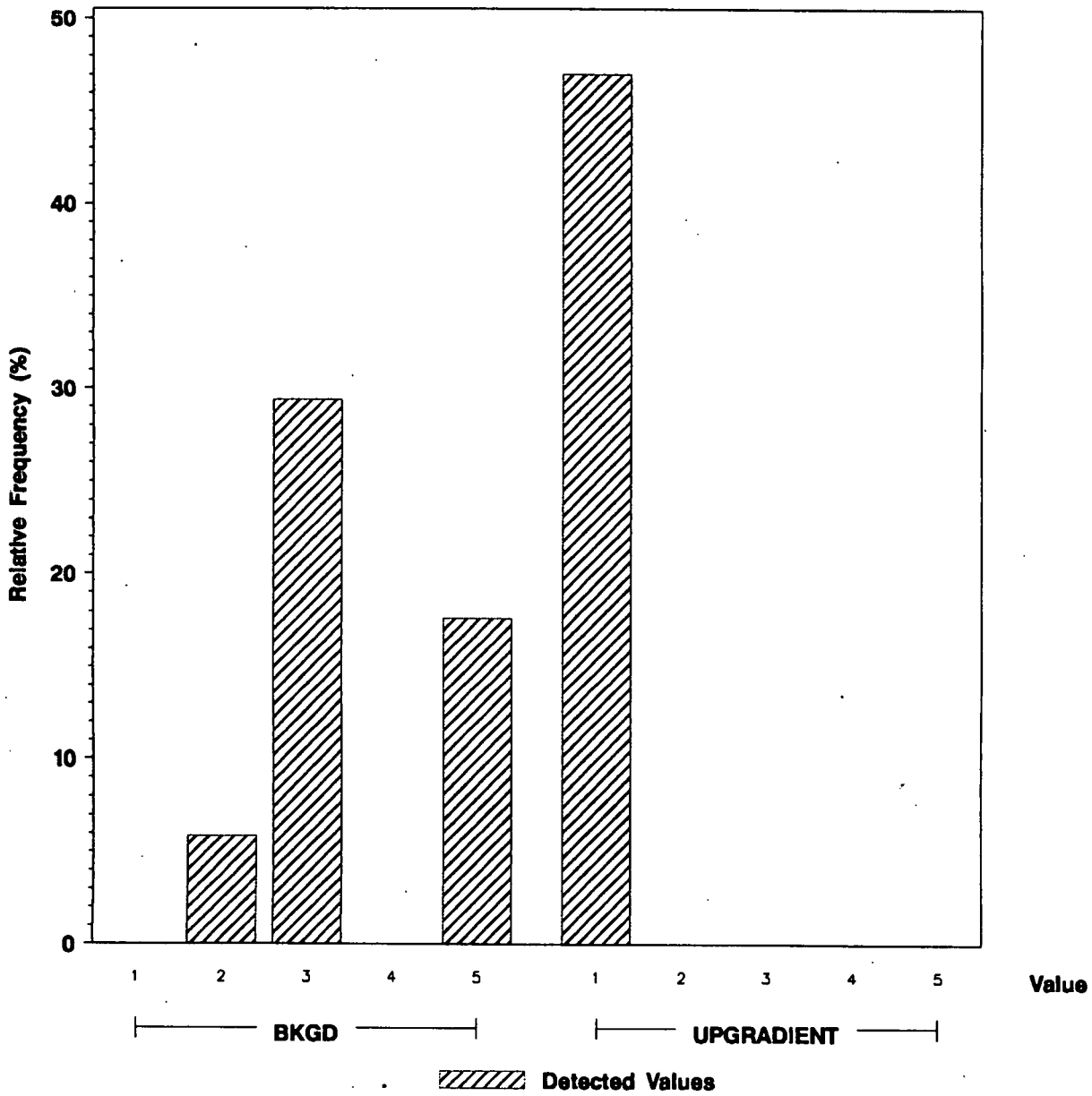
ANALYTE = BARIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## BERYLLIUM (mg\Kg) in Subsurface Geologic Materials

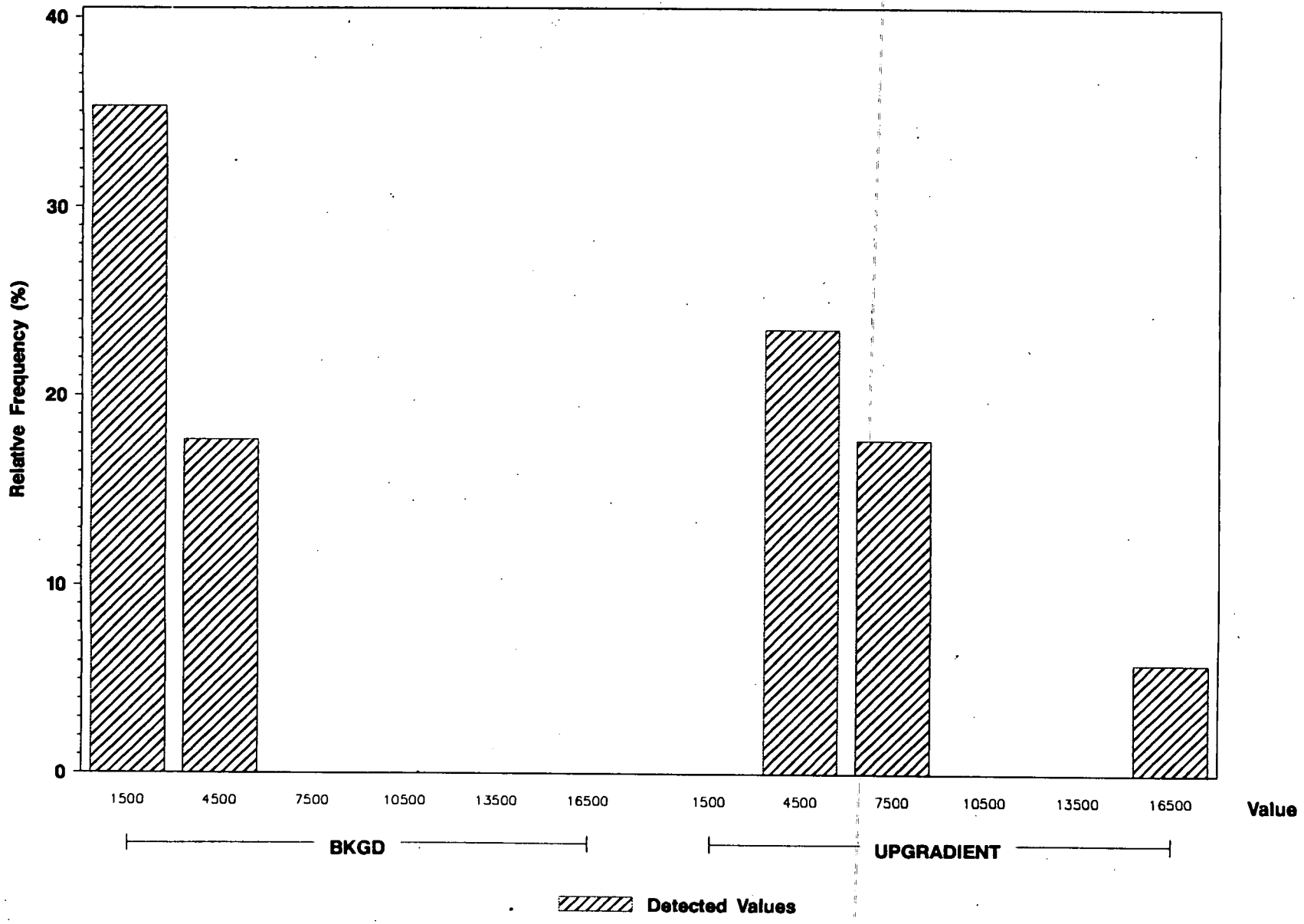
ANALYTE = BERYLLIUM



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## CALCIUM (mg\Kg) in Subsurface Geologic Materials

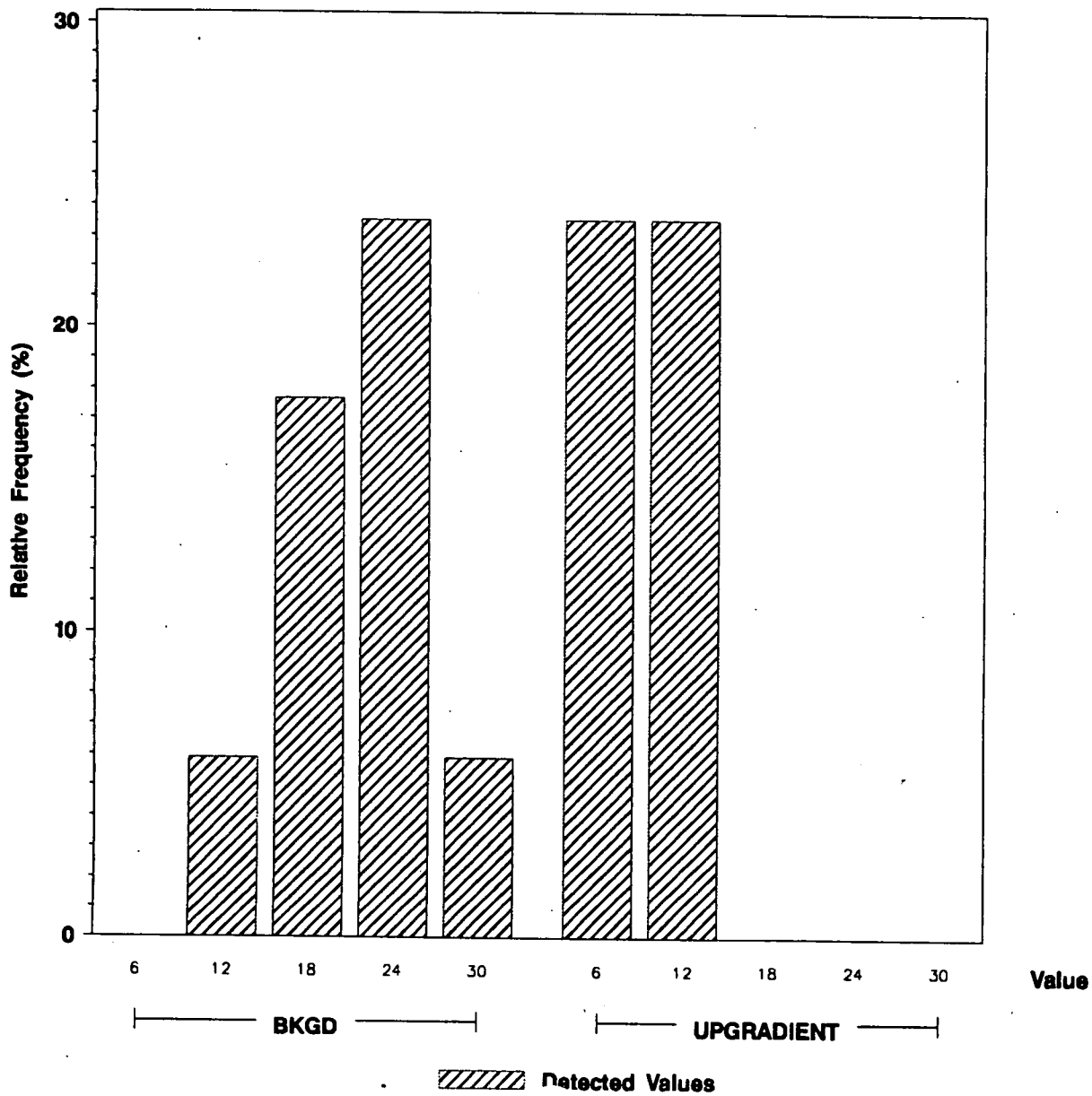
ANALYTE = CALCIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## CHROMIUM (mg\Kg) in Subsurface Geologic Materials

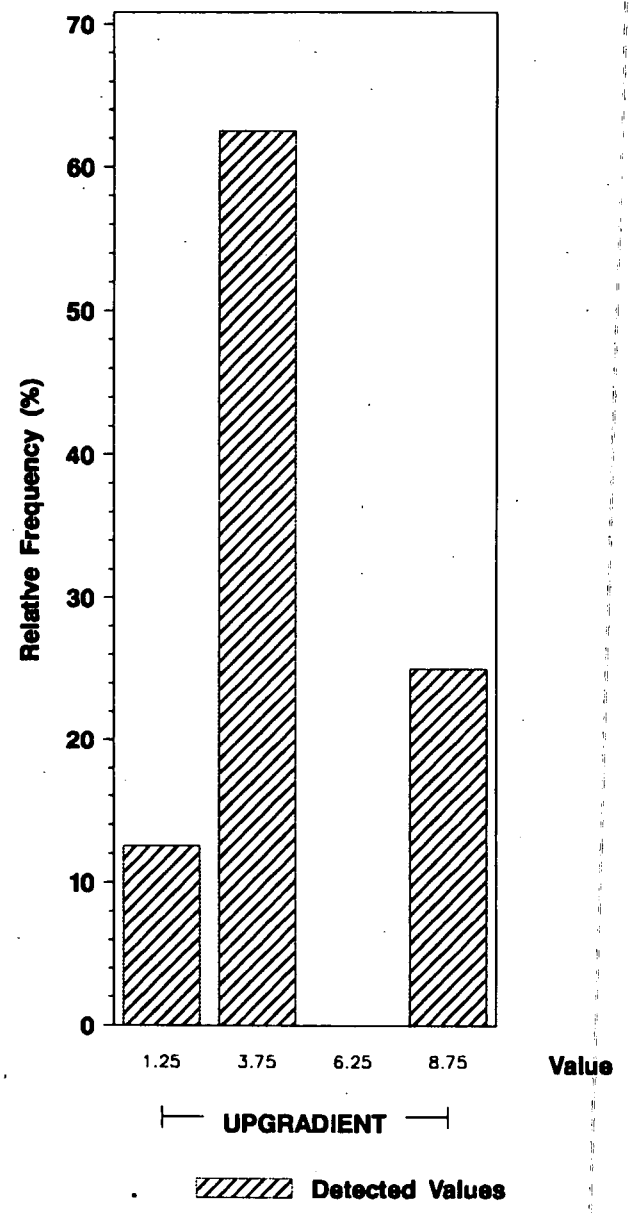
ANALYTE = CHROMIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## COBALT (mg\Kg) in Subsurface Geologic Materials

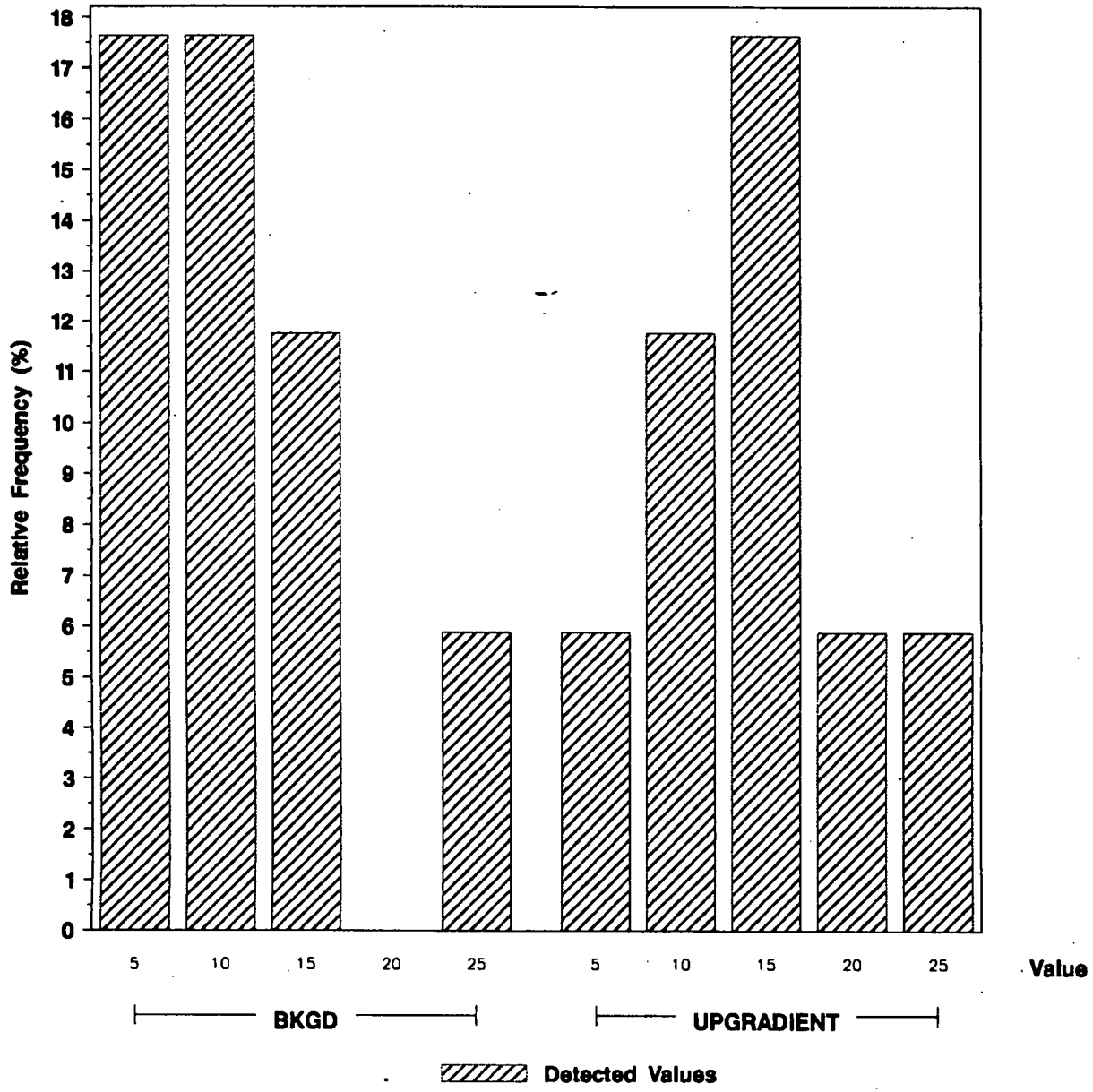
ANALYTE = COBALT



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## COPPER (mg\Kg) in Subsurface Geologic Materials

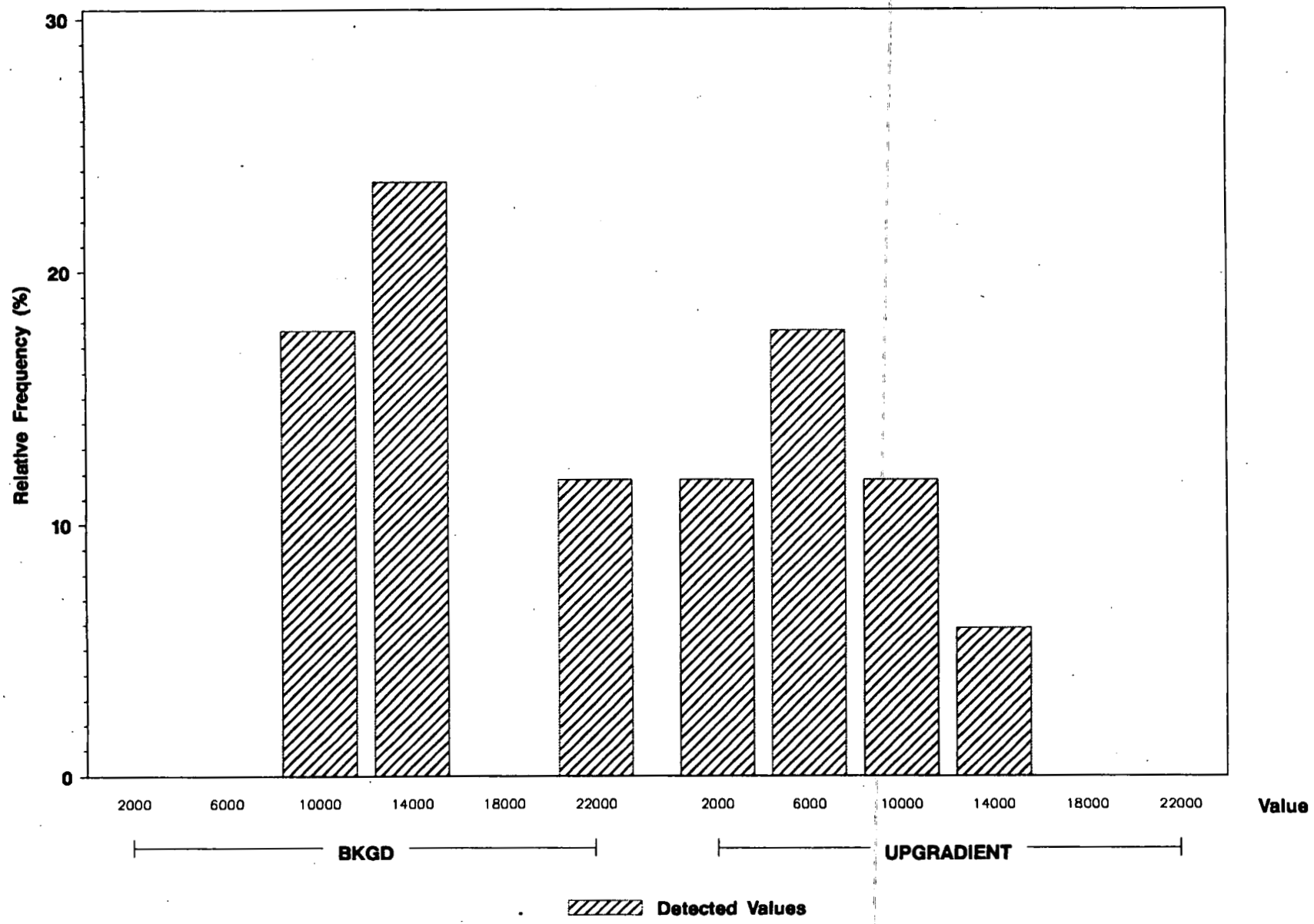
ANALYTE = COPPER



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## IRON (mg\Kg) in Subsurface Geologic Materials

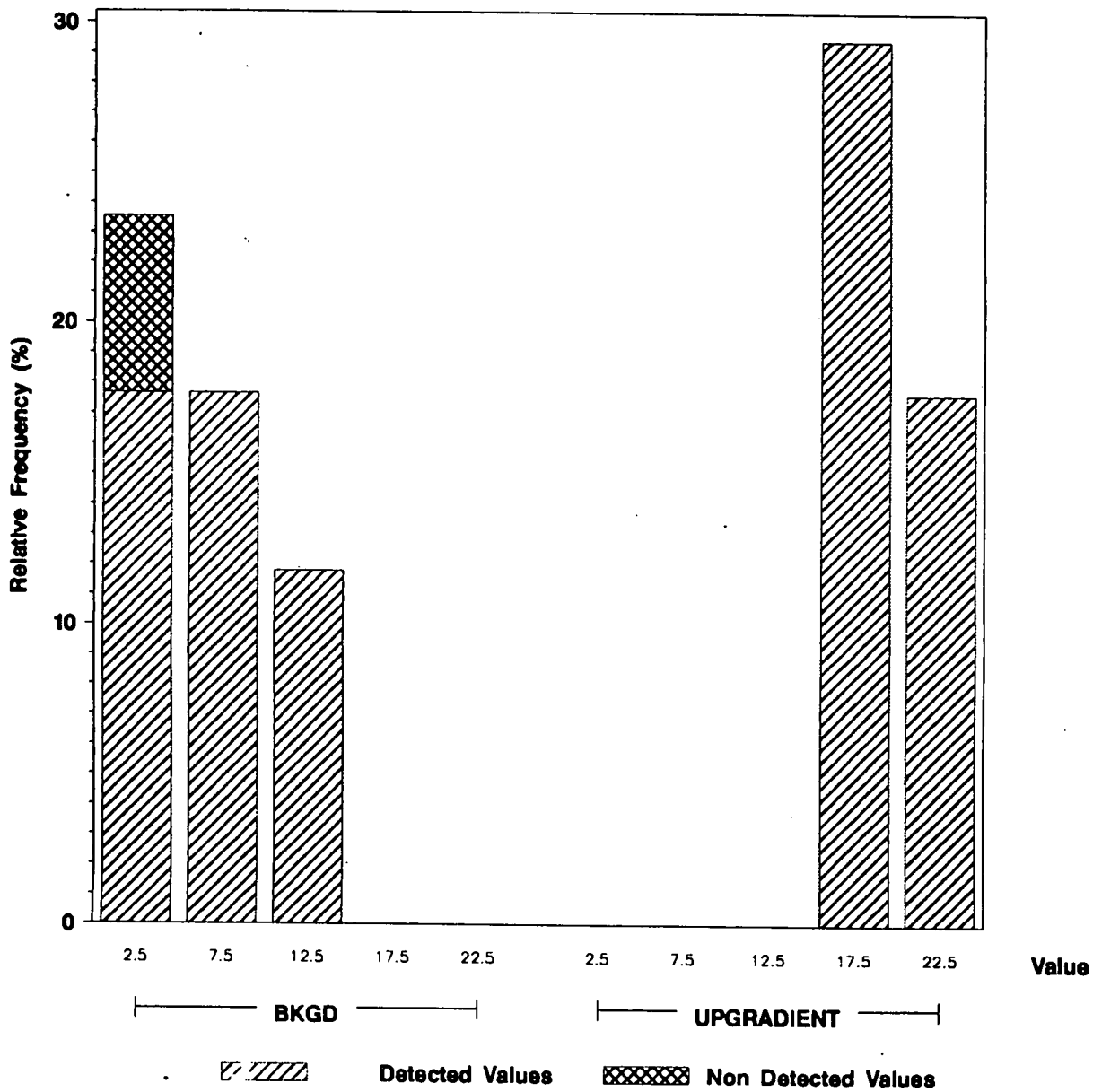
ANALYTE = IRON



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## LEAD (mg\Kg) in Subsurface Geologic Materials

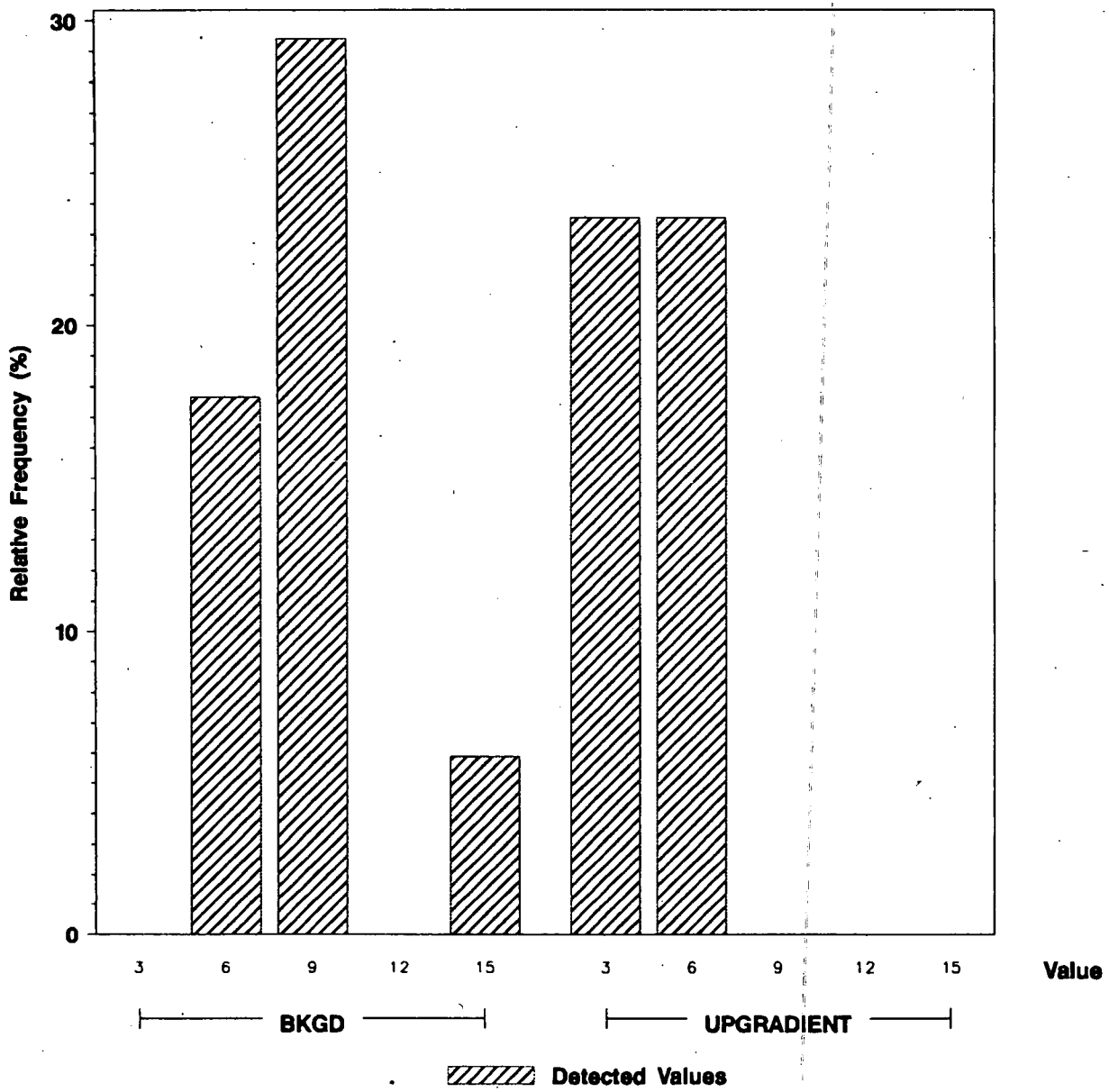
ANALYTE = LEAD



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## LITHIUM (mg\Kg) in Subsurface Geologic Materials

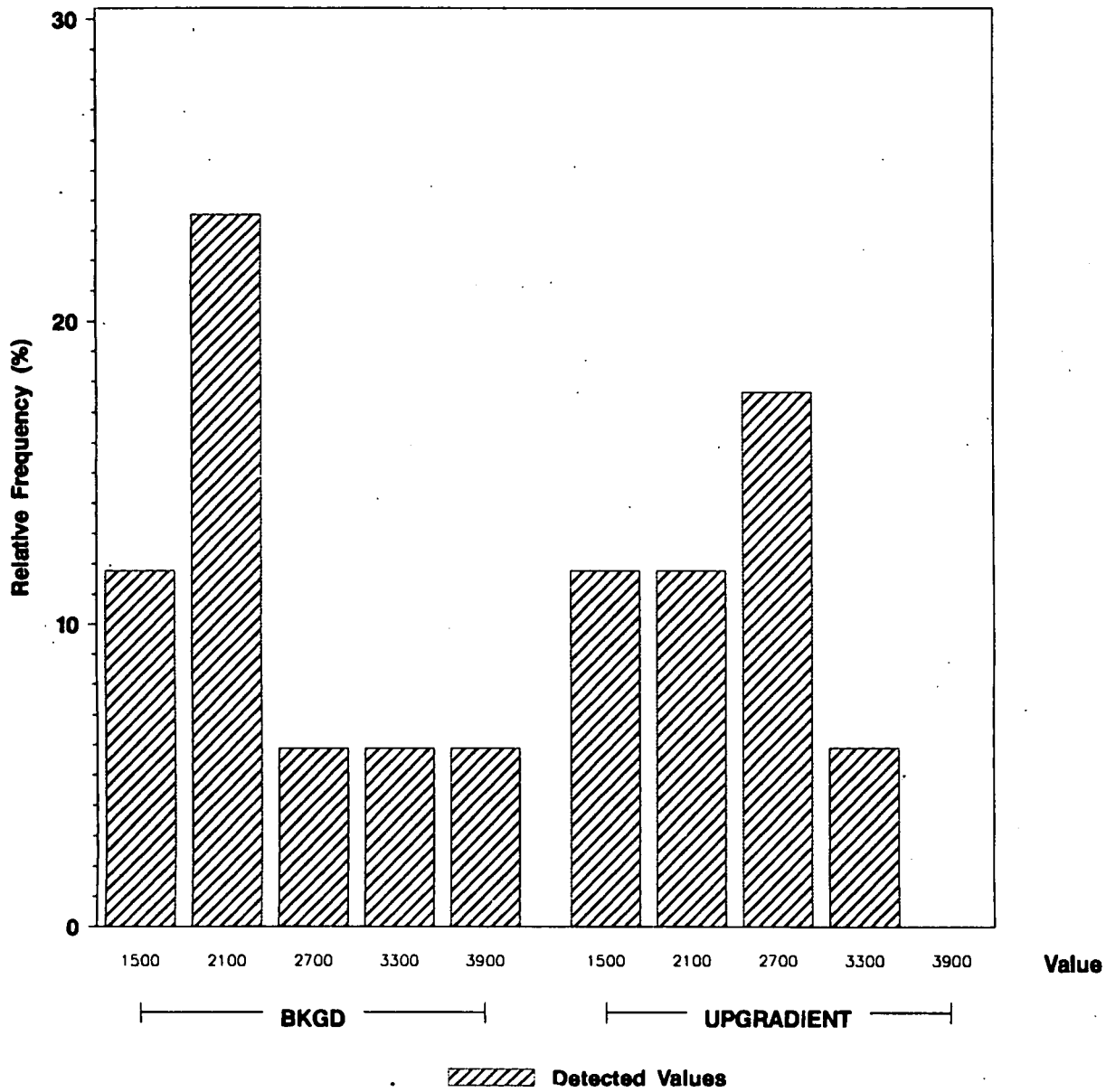
ANALYTE = LITHIUM



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## MAGNESIUM (mg\Kg) in Subsurface Geologic Materials

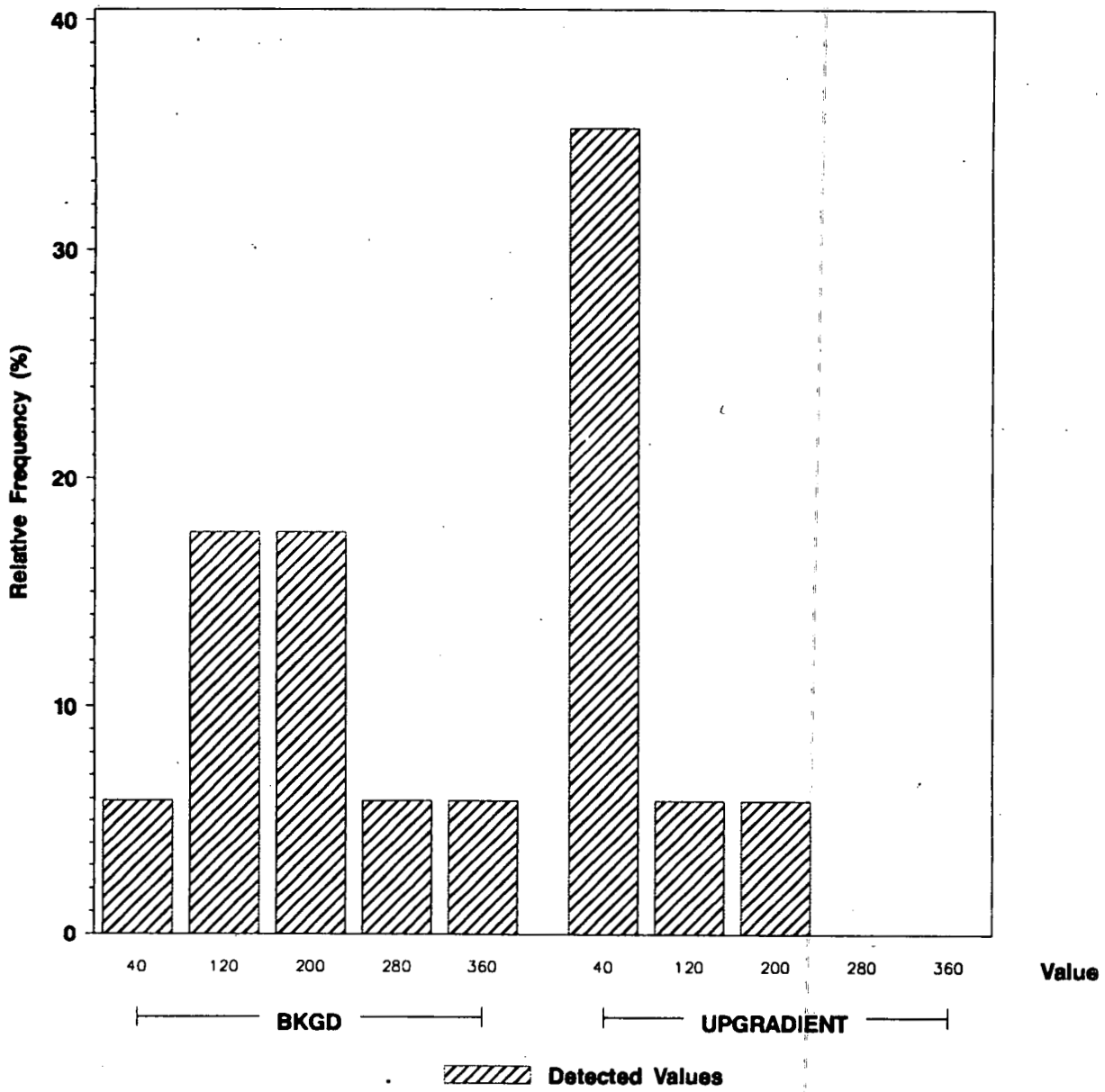
ANALYTE = MAGNESIUM



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## MANGANESE (mg\Kg) in Subsurface Geologic Materials

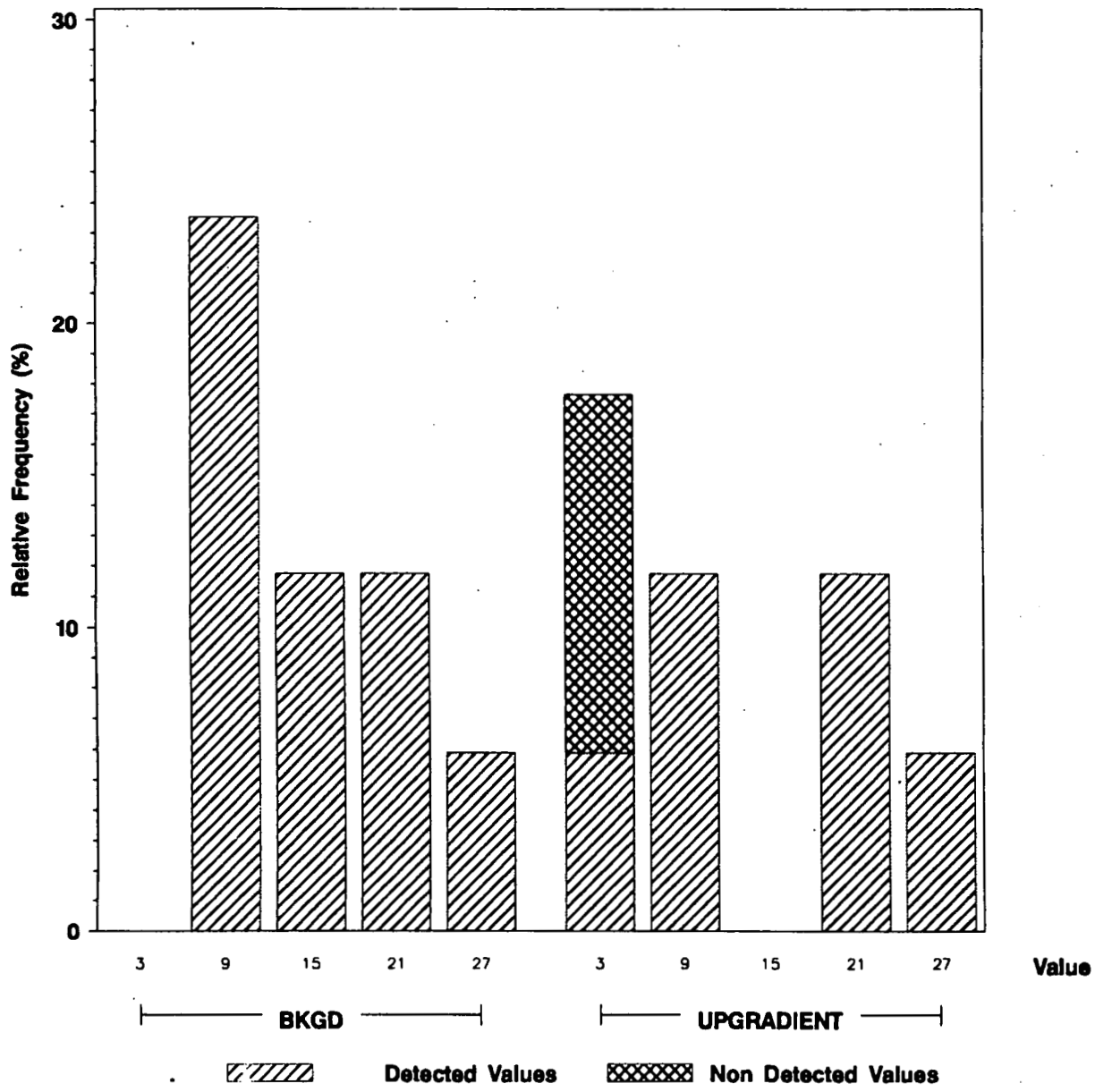
ANALYTE = MANGANESE



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## NICKEL (mg\Kg) in Subsurface Geologic Materials

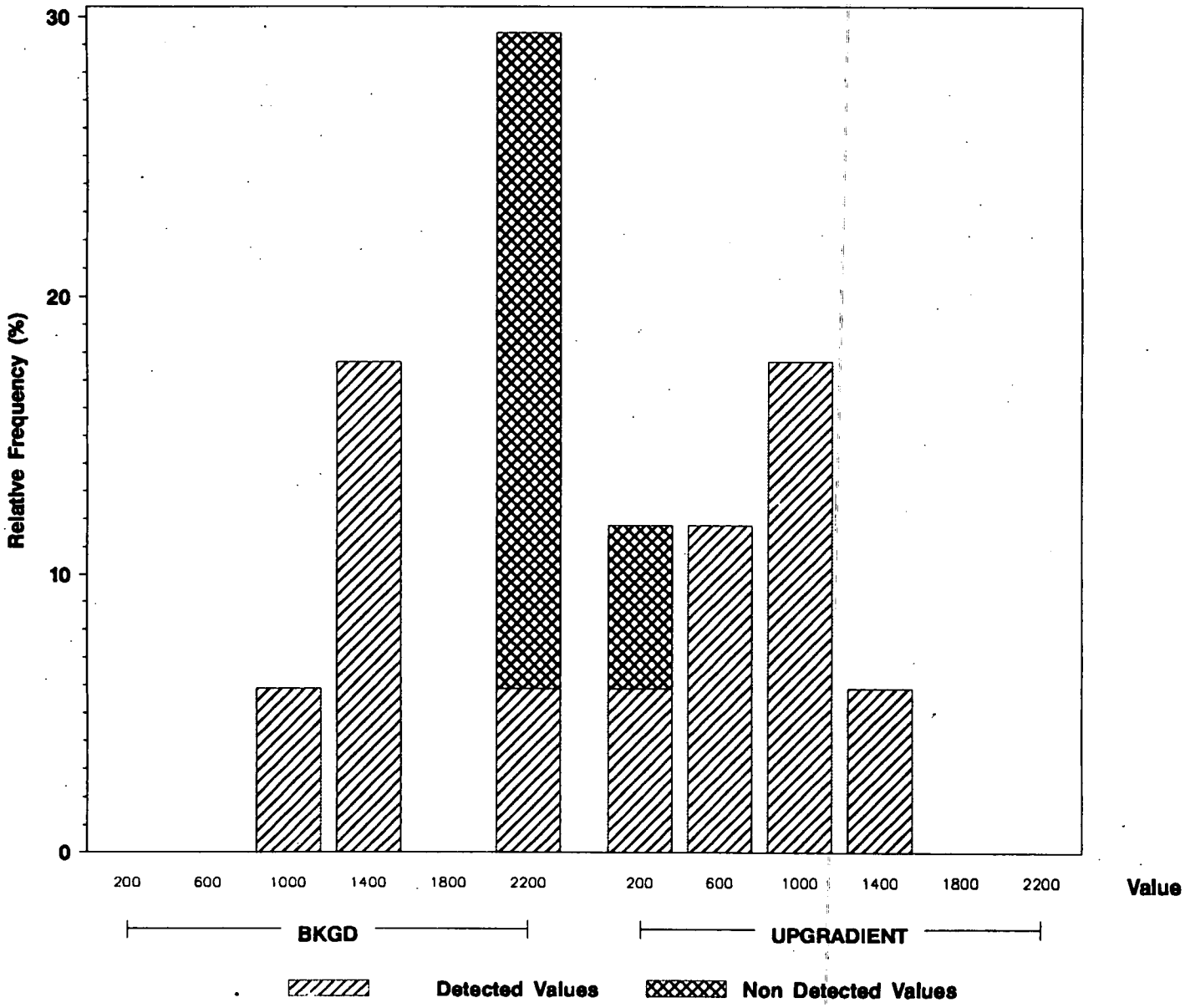
ANALYTE = NICKEL



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## POTASSIUM (mg\Kg) in Subsurface Geologic Materials

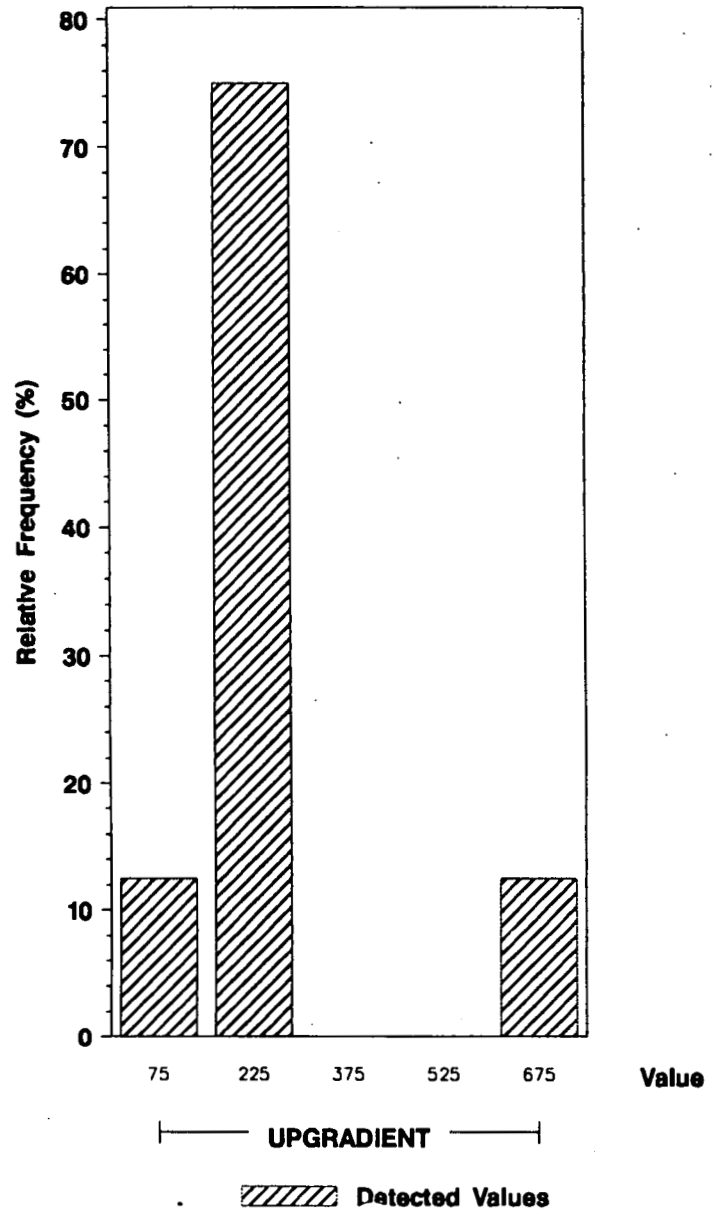
ANALYTE = POTASSIUM



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## SILICON (mg\Kg) in Subsurface Geologic Materials

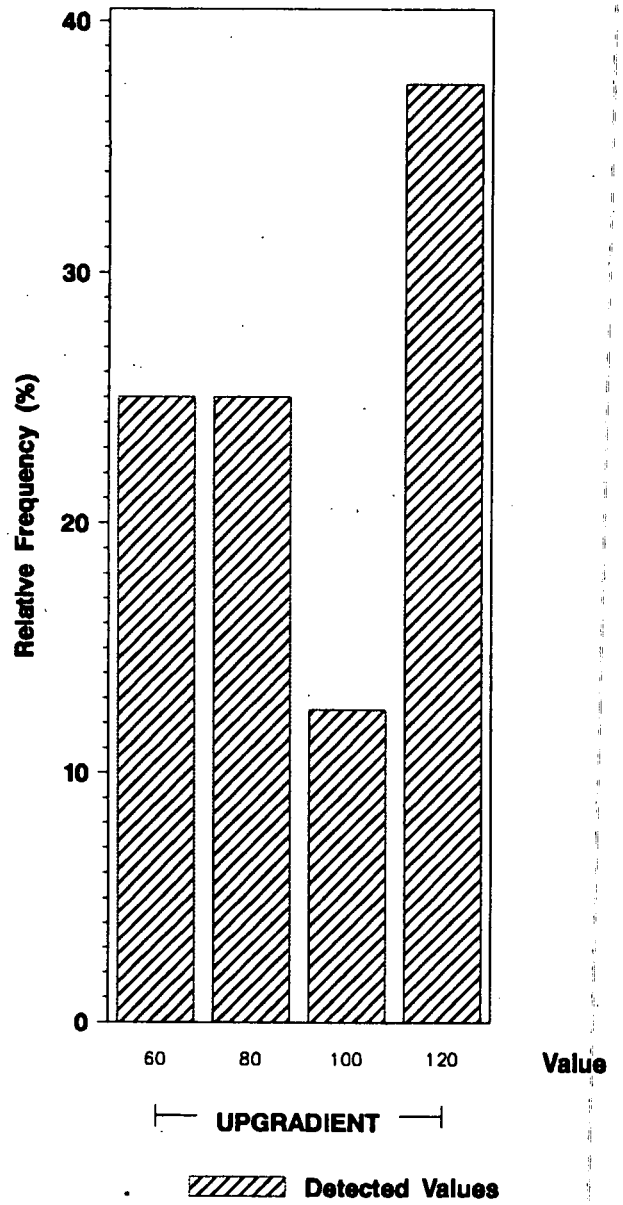
ANALYTE = SILICON



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## SODIUM (mg\Kg) in Subsurface Geologic Materials

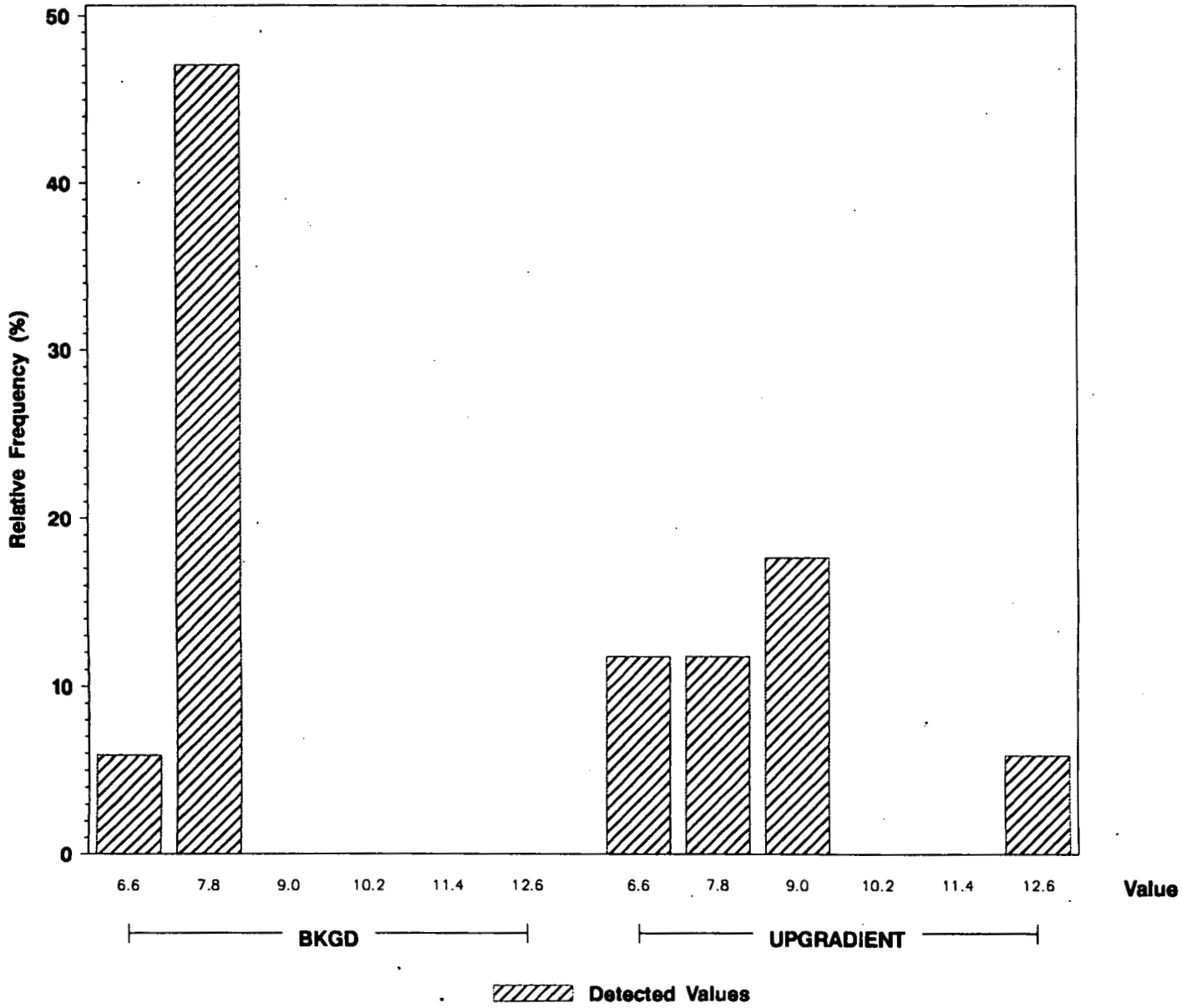
ANALYTE = SODIUM



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## pH in Subsurface Geologic Materials

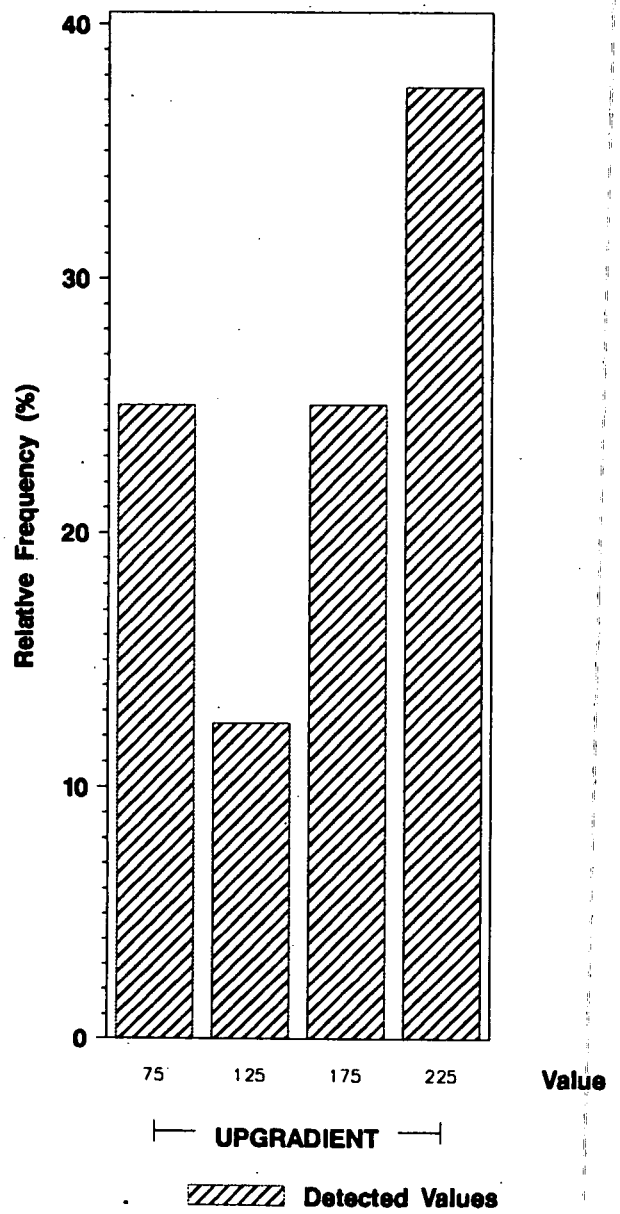
ANALYTE = pH



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## TOLUENE (ug/Kg) in Subsurface Geologic Materials

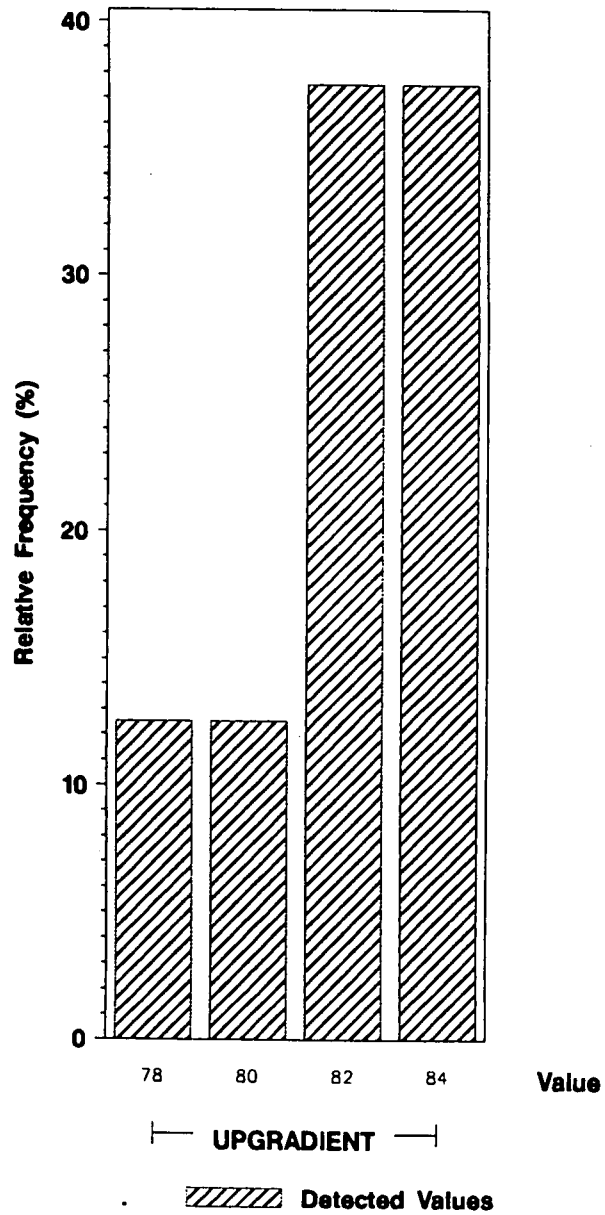
ANALYTE = TOLUENE



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## % SOLIDS (%) in Subsurface Geologic Materials

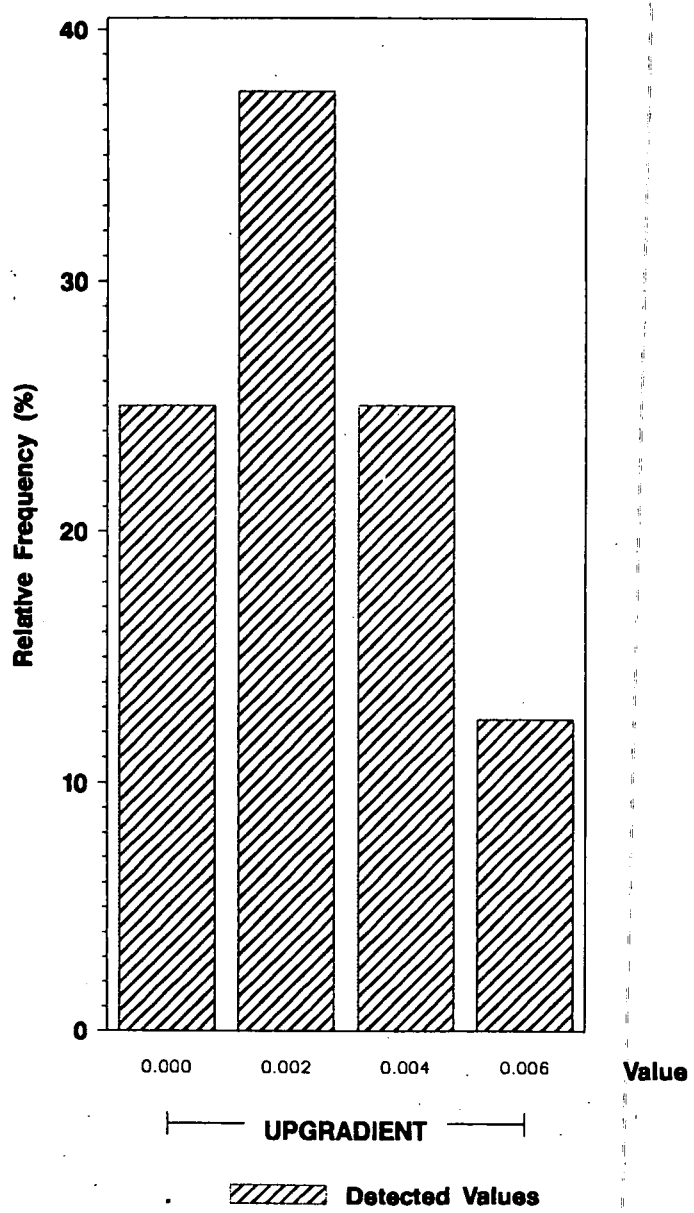
ANALYTE = % SOLIDS



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Subsurface Geologic Materials

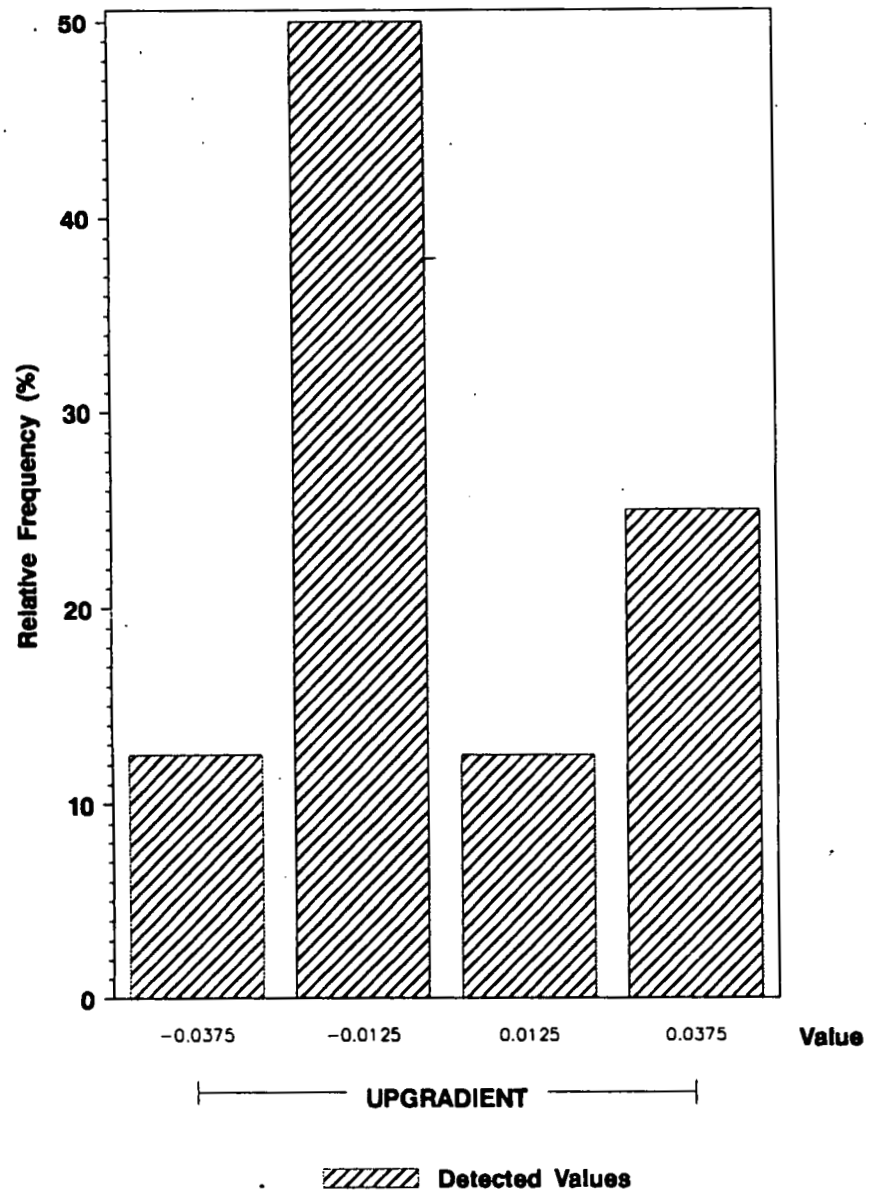
ANALYTE = AMERICIUM – 241



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## CESIUM – 137 (pCi/g) in Subsurface Geologic Materials

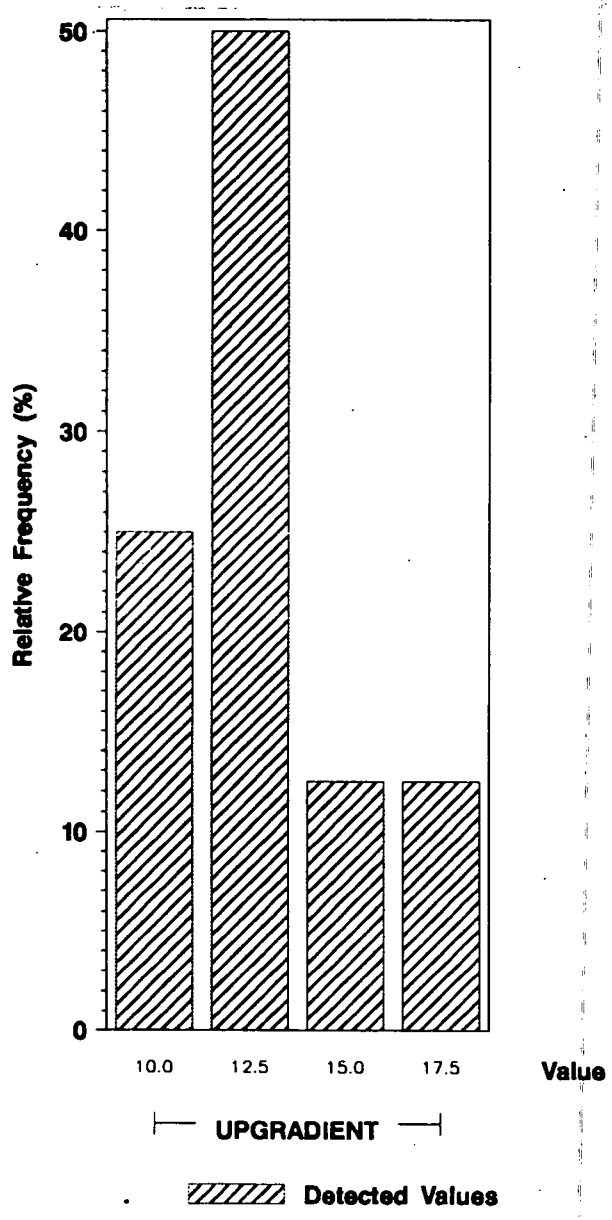
ANALYTE = CESIUM – 137



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## GROSS ALPHA (pCi/g) in Subsurface Geologic Materials

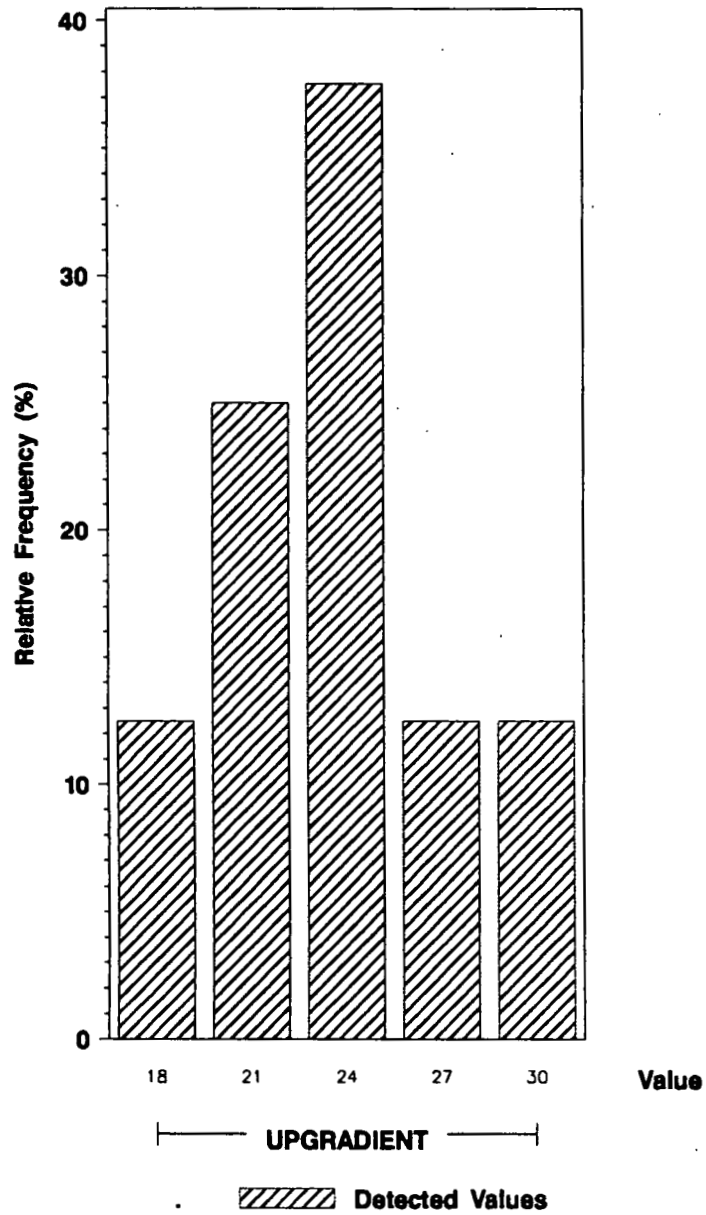
ANALYTE = GROSS ALPHA



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## GROSS BETA (pCi/g) in Subsurface Geologic Materials

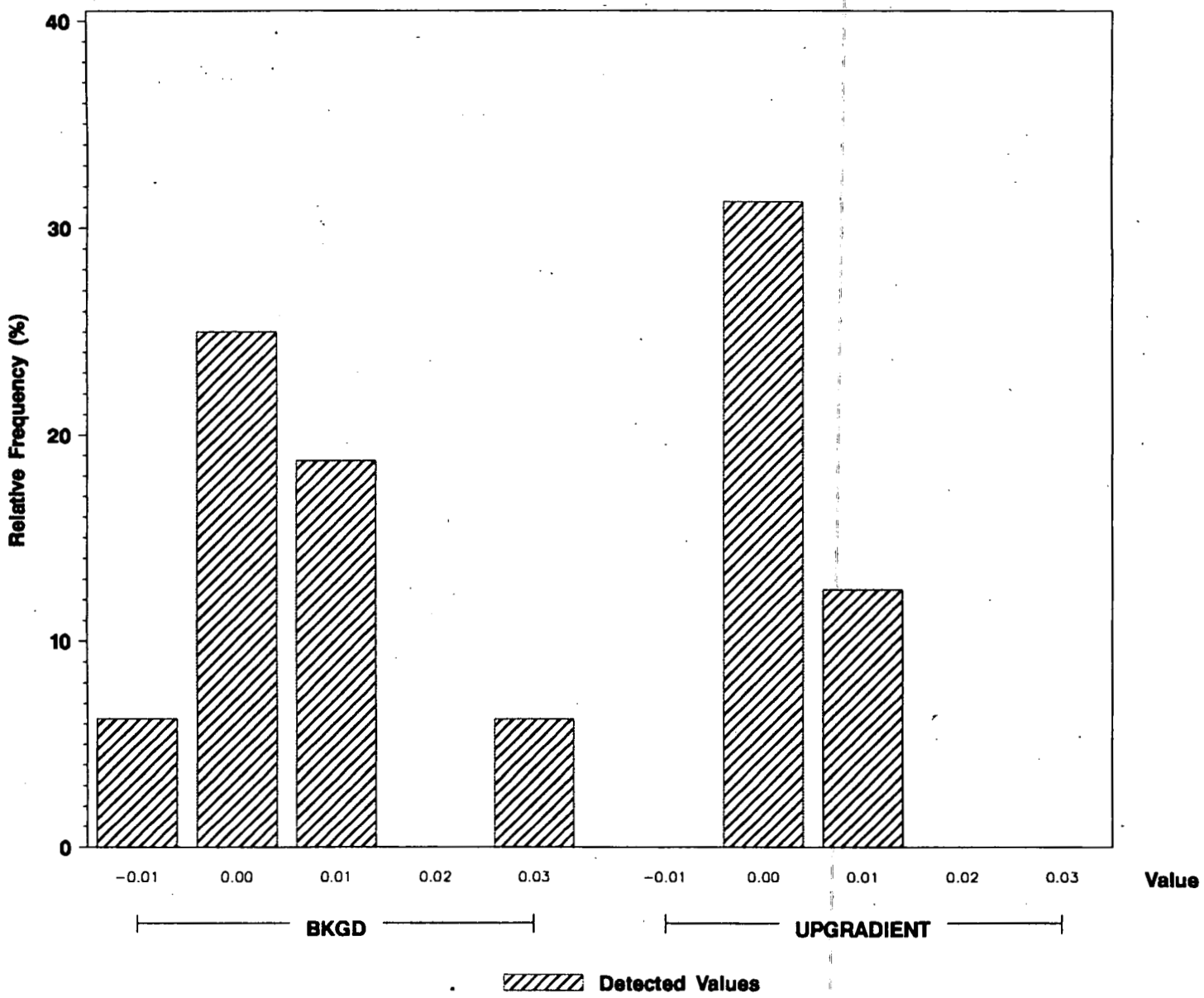
ANALYTE = GROSS BETA



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## PLUTONIUM – 239,240 (pCi/g) in Subsurface Geologic Materials

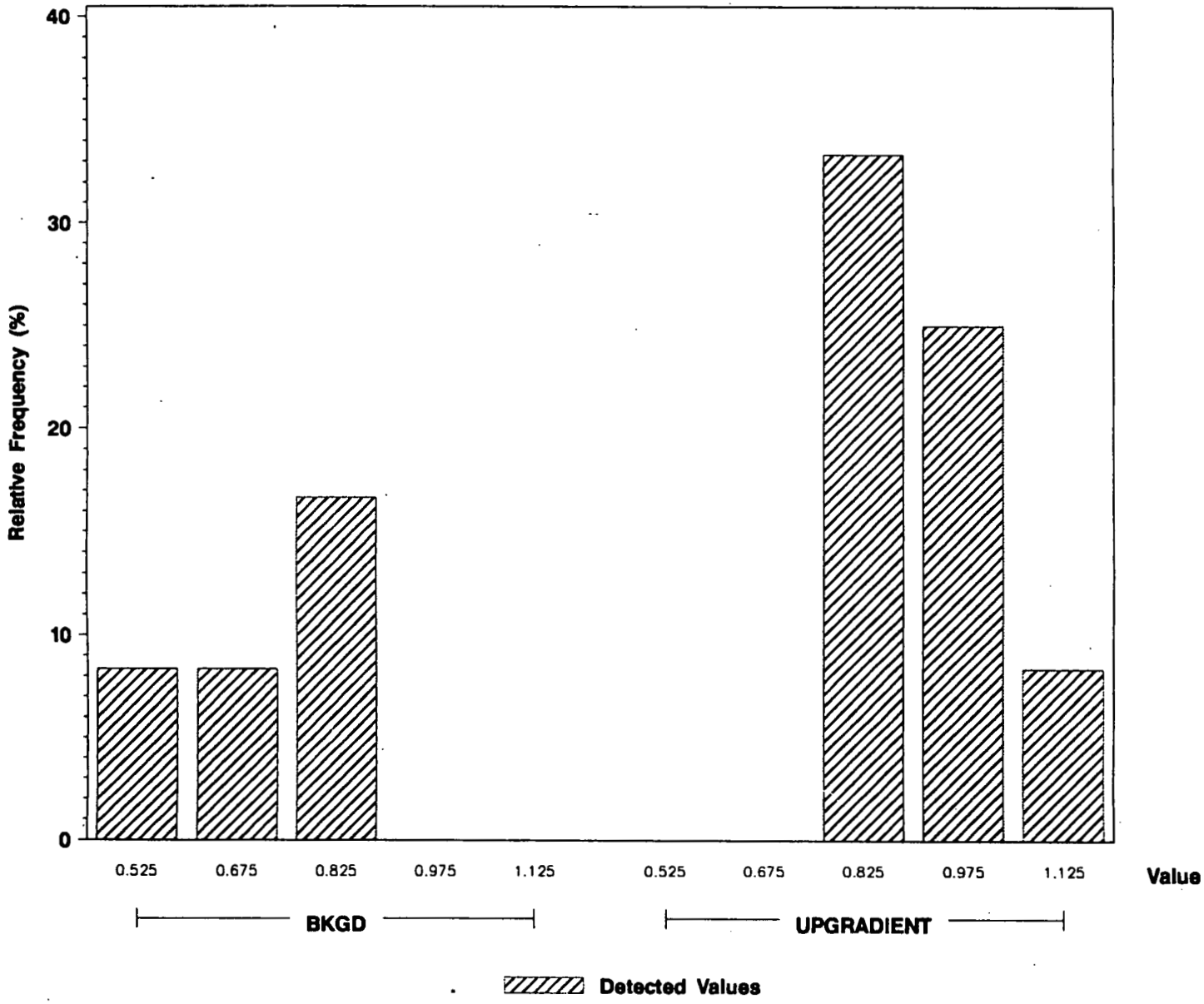
ANALYTE = PLUTONIUM – 239,240



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## RADIUM – 226 (pCi/g) in Subsurface Geologic Materials

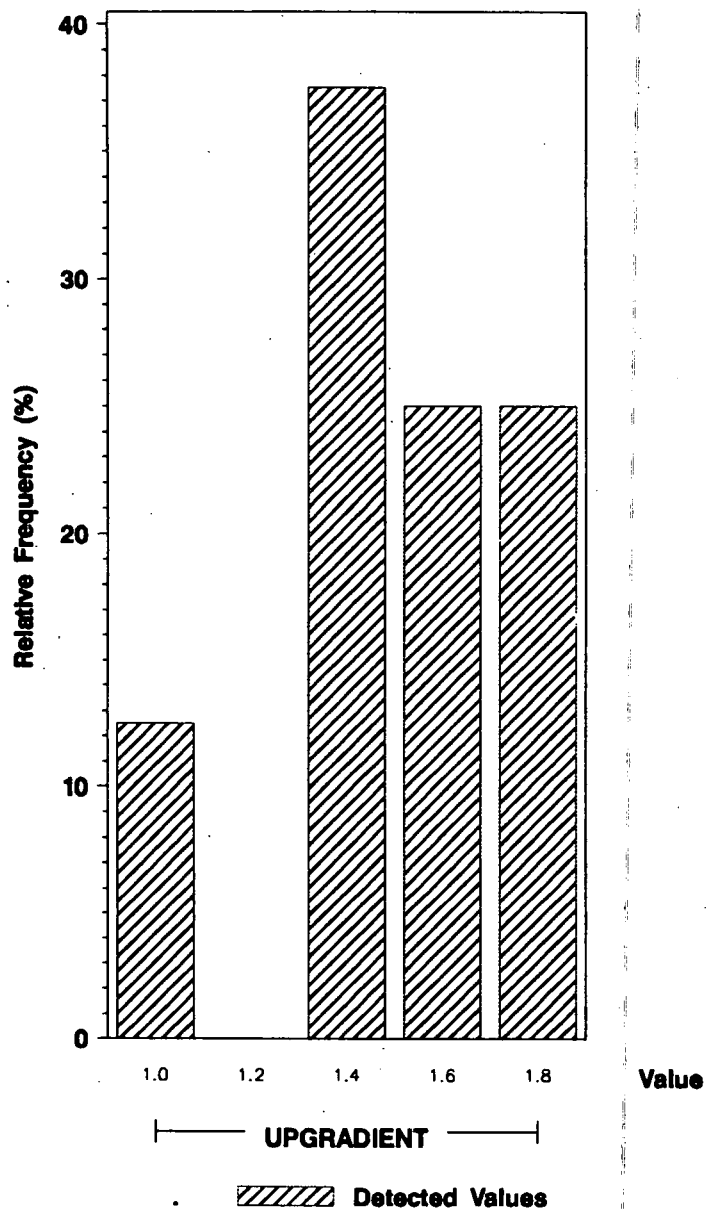
ANALYTE = RADIUM – 226



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## RADIUM – 228 (pCi/g) in Subsurface Geologic Materials

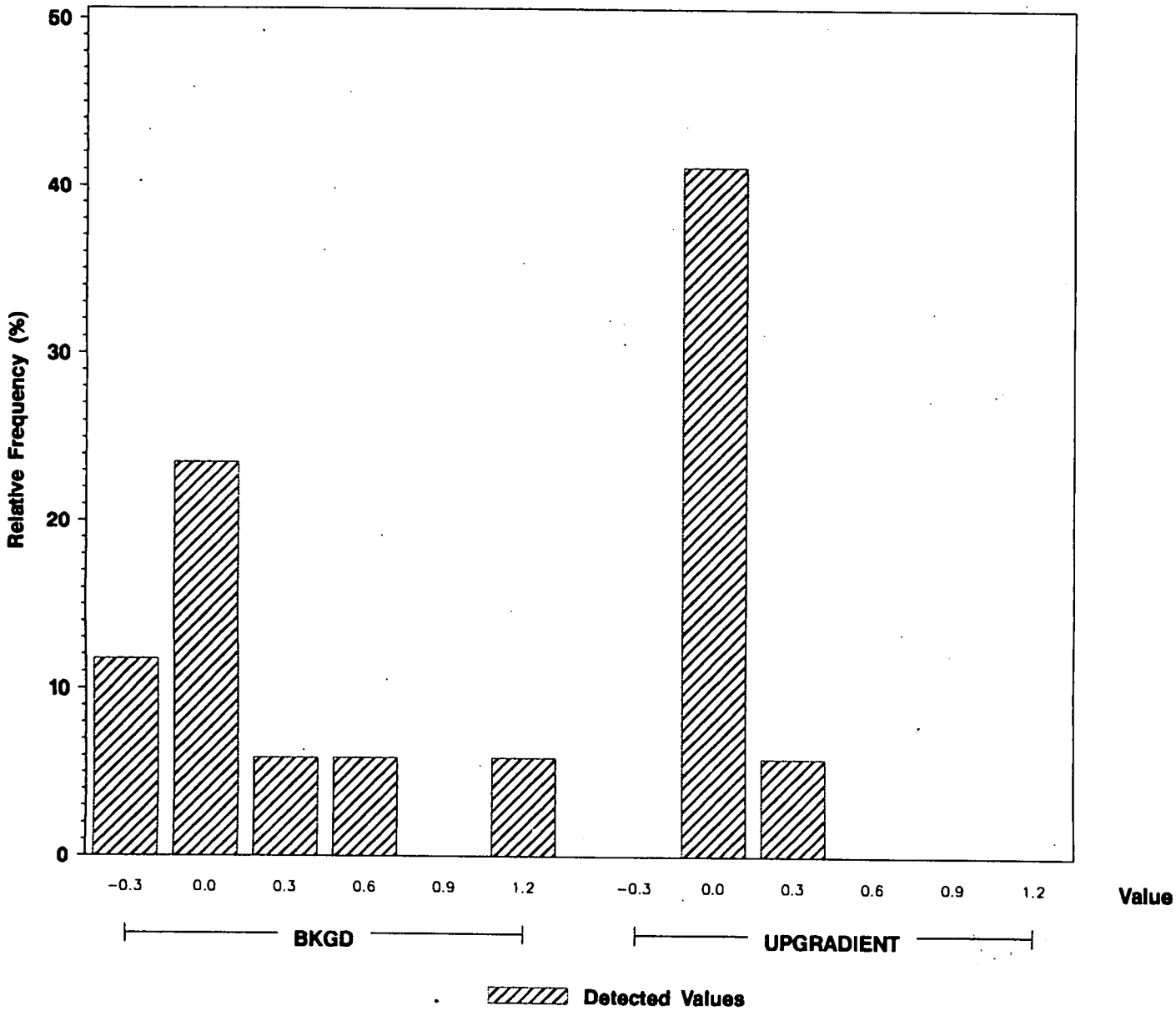
ANALYTE = RADIUM – 228



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Subsurface Geologic Materials

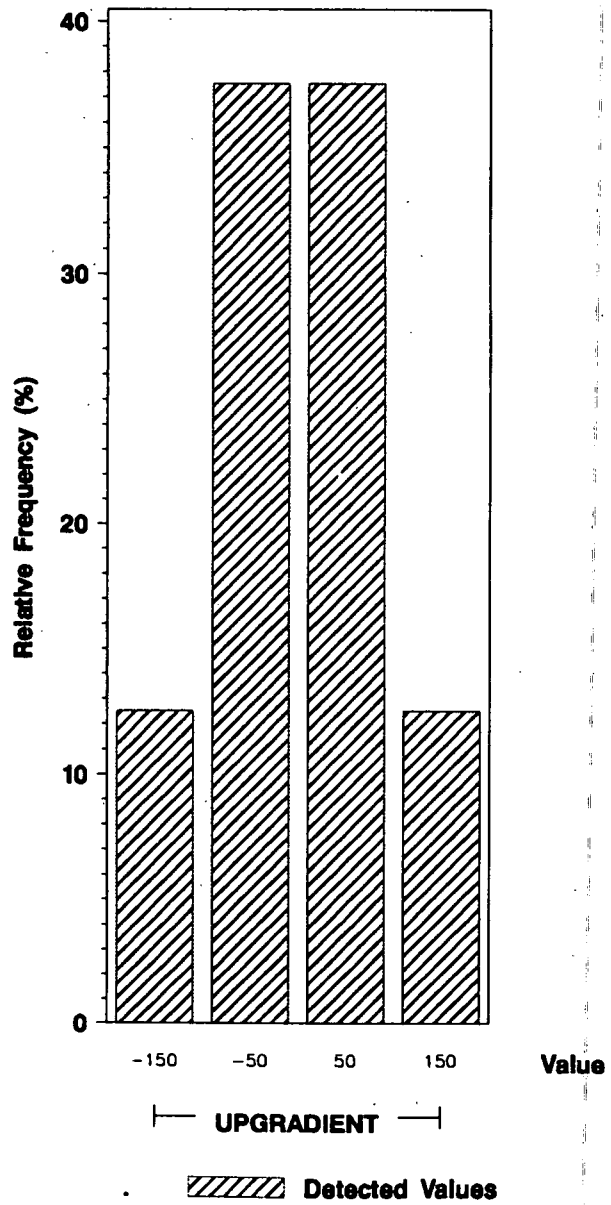
ANALYTE = STRONTIUM – 89,90



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## TRITIUM (pCi/L) in Subsurface Geologic Materials

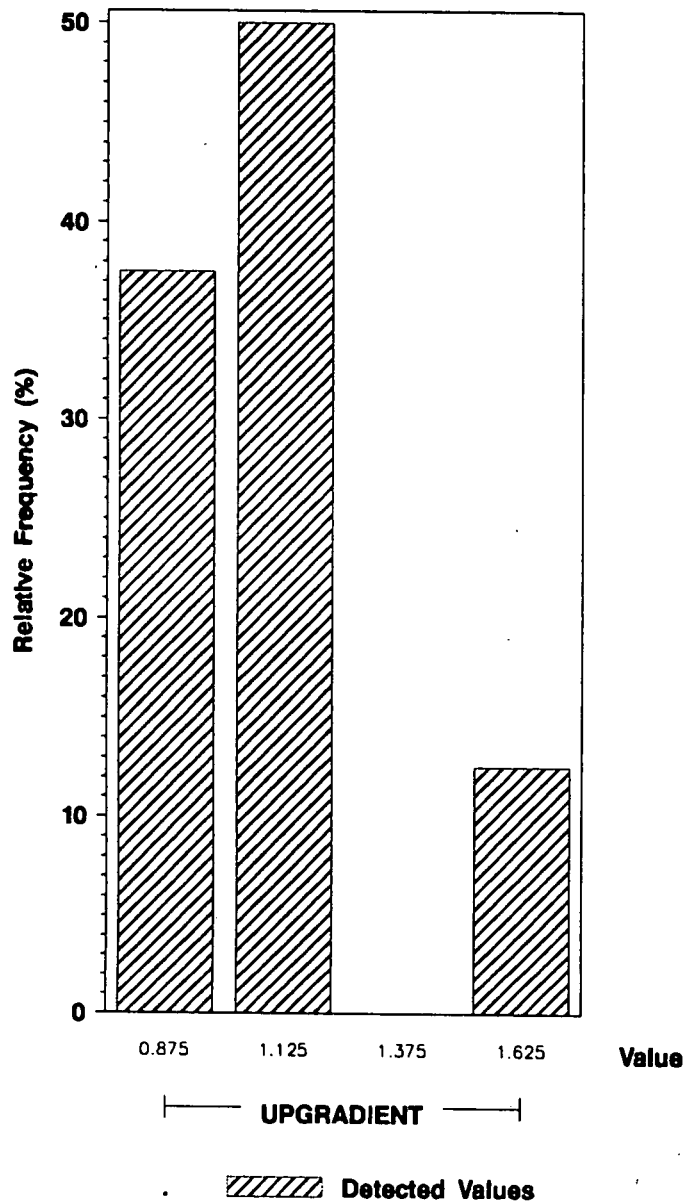
ANALYTE = TRITIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Subsurface Geologic Materials

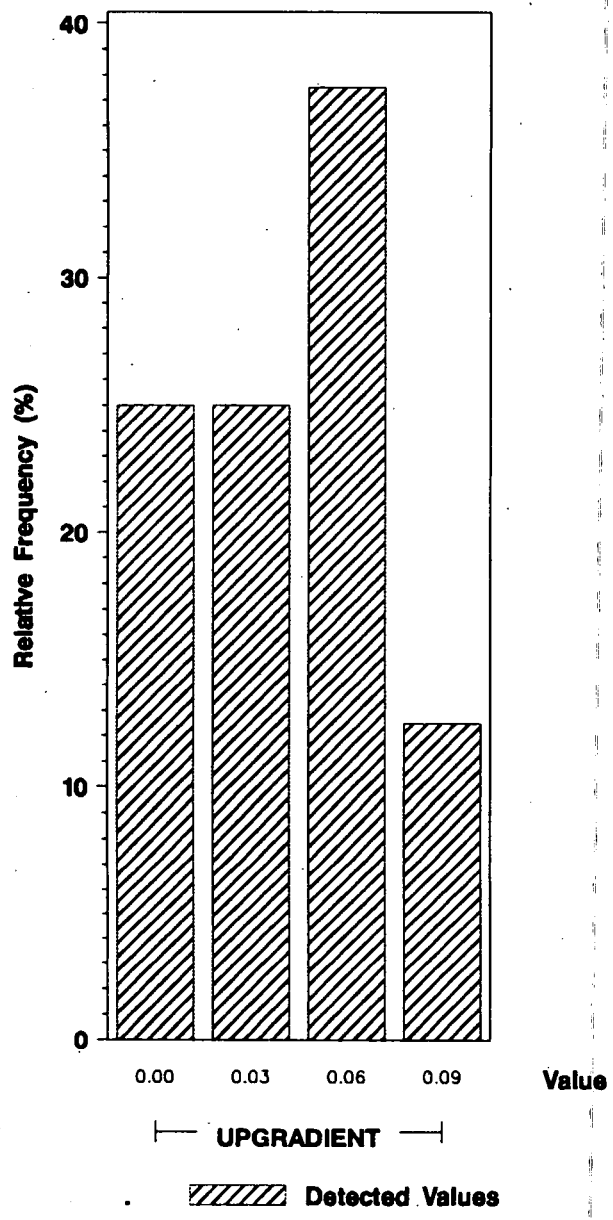
ANALYTE = URANIUM – 233, – 234



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## URANIUM – 235 (pCi/g) in Subsurface Geologic Materials

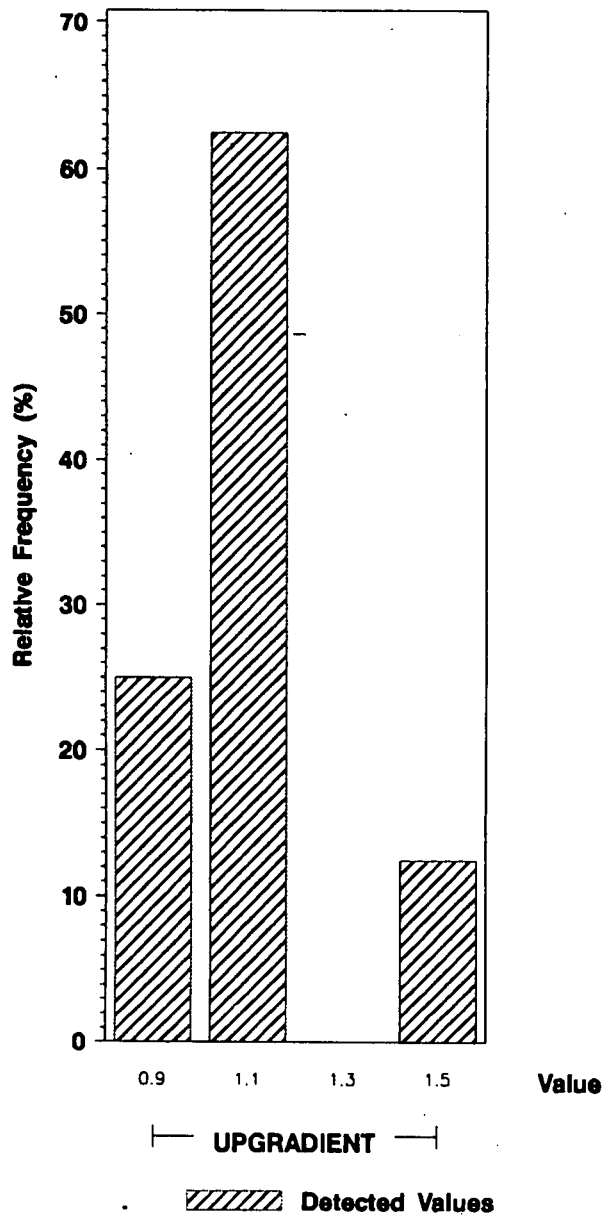
ANALYTE = URANIUM – 235



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## URANIUM – 238 (pCi/g) in Subsurface Geologic Materials

ANALYTE = URANIUM – 238



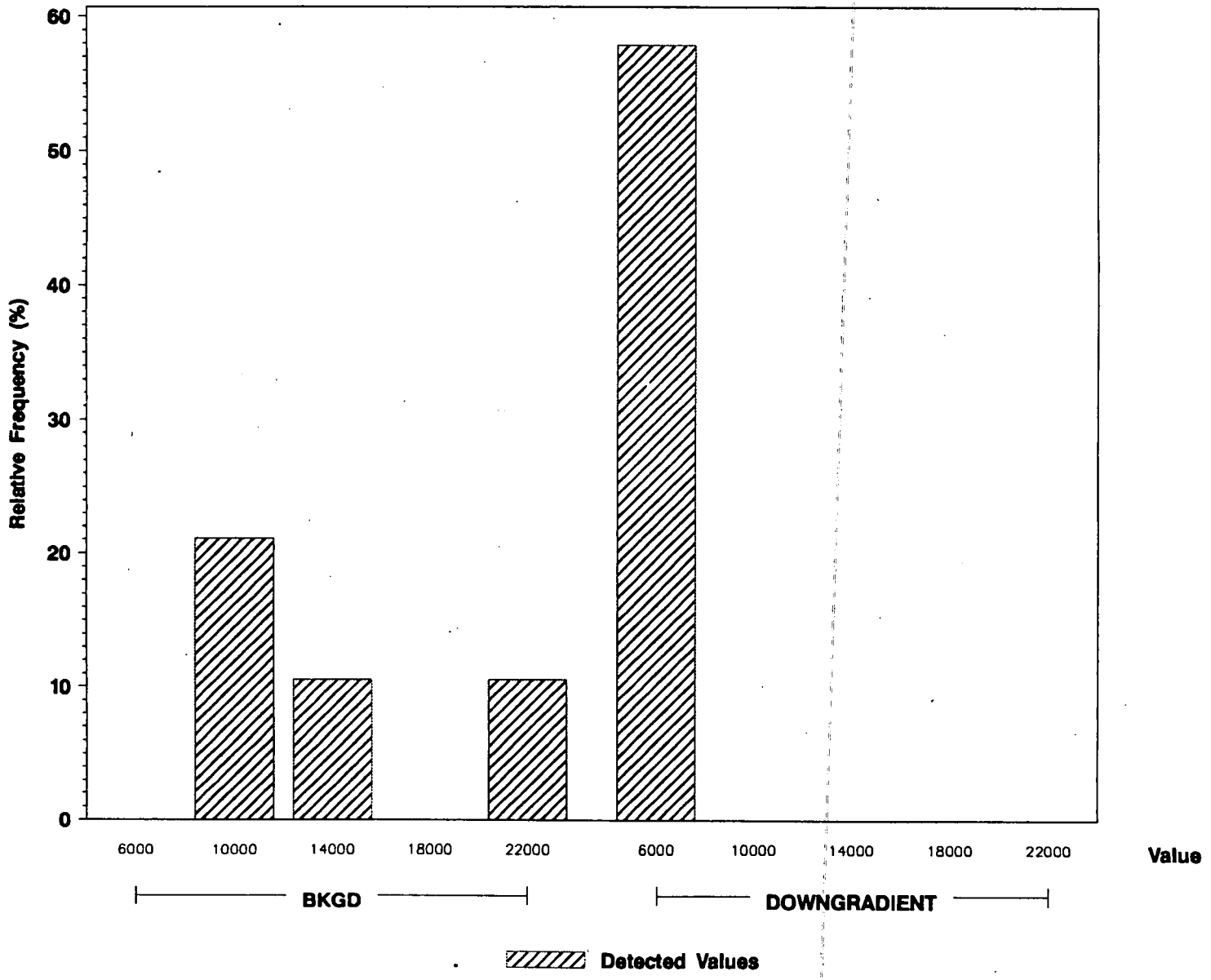
# Subsurface Geologic Materials

## Background vs. OU 7 Downgradient KaKl(w)

# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## ALUMINUM (mg\Kg) in Subsurface Geologic Materials

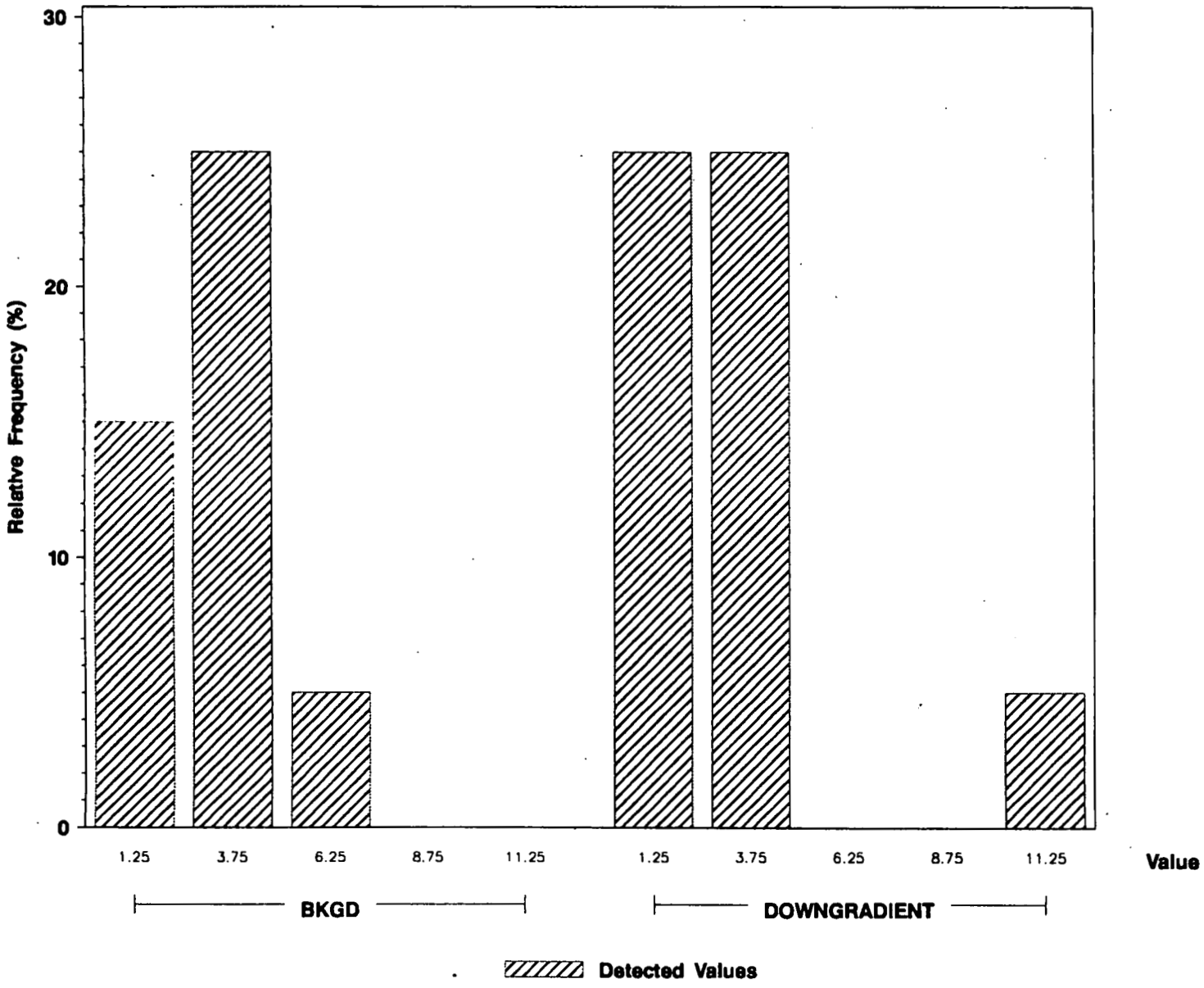
ANALYTE = ALUMINUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## ARSENIC (mg\Kg) in Subsurface Geologic Materials

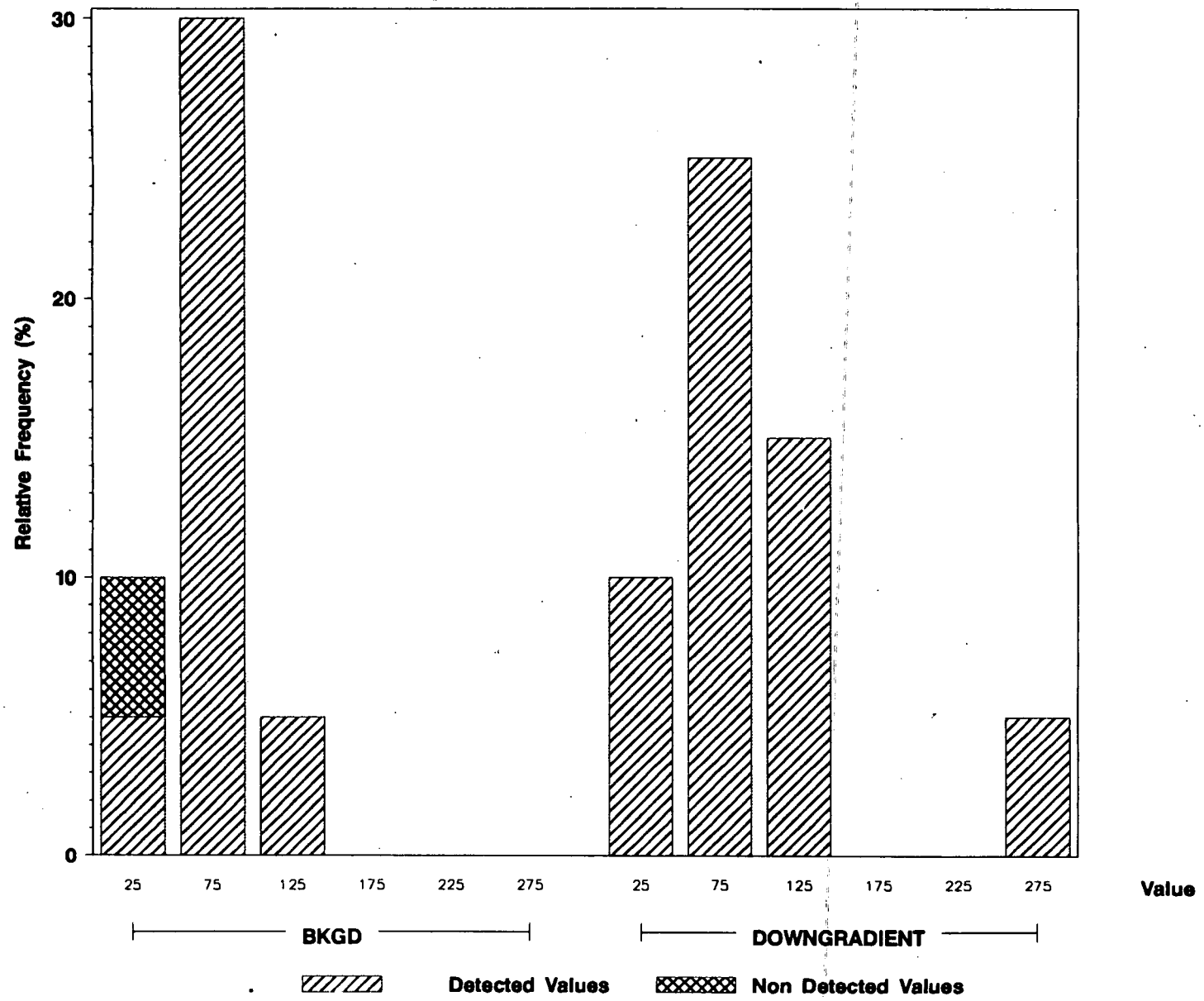
ANALYTE = ARSENIC



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## BARIUM (mg\Kg) in Subsurface Geologic Materials

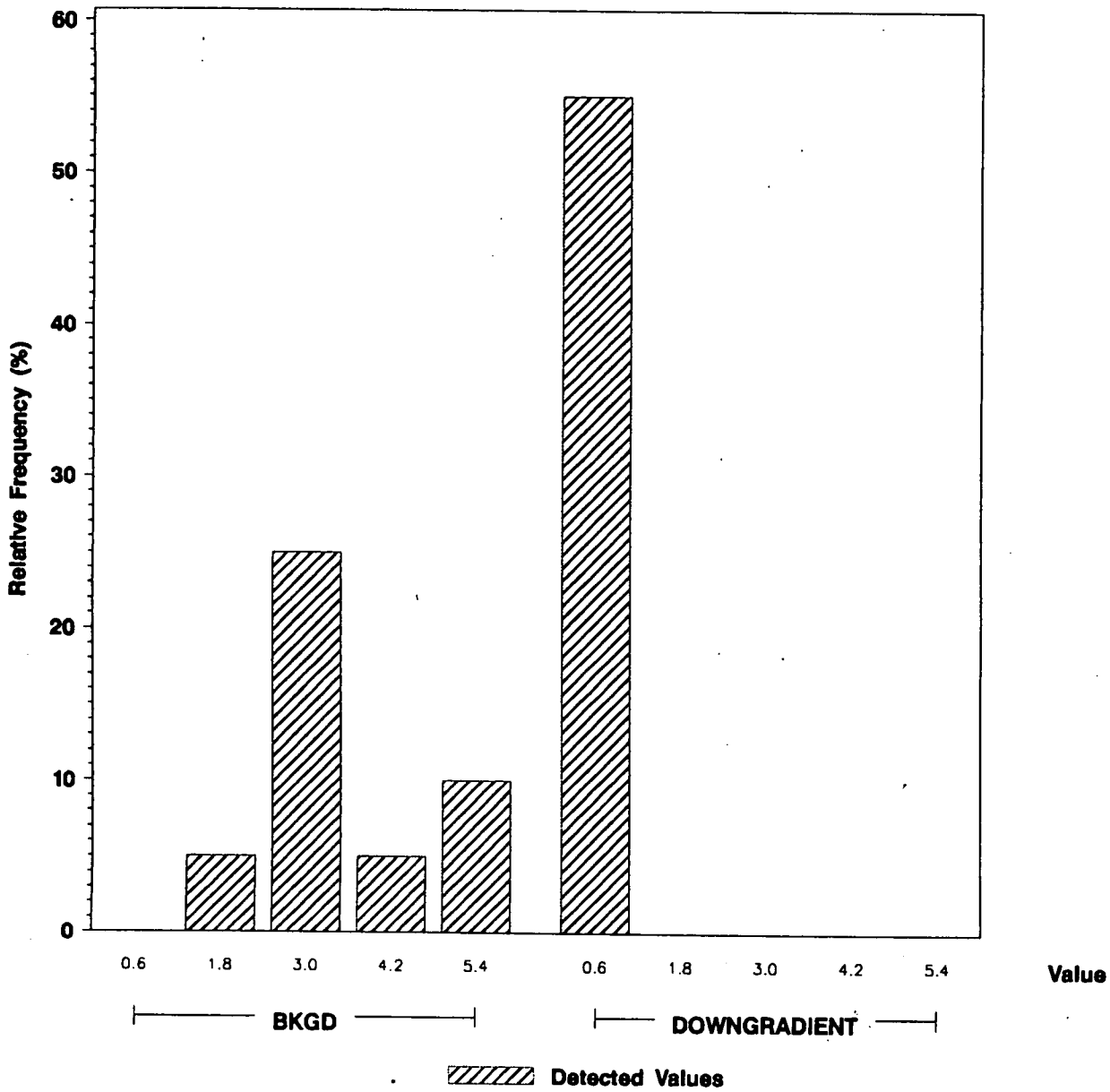
ANALYTE = BARIUM



# Background KaKI−w vs OU7 KaKI−w Frequency Histogram

## BERYLLIUM (mg\Kg) in Subsurface Geologic Materials

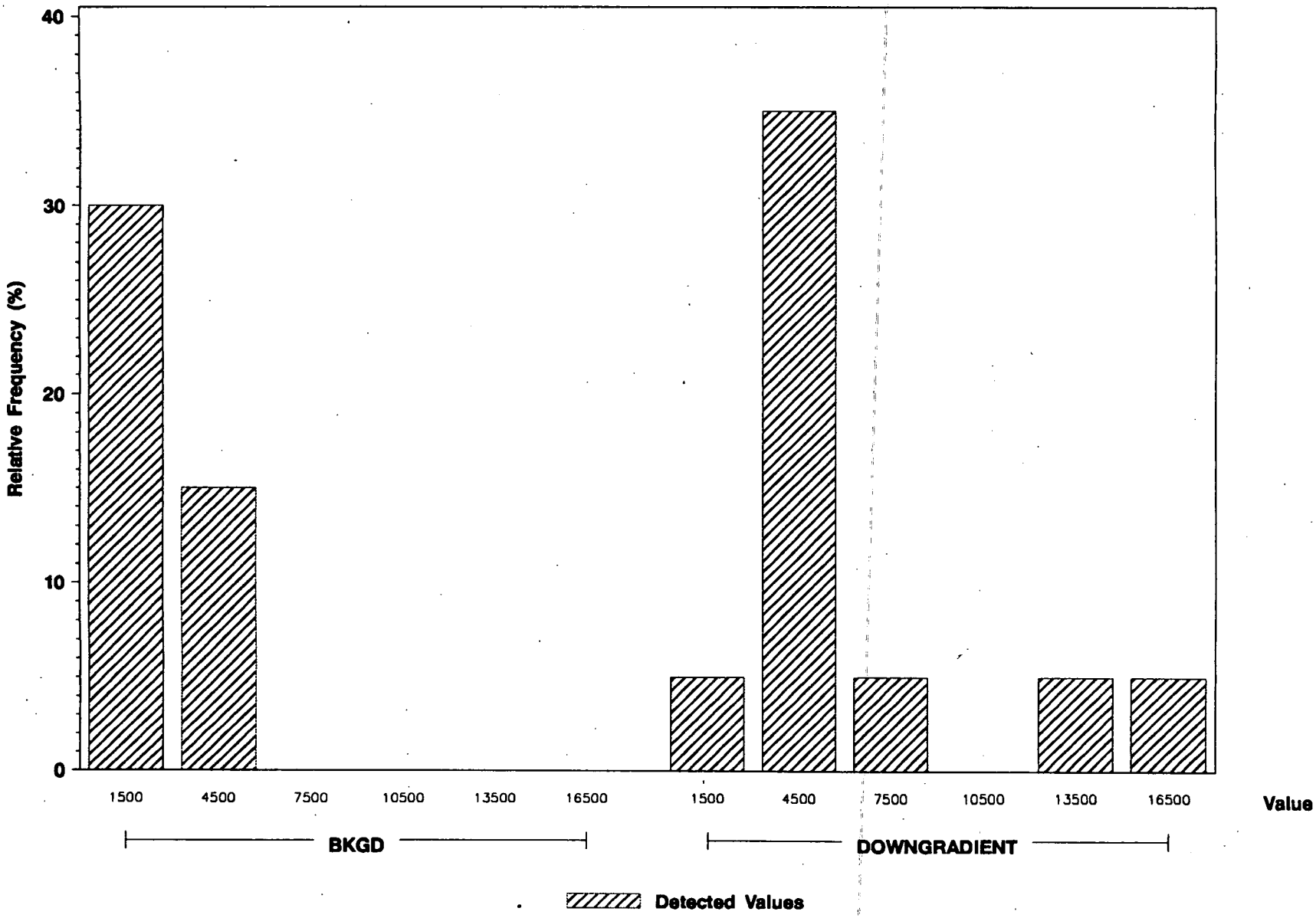
ANALYTE = BERYLLIUM



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## CALCIUM (mg\Kg) in Subsurface Geologic Materials

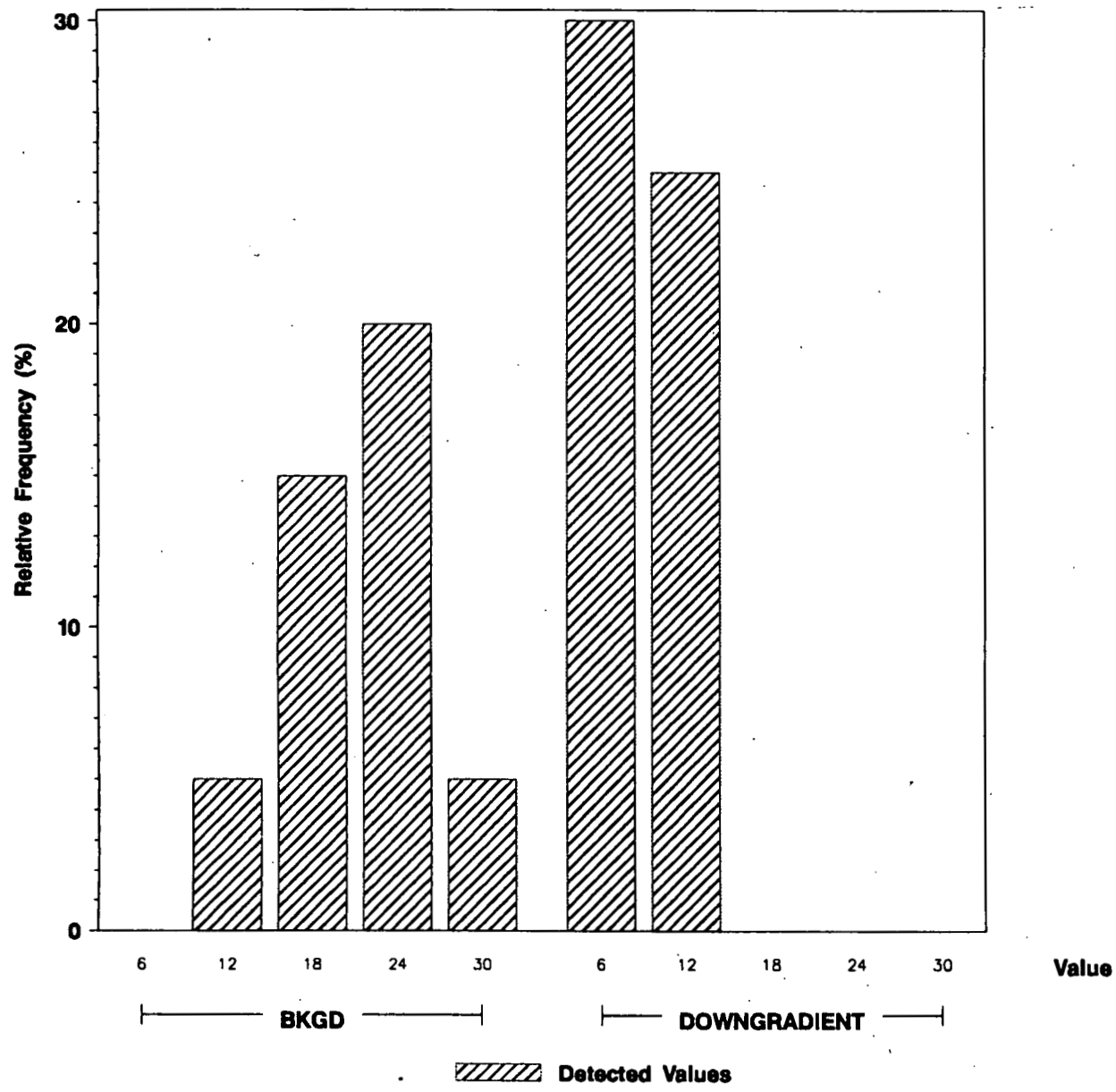
ANALYTE=CALCIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## CHROMIUM (mg\Kg) in Subsurface Geologic Materials

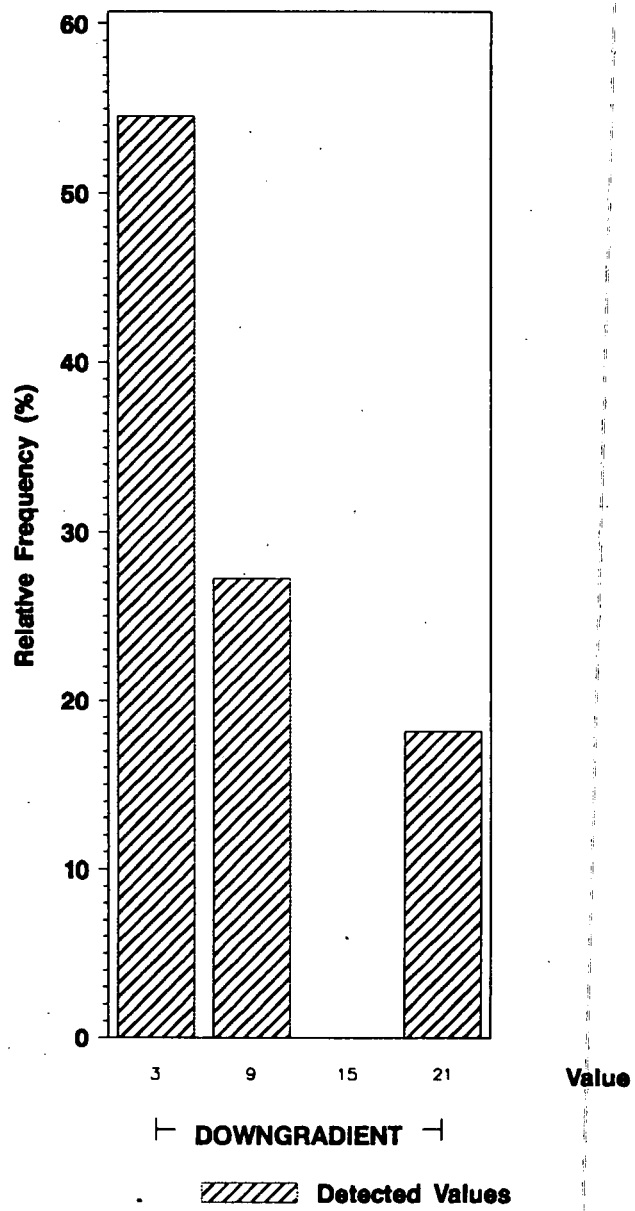
ANALYTE = CHROMIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## COBALT (mg\Kg) in Subsurface Geologic Materials

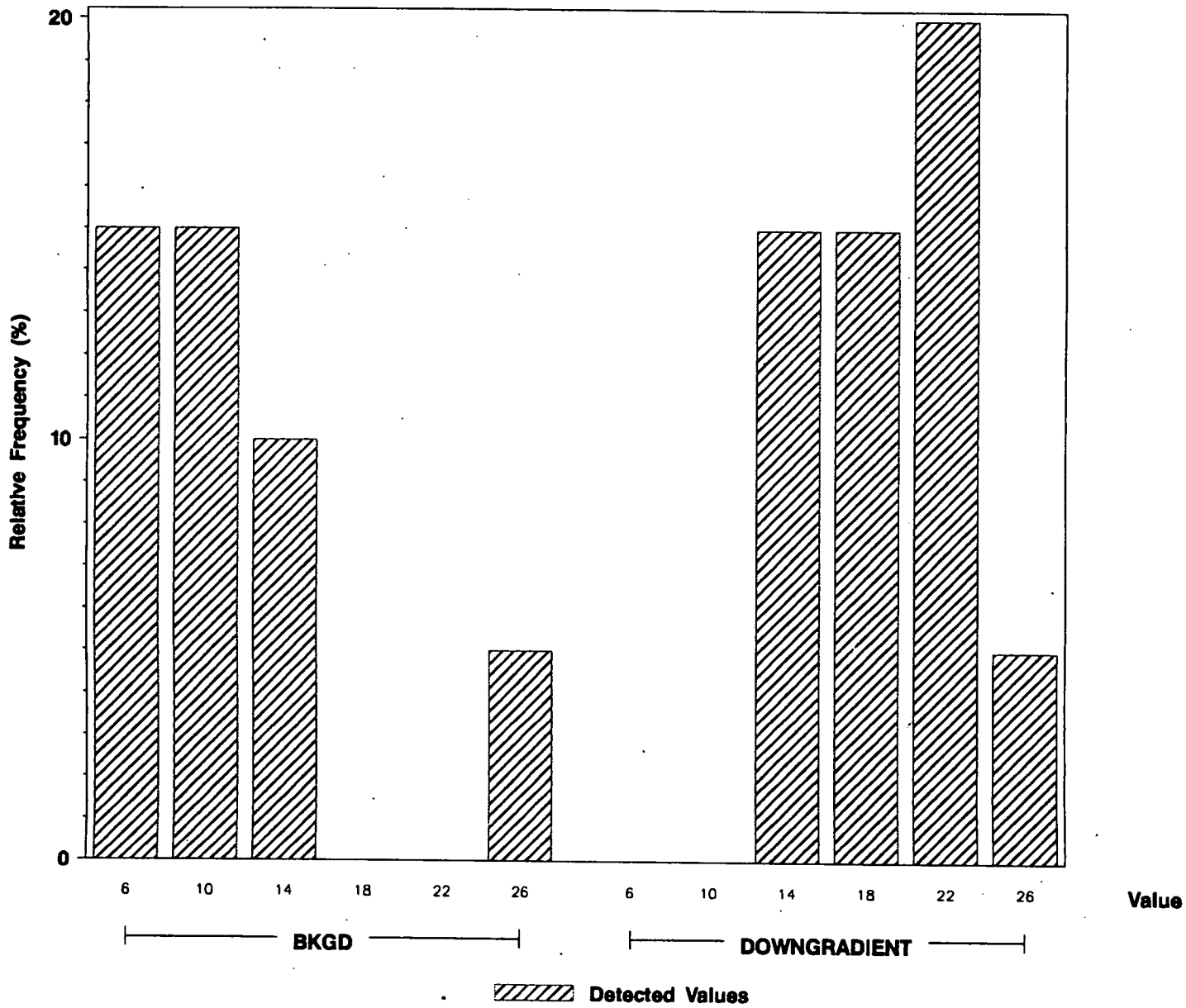
ANALYTE = COBALT



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## COPPER (mg\Kg) in Subsurface Geologic Materials

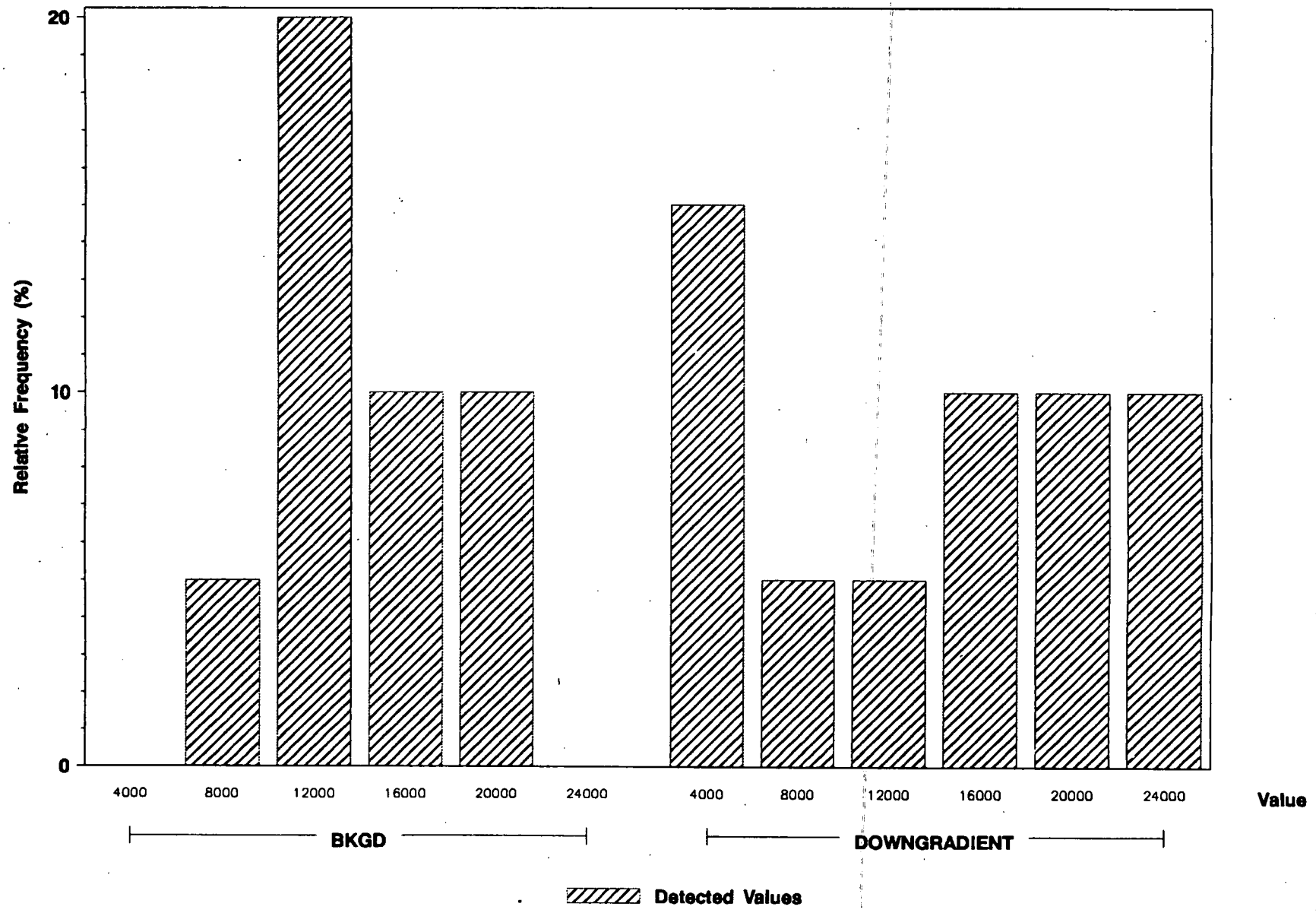
ANALYTE = COPPER



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## IRON (mg\Kg) in Subsurface Geologic Materials

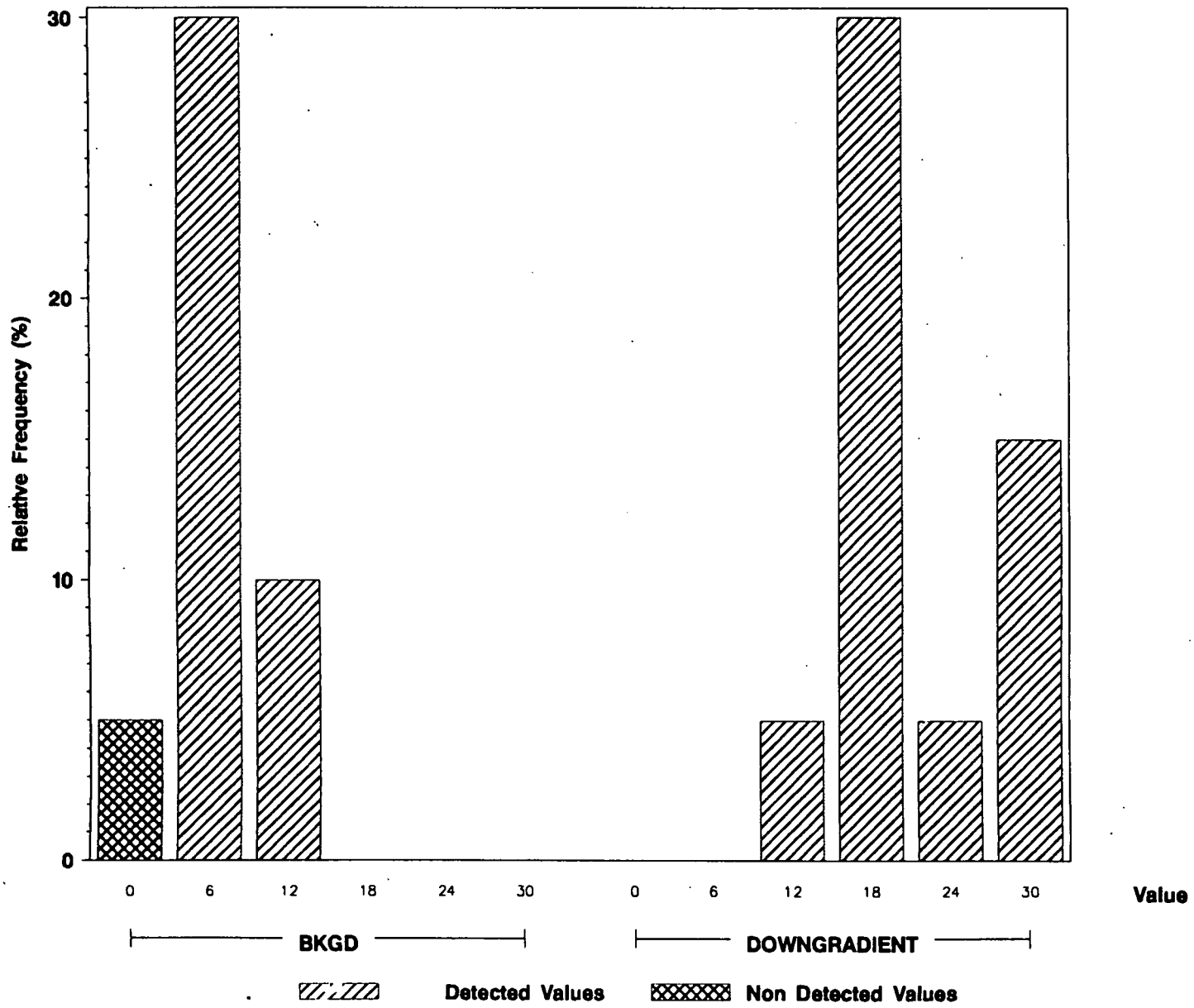
ANALYTE=IRON



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## LEAD (mg\Kg) in Subsurface Geologic Materials

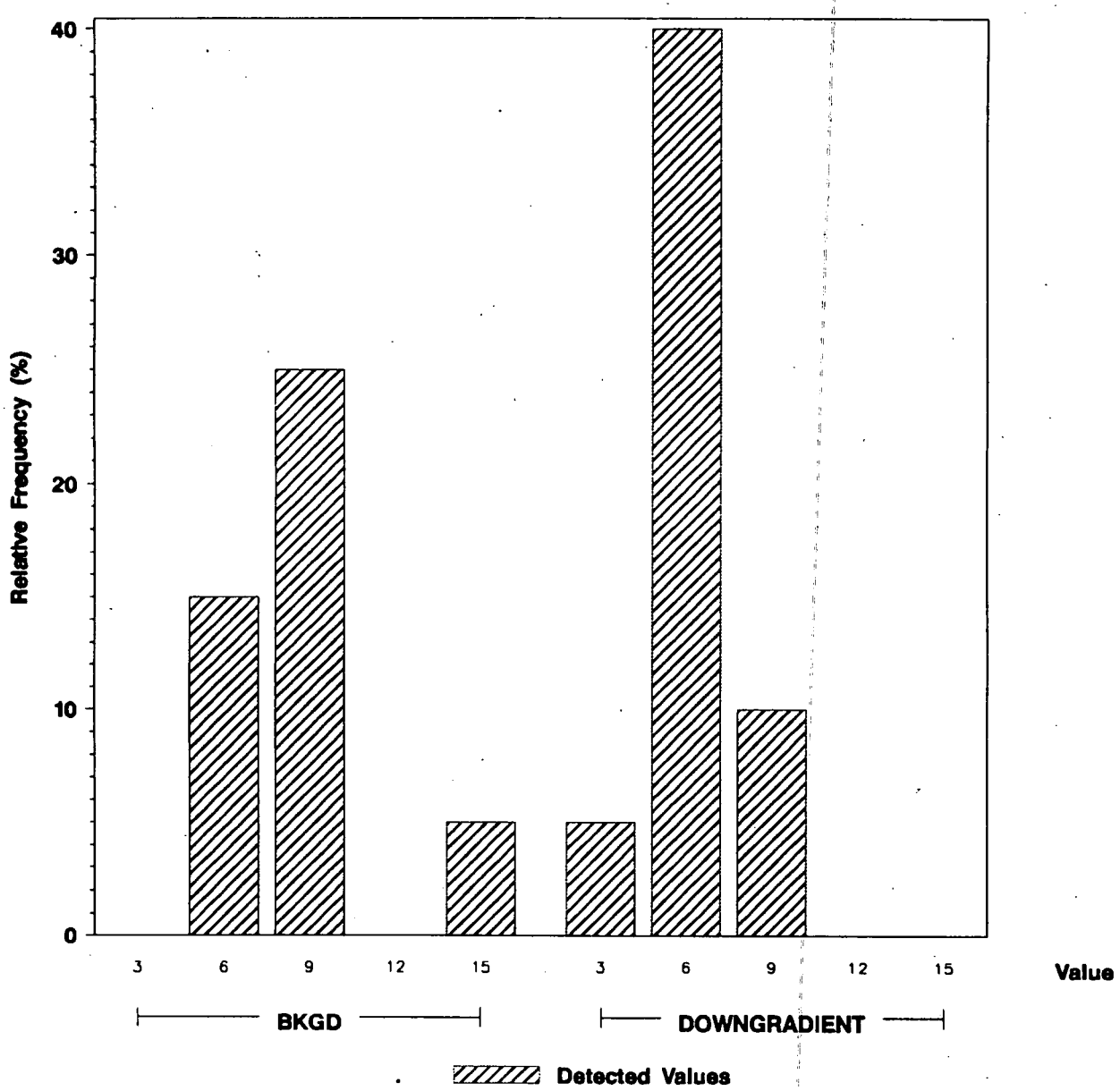
ANALYTE = LEAD



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## LITHIUM (mg\Kg) in Subsurface Geologic Materials

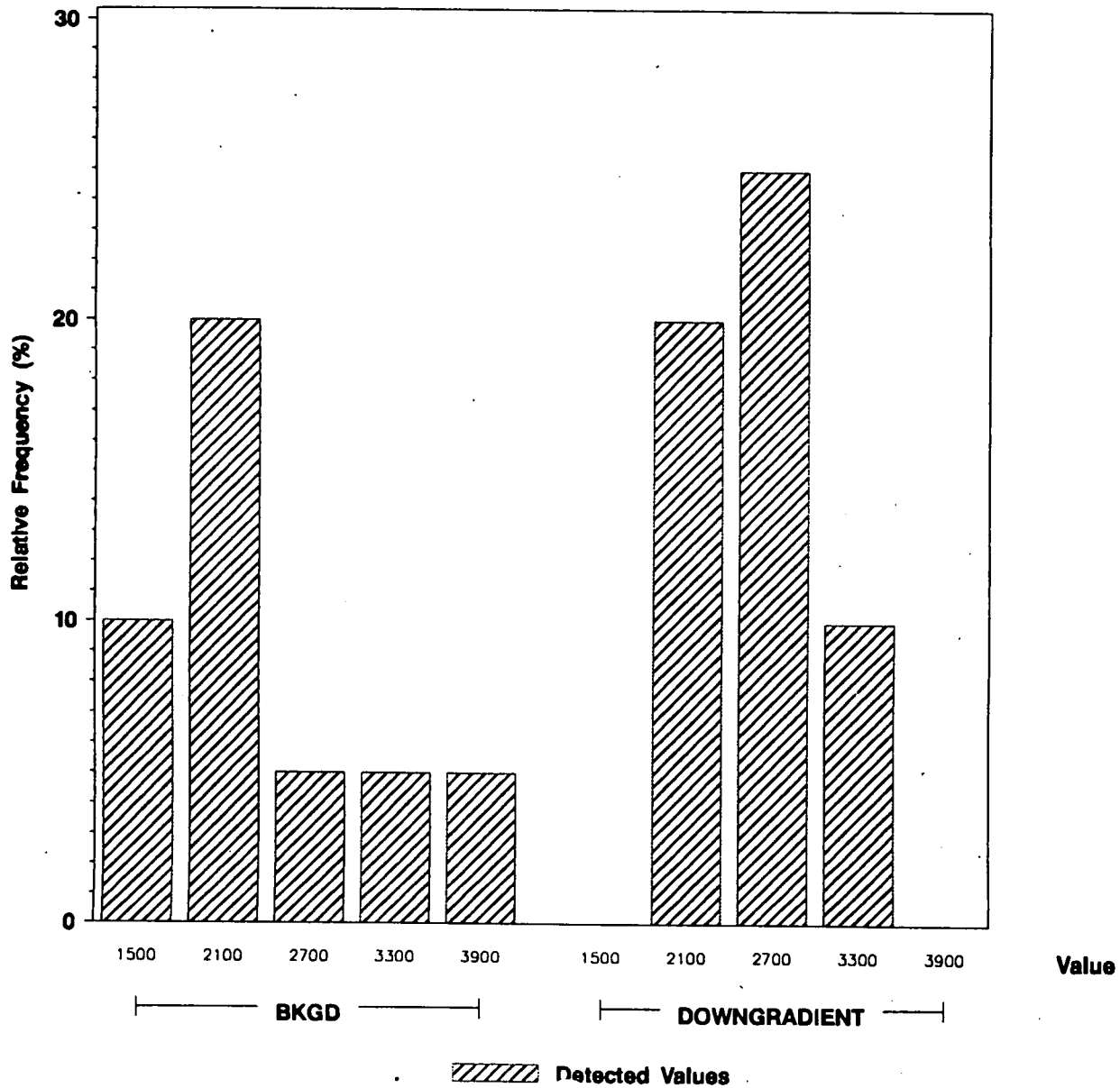
ANALYTE = LITHIUM



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## MAGNESIUM (mg\Kg) in Subsurface Geologic Materials

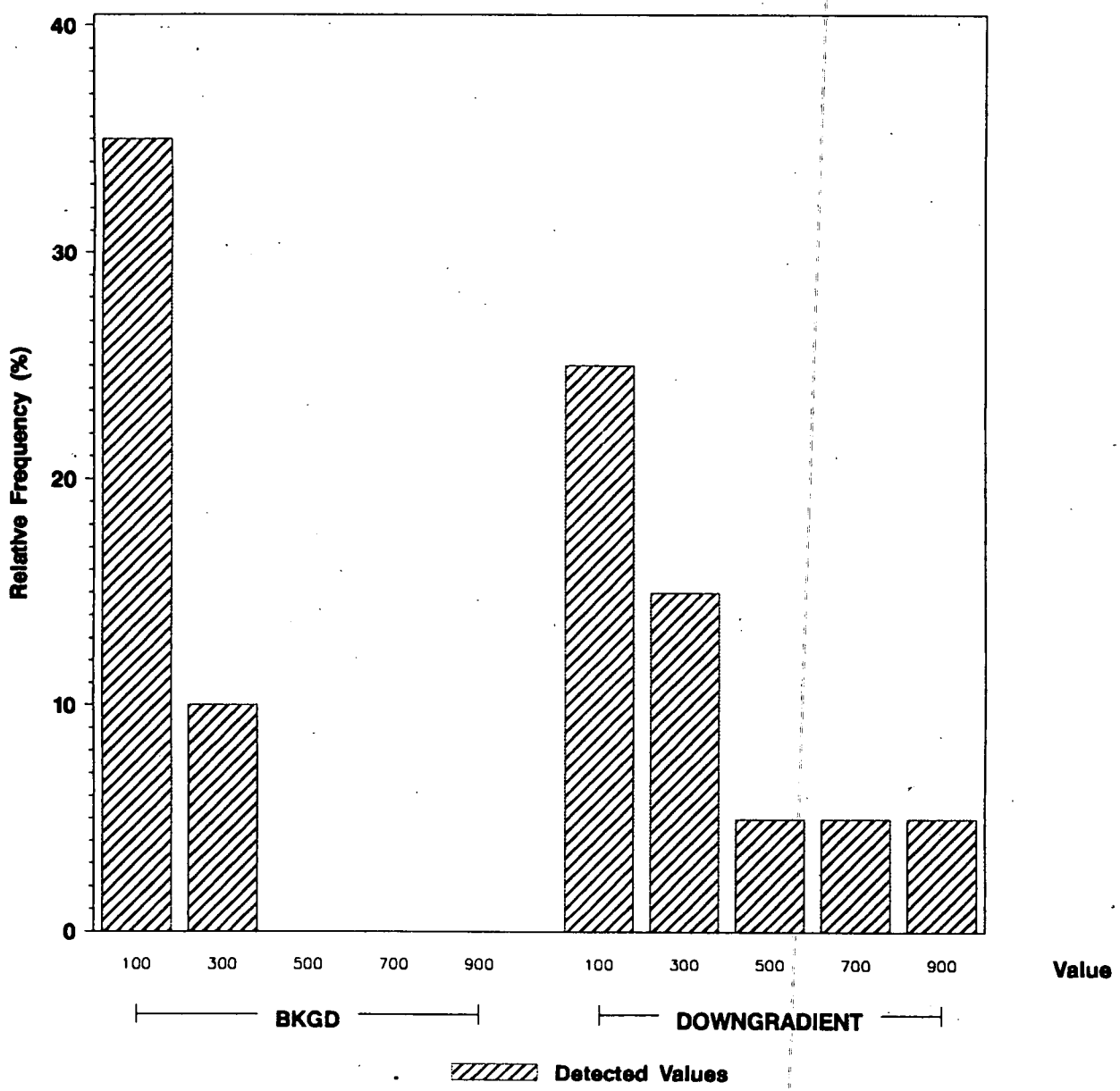
ANALYTE = MAGNESIUM



# Background KaKl-w vs OU7 KaKl-w Frequency Histogram

## MANGANESE (mg\Kg) in Subsurface Geologic Materials

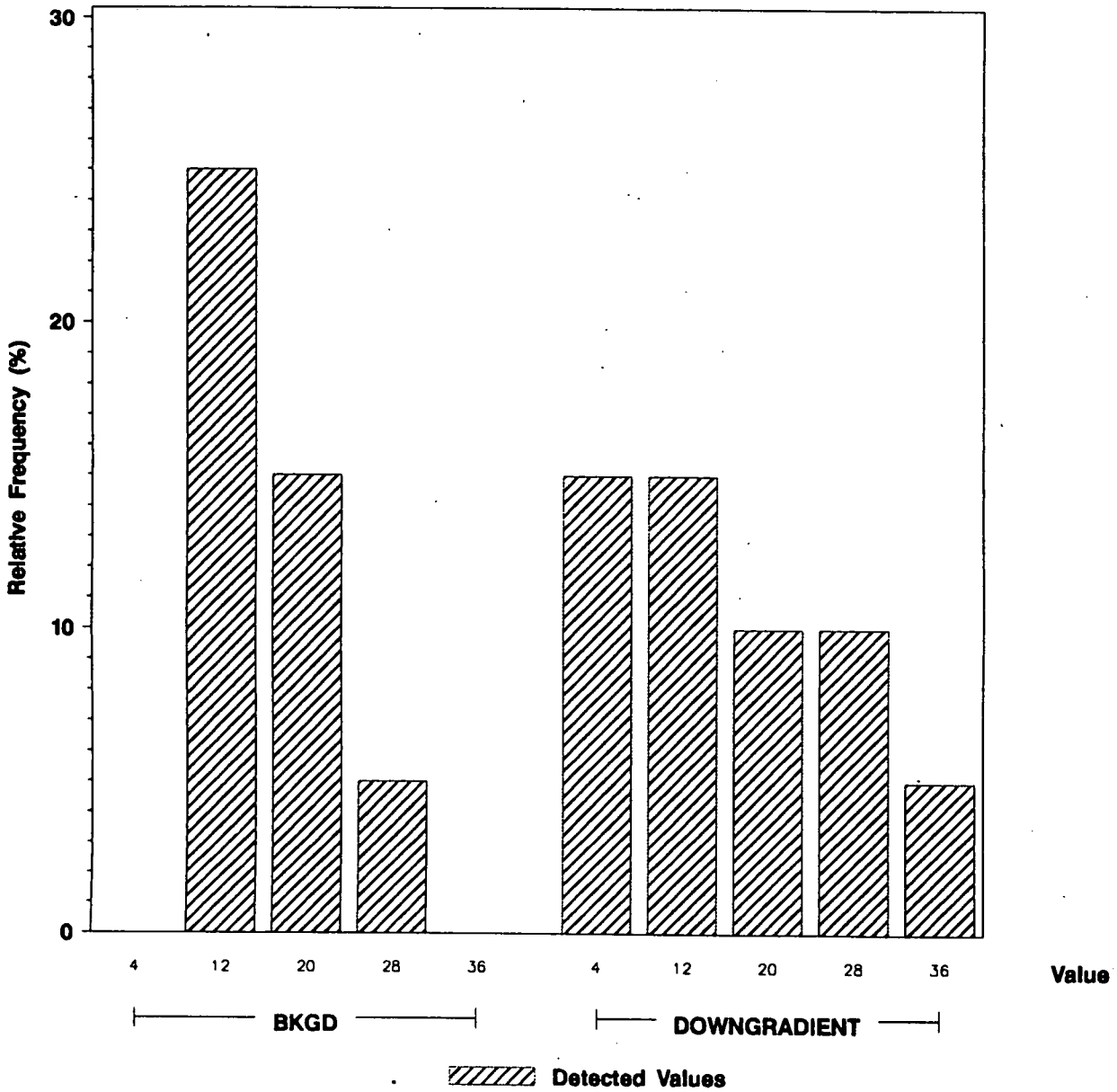
ANALYTE = MANGANESE



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## NICKEL (mg\Kg) in Subsurface Geologic Materials

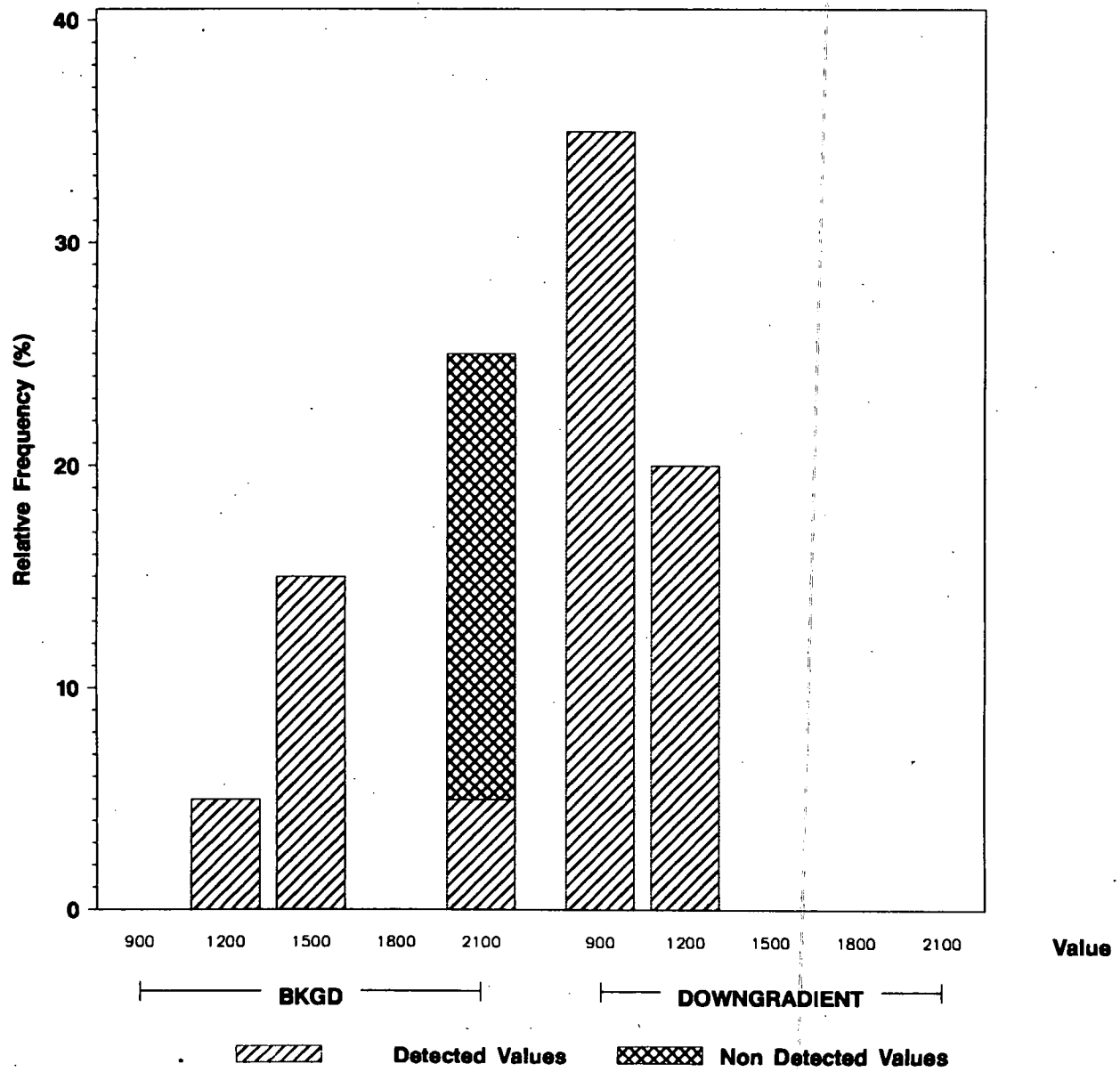
ANALYTE = NICKEL



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## POTASSIUM (mg\Kg) in Subsurface Geologic Materials

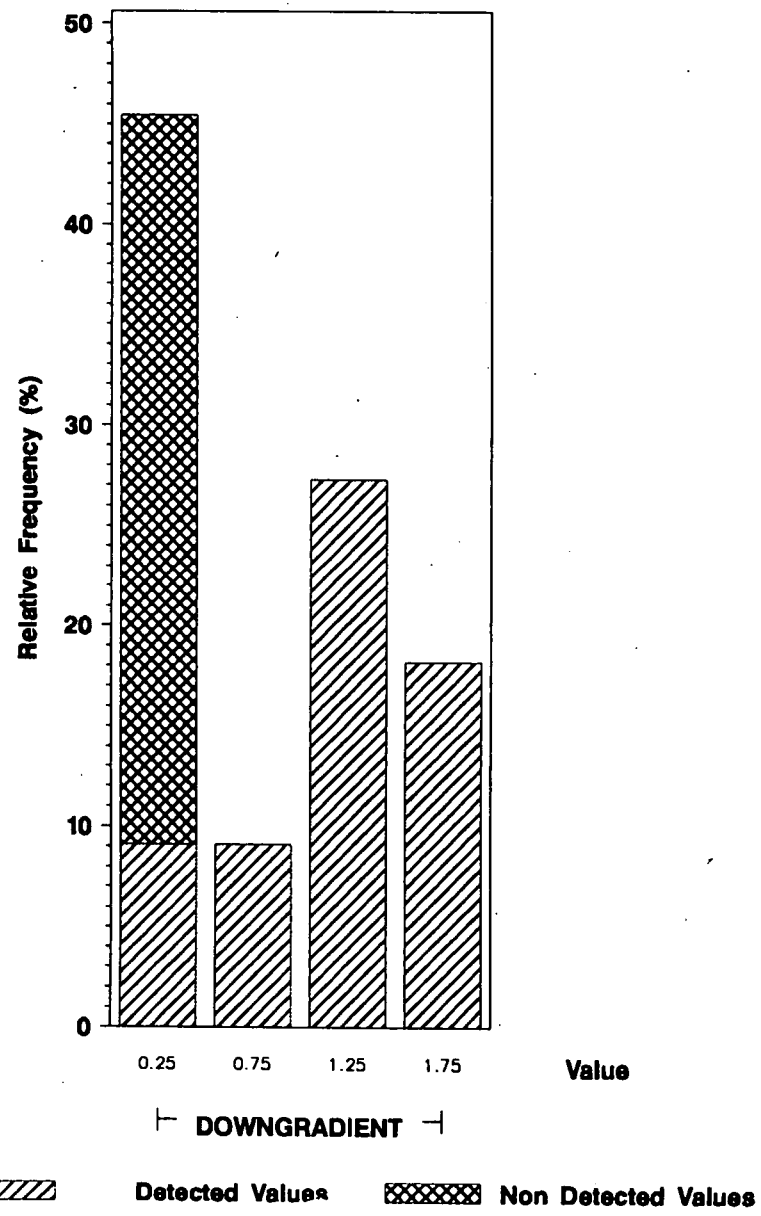
ANALYTE = POTASSIUM



# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## SELENIUM (mg\Kg) in Subsurface Geologic Materials

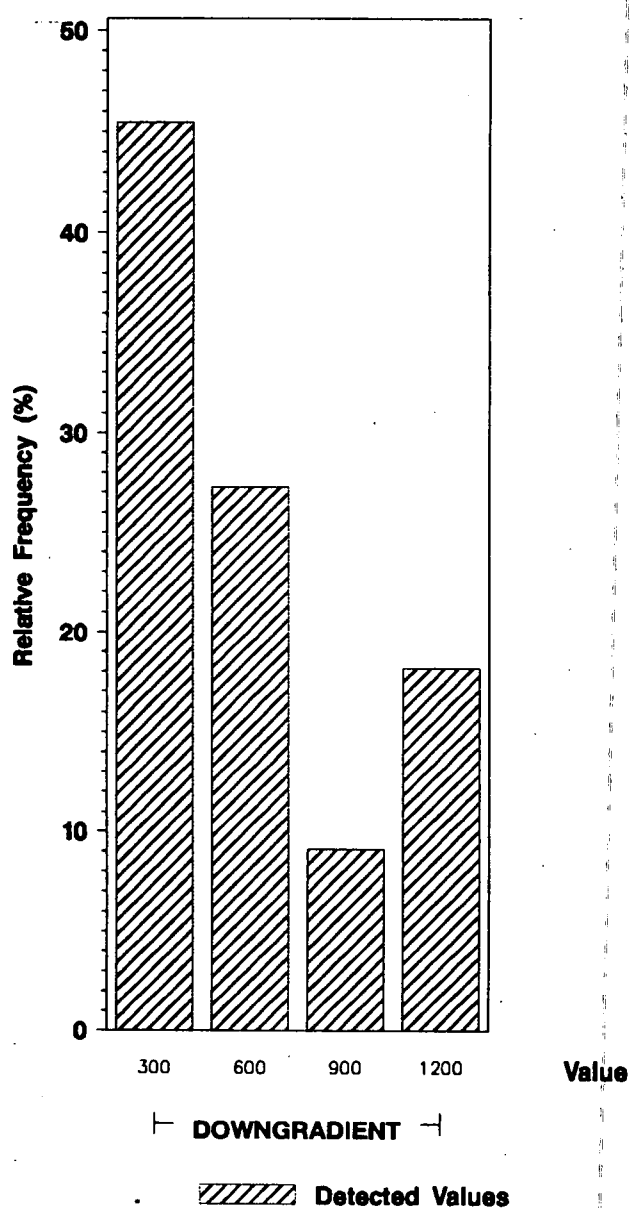
ANALYTE = SELENIUM



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## SILICON (mg\Kg) in Subsurface Geologic Materials

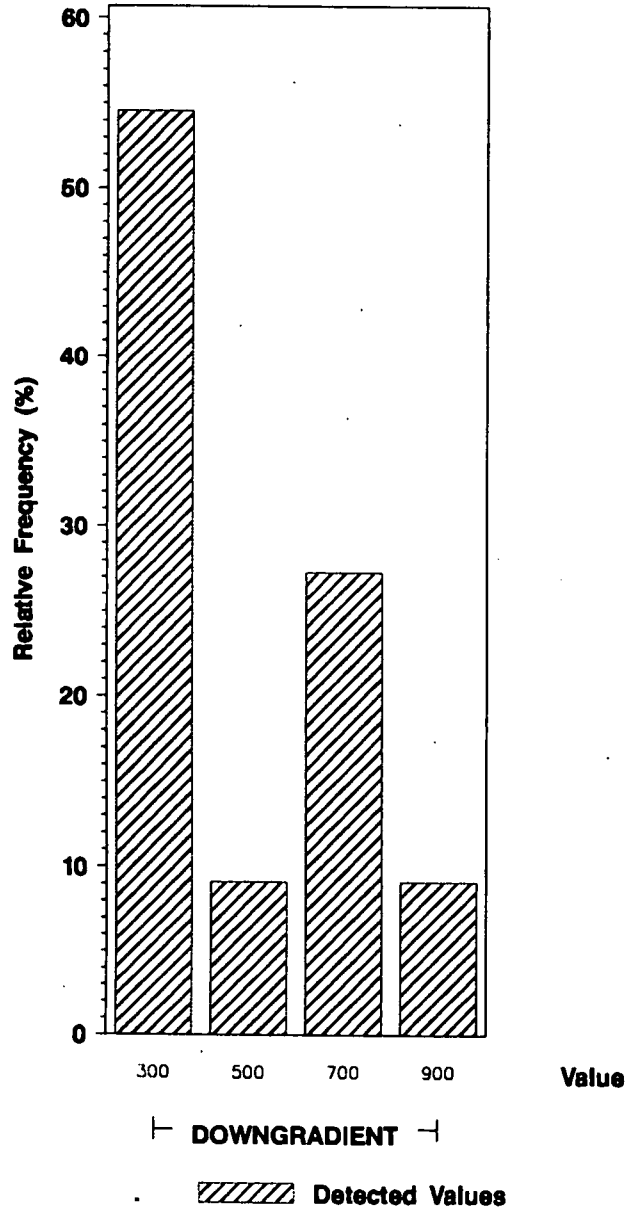
ANALYTE = SILICON



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## SODIUM (mg\Kg) in Subsurface Geologic Materials

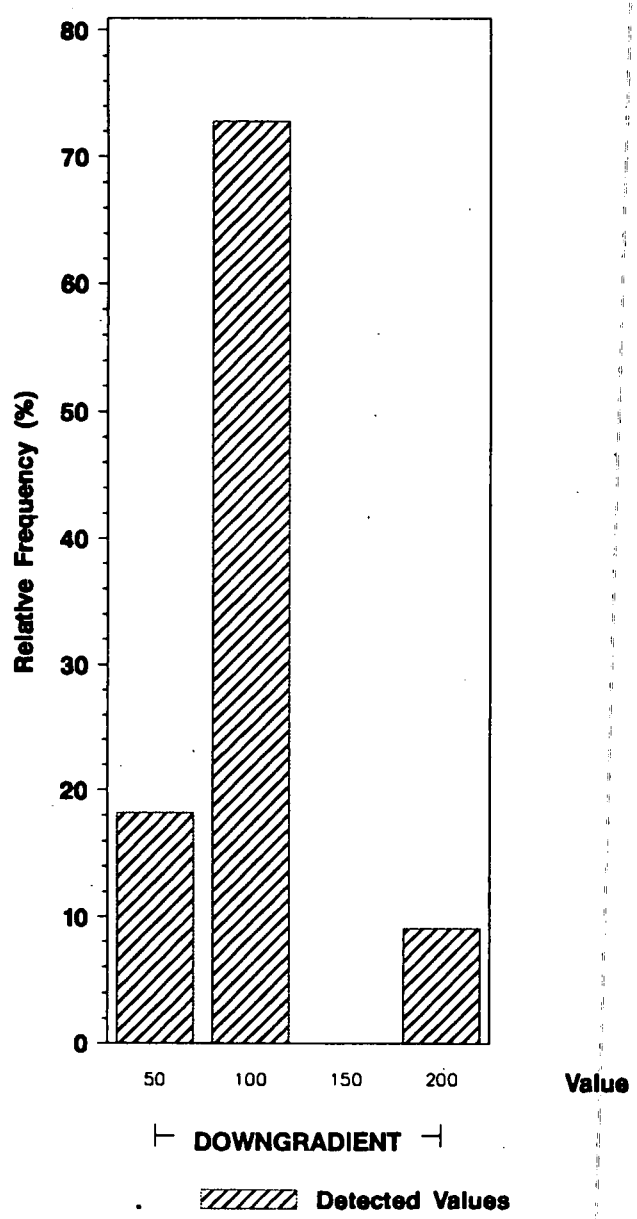
ANALYTE = SODIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## STRONTIUM (mg\Kg) in Subsurface Geologic Materials

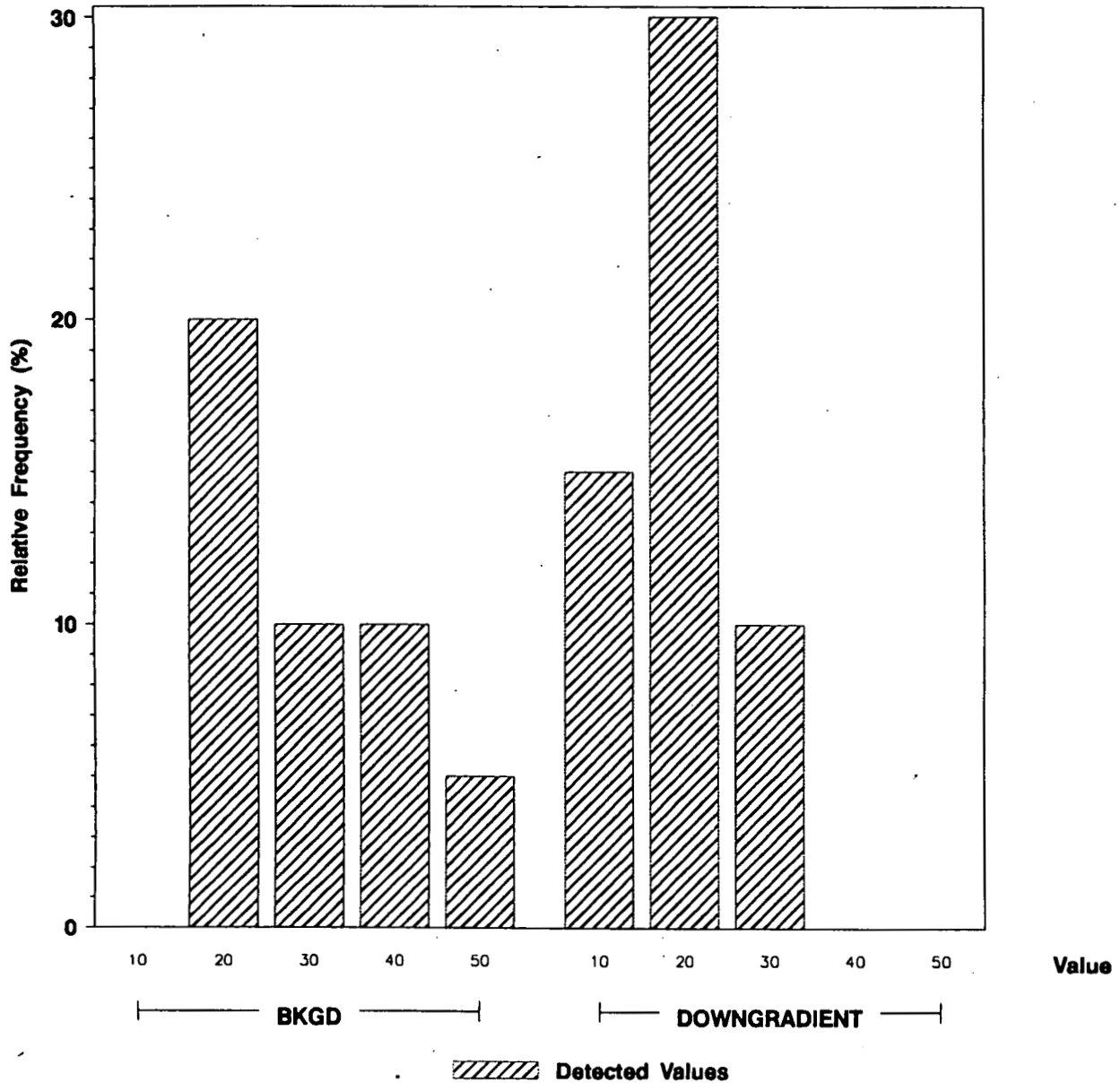
ANALYTE = STRONTIUM



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## VANADIUM (mg\Kg) in Subsurface Geologic Materials

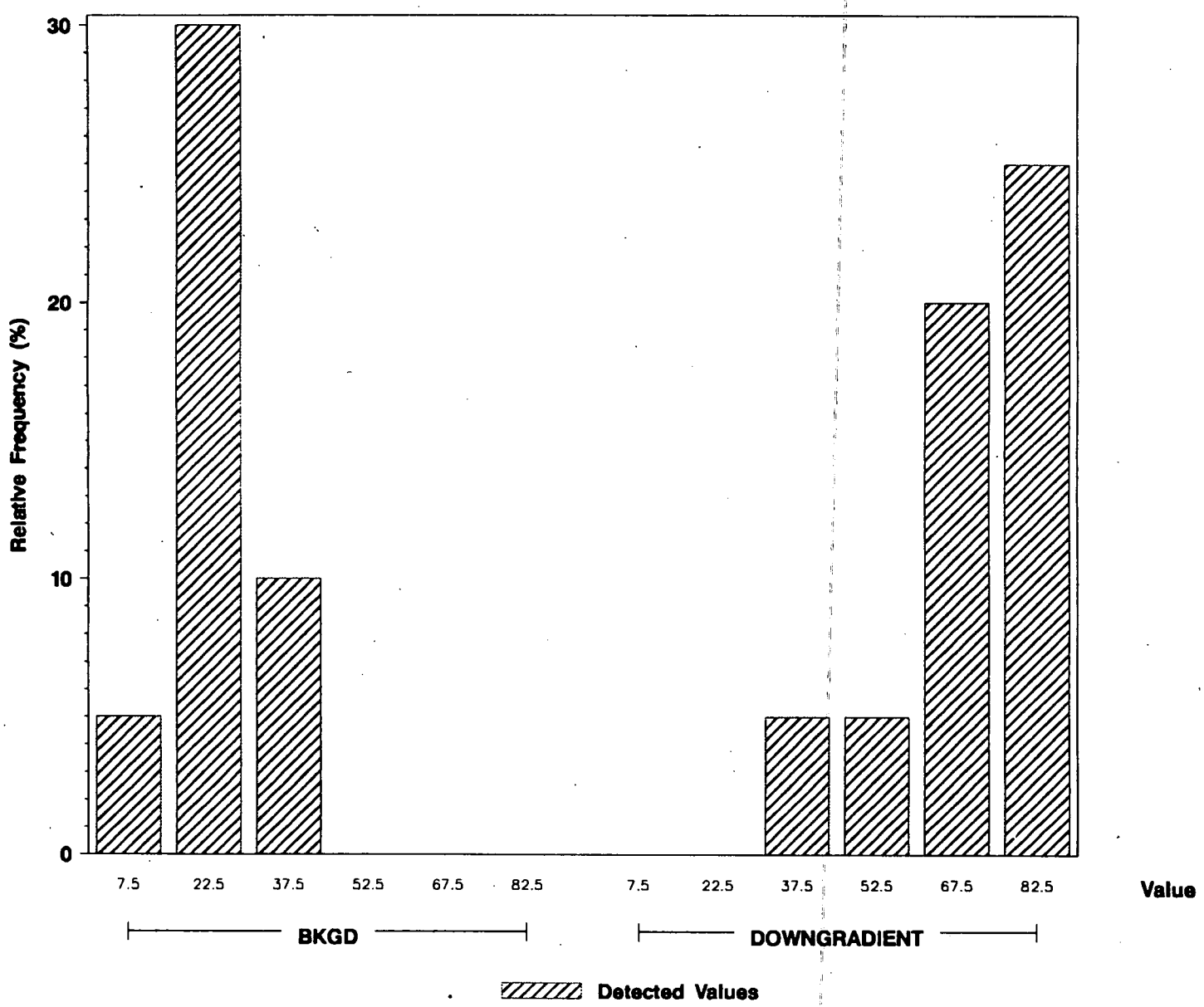
ANALYTE = VANADIUM



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## ZINC (mg\Kg) in Subsurface Geologic Materials

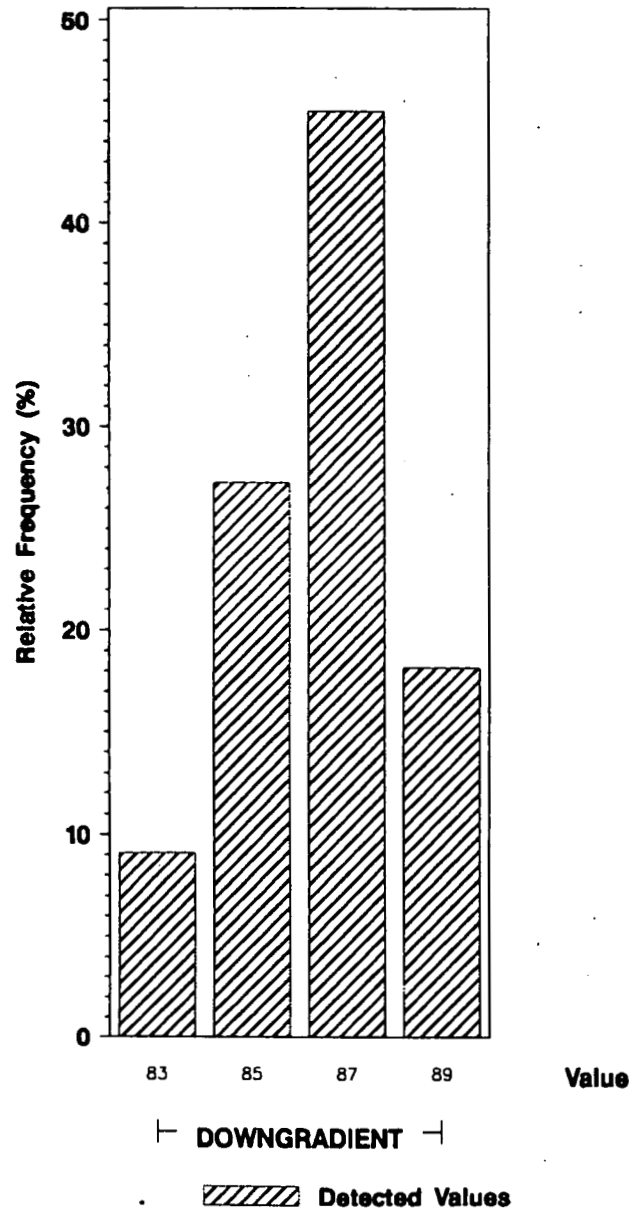
ANALYTE=ZINC



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## % SOLIDS (%) in Subsurface Geologic Materials

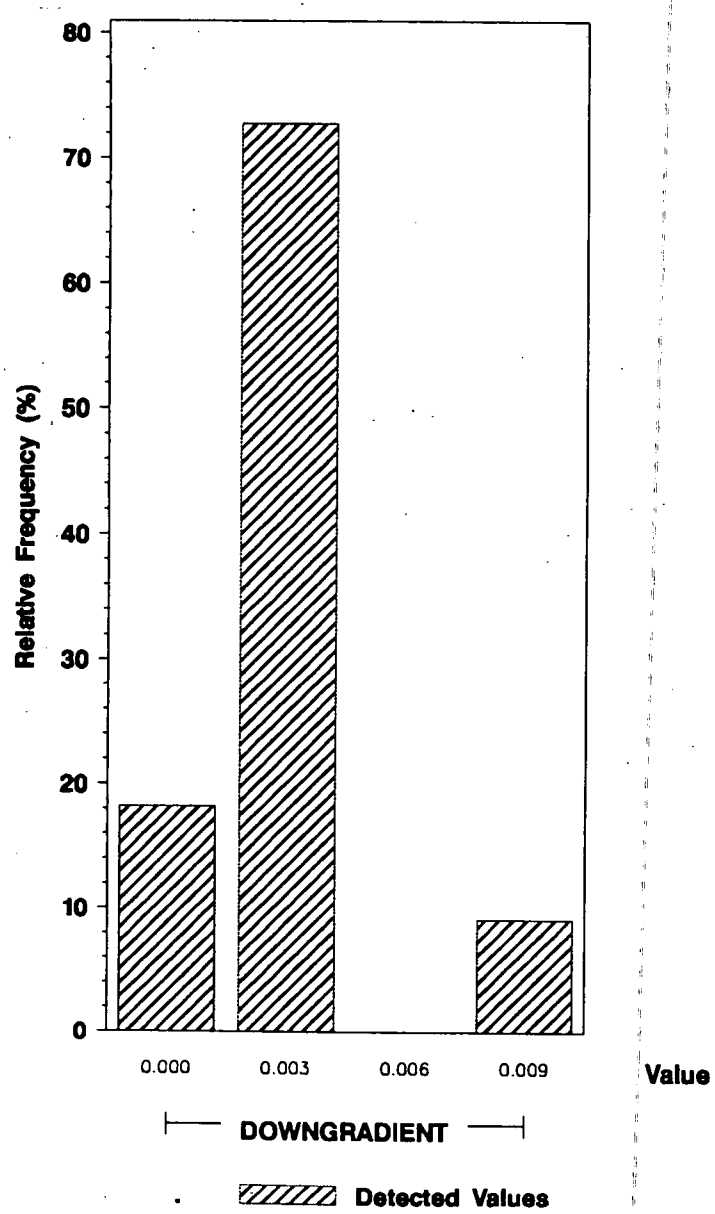
ANALYTE = % SOLIDS



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Subsurface Geologic Materials

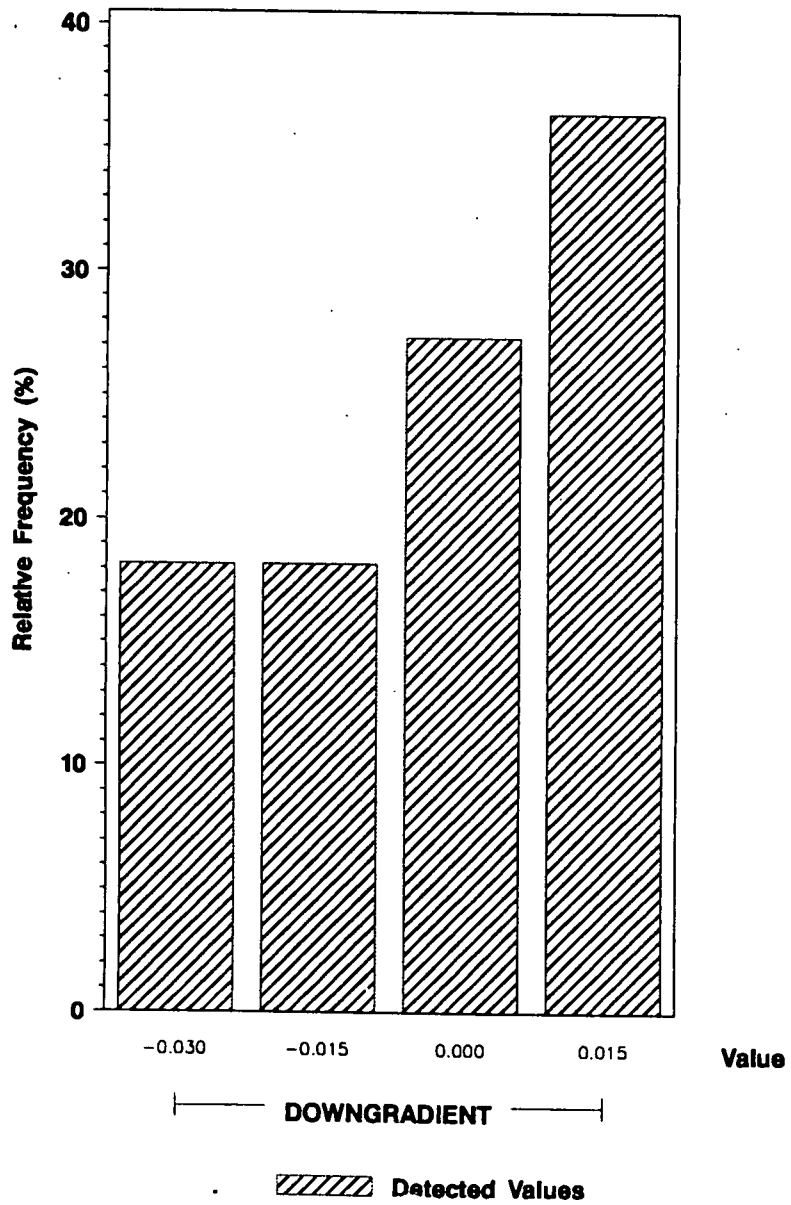
ANALYTE = AMERICIUM – 241



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## CESIUM – 137 (pCi/g) in Subsurface Geologic Materials

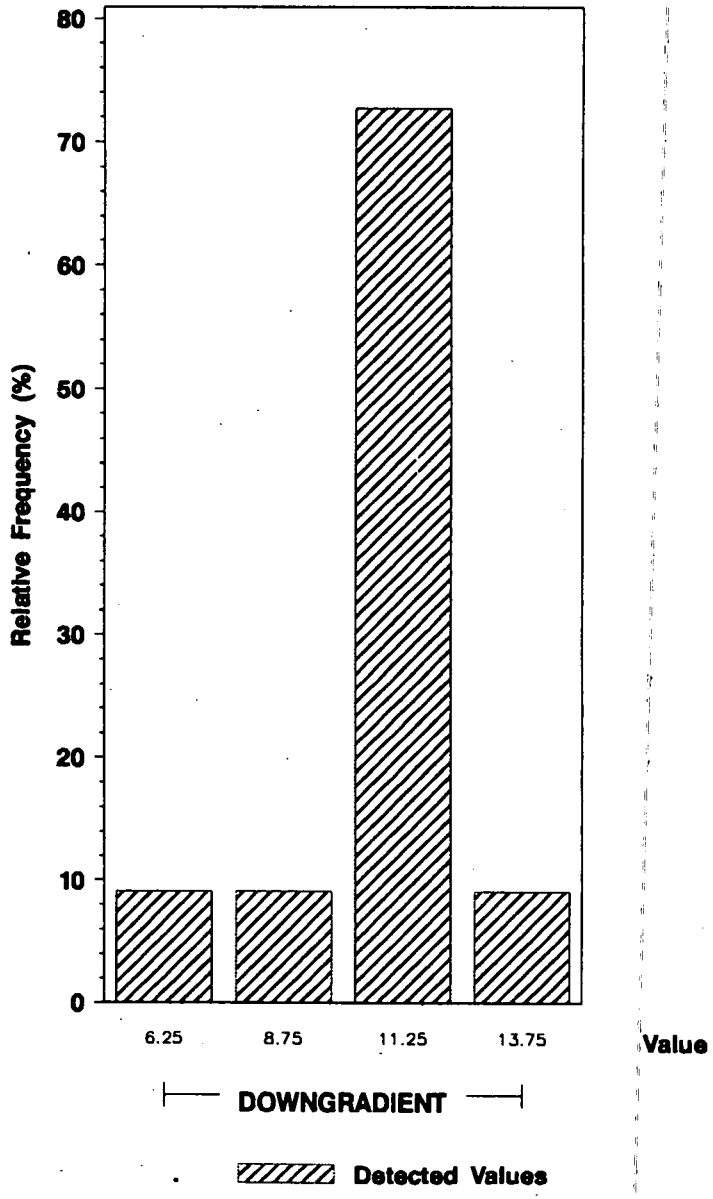
ANALYTE = CESIUM – 137



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## GROSS ALPHA (pCi/g) in Subsurface Geologic Materials

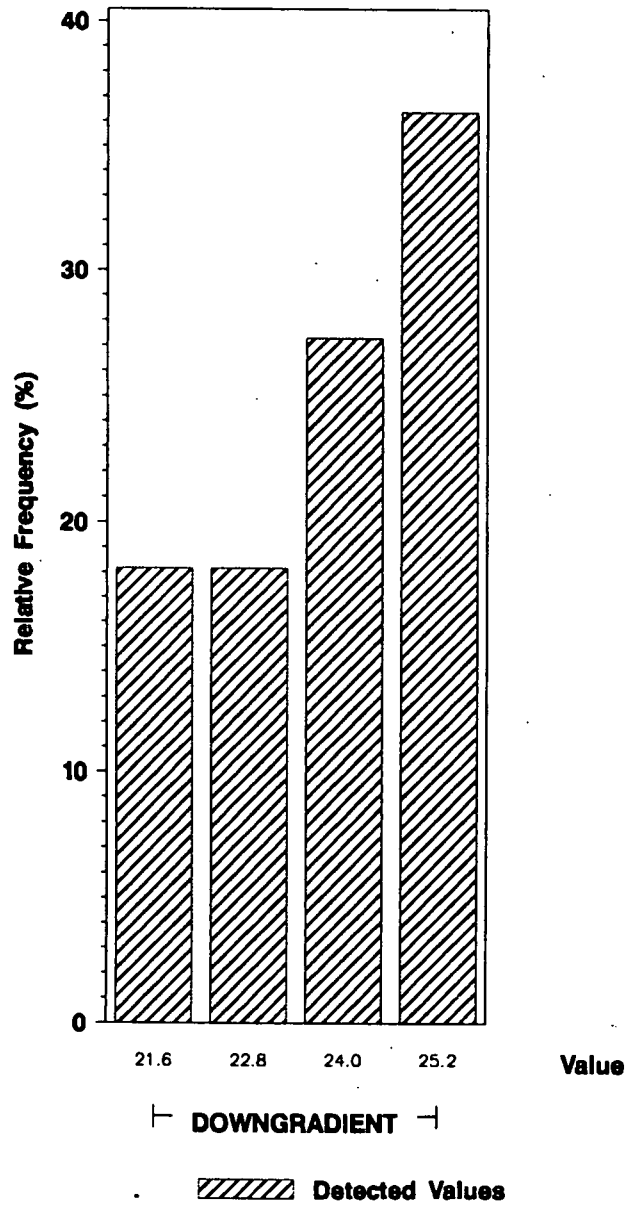
ANALYTE = GROSS ALPHA



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## GROSS BETA (pCi/g) in Subsurface Geologic Materials

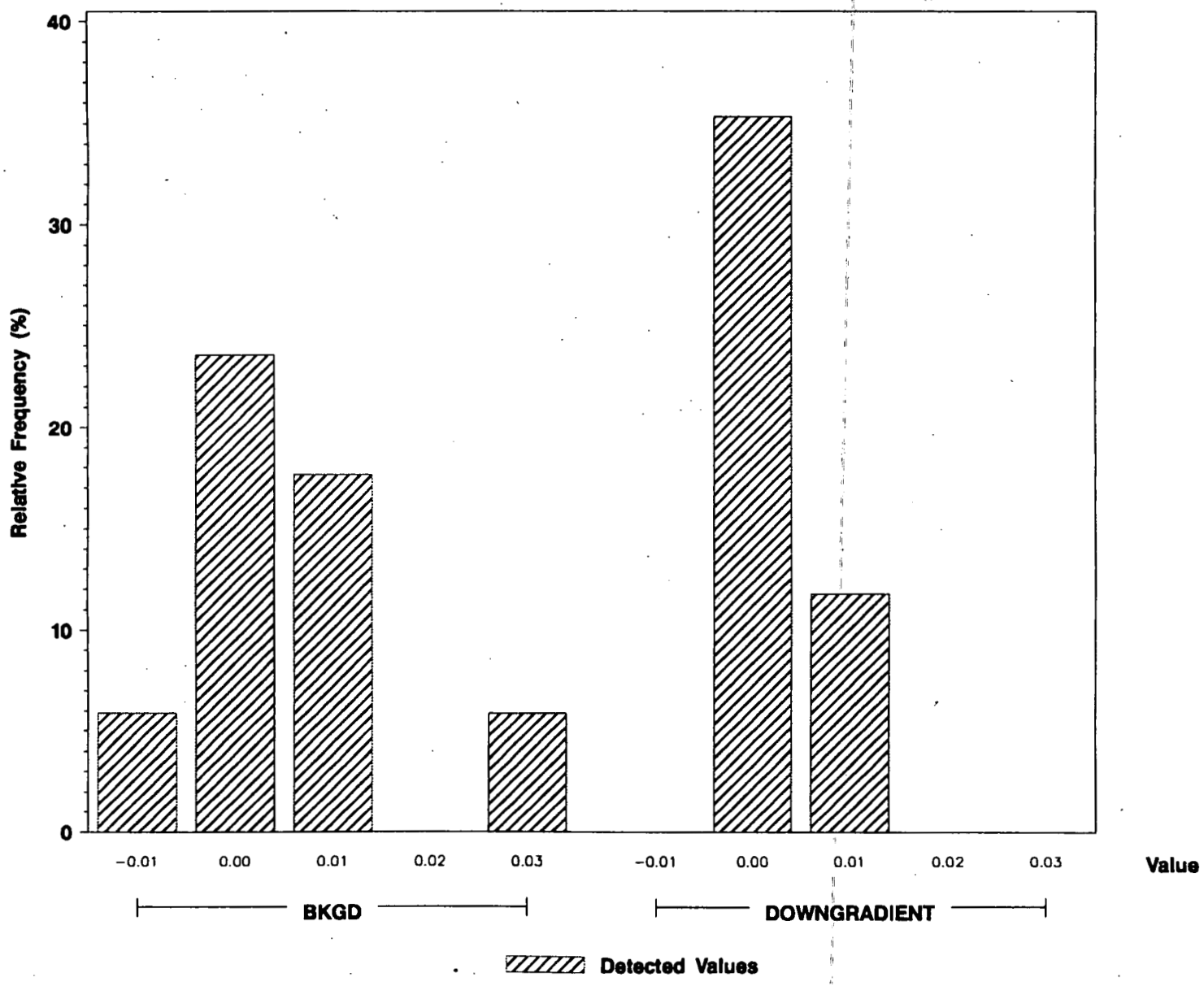
ANALYTE = GROSS BETA



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## PLUTONIUM – 239,240 (pCi/g) In Subsurface Geologic Materials

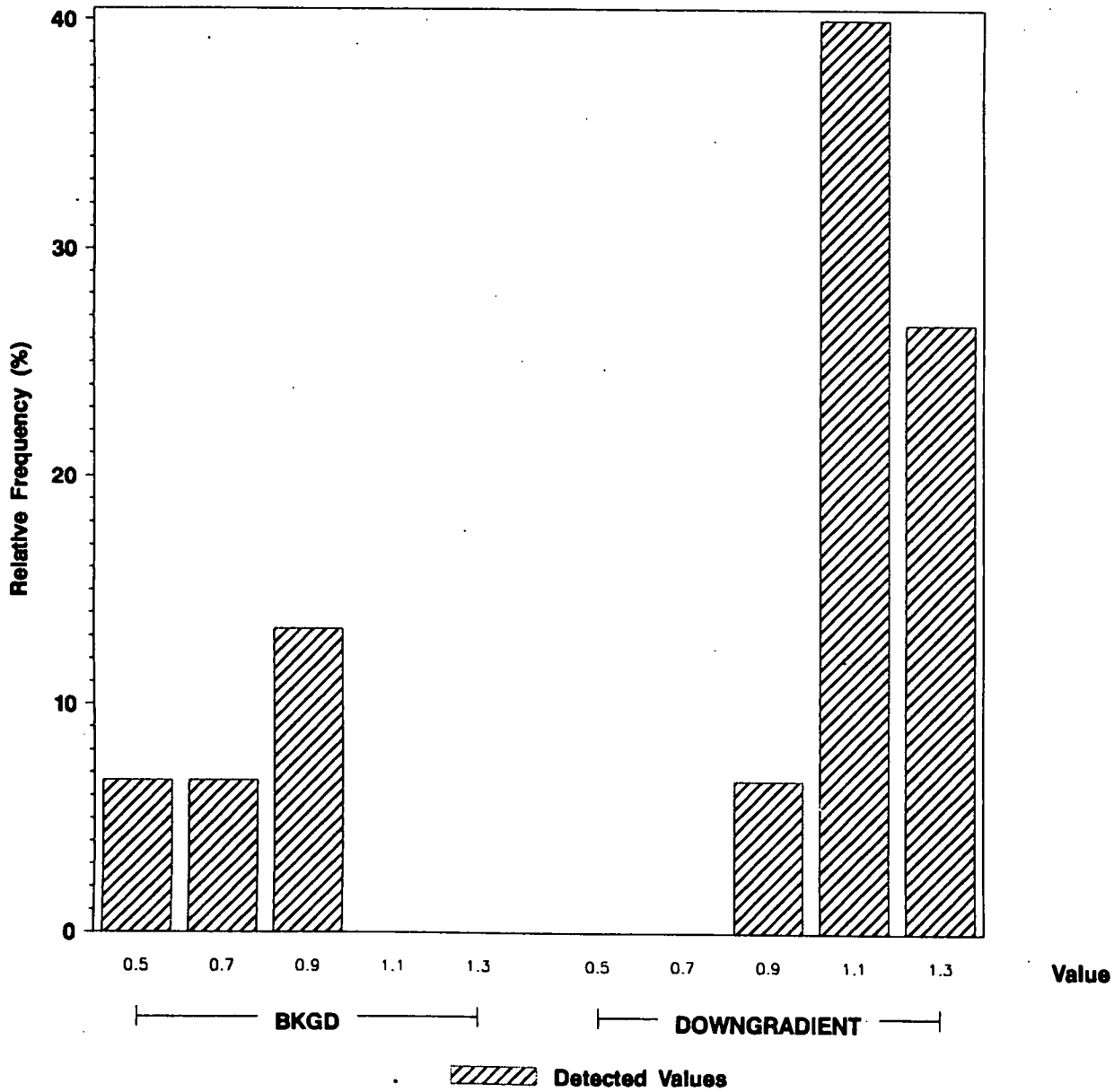
ANALYTE = PLUTONIUM – 239,240



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## RADIUM – 226 (pCi/g) in Subsurface Geologic Materials

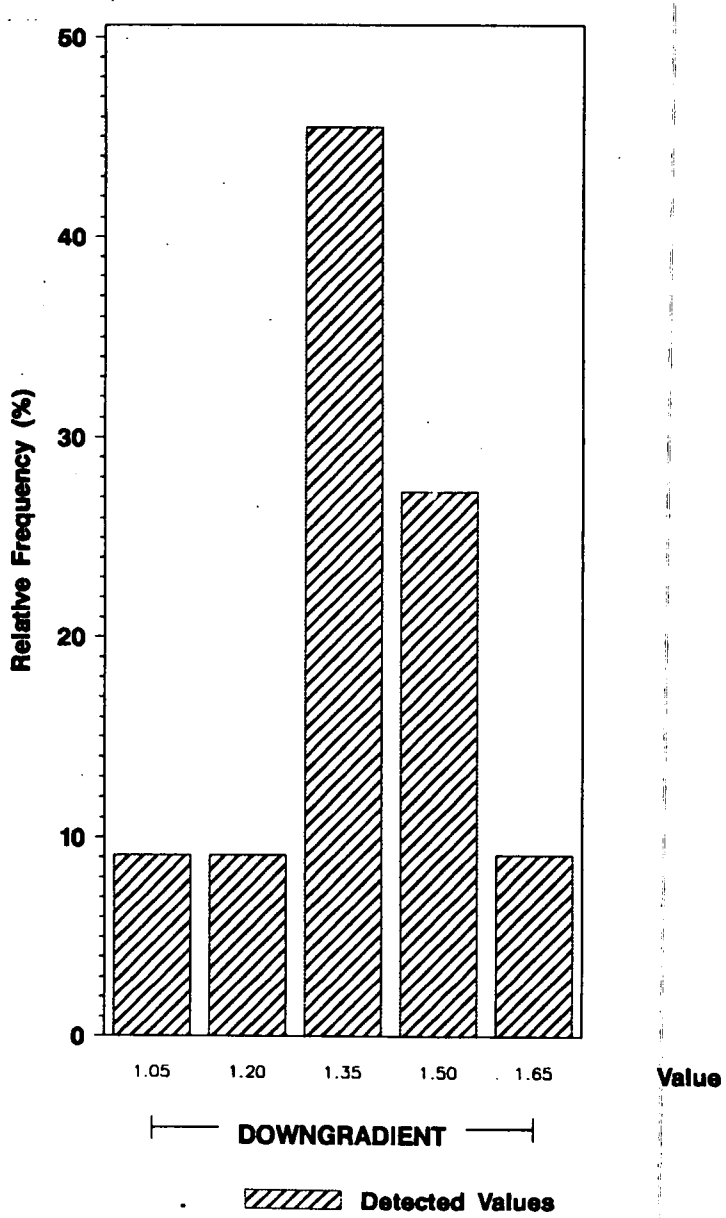
ANALYTE = RADIUM – 226



# Background KaKI-w vs OU7 KaKI-w Frequency Histogram

## RADIUM-228 (pCi/g) in Subsurface Geologic Materials

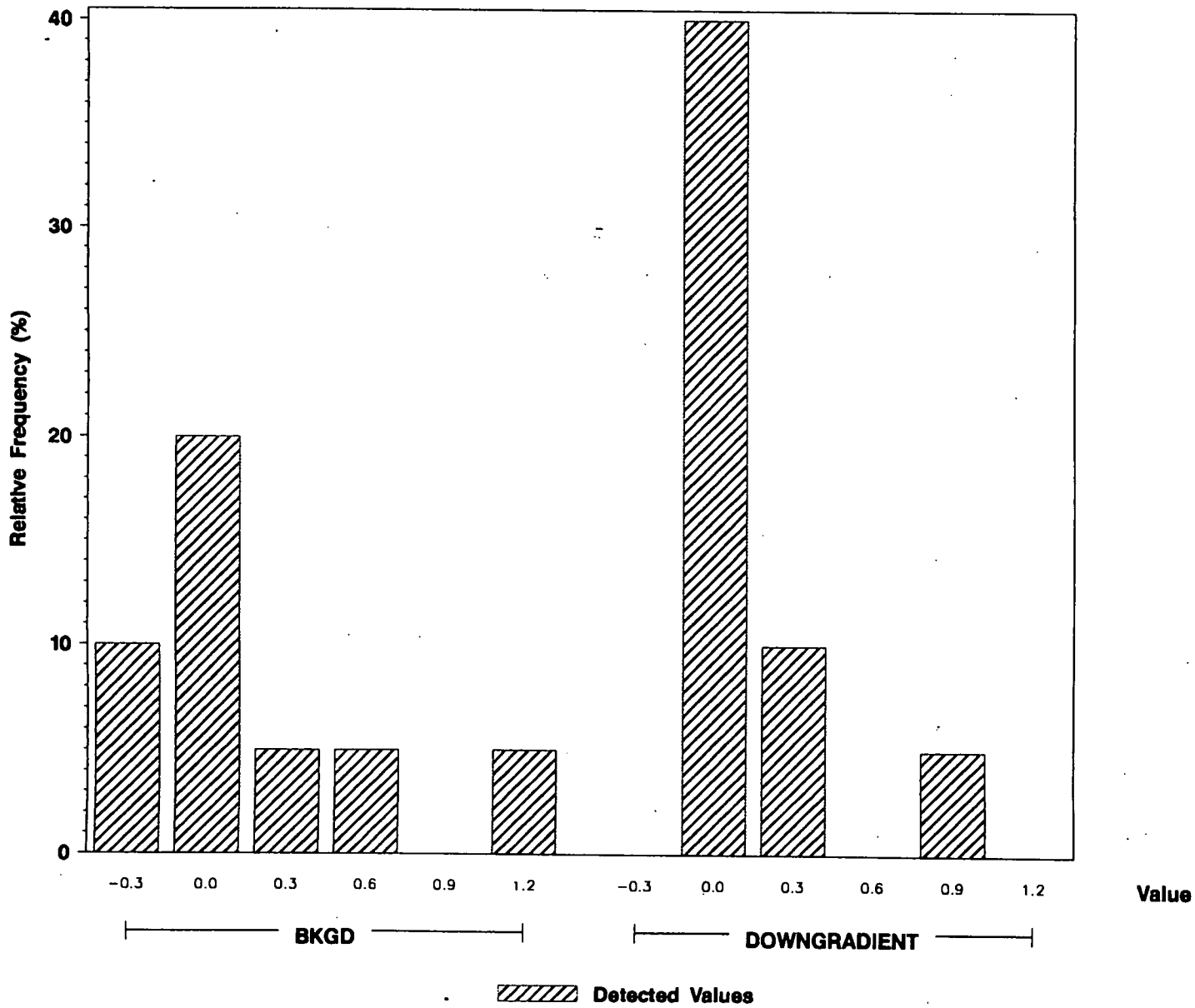
ANALYTE = RADIUM-228



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Subsurface Geologic Materials

ANALYTE = STRONTIUM – 89,90



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

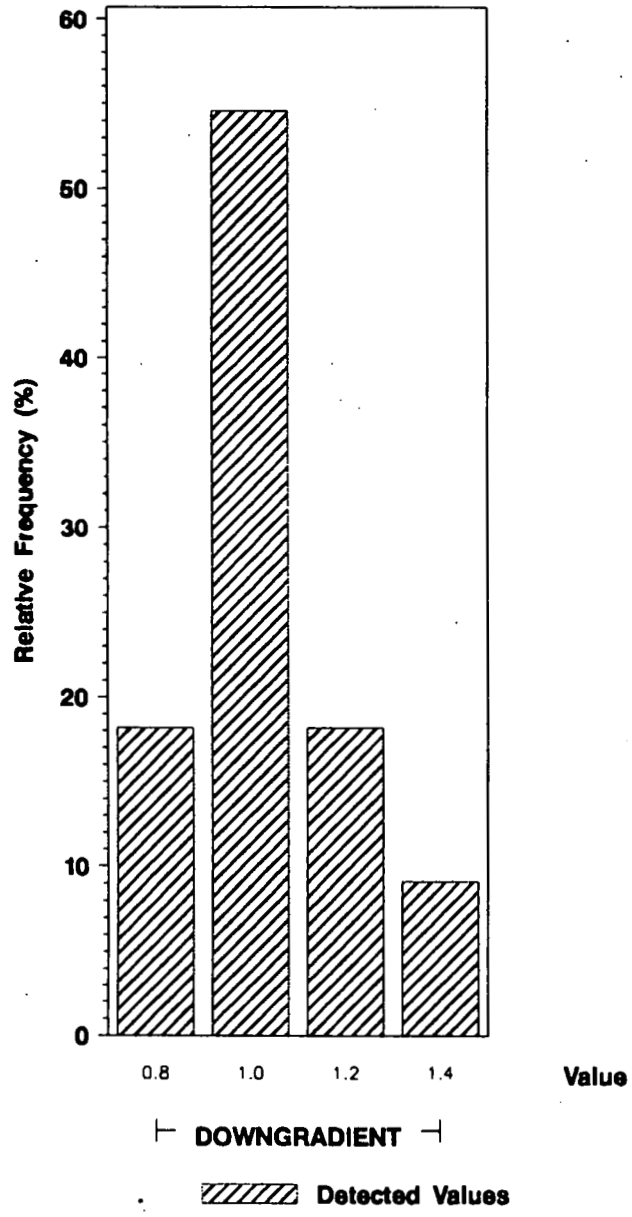
## TRITIUM (pCi/L) in Subsurface Geologic Materials

ANALYTE = TRITIUM

# Background KaKl – w vs OU7 KaKl – w Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Subsurface Geologic Materials

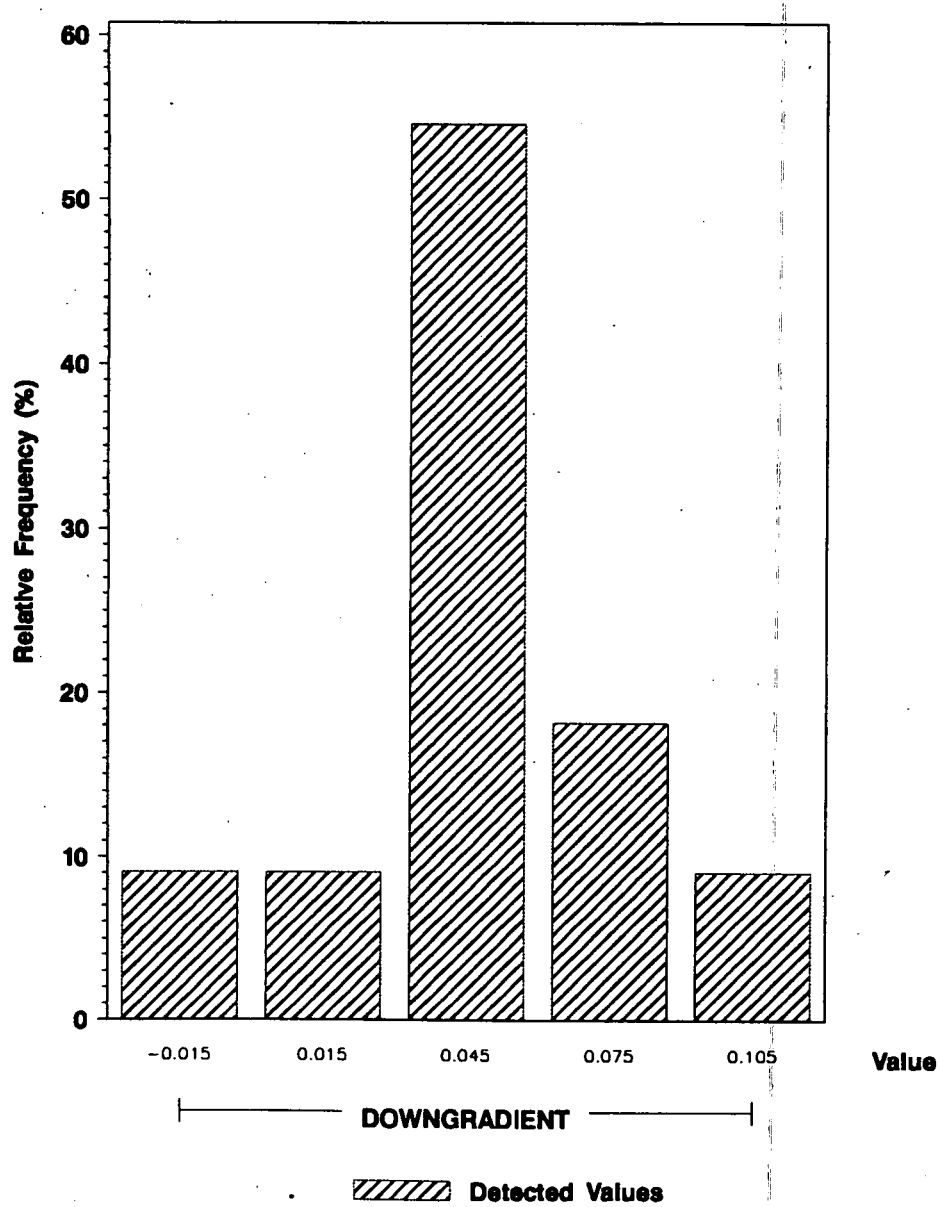
ANALYTE = URANIUM – 233, – 234



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## URANIUM – 235 (pCi/g) in Subsurface Geologic Materials

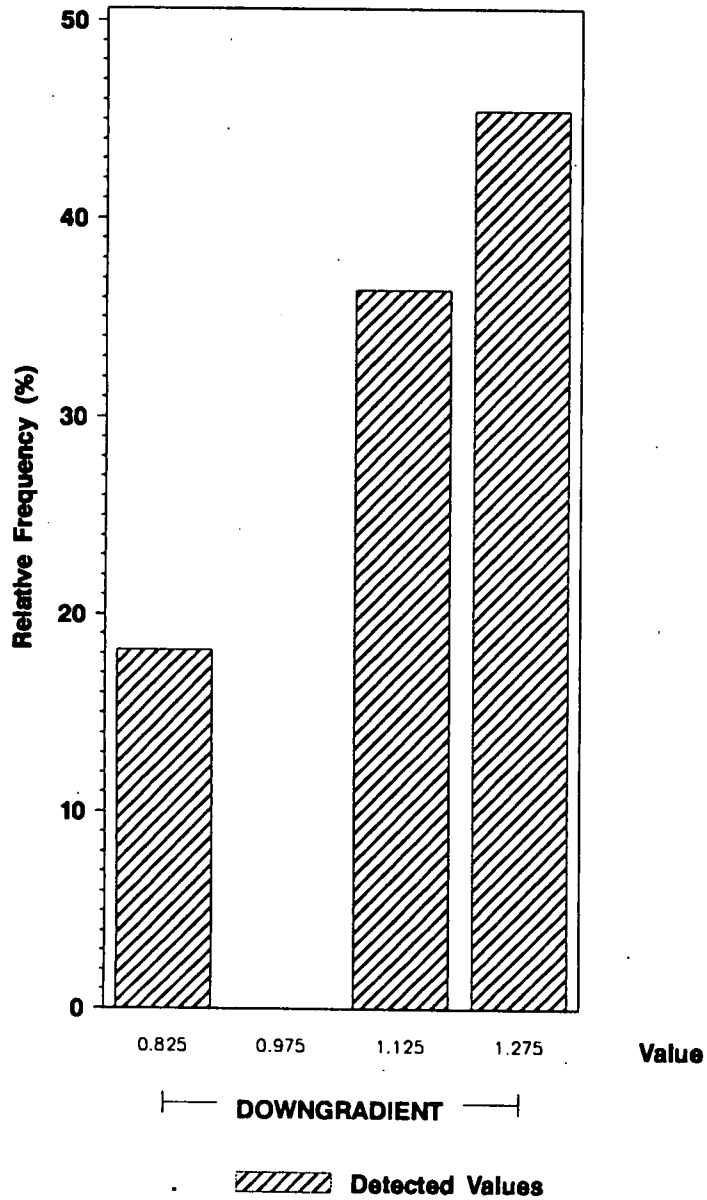
ANALYTE = URANIUM – 235



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## URANIUM – 238 (pCi/g) in Subsurface Geologic Materials

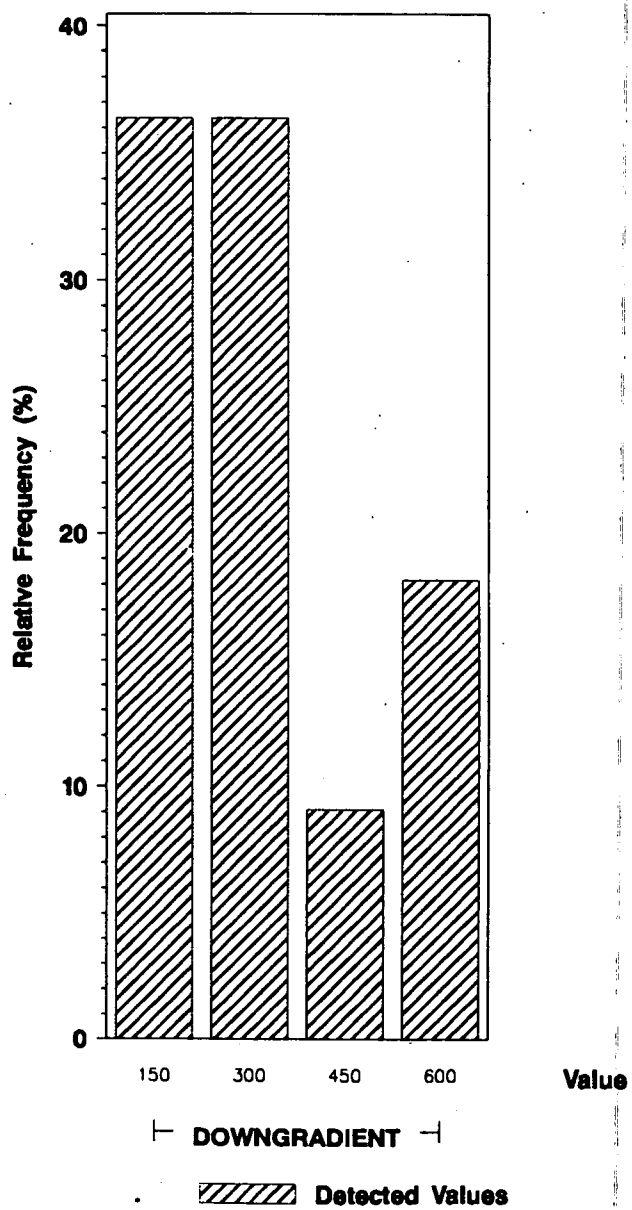
ANALYTE = URANIUM – 238



# Background KaKI – w vs OU7 KaKI – w Frequency Histogram

## TOLUENE (ug/Kg) in Subsurface Geologic Materials

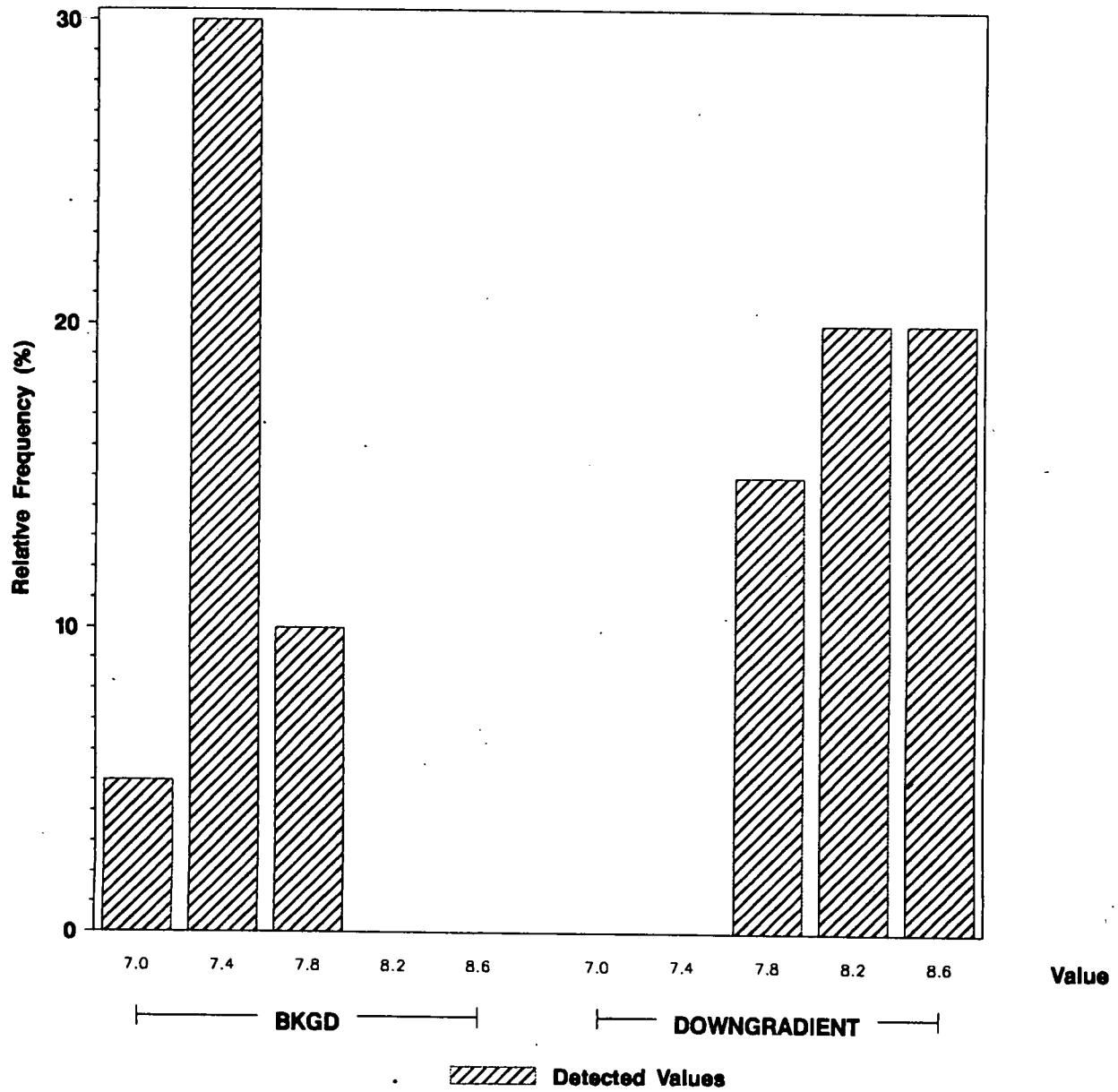
ANALYTE = TOLUENE



# Background KaKl−w vs OU7 KaKl−w Frequency Histogram

## pH in Subsurface Geologic Materials

ANALYTE = pH



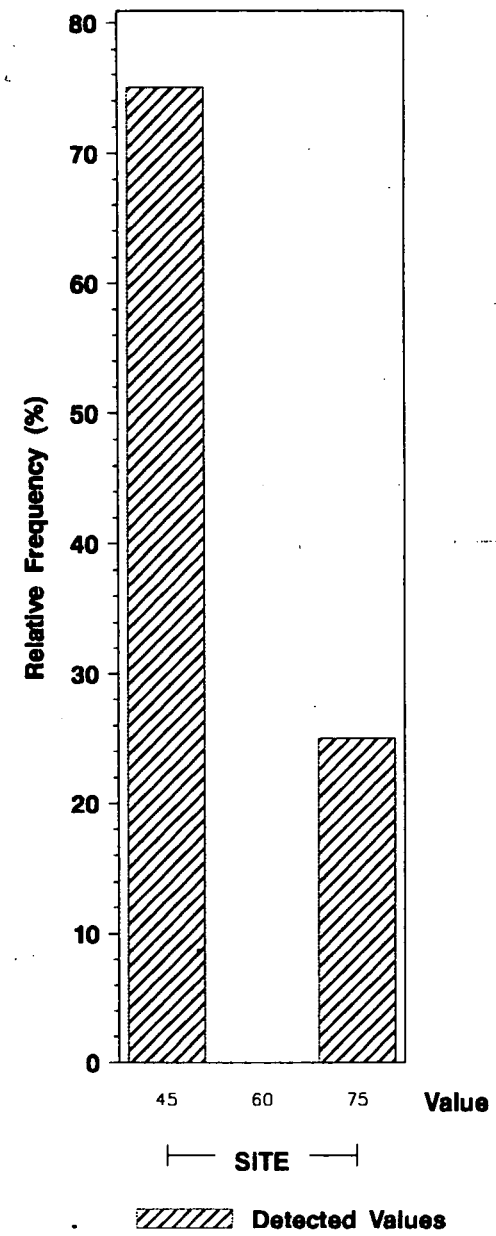
# Sediments

## Background vs. East Landfill Pond

# Background vs East Landfill Pond Sediments Frequency Histogram

## % SOLIDS in Sediments

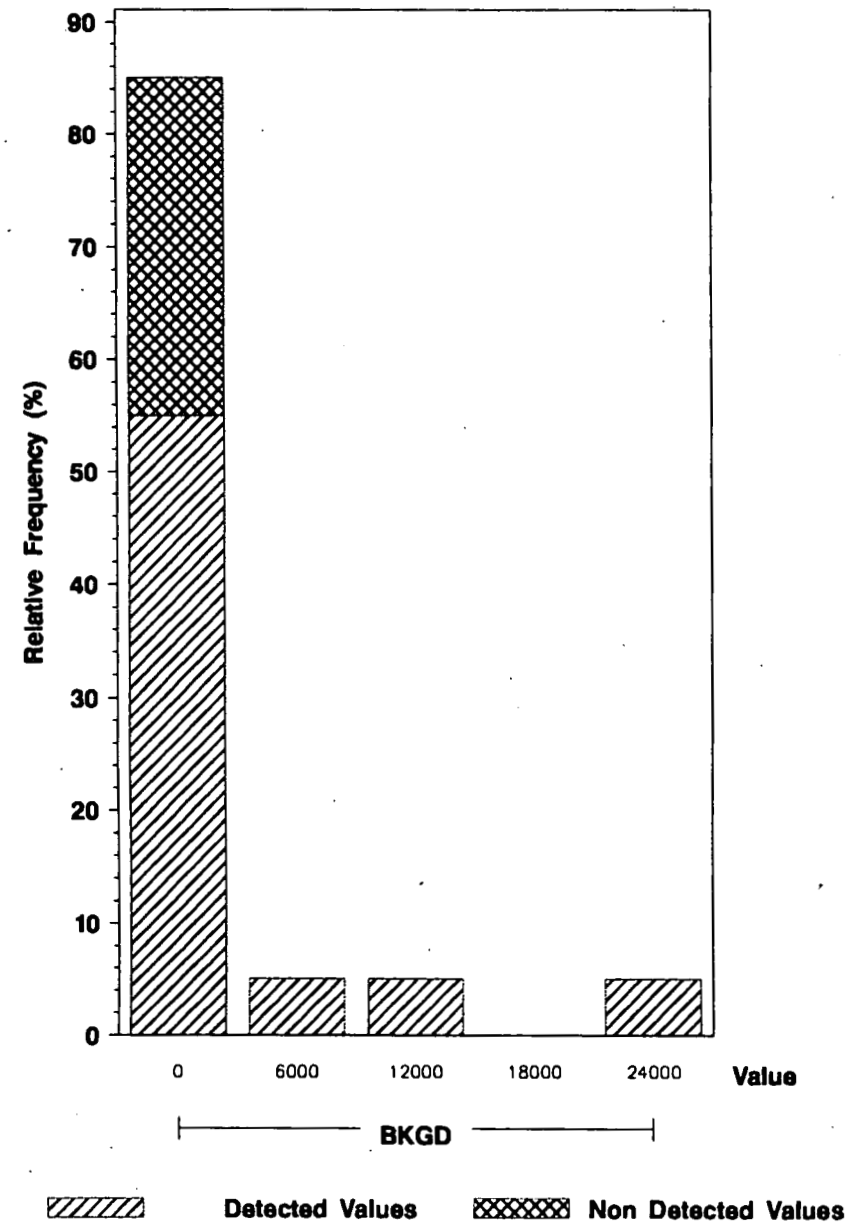
ANALYTE = % SOLIDS



# Background vs East Landfill Pond Sediments Frequency Histogram

## ALKALINITY AS CACO3 (mg/Kg) in Sediments

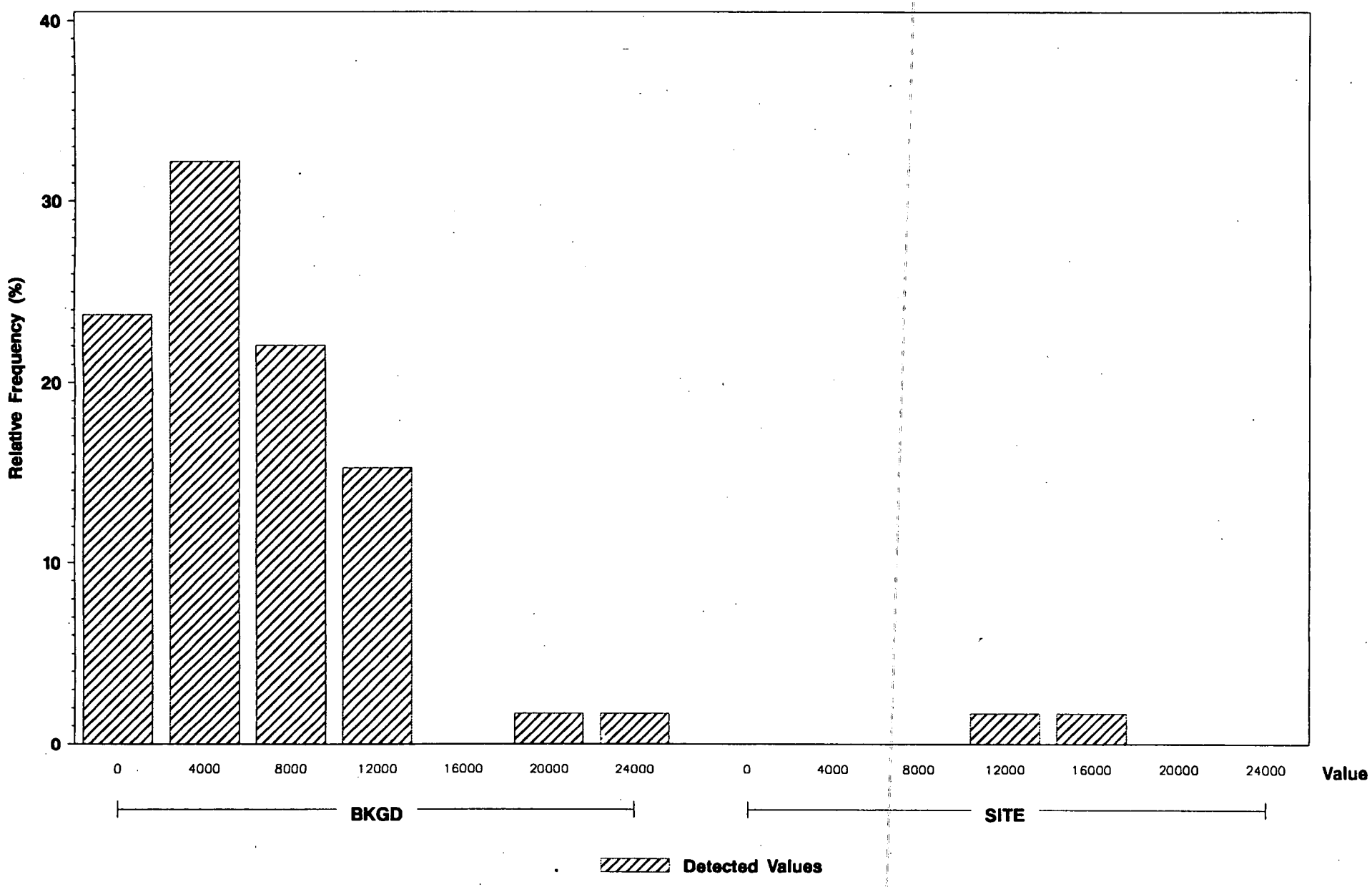
ANALYTE = ALKALINITY AS CACO3



# Background vs East Landfill Pond Sediments Frequency Histogram

## ALUMINUM (mg/Kg) in Sediments

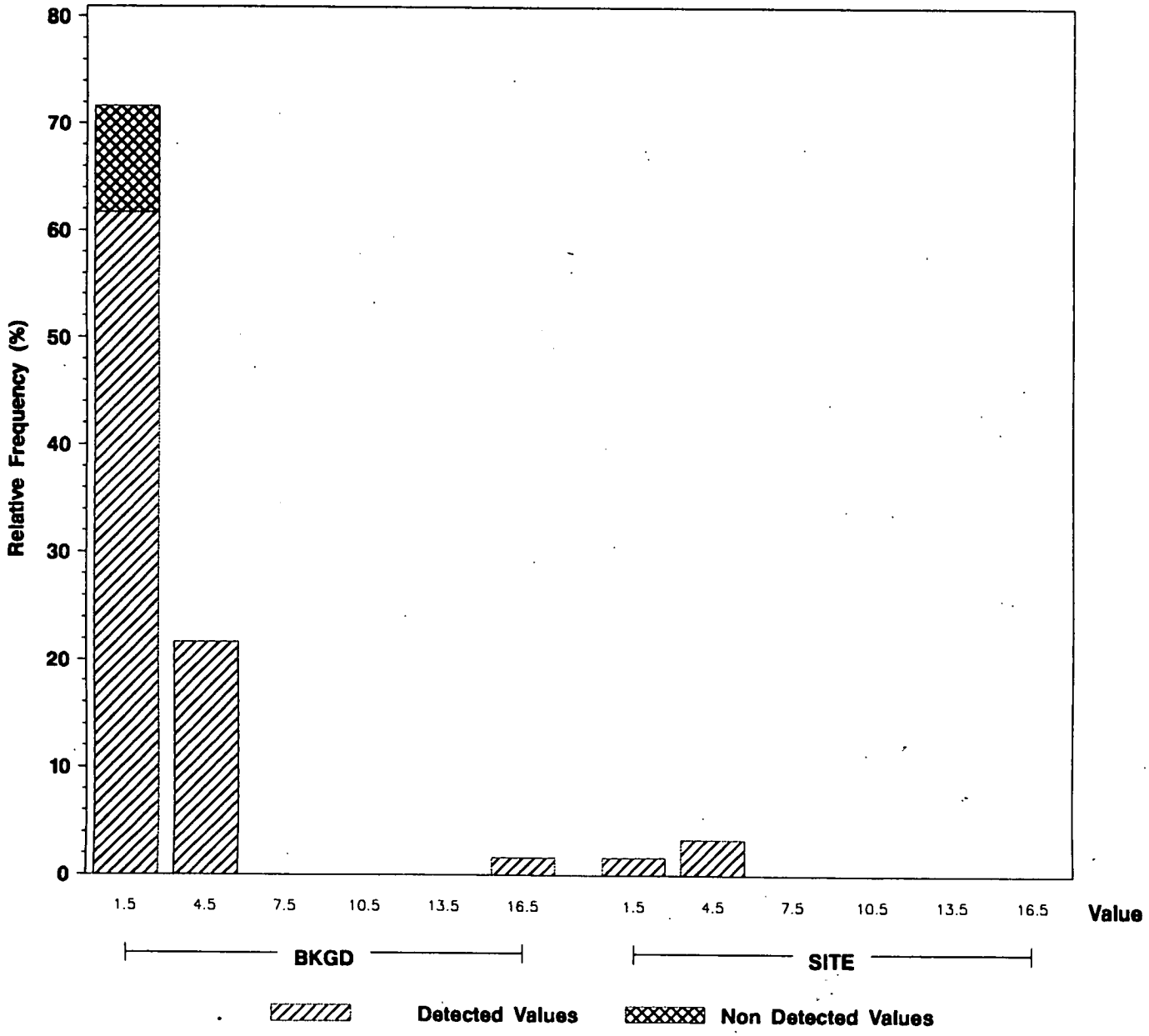
ANALYTE = ALUMINUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## ARSENIC (mg/Kg) in Sediments

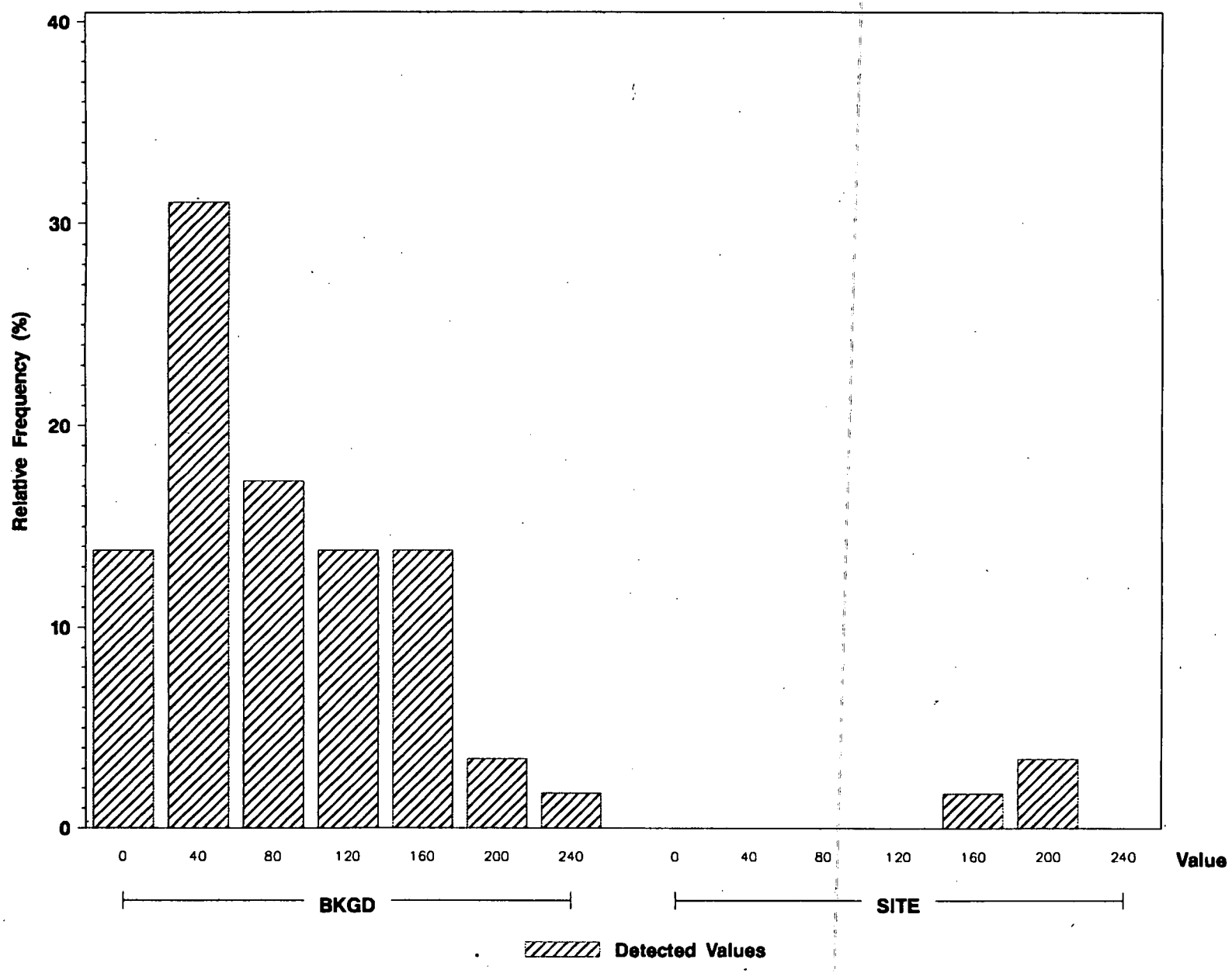
ANALYTE = ARSENIC



# Background vs East Landfill Pond Sediments Frequency Histogram

## BARIUM (mg/Kg) in Sediments

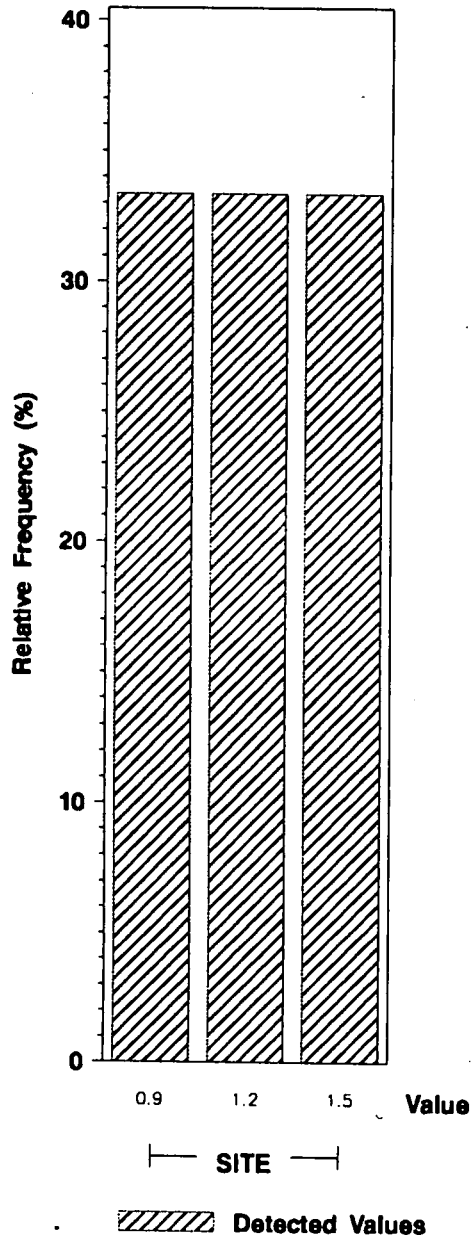
ANALYTE = BARIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## BERYLLIUM (mg/Kg) in Sediments

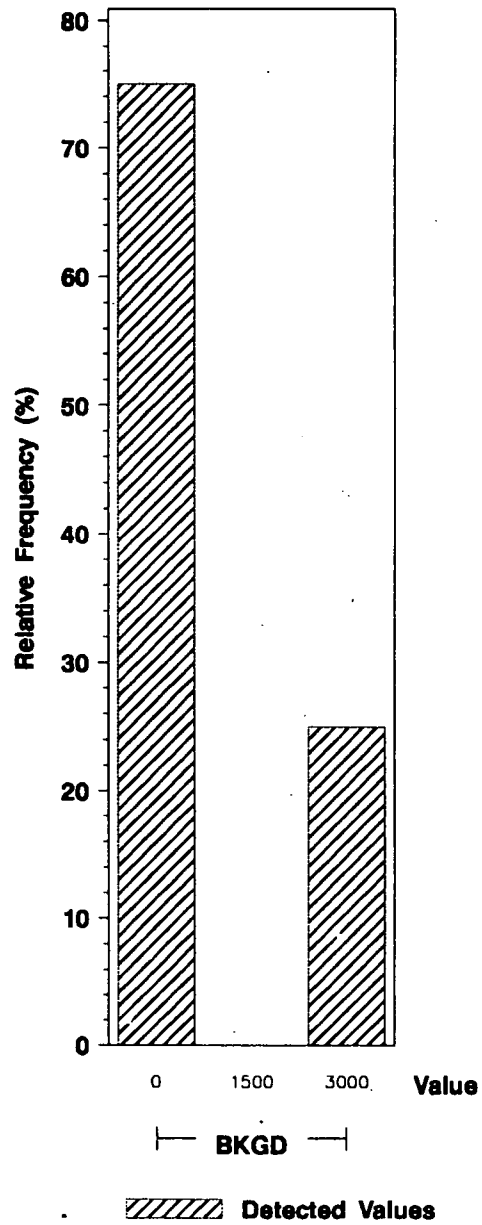
ANALYTE = BERYLLIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## BICARBONATE AS CACO3 (mg/Kg) in Sediments

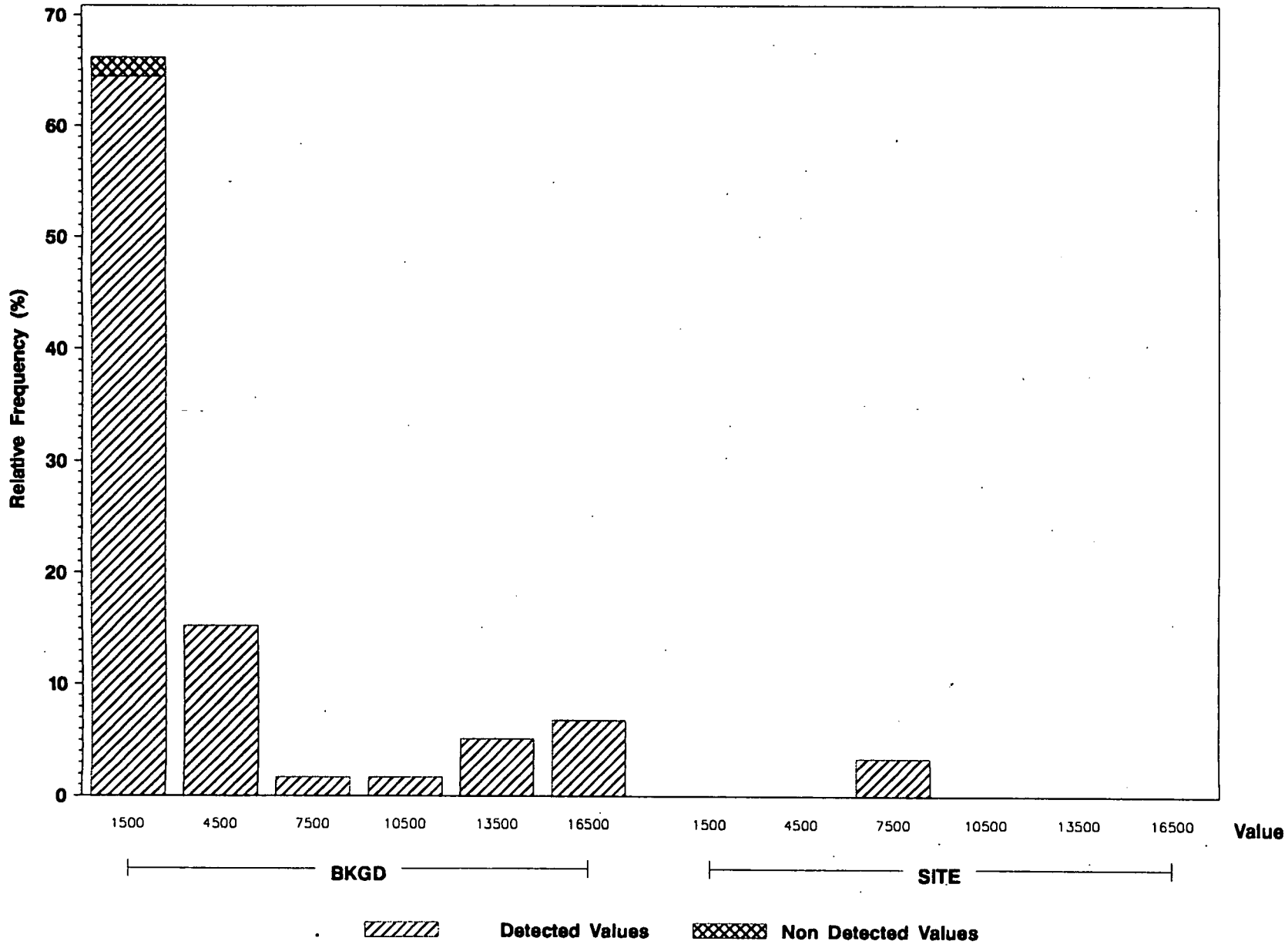
ANALYTE=BICARBONATE AS CACO3



# Background vs East Landfill Pond Sediments Frequency Histogram

## CALCIUM (mg/Kg) in Sediments

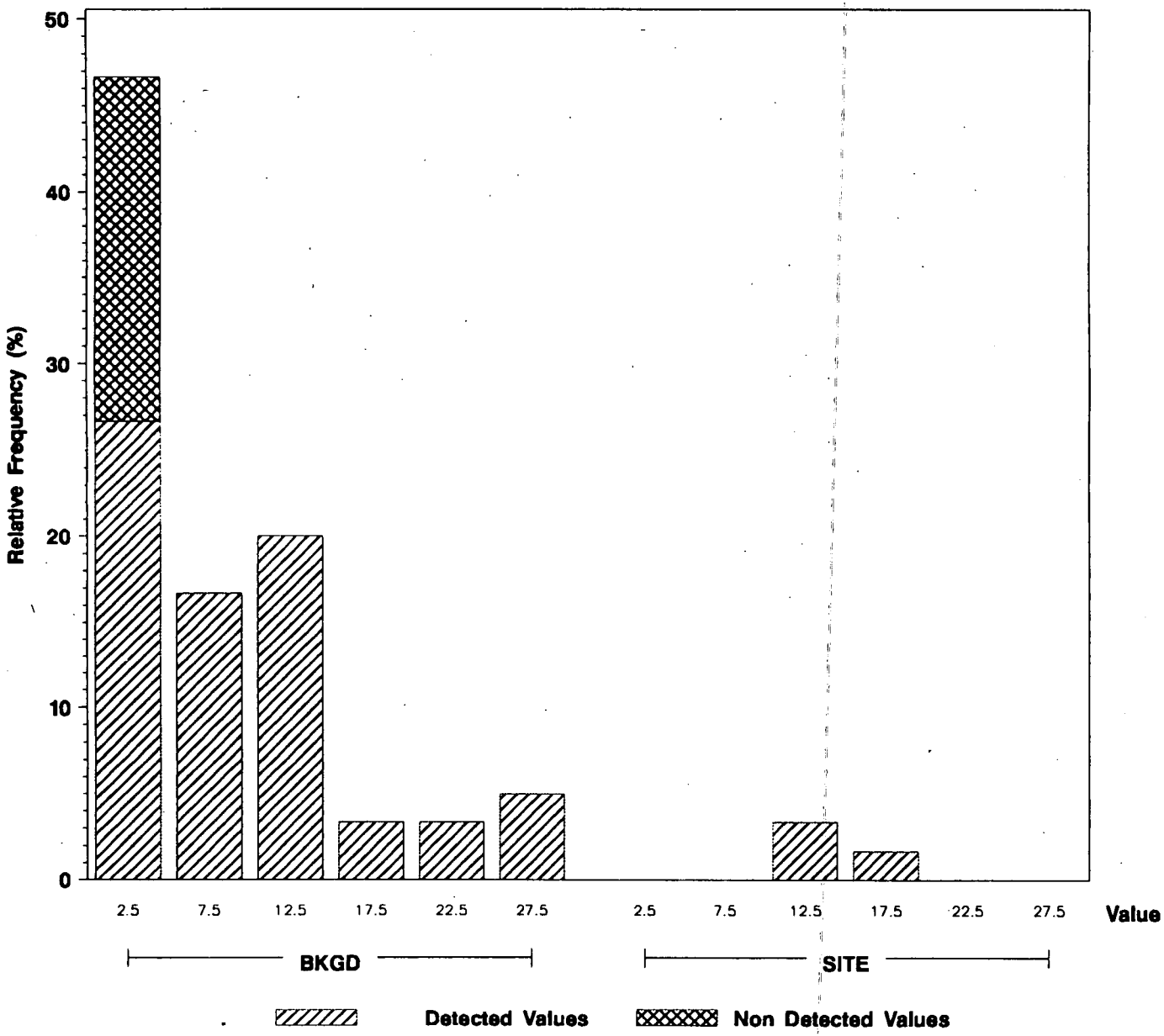
ANALYTE = CALCIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## CHROMIUM (mg/Kg) in Sediments

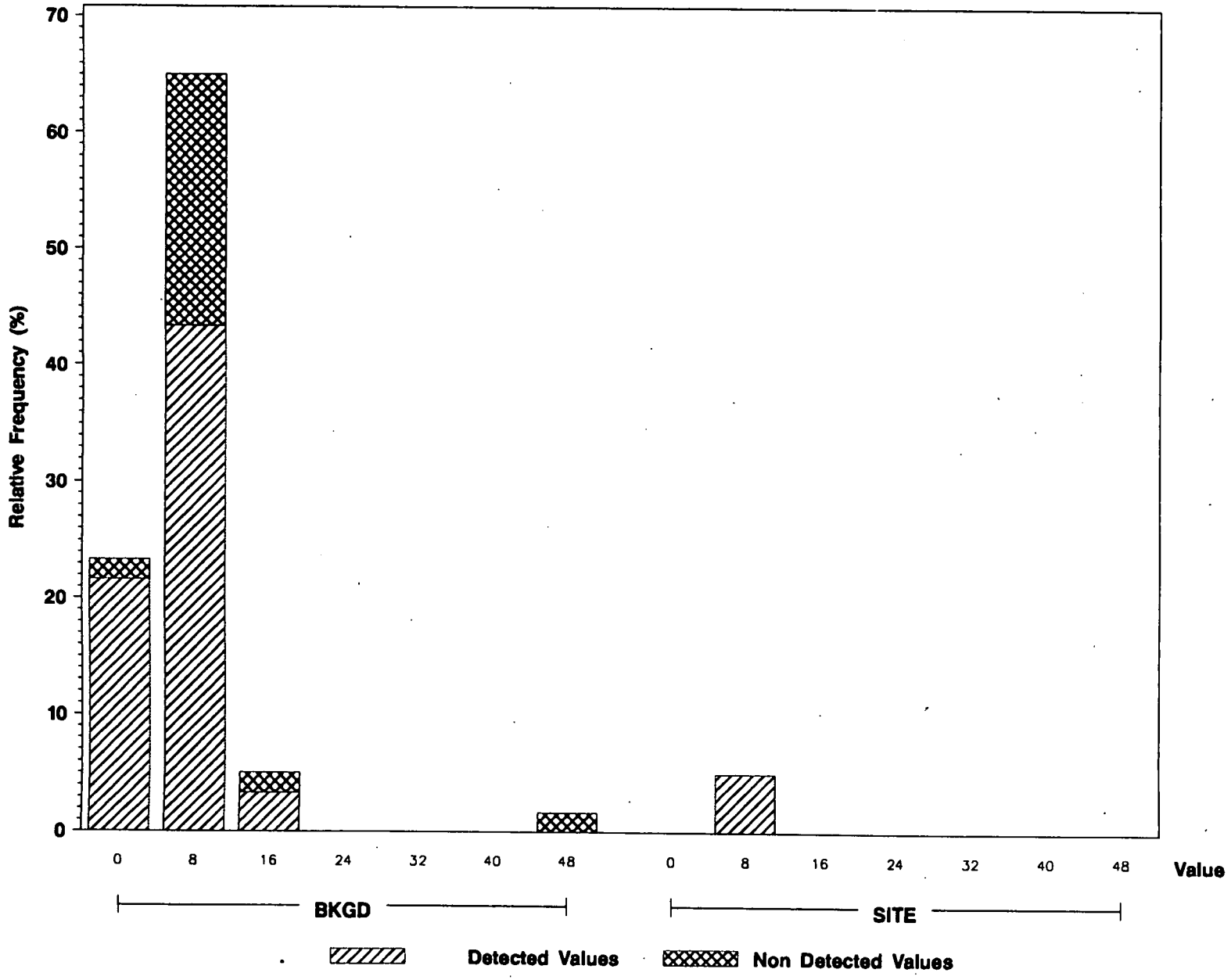
ANALYTE = CHROMIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## COBALT (mg/Kg) in Sediments

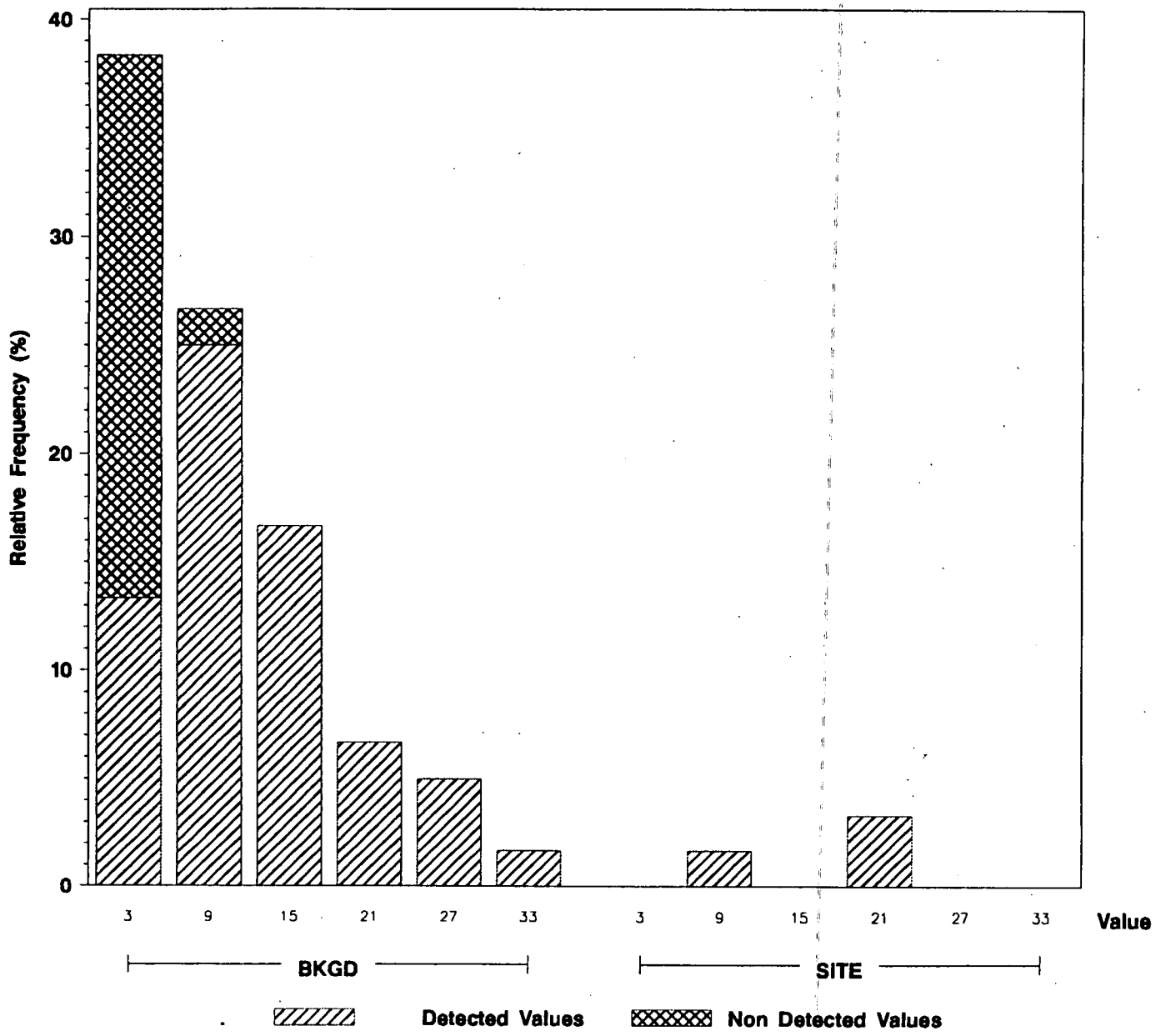
ANALYTE = COBALT



# Background vs East Landfill Pond Sediments Frequency Histogram

## COPPER (mg/Kg) in Sediments

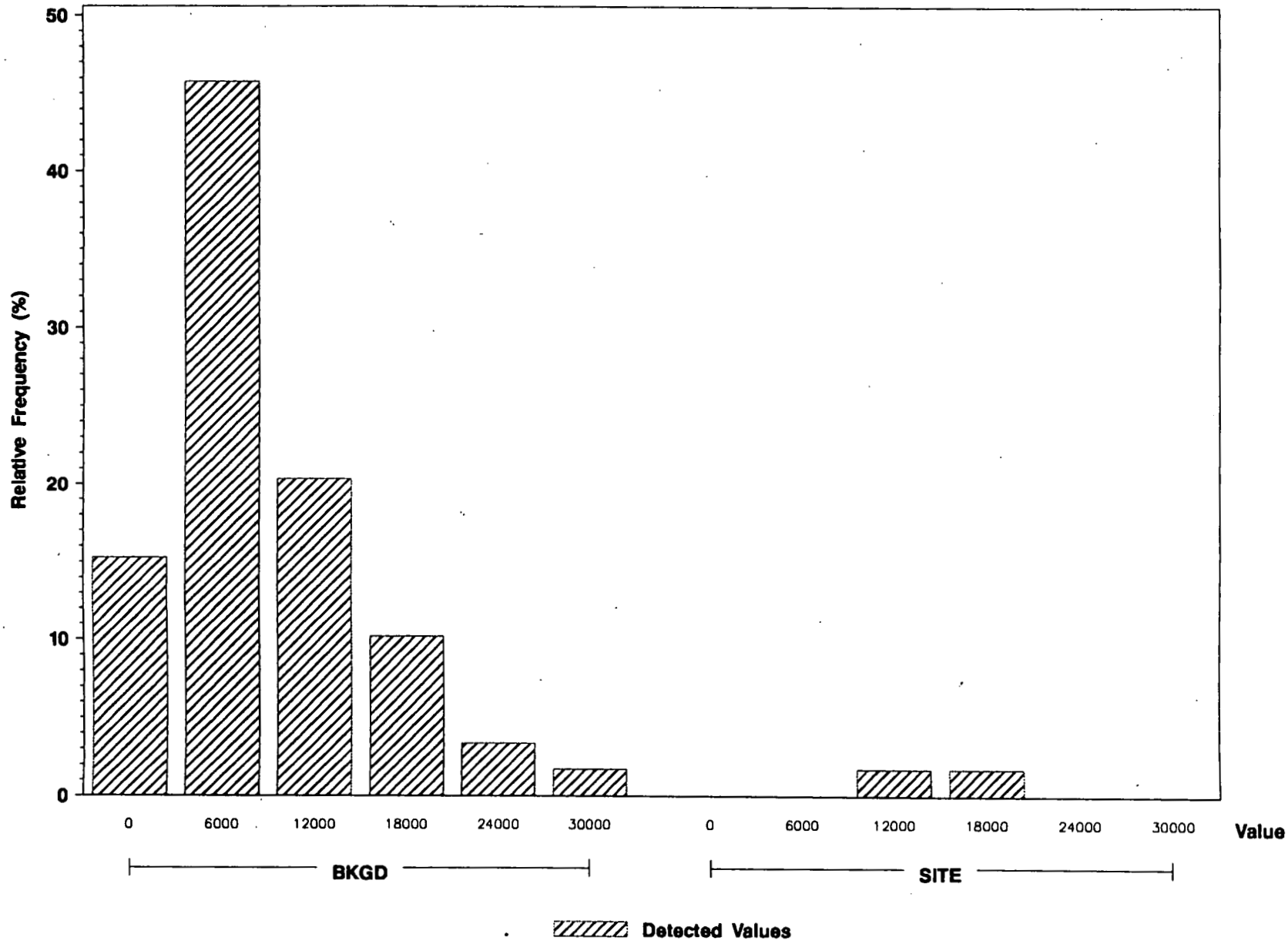
ANALYTE = COPPER



# Background vs East Landfill Pond Sediments Frequency Histogram

## IRON (mg/Kg) in Sediments

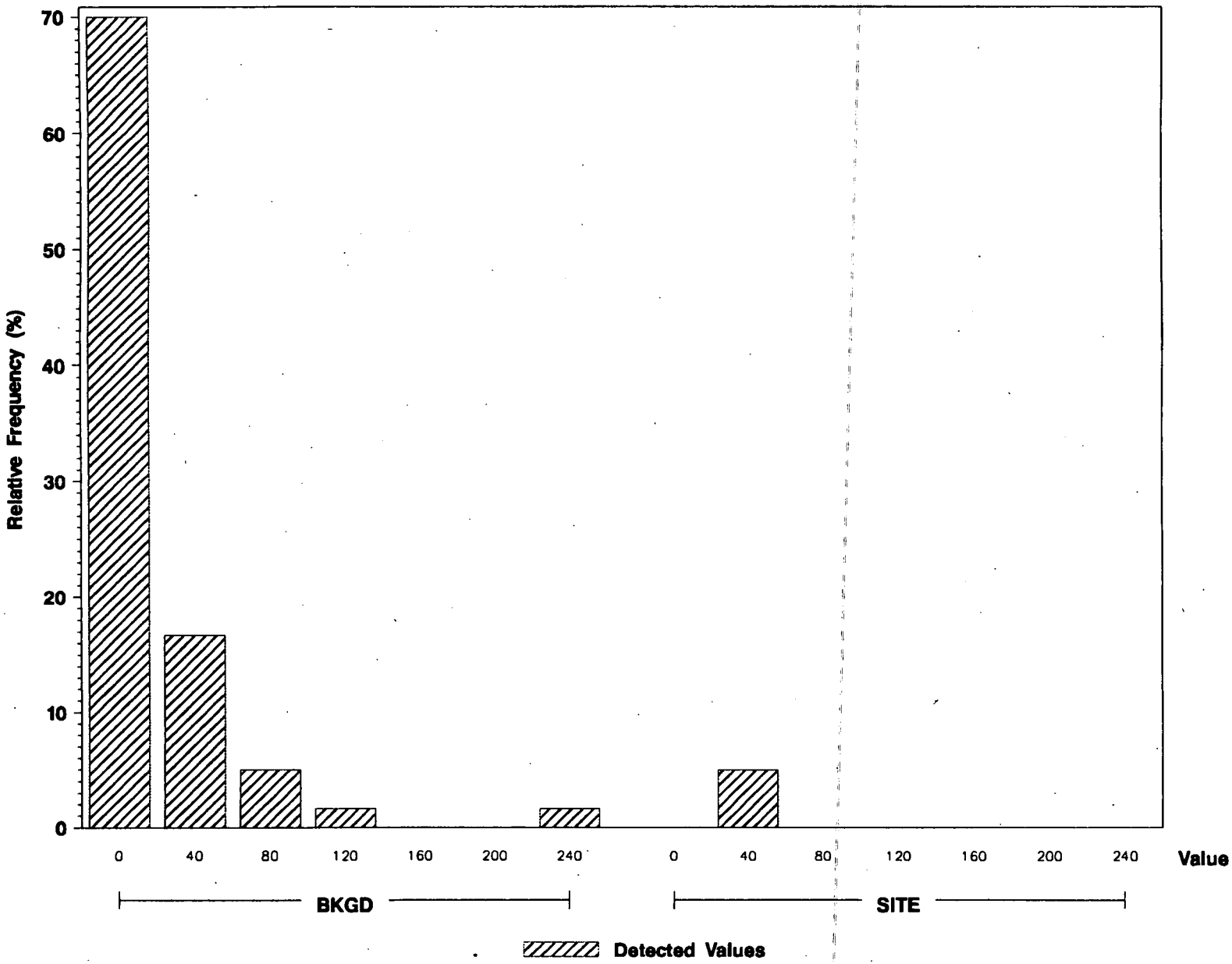
ANALYTE = IRON



# Background vs East Landfill Pond Sediments Frequency Histogram

## LEAD (mg/Kg) in Sediments

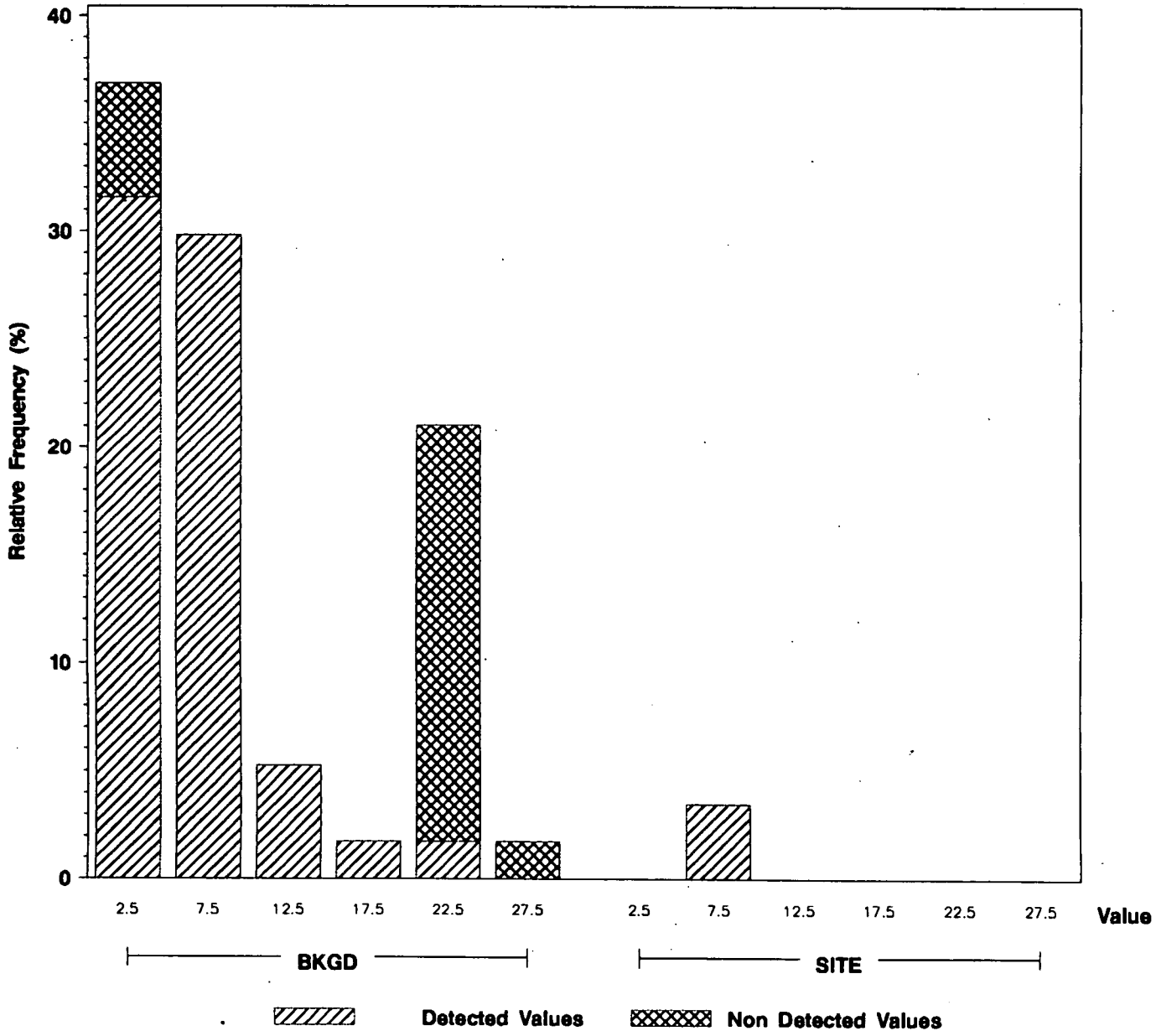
ANALYTE = LEAD



# Background vs East Landfill Pond Sediments Frequency Histogram

## LITHIUM (mg/Kg) in Sediments

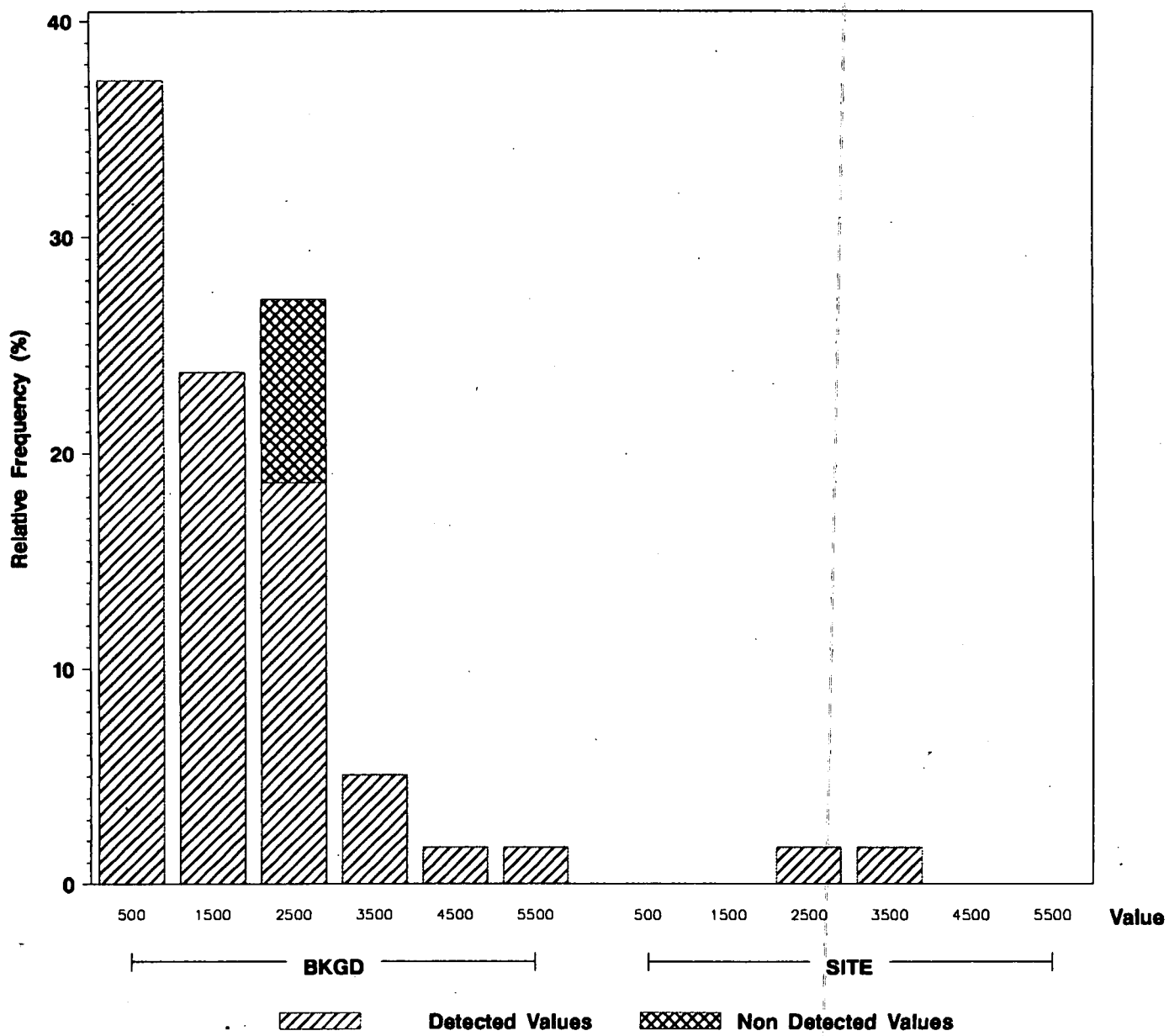
ANALYTE=LITHIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## MAGNESIUM (mg/Kg) in Sediments

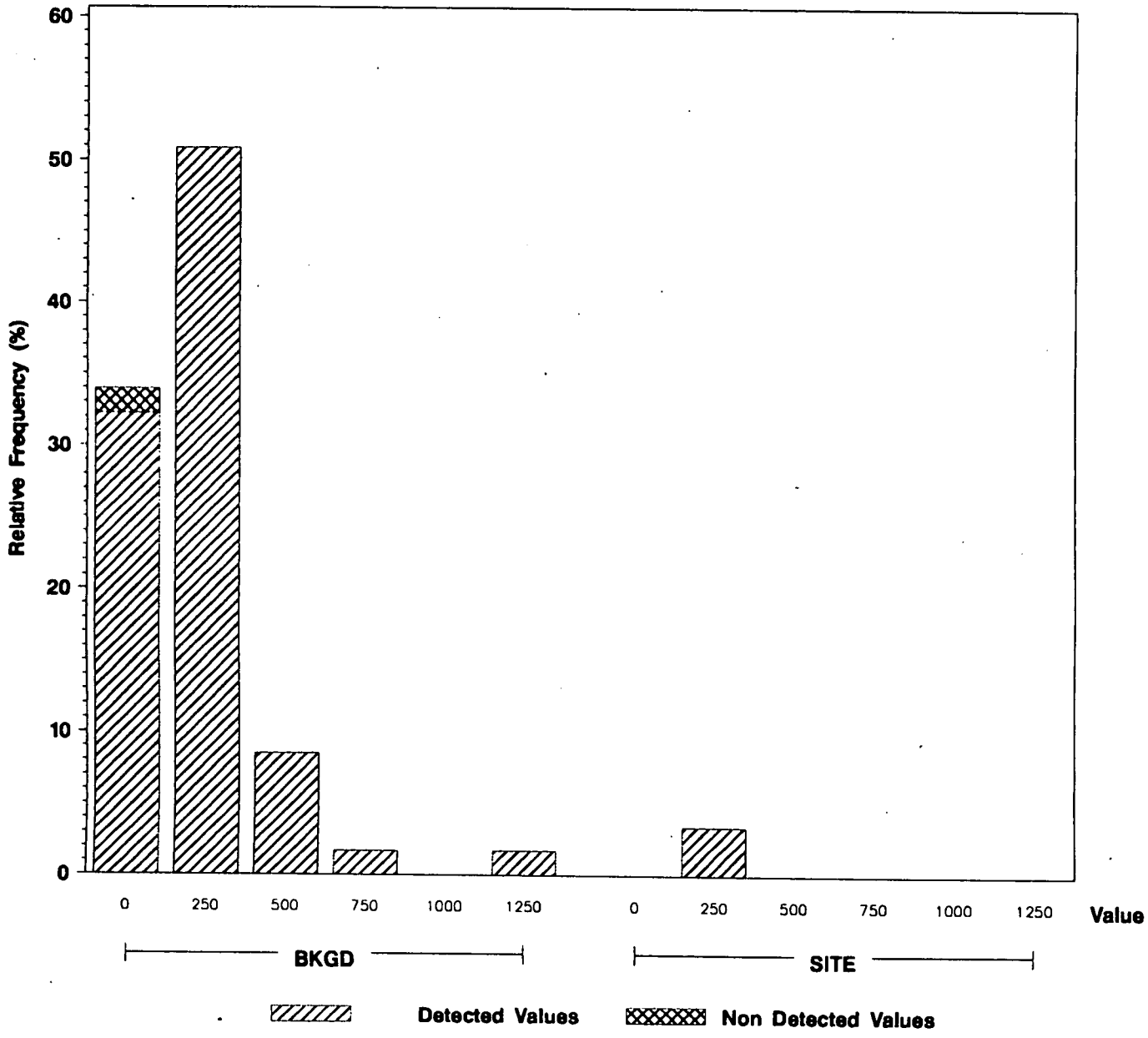
ANALYTE = MAGNESIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## MANGANESE (mg/Kg) in Sediments

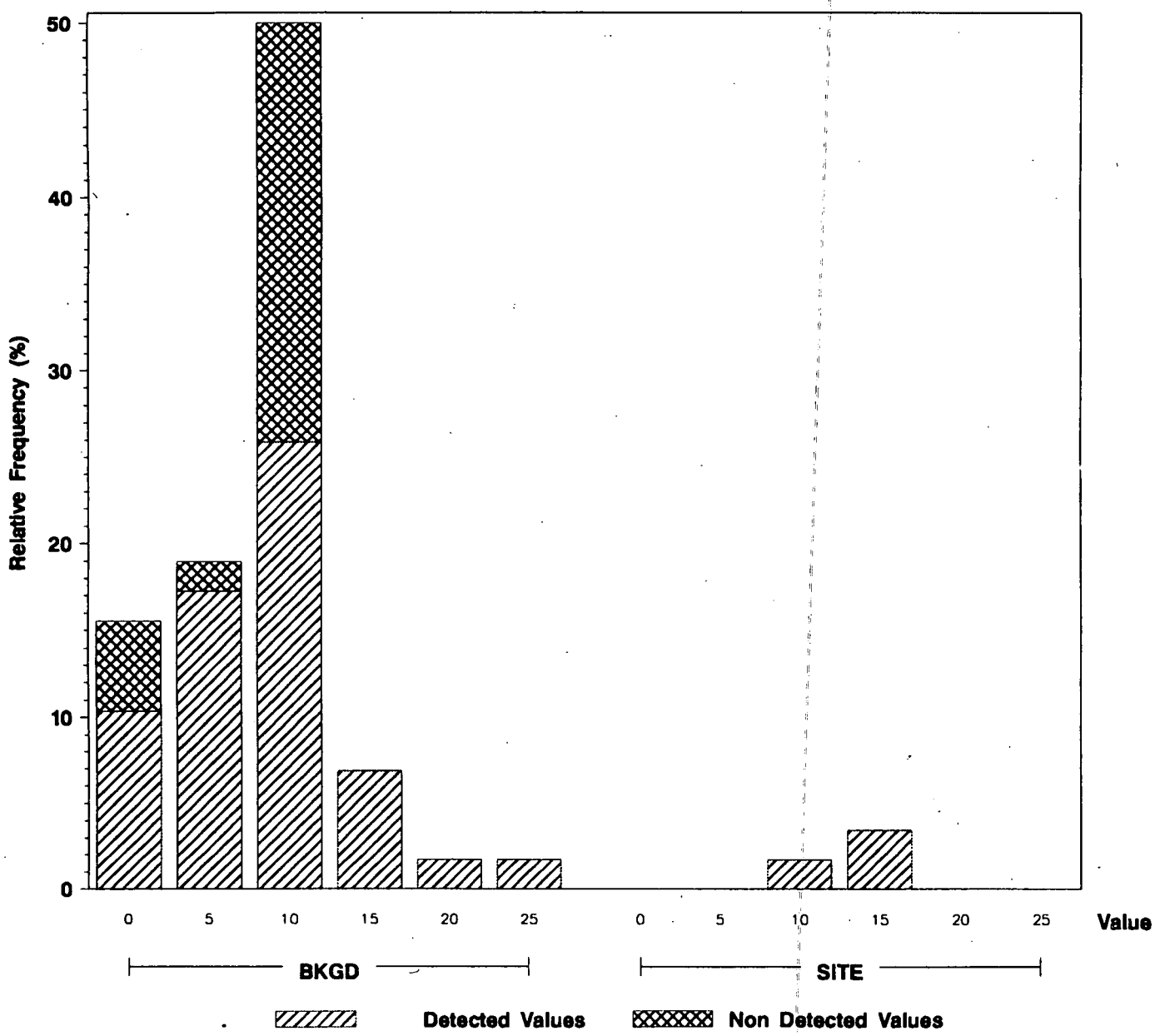
ANALYTE = MANGANESE



# Background vs East Landfill Pond Sediments Frequency Histogram

## NICKEL (mg/Kg) in Sediments

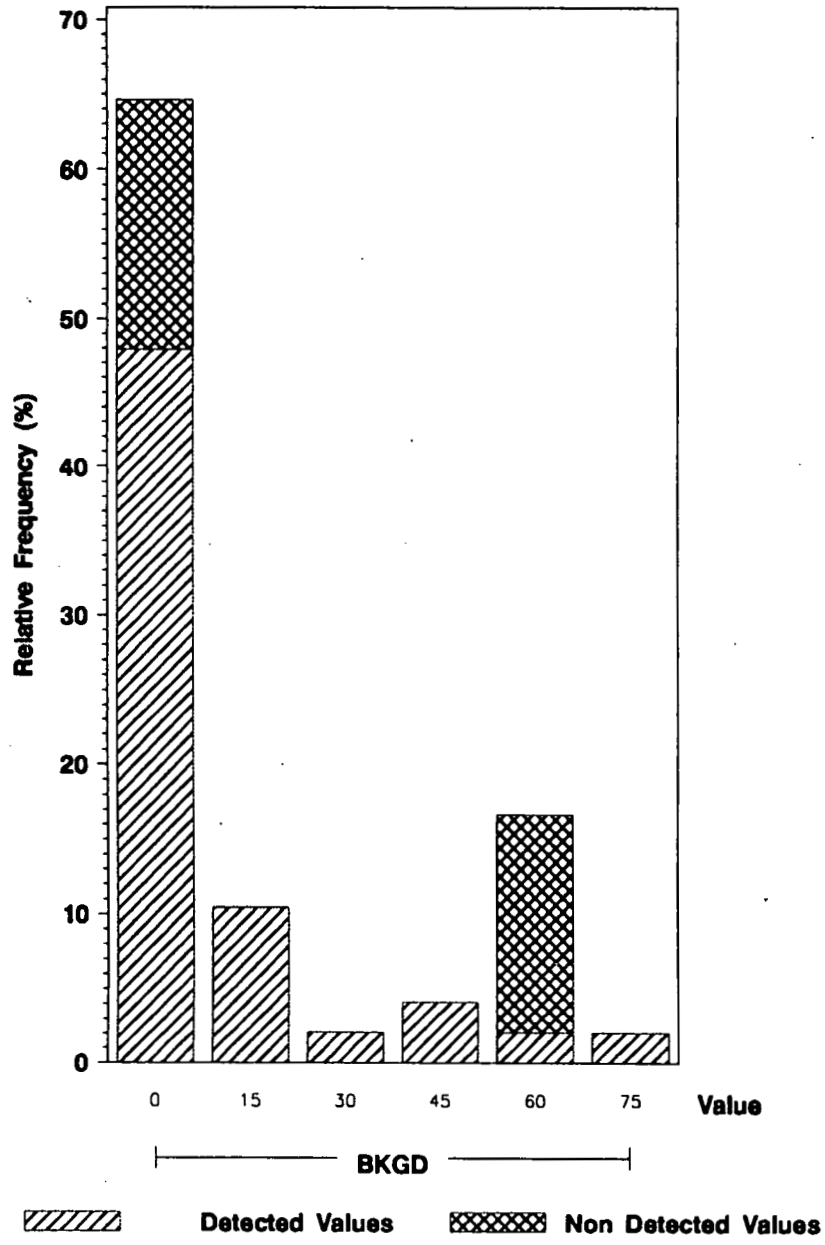
ANALYTE = NICKEL



# Background vs East Landfill Pond Sediments Frequency Histogram

## NITRATE/NITRITE (mg/Kg) in Sediments

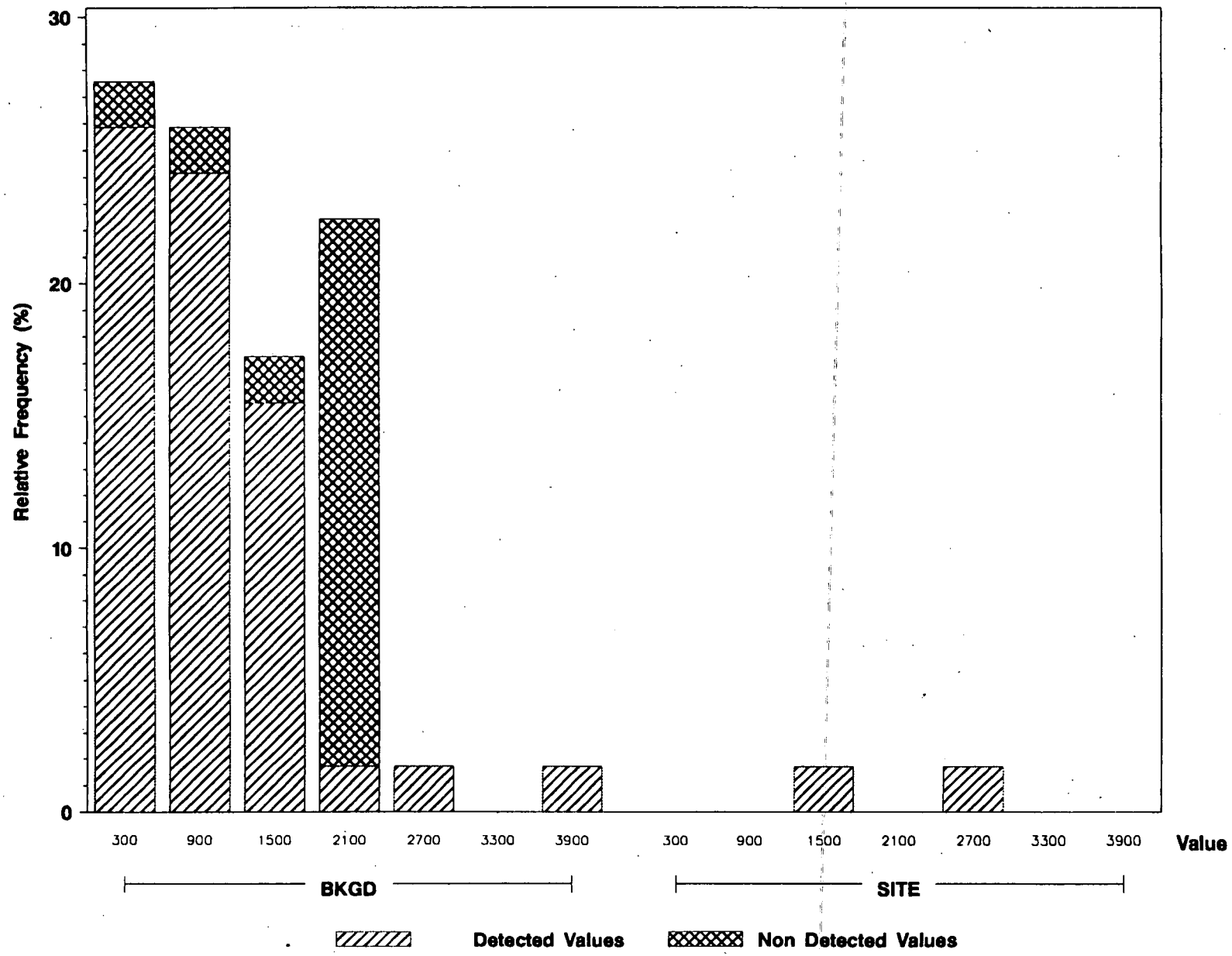
ANALYTE = NITRATE/NITRITE



# Background vs East Landfill Pond Sediments Frequency Histogram

## POTASSIUM (mg/Kg) in Sediments

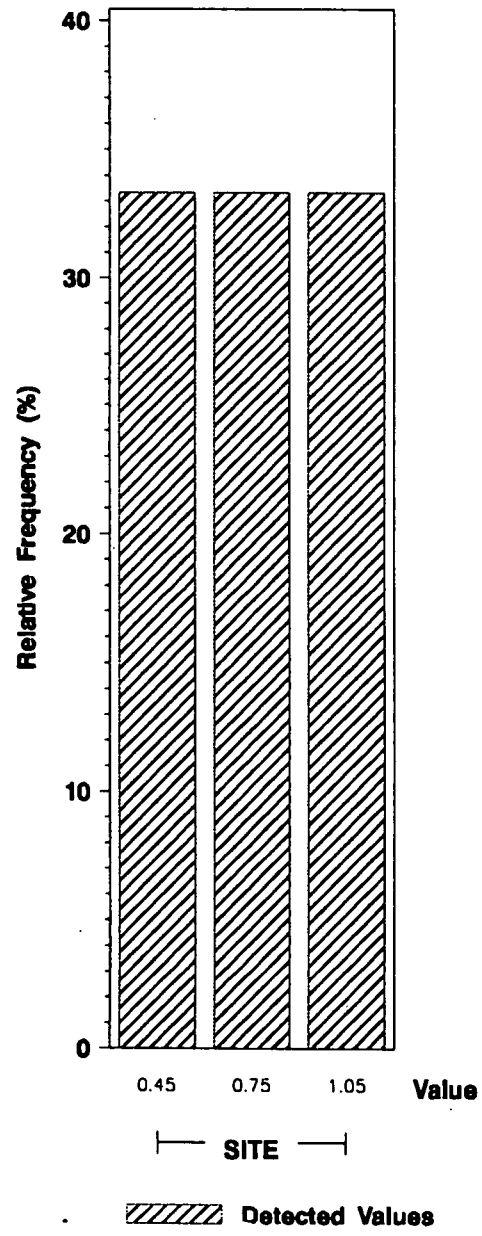
ANALYTE = POTASSIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## SELENIUM (mg/Kg) in Sediments

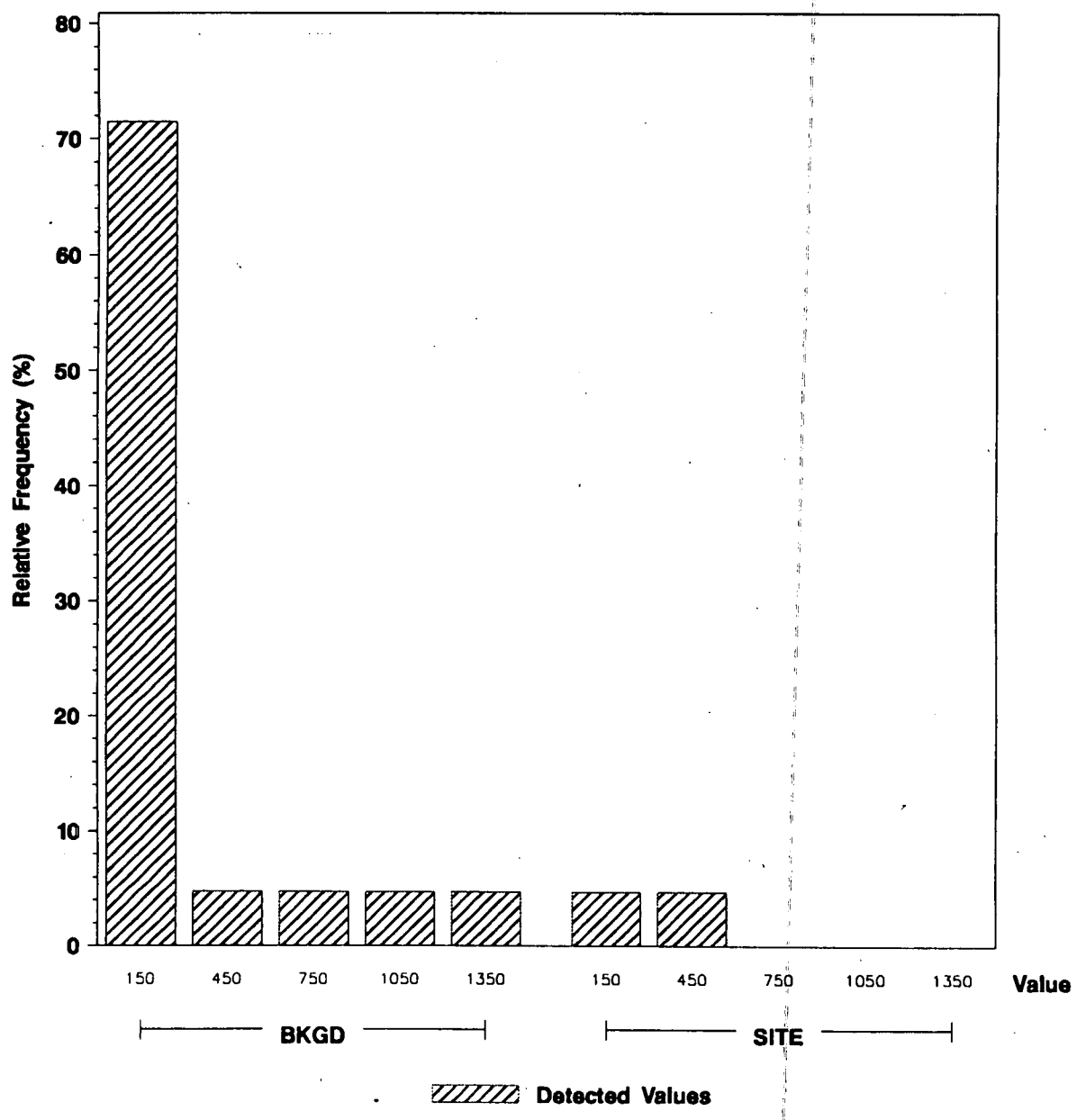
ANALYTE = SELENIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## SILICON (mg/Kg) in Sediments

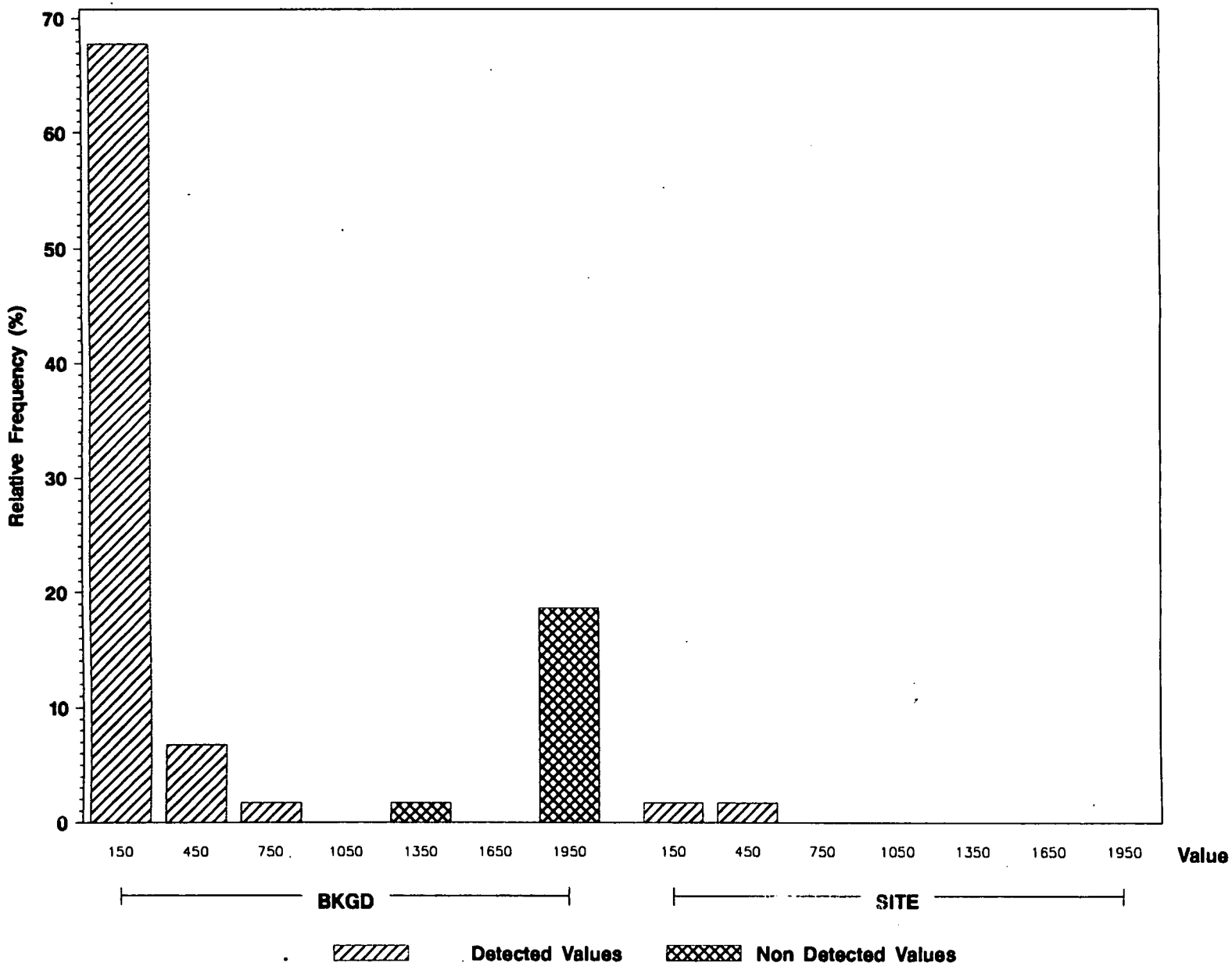
ANALYTE=SILICON



# Background vs East Landfill Pond Sediments Frequency Histogram

## SODIUM (mg/Kg) in Sediments

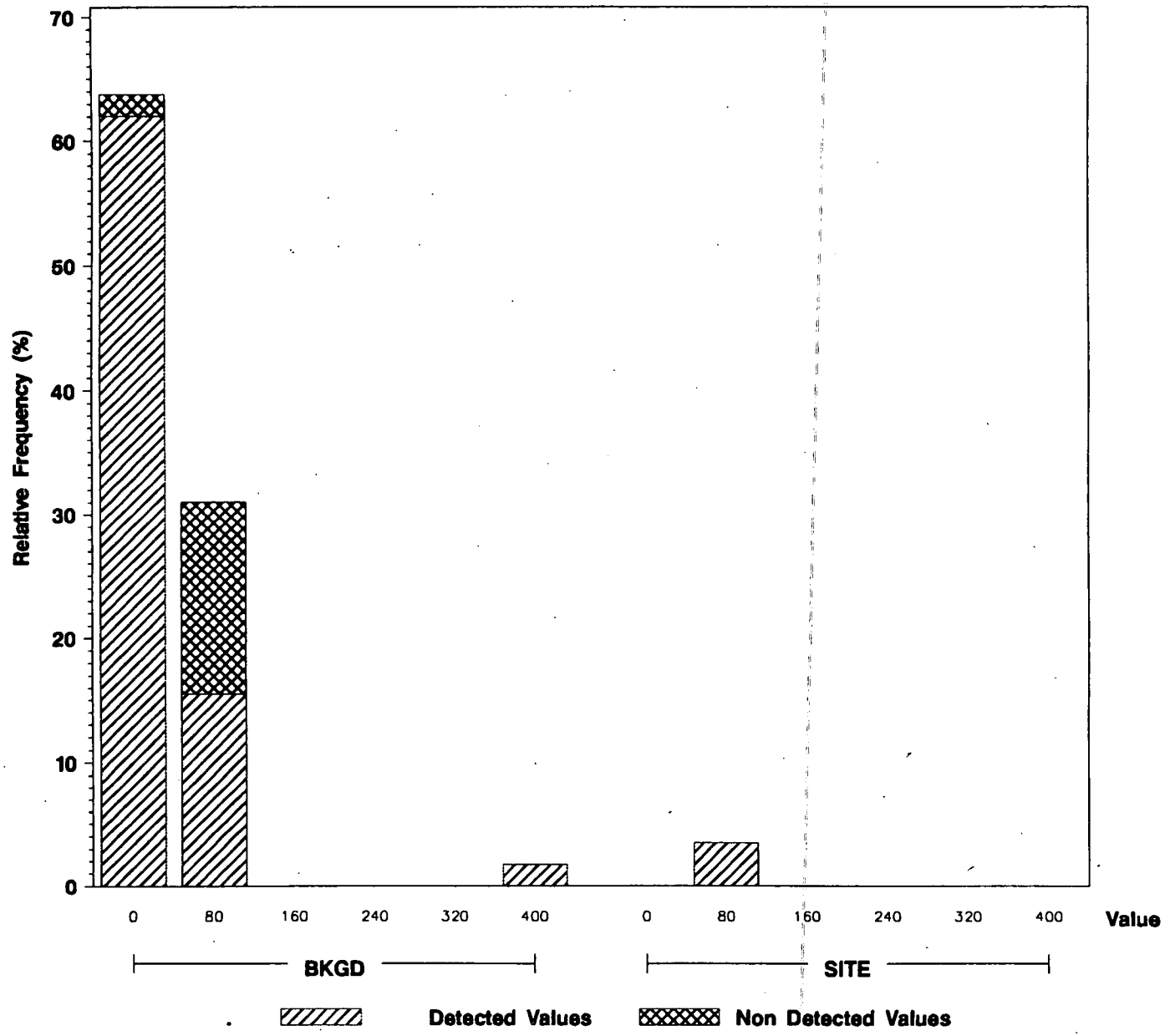
ANALYTE = SODIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## STRONTIUM (mg/Kg) in Sediments

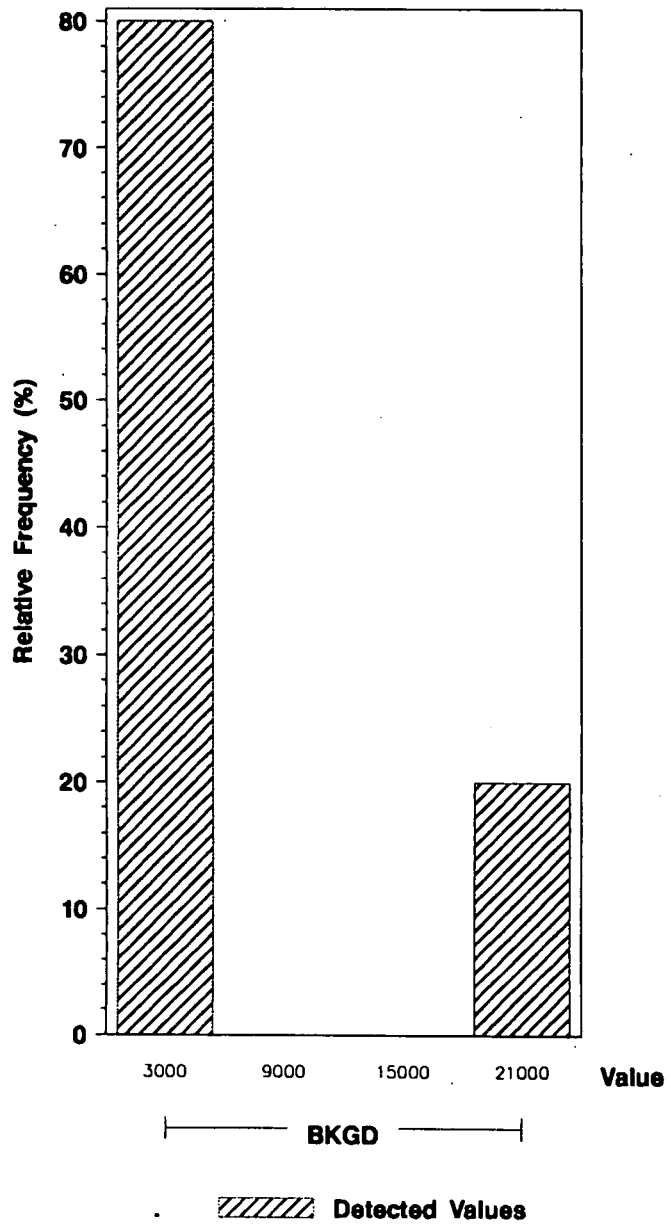
ANALYTE = STRONTIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## TOTAL ALKALINITY (mg/Kg) in Sediments

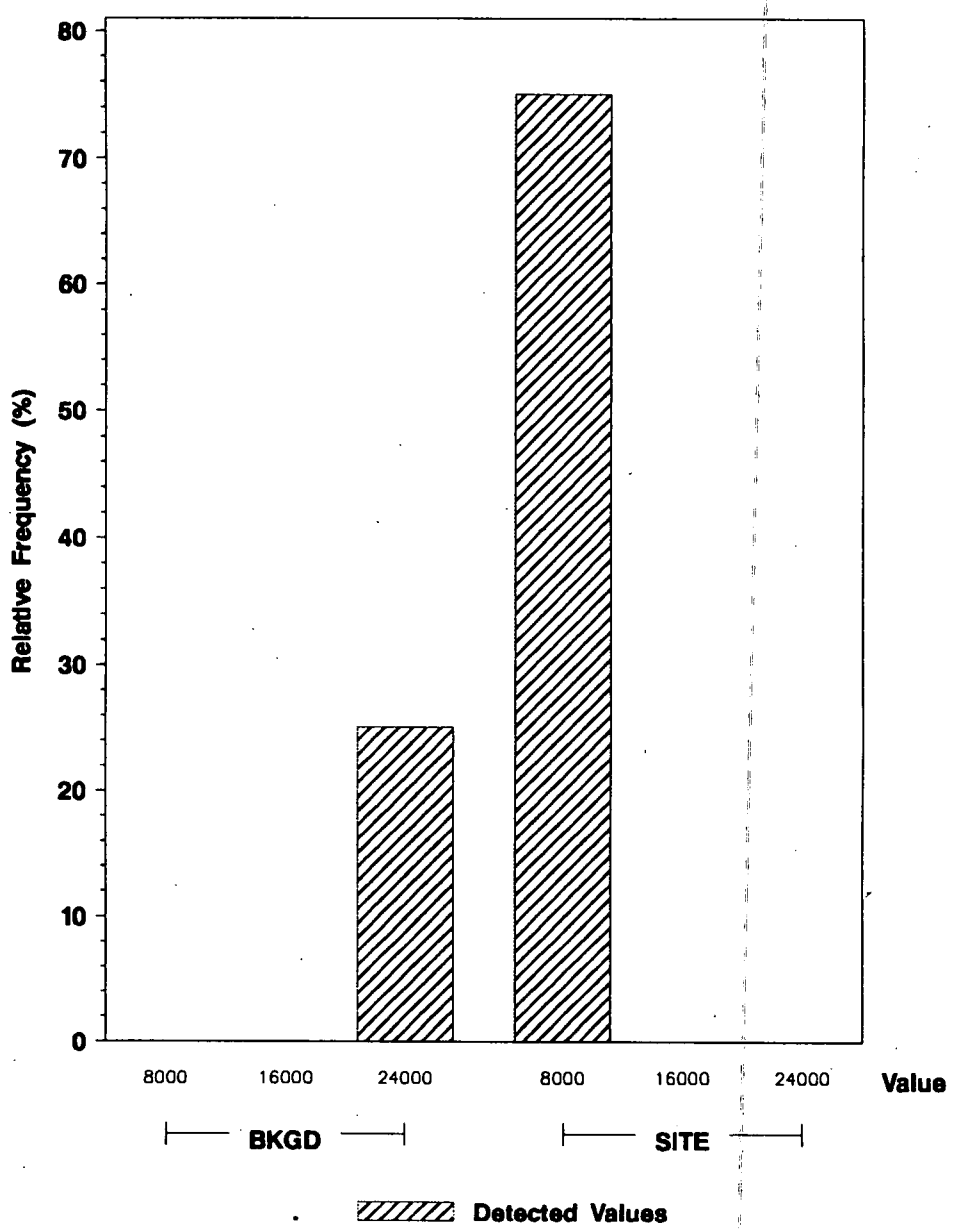
ANALYTE=TOTAL ALKALINITY



# Background vs East Landfill Pond Sediments Frequency Histogram

## TOTAL ORGANIC CARBON (mg/Kg) in Sediments

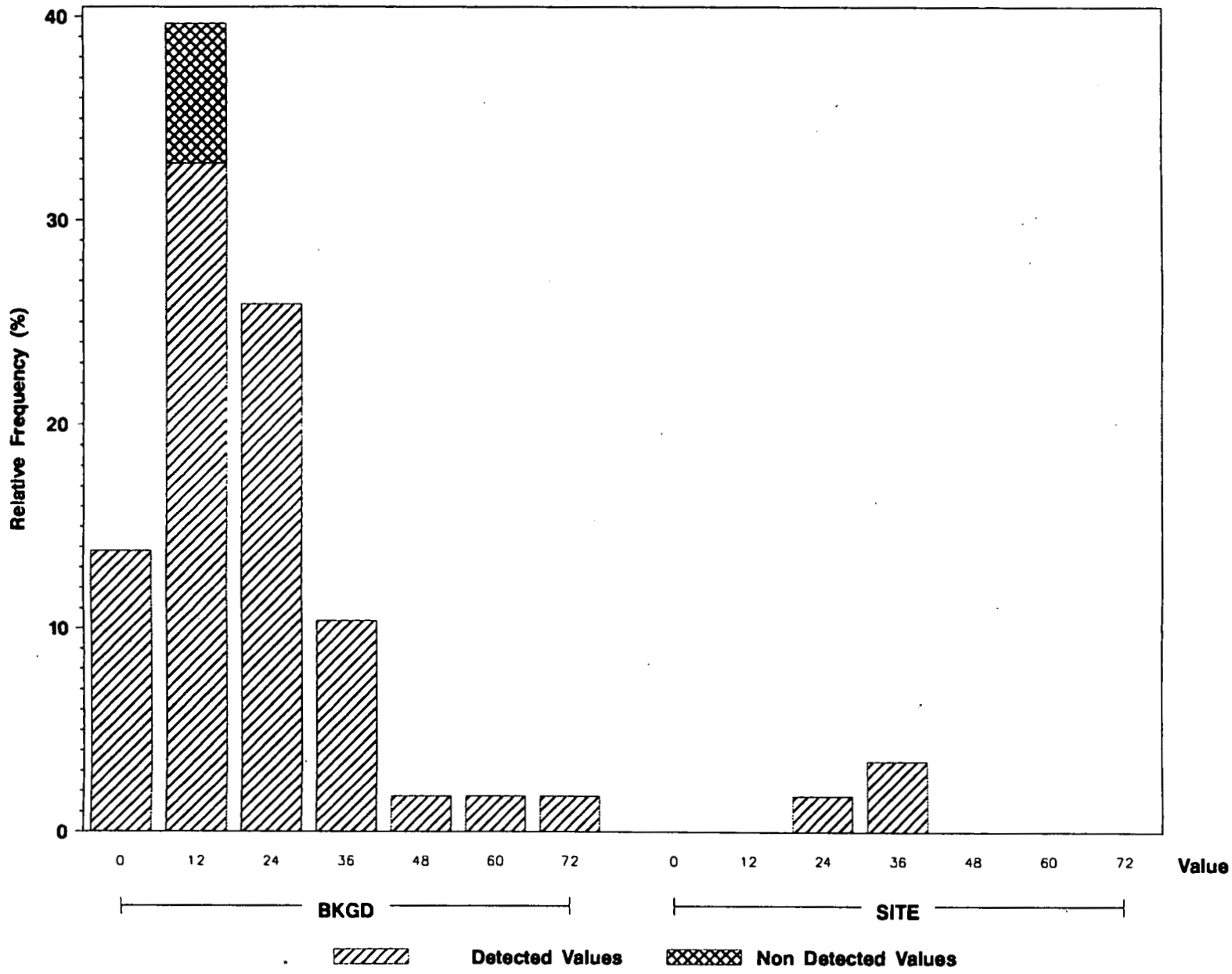
ANALYTE = TOTAL ORGANIC CARBON



# Background vs East Landfill Pond Sediments Frequency Histogram

## VANADIUM (mg/Kg) in Sediments

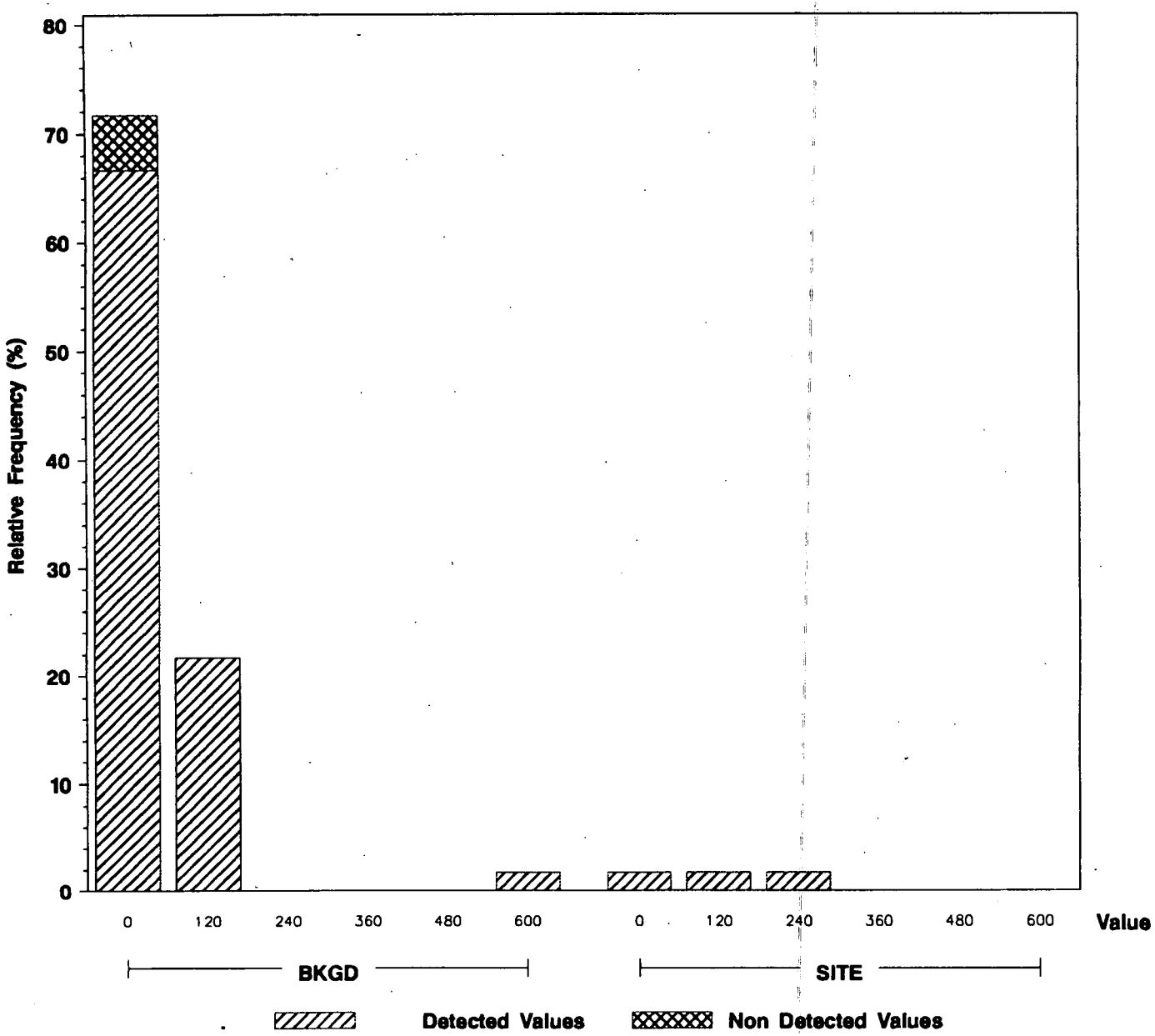
ANALYTE = VANADIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## ZINC (mg/Kg) in Sediments

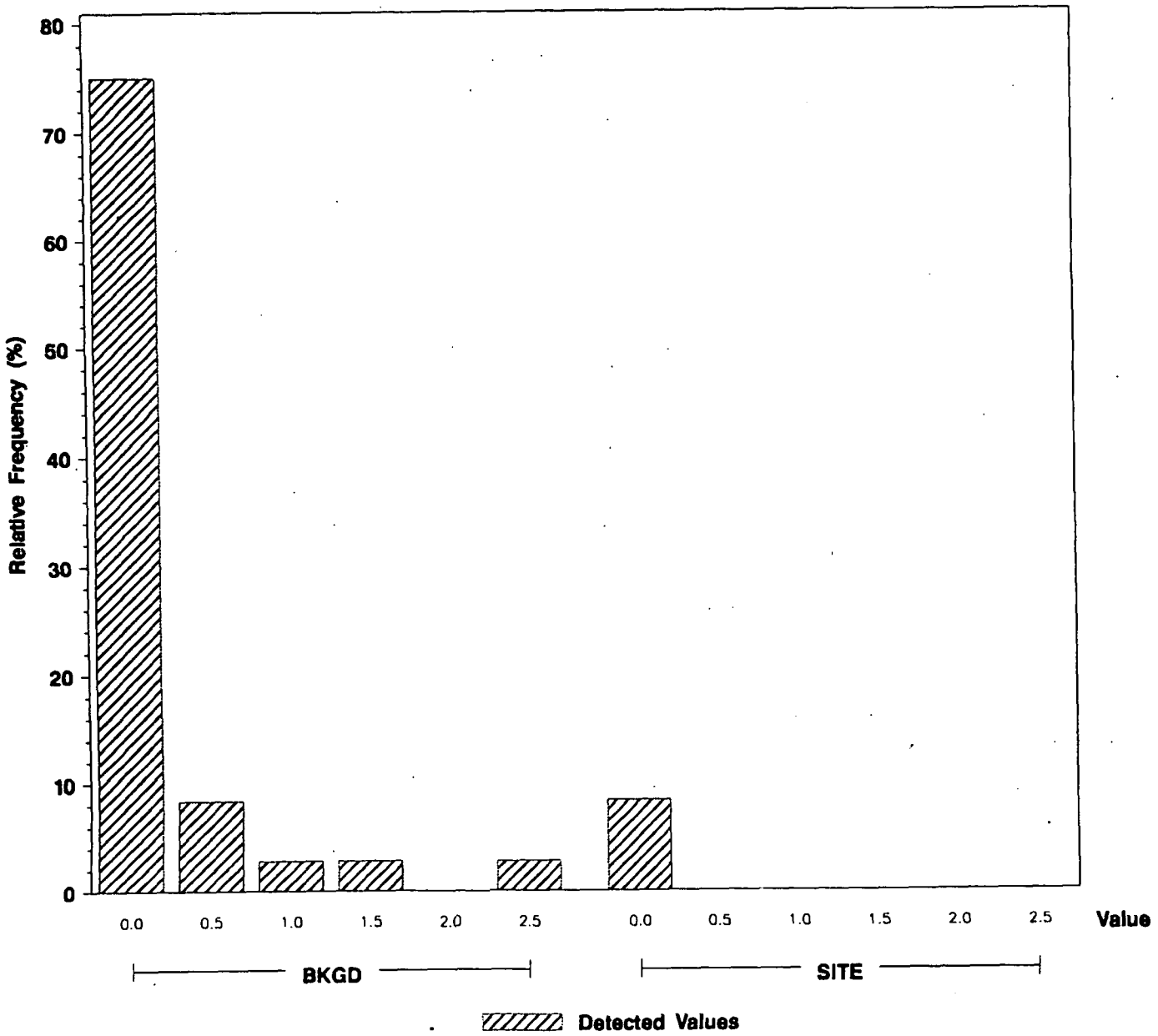
ANALYTE = ZINC



# Background vs East Landfill Pond Sediments Frequency Histogram

## AMERICIUM – 241 (pCi/g) in Sediments

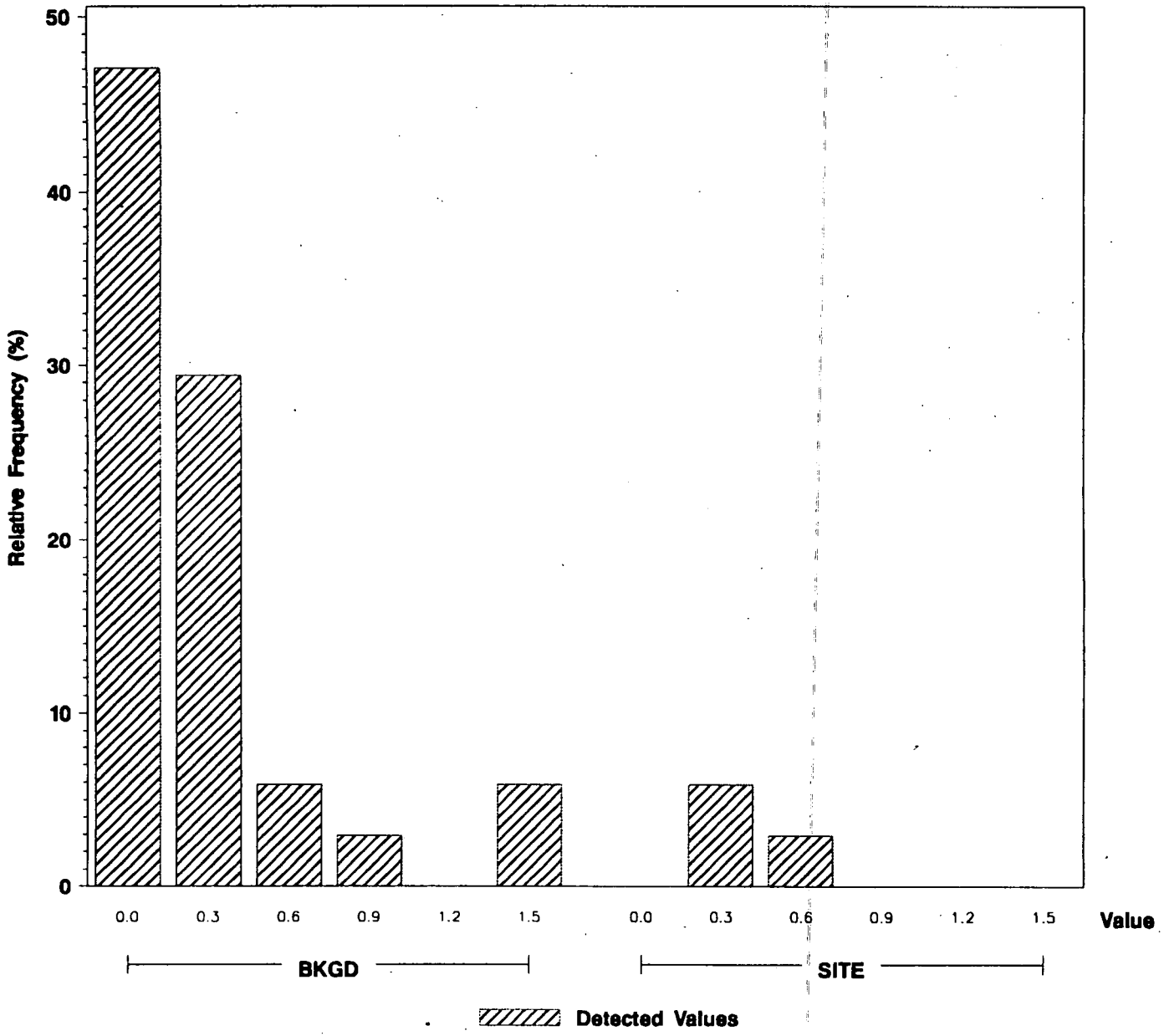
ANALYTE = AMERICIUM – 241



# Background vs East Landfill Pond Sediments Frequency Histogram

## CESIUM – 137 (pCi/g) in Sediments

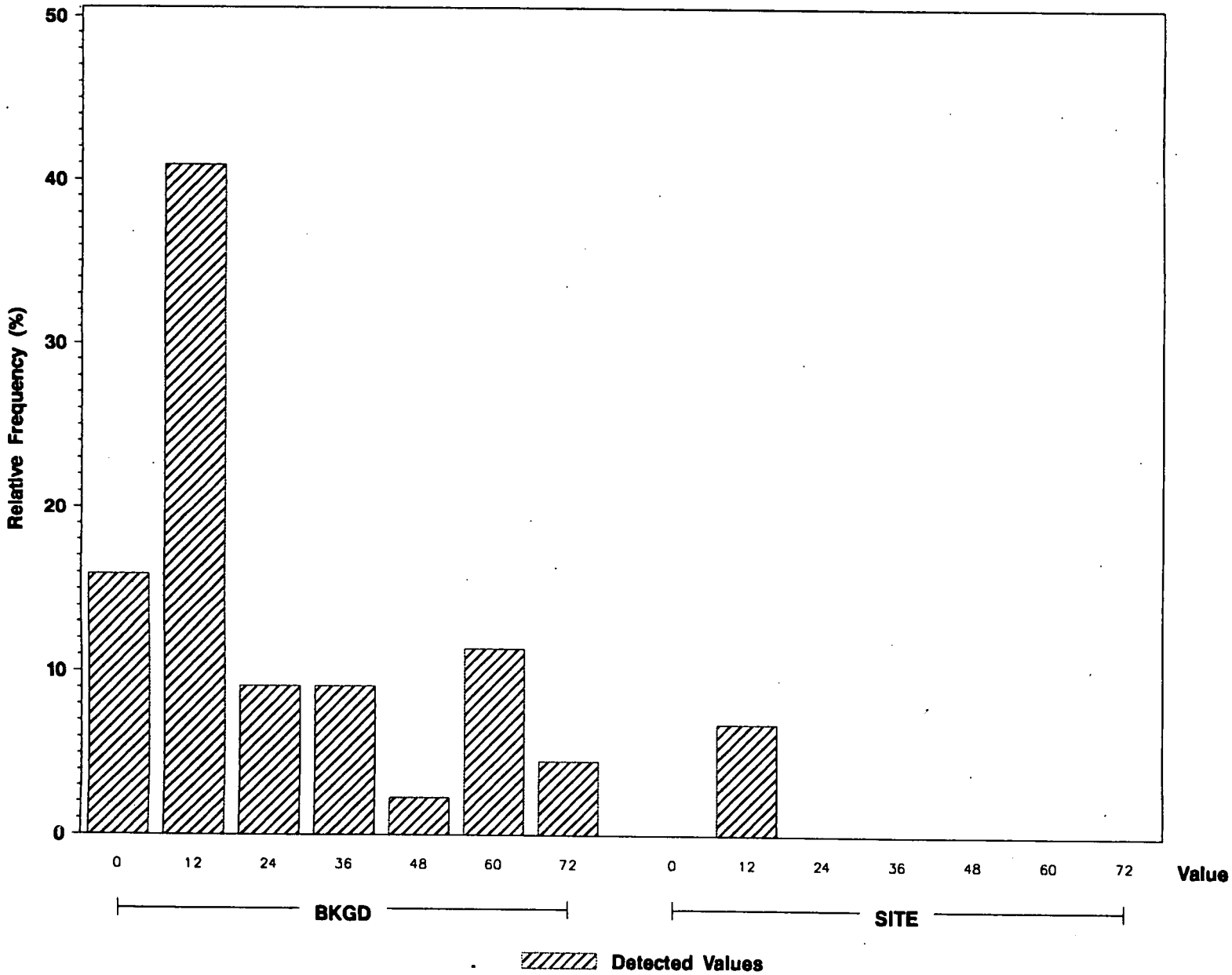
ANALYTE = CESIUM – 137



# Background vs East Landfill Pond Sediments Frequency Histogram

## GROSS ALPHA (pCi/g) in Sediments

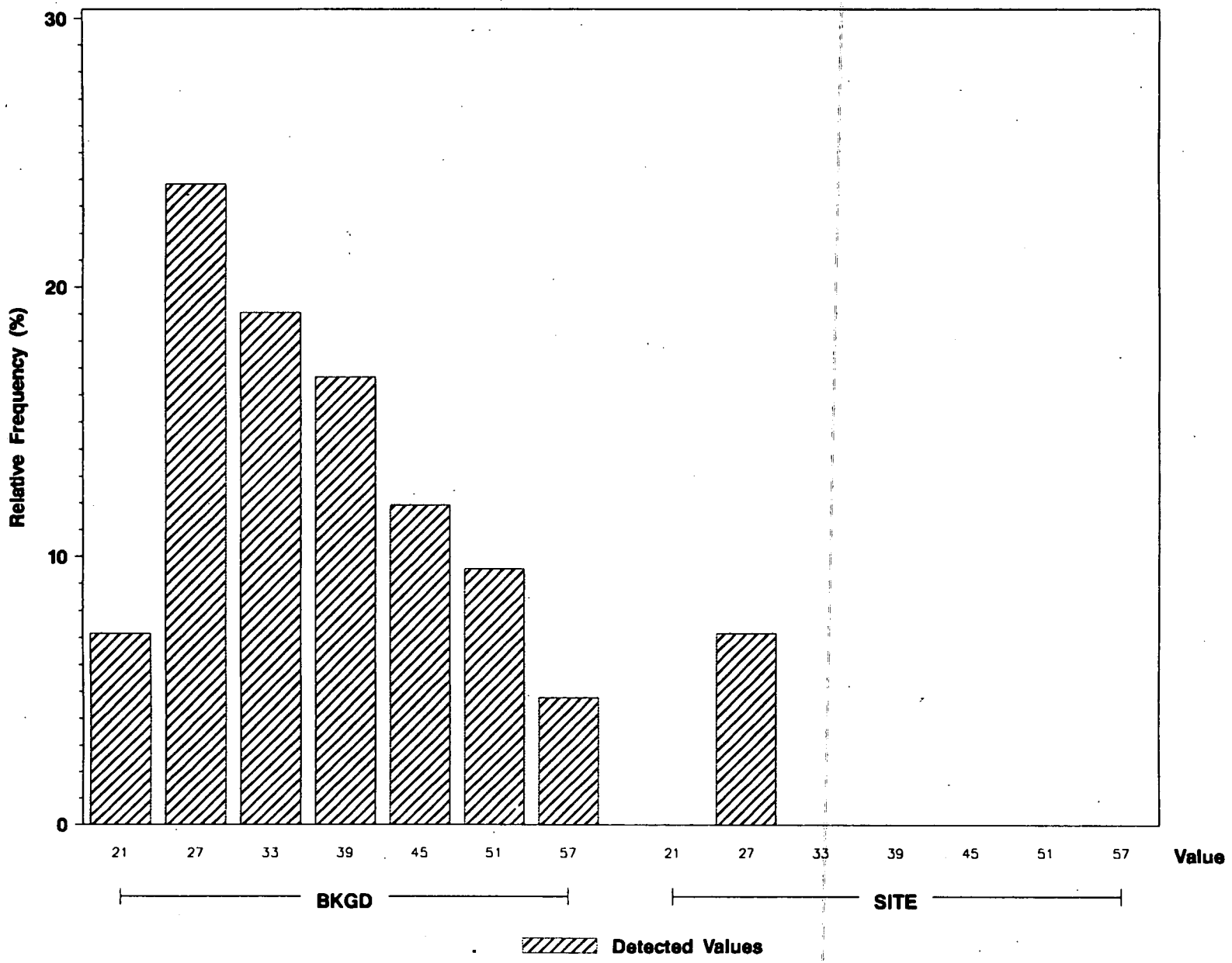
ANALYTE = GROSS ALPHA



# Background vs East Landfill Pond Sediments Frequency Histogram

## GROSS BETA (pCi/g) in Sediments

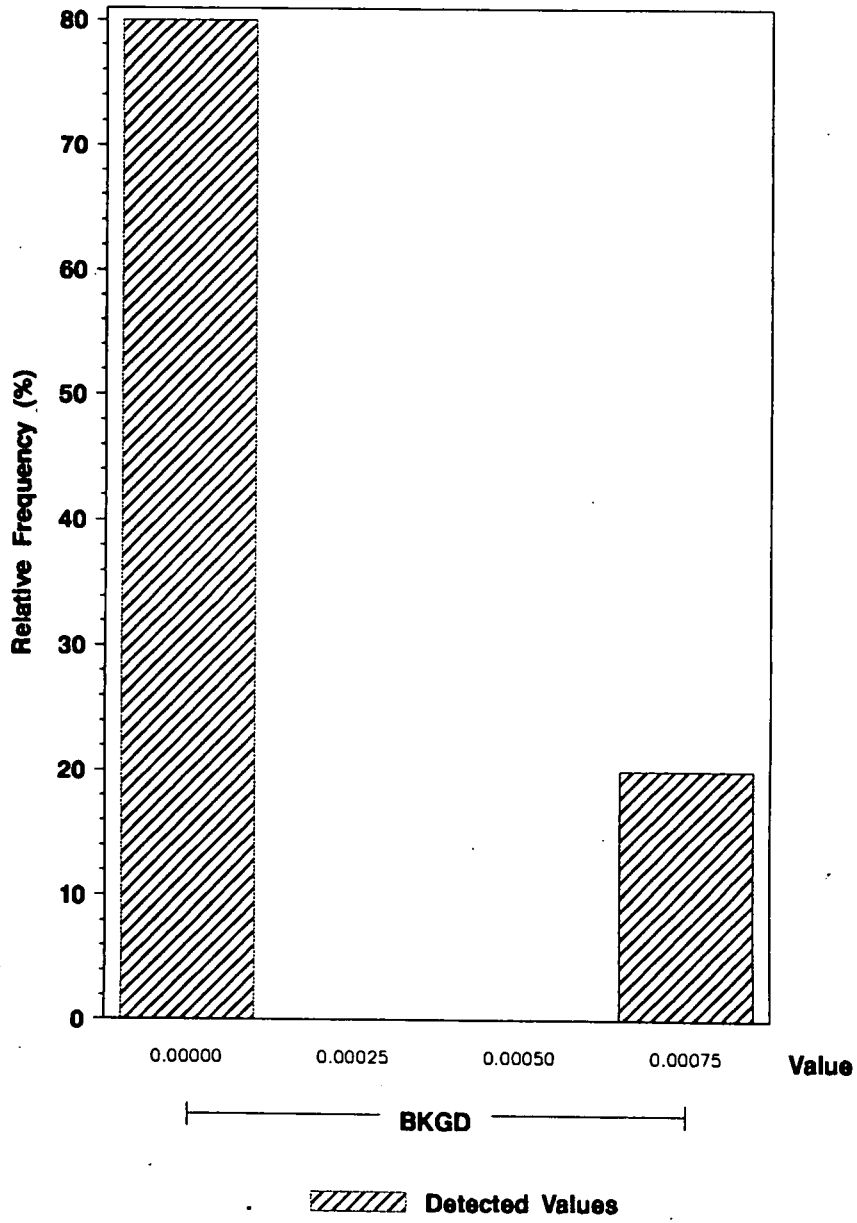
ANALYTE=GROSS BETA



# Background vs East Landfill Pond Sediments Frequency Histogram

## PLUTONIUM – 238 (pCi/g) in Sediments

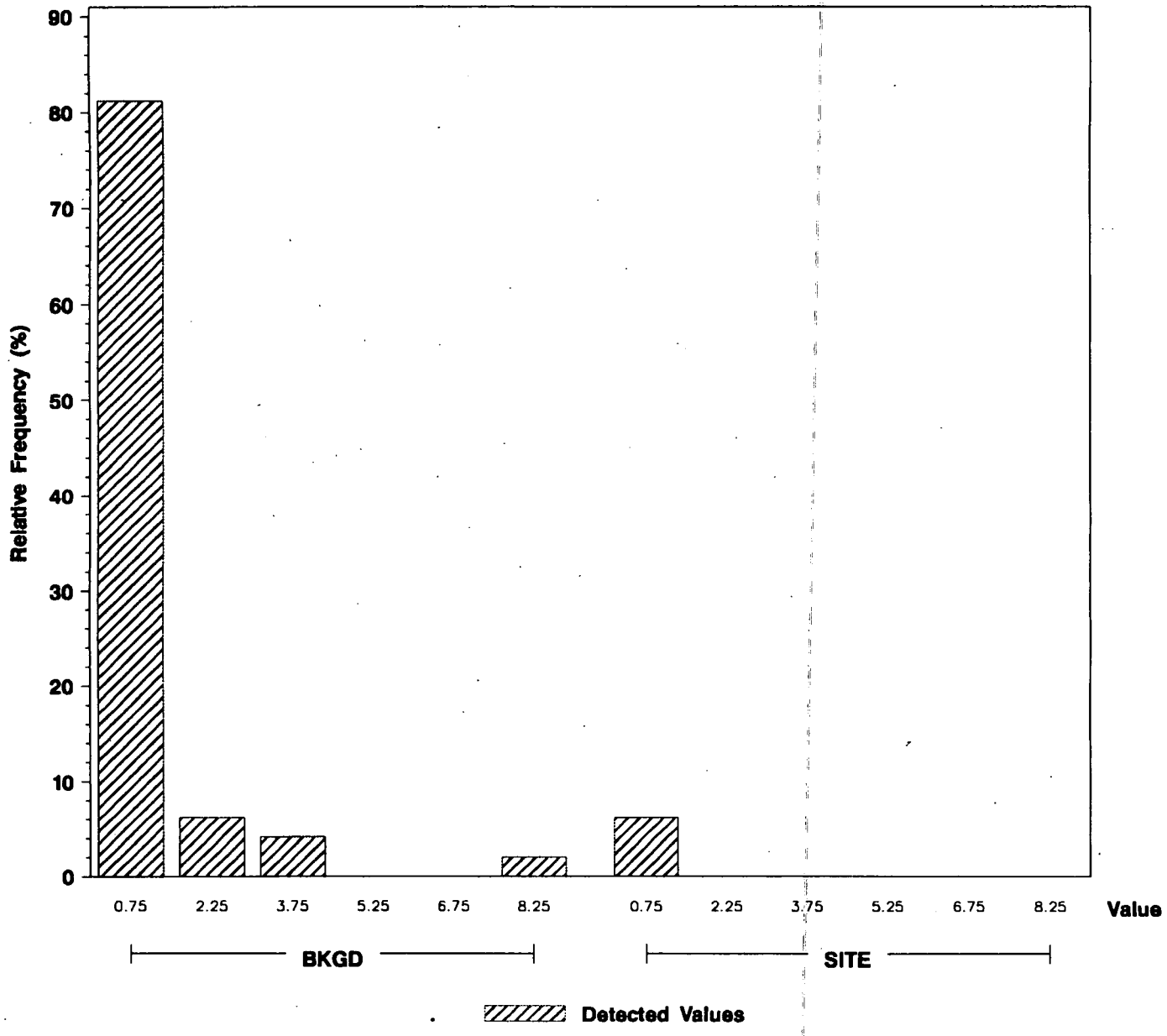
ANALYTE = PLUTONIUM – 238



# Background vs East Landfill Pond Sediments Frequency Histogram

## PLUTONIUM – 239/240 (pCi/g) in Sediments

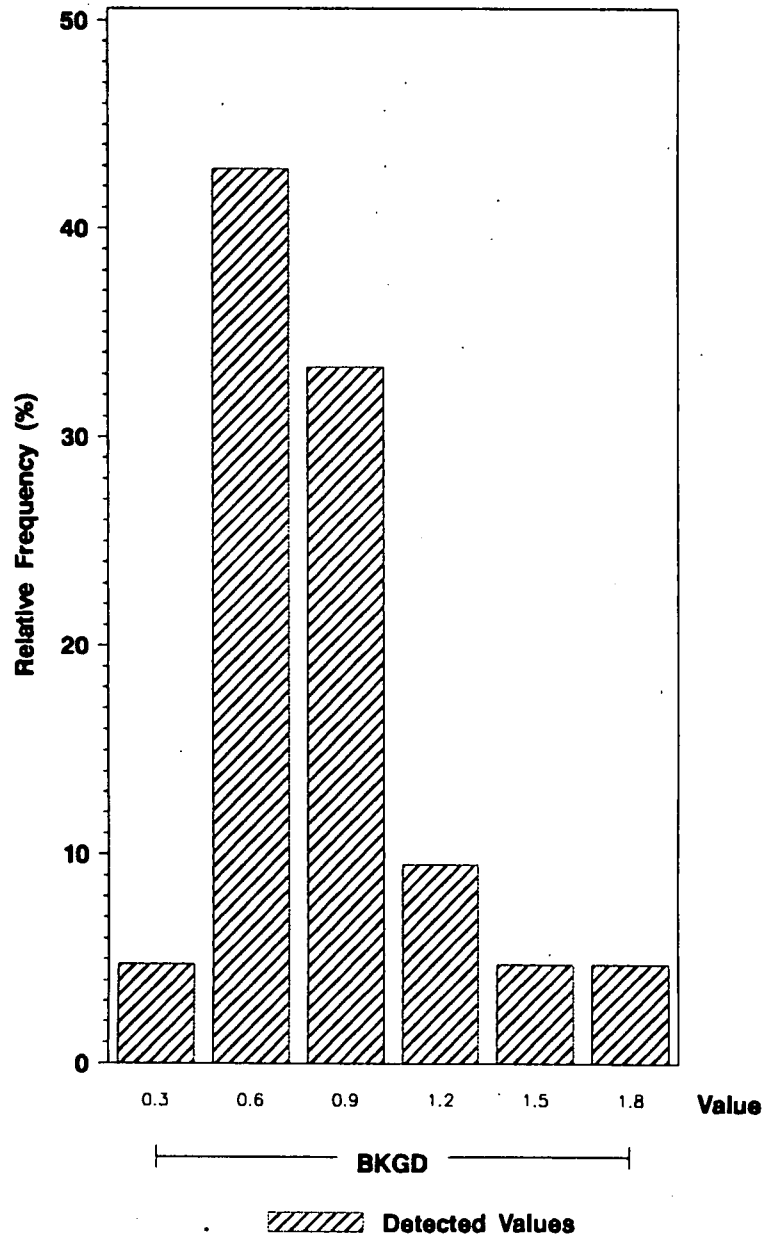
ANALYTE = PLUTONIUM – 239/240



# Background vs East Landfill Pond Sediments Frequency Histogram

## RADIUM – 226 (pCi/g) in Sediments

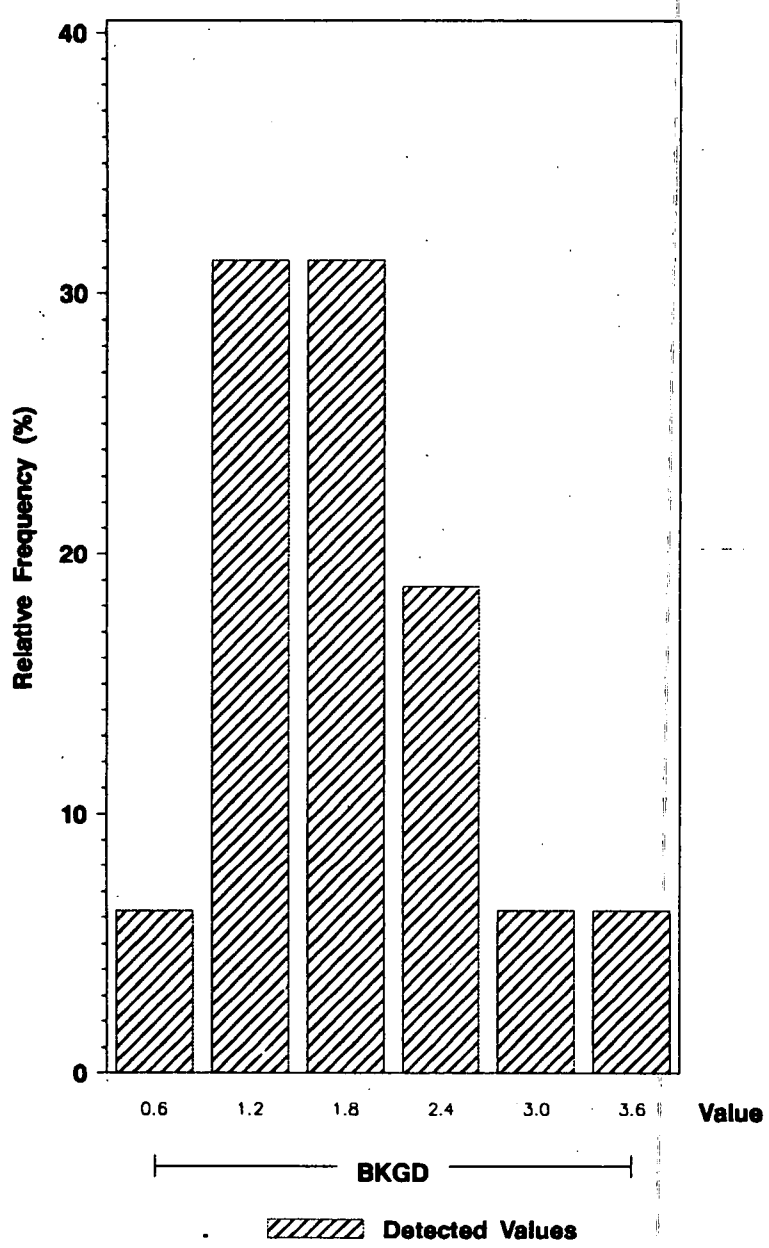
ANALYTE = RADIUM – 226



# Background vs East Landfill Pond Sediments Frequency Histogram

## RADIUM – 228 (pCi/g) in Sediments

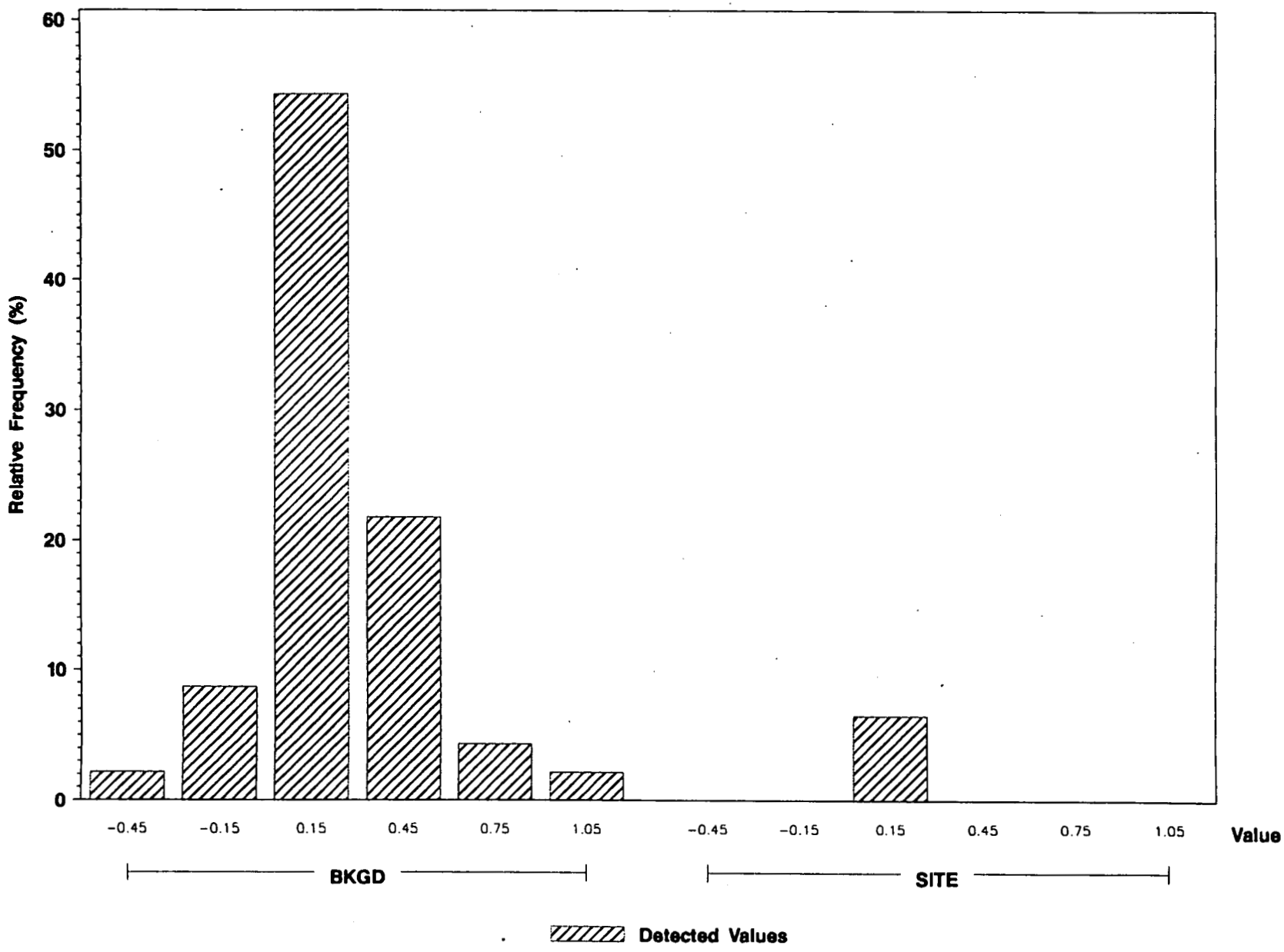
ANALYTE = RADIUM – 228



# Background vs East Landfill Pond Sediments Frequency Histogram

## STRONTIUM – 89,90 (pCi/g) in Sediments

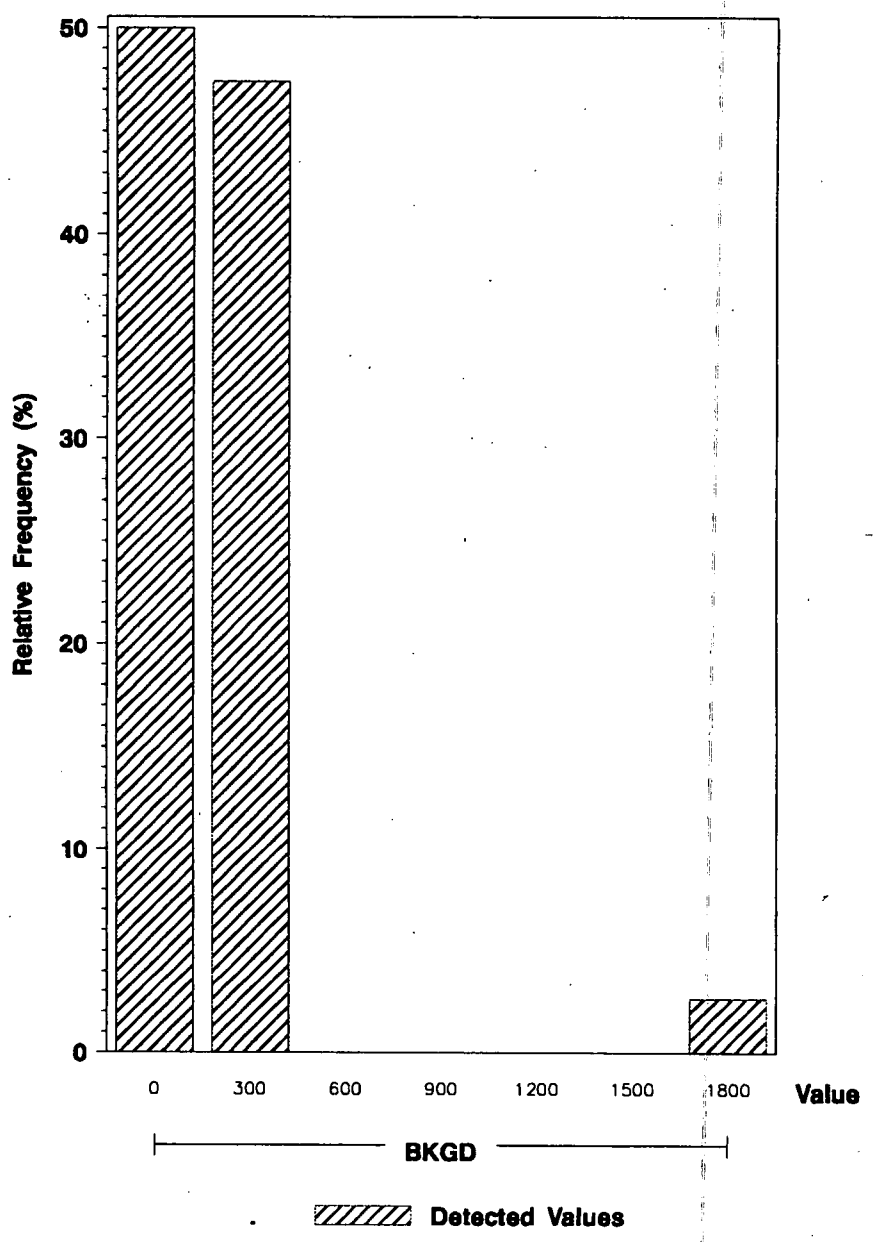
ANALYTE = STRONTIUM – 89,90



# Background vs East Landfill Pond Sediments Frequency Histogram

## TRITIUM (pCi/L) in Sediments

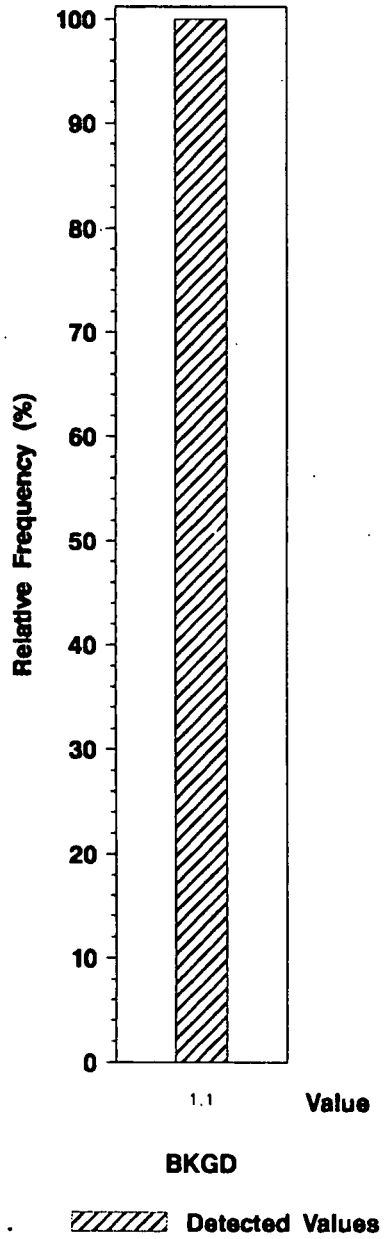
ANALYTE = TRITIUM



# Background vs East Landfill Pond Sediments Frequency Histogram

## URANIUM, TOTAL (pCi/g) in Sediments

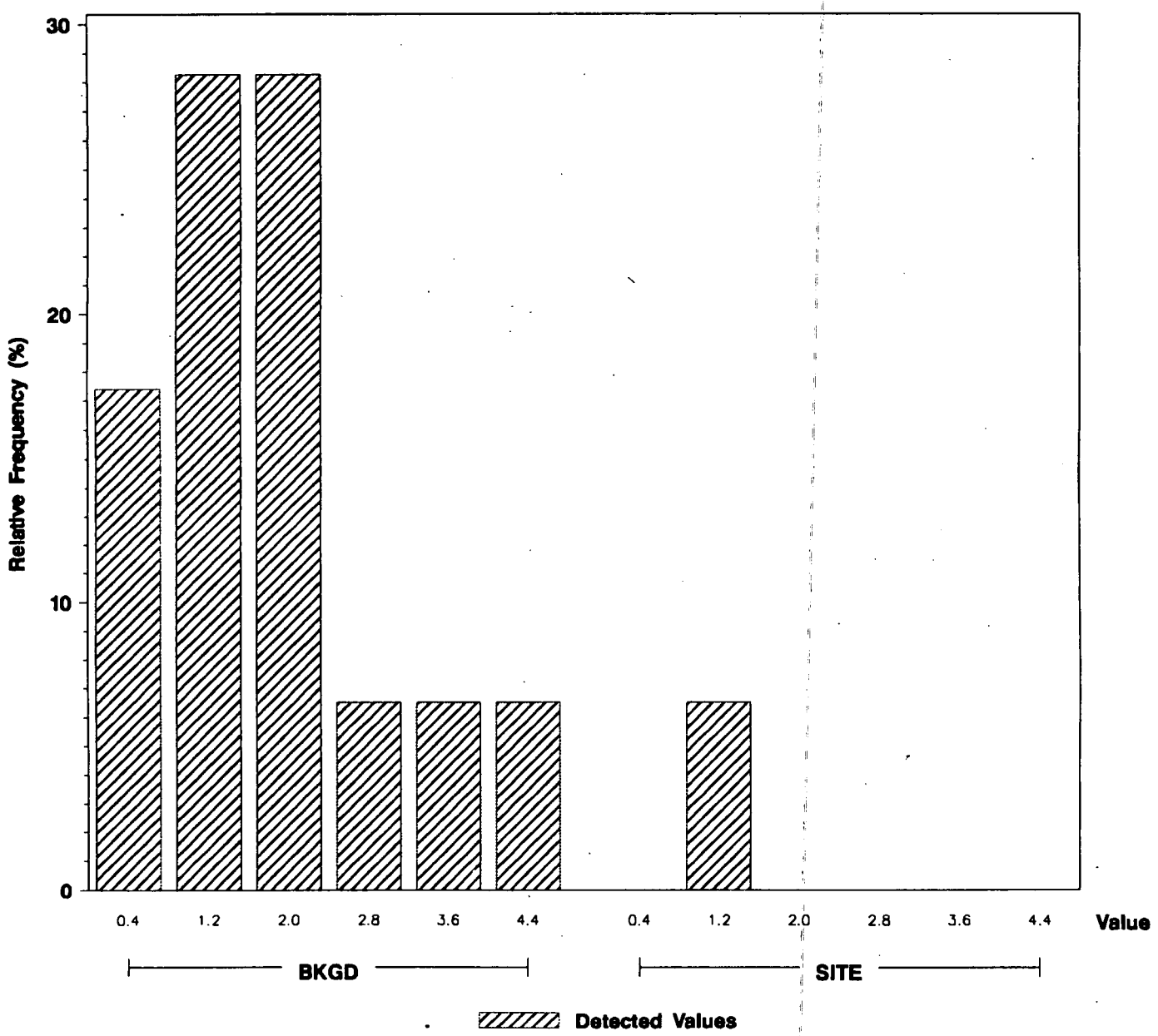
ANALYTE = URANIUM, TOTAL



# Background vs East Landfill Pond Sediments Frequency Histogram

## URANIUM – 233, – 234 (pCi/g) in Sediments

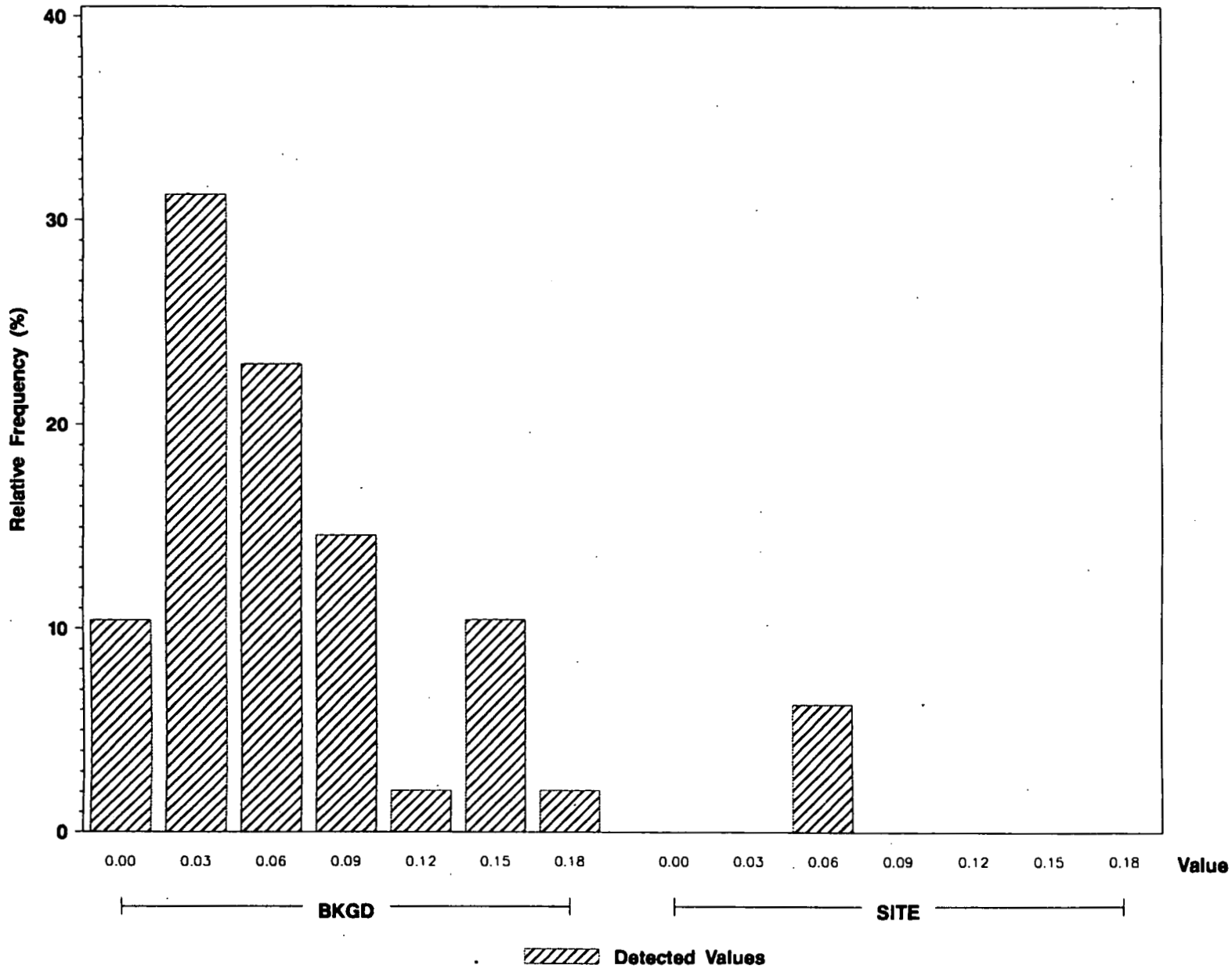
ANALYTE = URANIUM – 233, – 234



# Background vs East Landfill Pond Sediments Frequency Histogram

## URANIUM – 235 (pCi/g) in Sediments

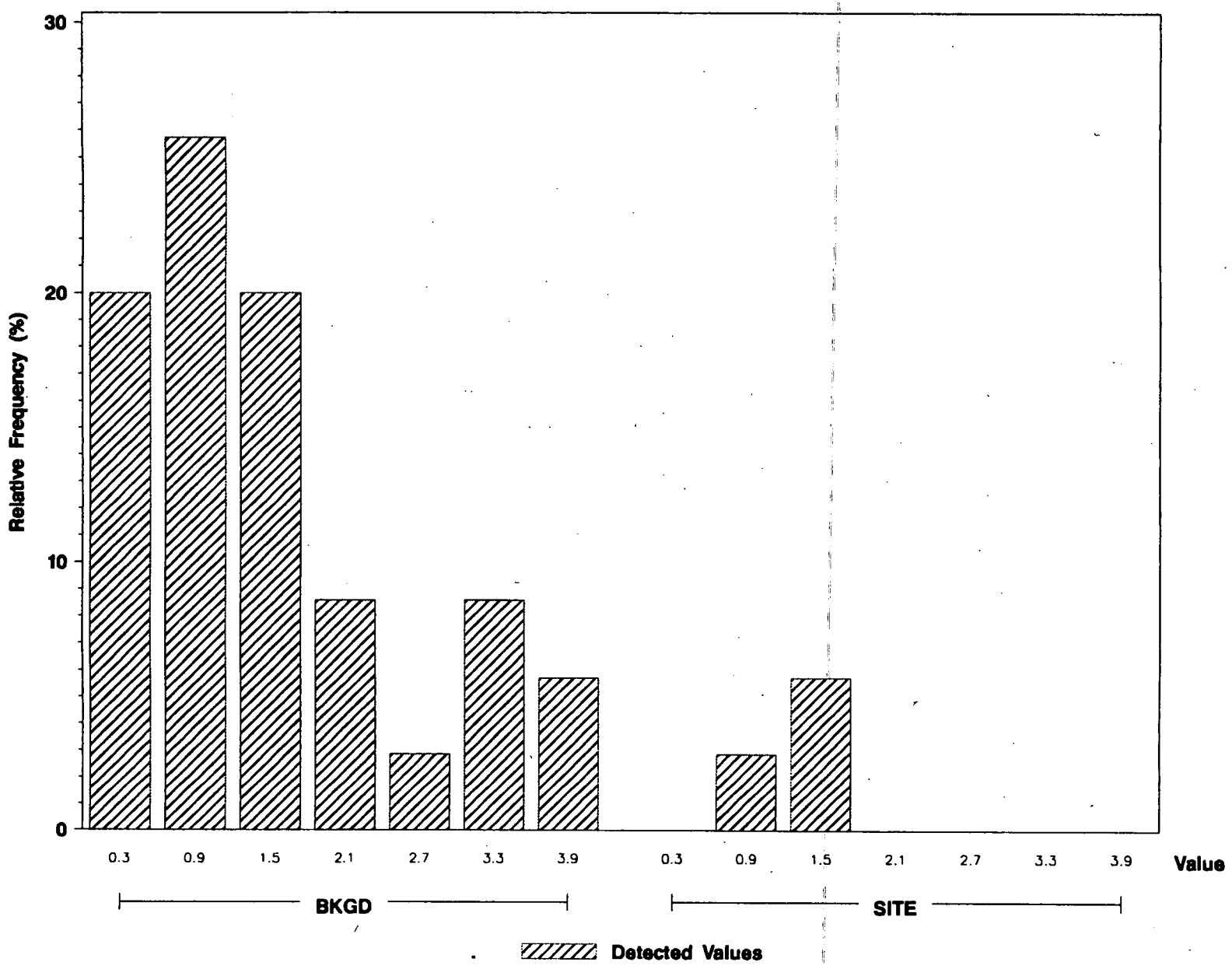
ANALYTE = URANIUM – 235



# Background vs East Landfill Pond Sediments Frequency Histogram

## URANIUM – 238 (pCi/g) in Sediments

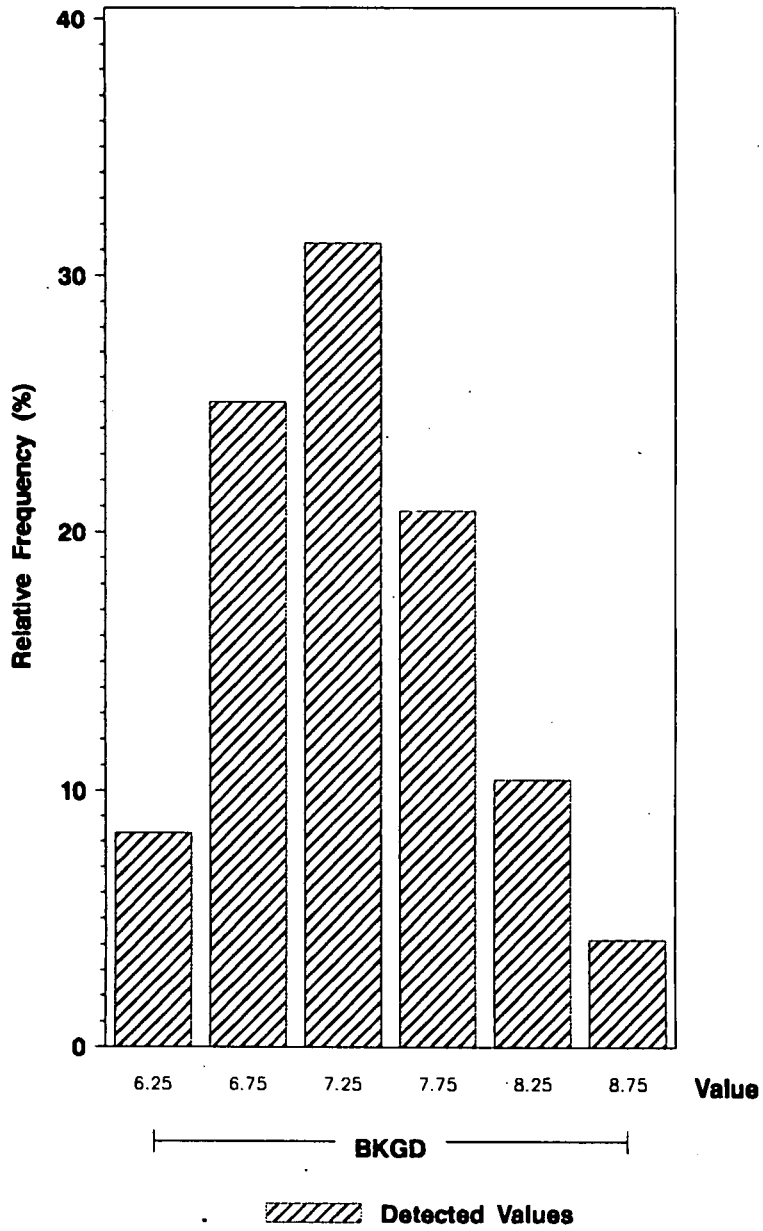
ANALYTE = URANIUM – 238



# Background vs East Landfill Pond Sediments Frequency Histogram

## pH in Sediments

ANALYTE = pH



**Surface Water**

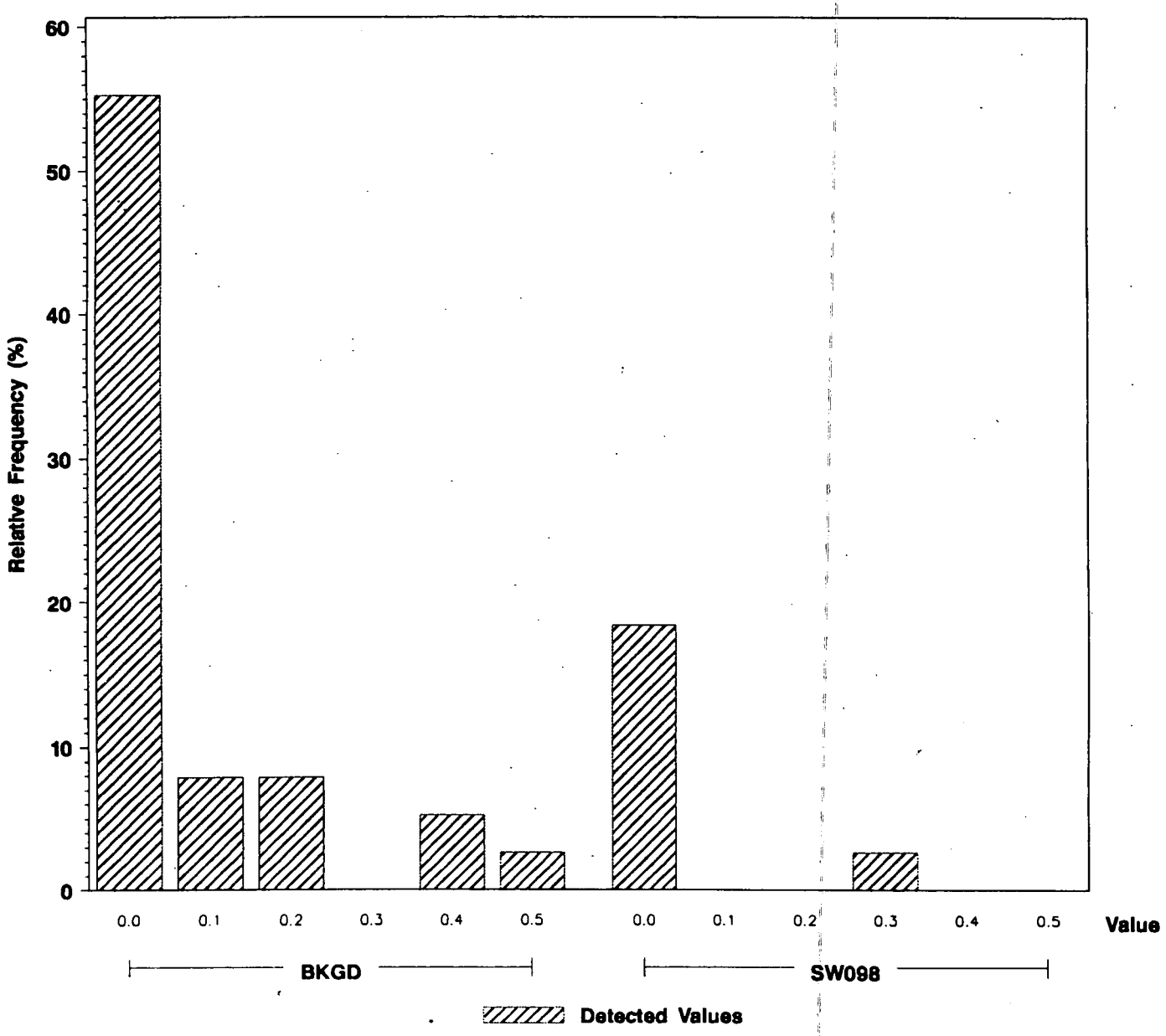
**(Dissolved)**

**Background vs. OU 7 (SW098)**

# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved AMERICIUM-241 (pCi/L) in Surface Water

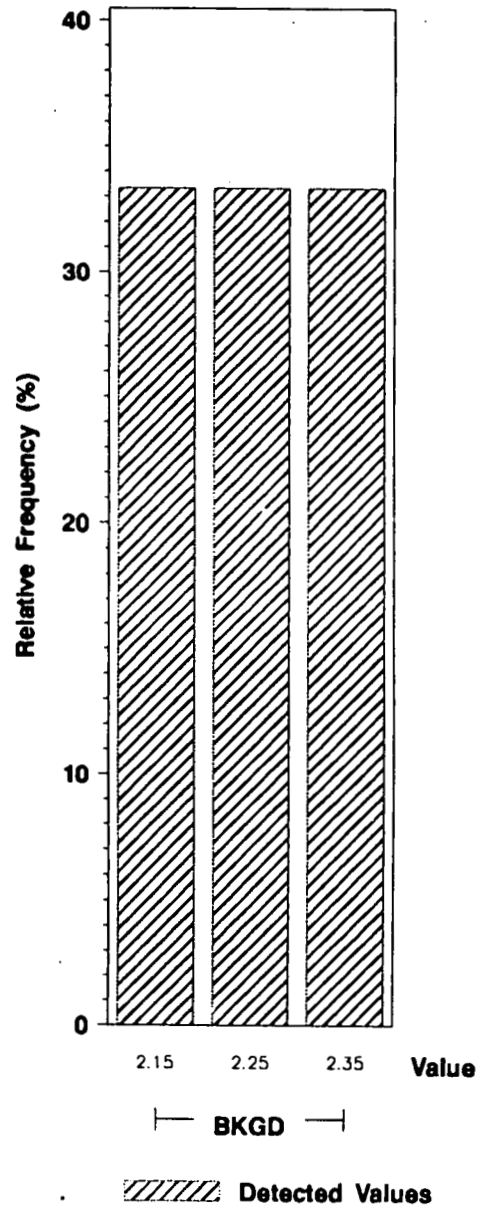
ANALYTE = AMERICIUM-241



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Surface Water

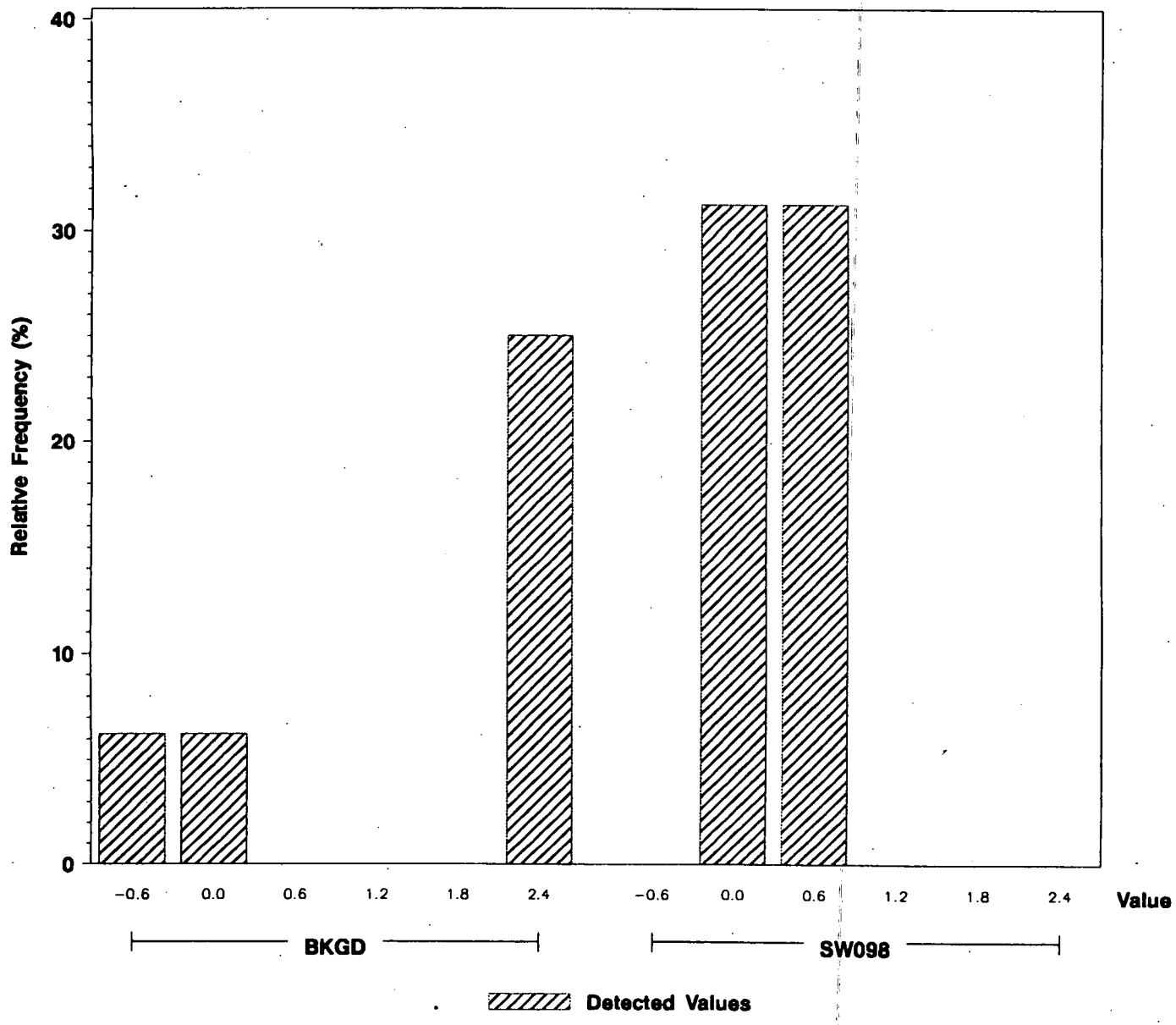
ANALYTE = CESIUM – 134



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Surface Water

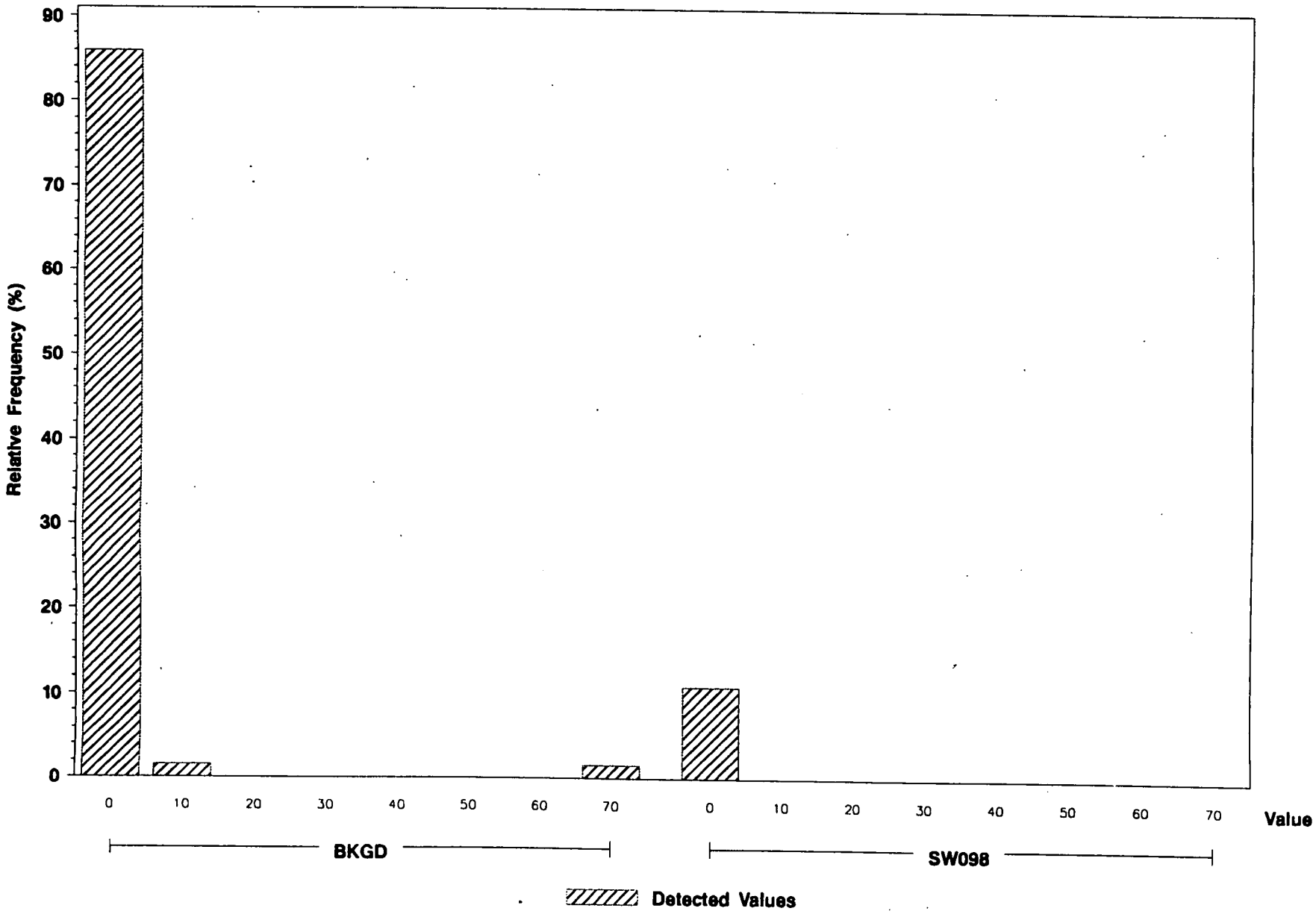
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Surface Water

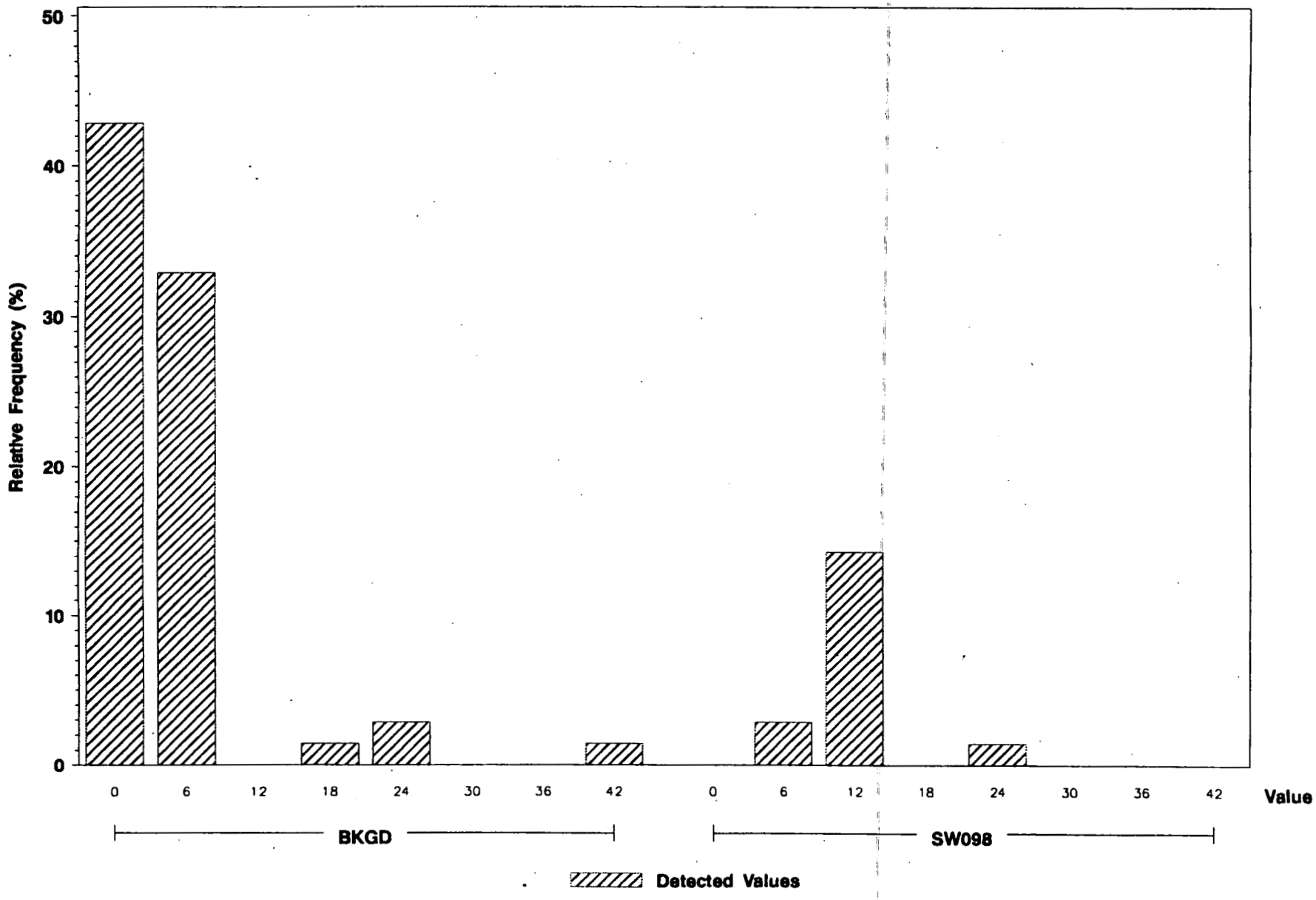
ANALYTE = GROSS ALPHA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Surface Water

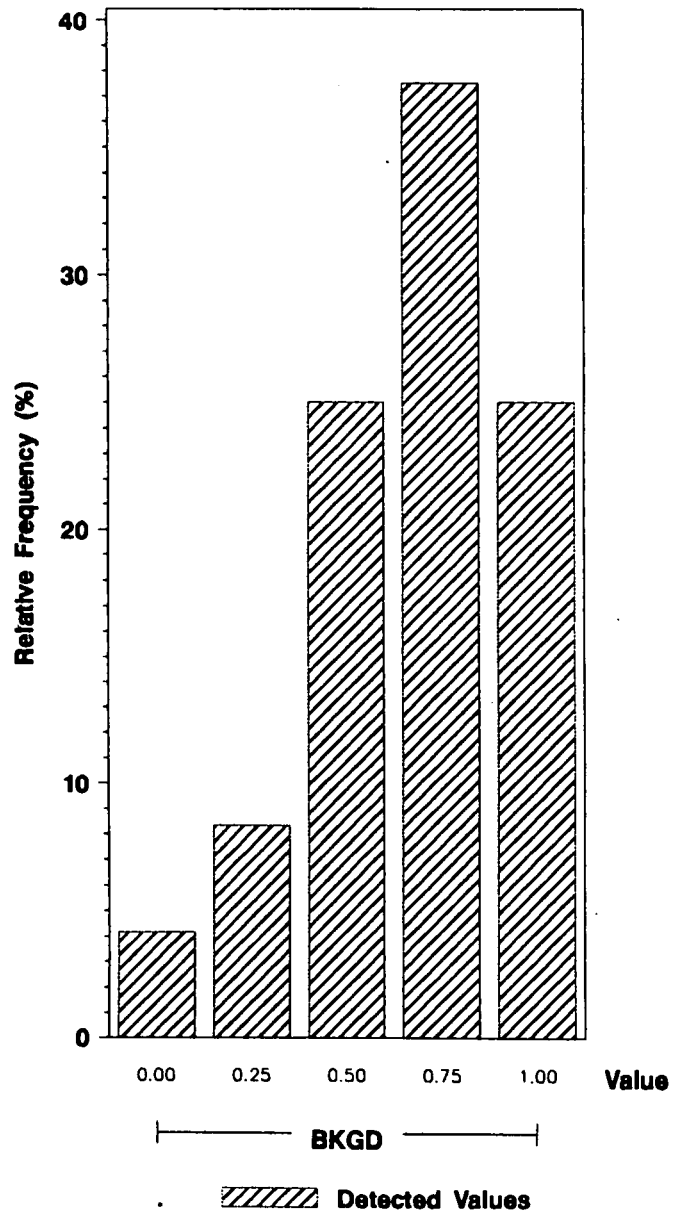
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved GROSS GAMMA (pCi/L) in Surface Water

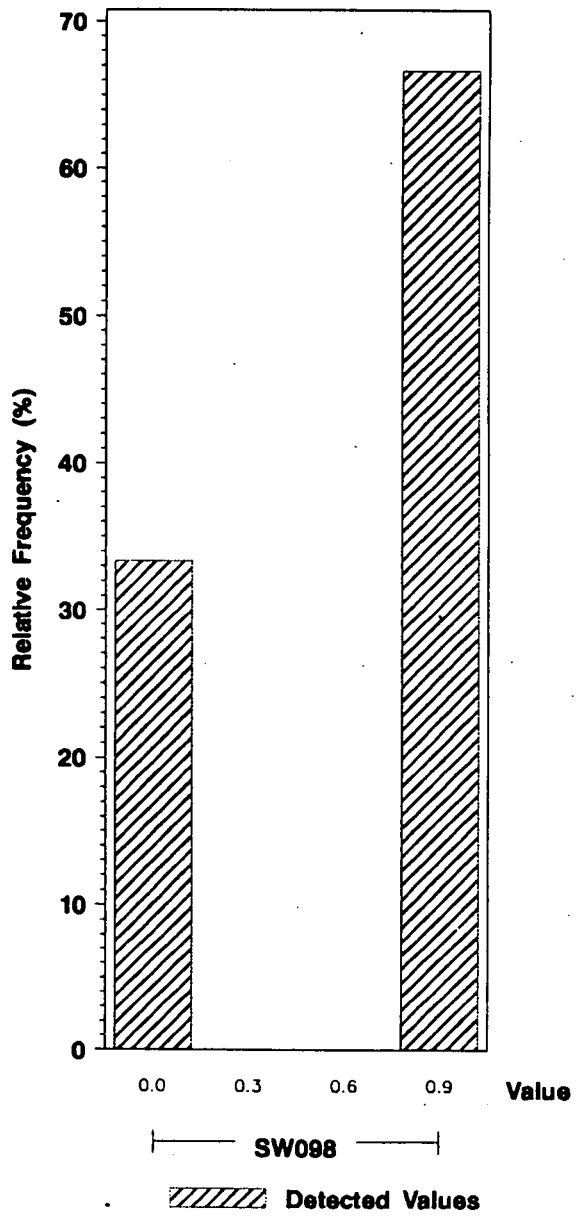
ANALYTE=GROSS GAMMA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved NEPTUNIUM – 237 (pCi/L) in Surface Water

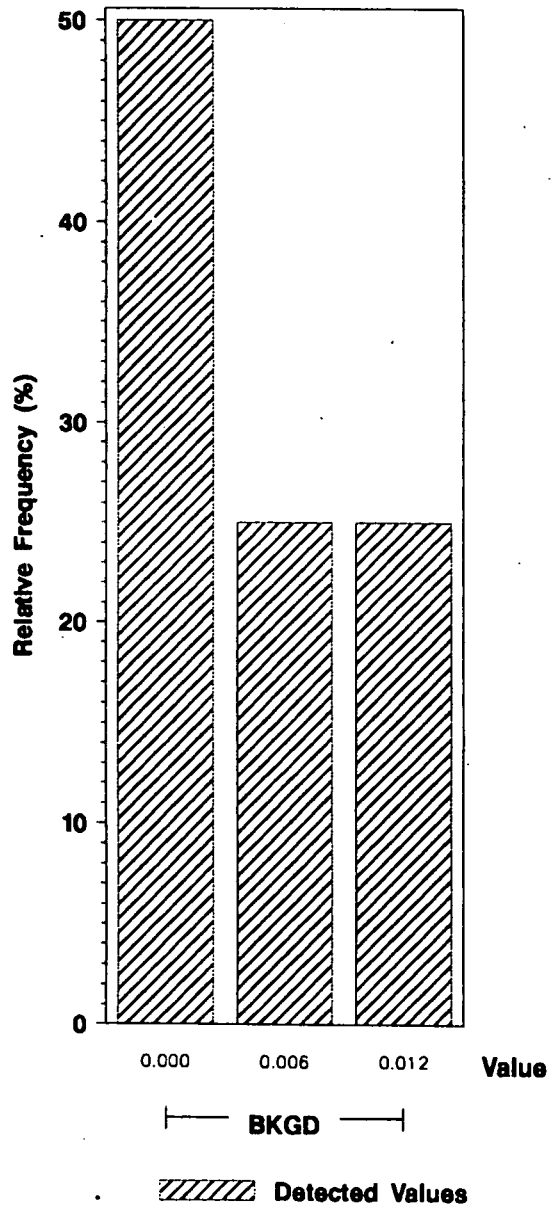
ANALYTE = NEPTUNIUM – 237



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved PLUTONIUM – 236 (pCi/L) in Surface Water

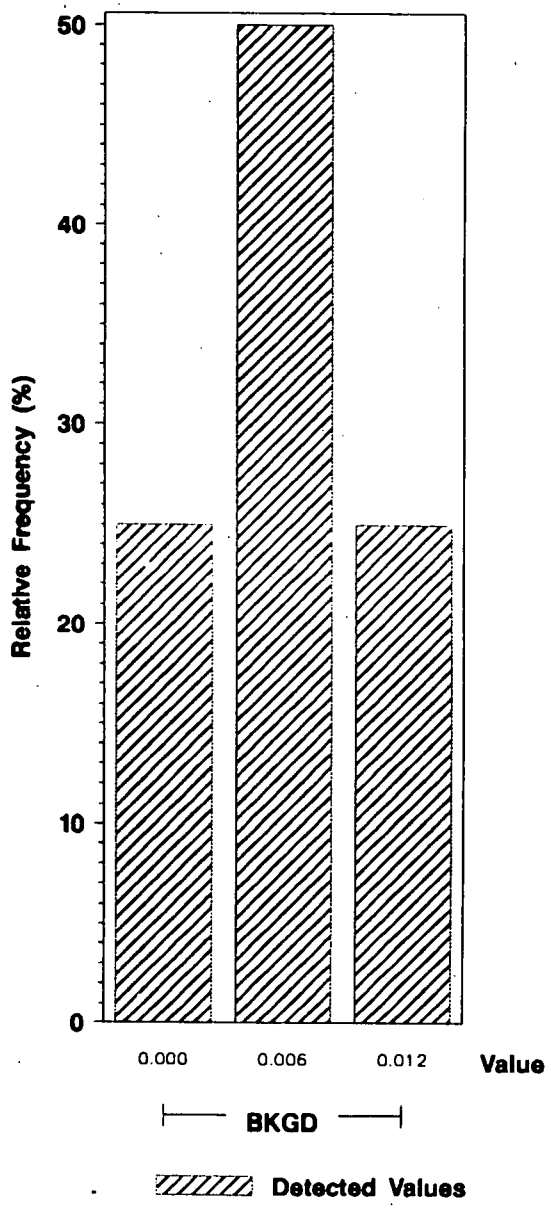
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved PLUTONIUM – 238 (pCi/L) in Surface Water

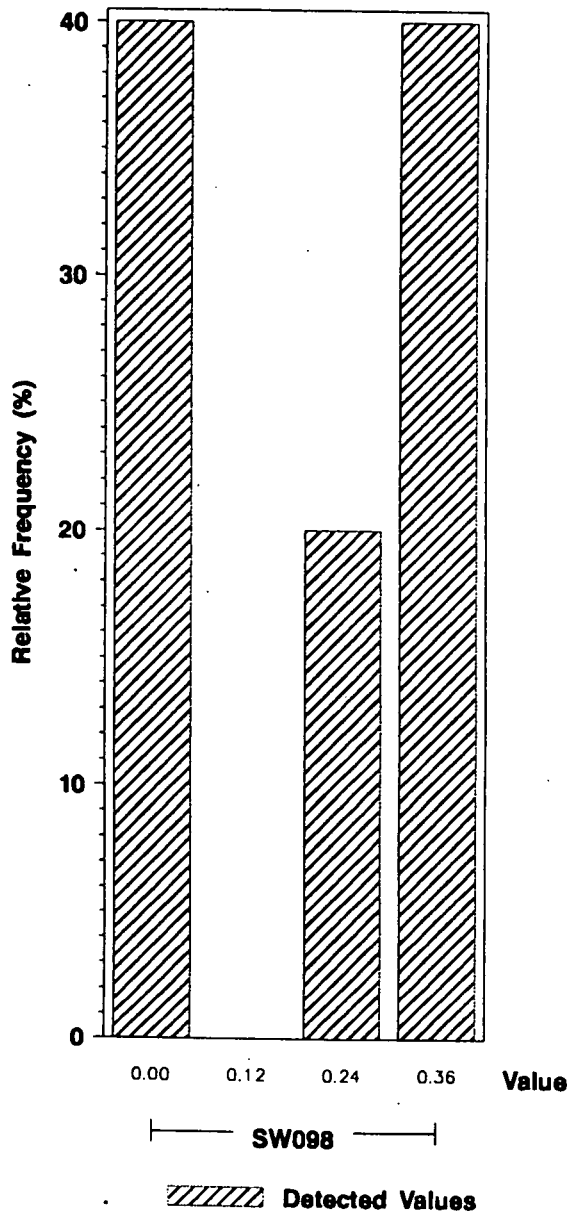
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved PLUTONIUM-239 (pCi/L) in Surface Water

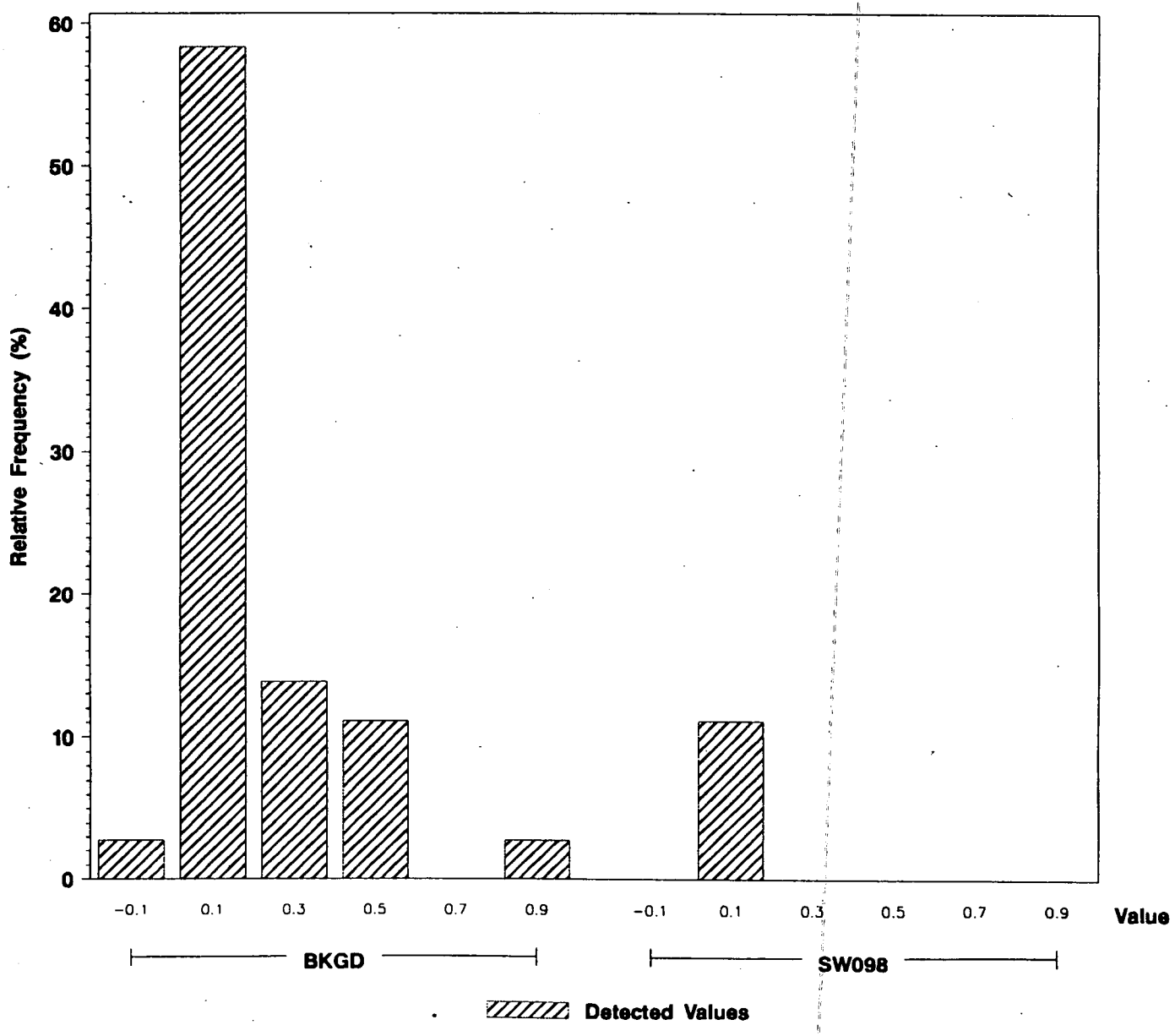
ANALYTE = PLUTONIUM-239



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved PLUTONIUM – 239/240 (pCi/L) in Surface Water

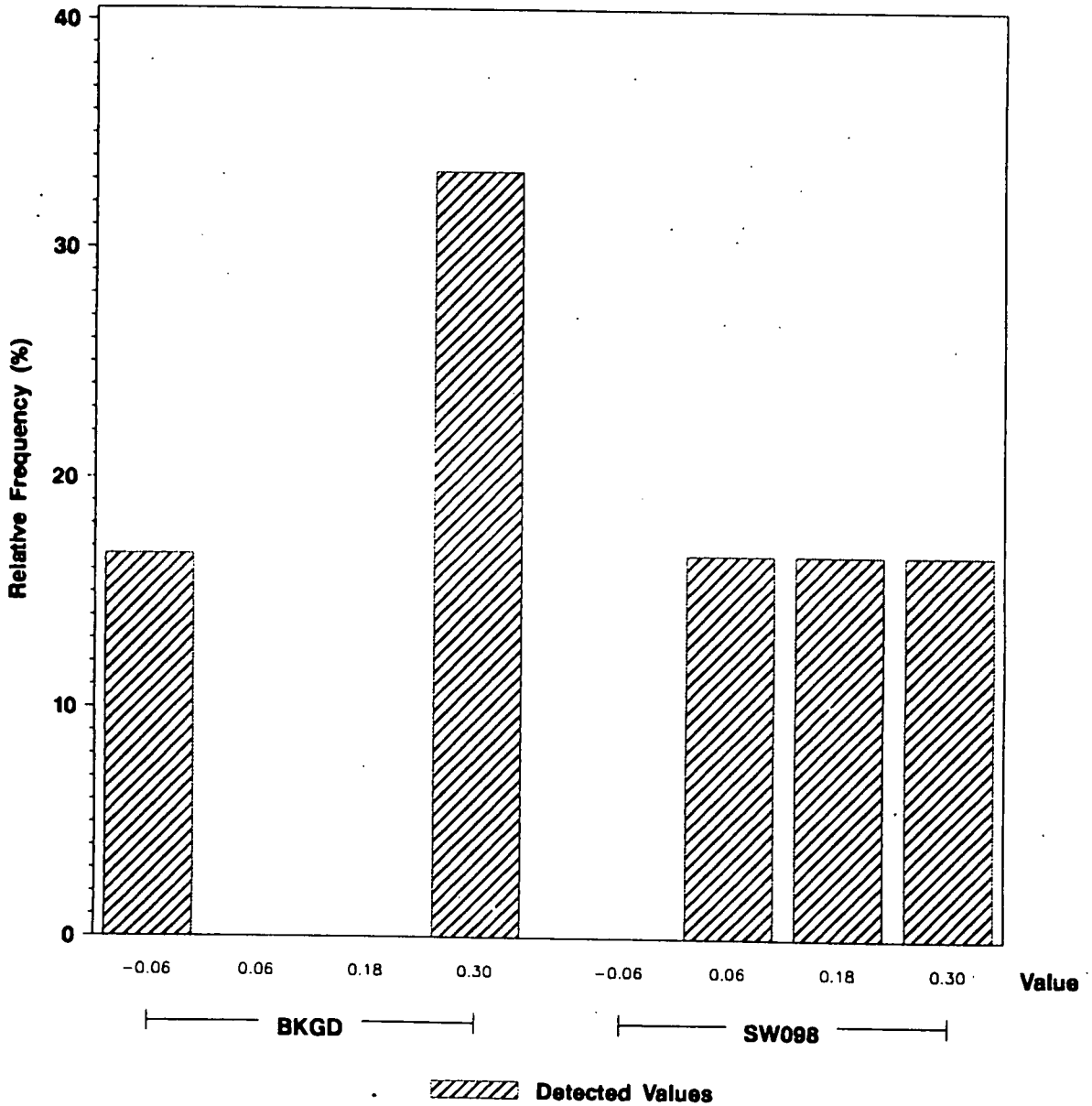
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved RADIUM-226 (pCi/L) in Surface Water

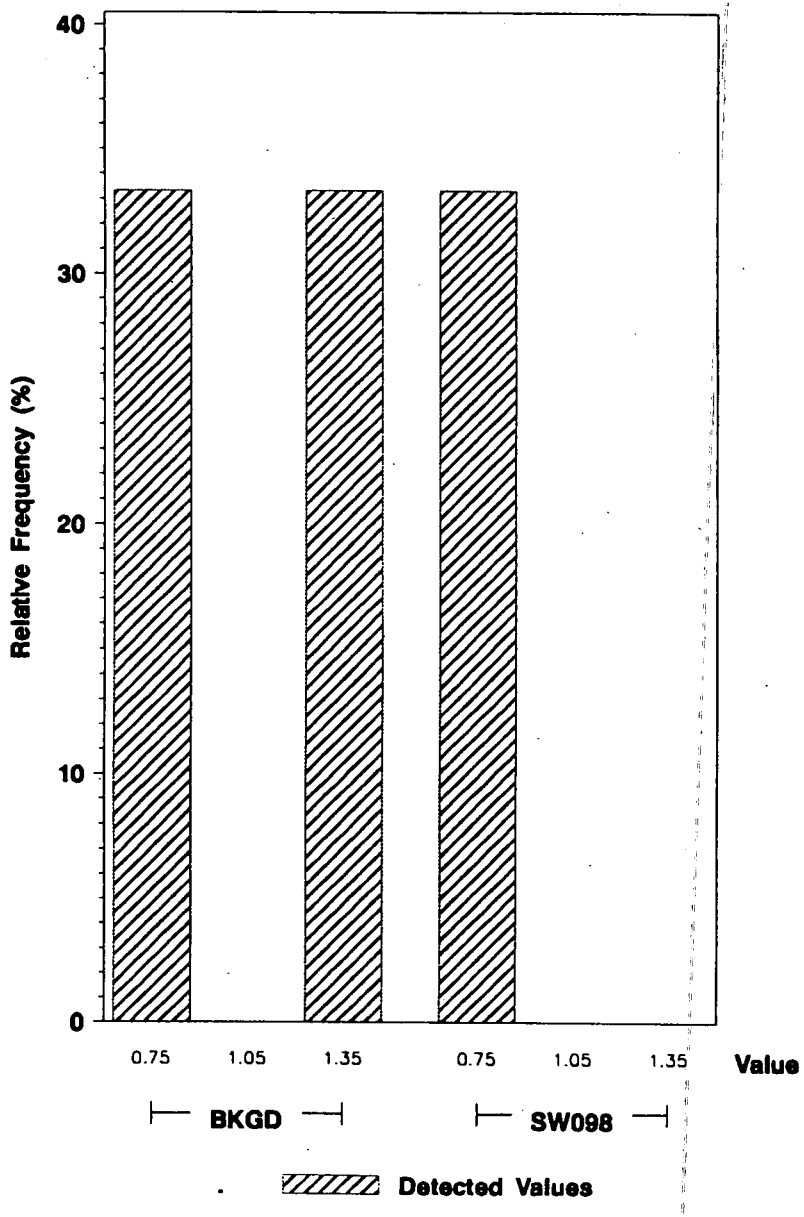
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved RADIUM-228 (pCi/L) in Surface Water

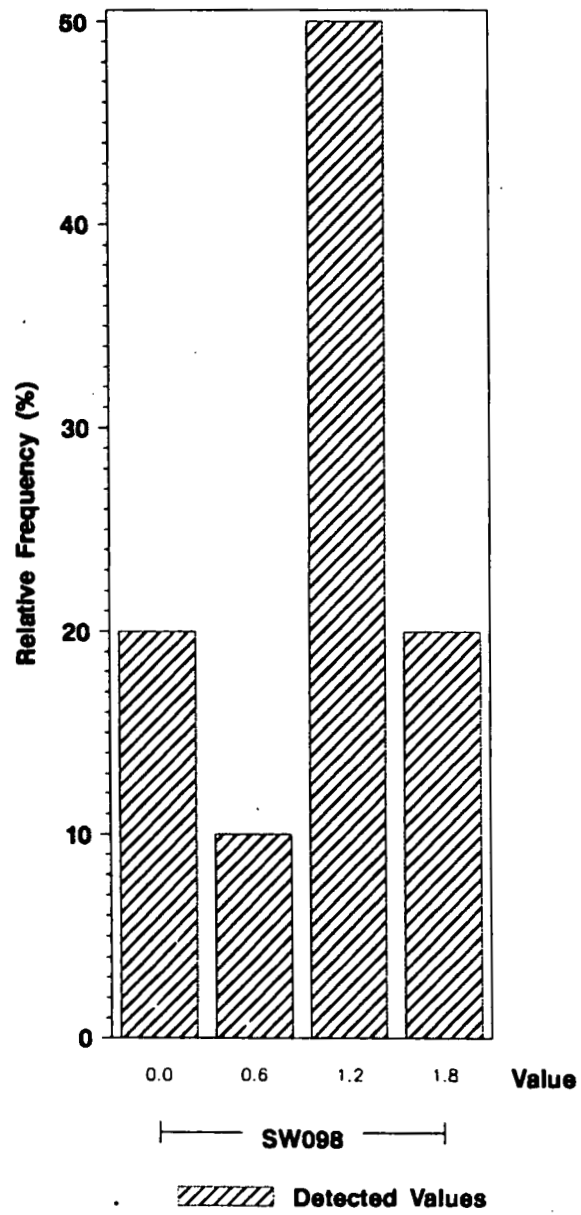
ANALYTE = RADIUM-228



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved STRONTIUM – 89 (pCi/L) in Surface Water

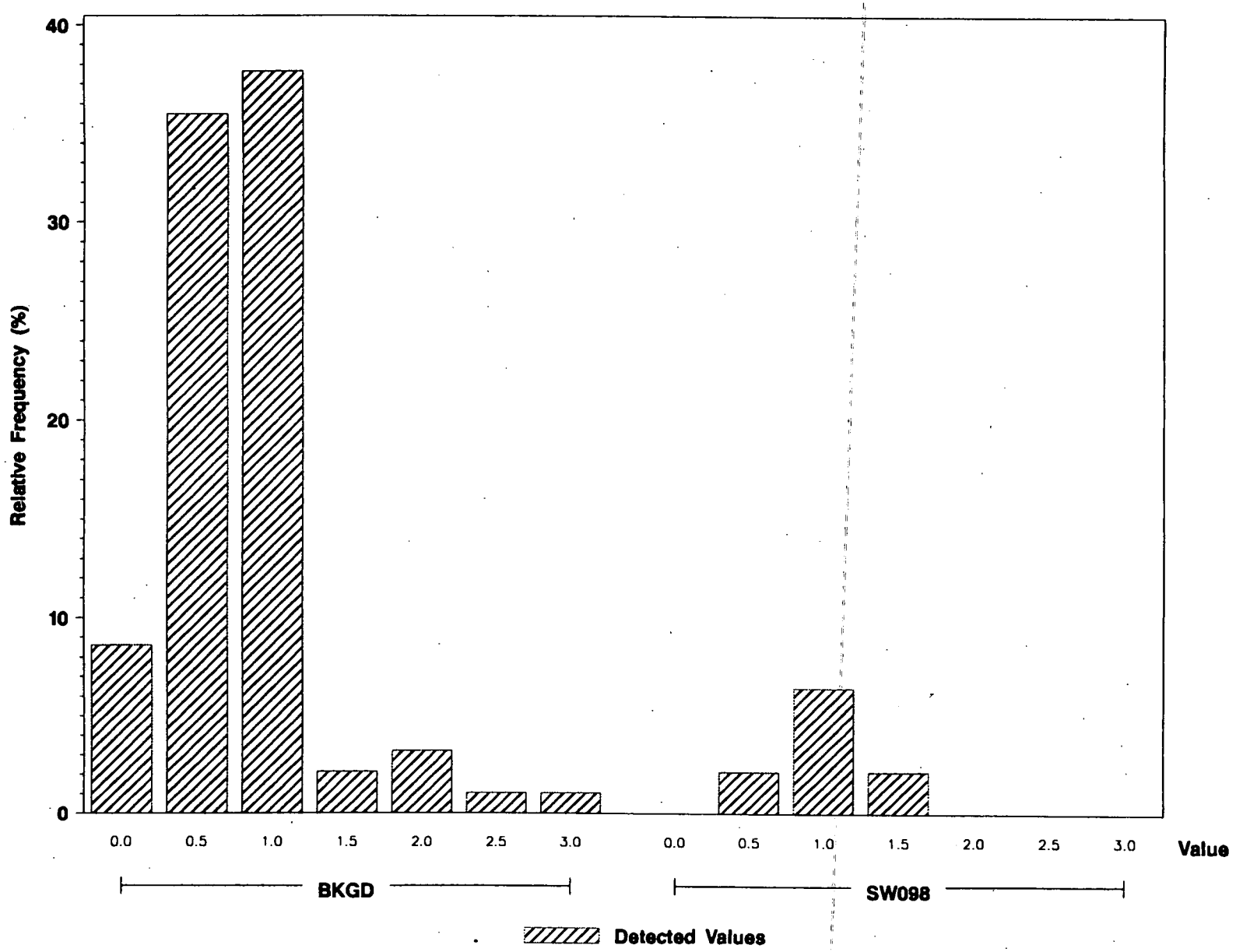
ANALYTE = STRONTIUM – 89



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Surface Water

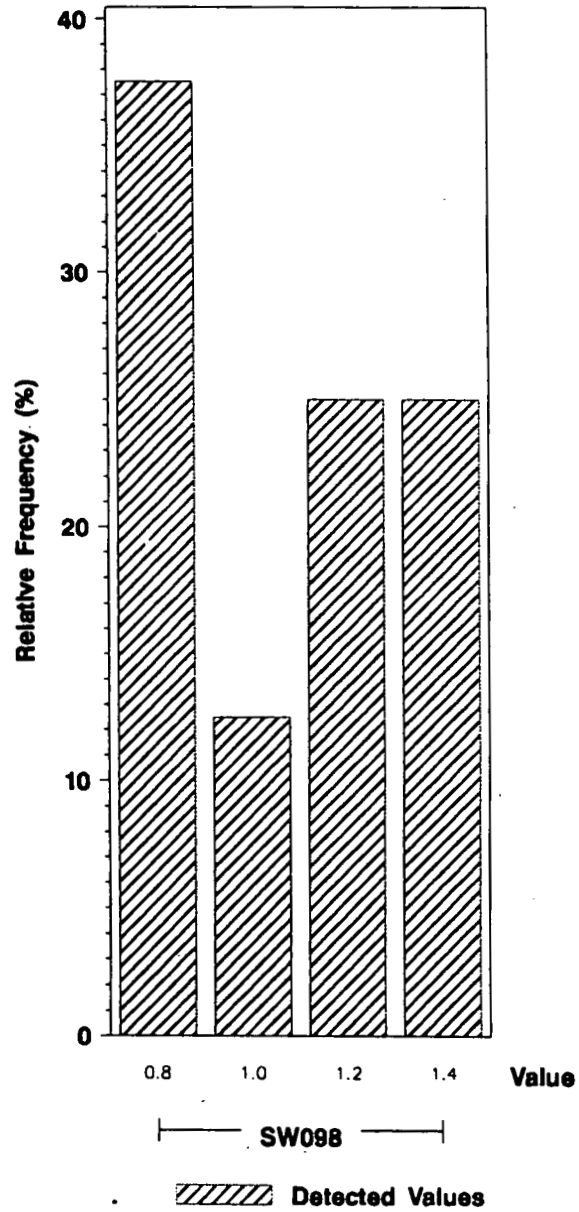
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved STRONTIUM – 90 (pCi/L) in Surface Water

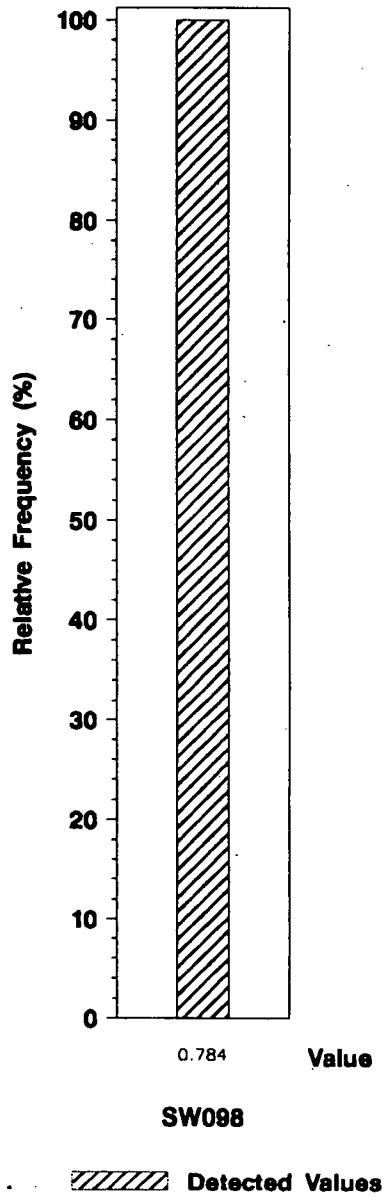
ANALYTE = STRONTIUM – 90



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved TOTAL RADIOCESIUM (pCi/L) in Surface Water

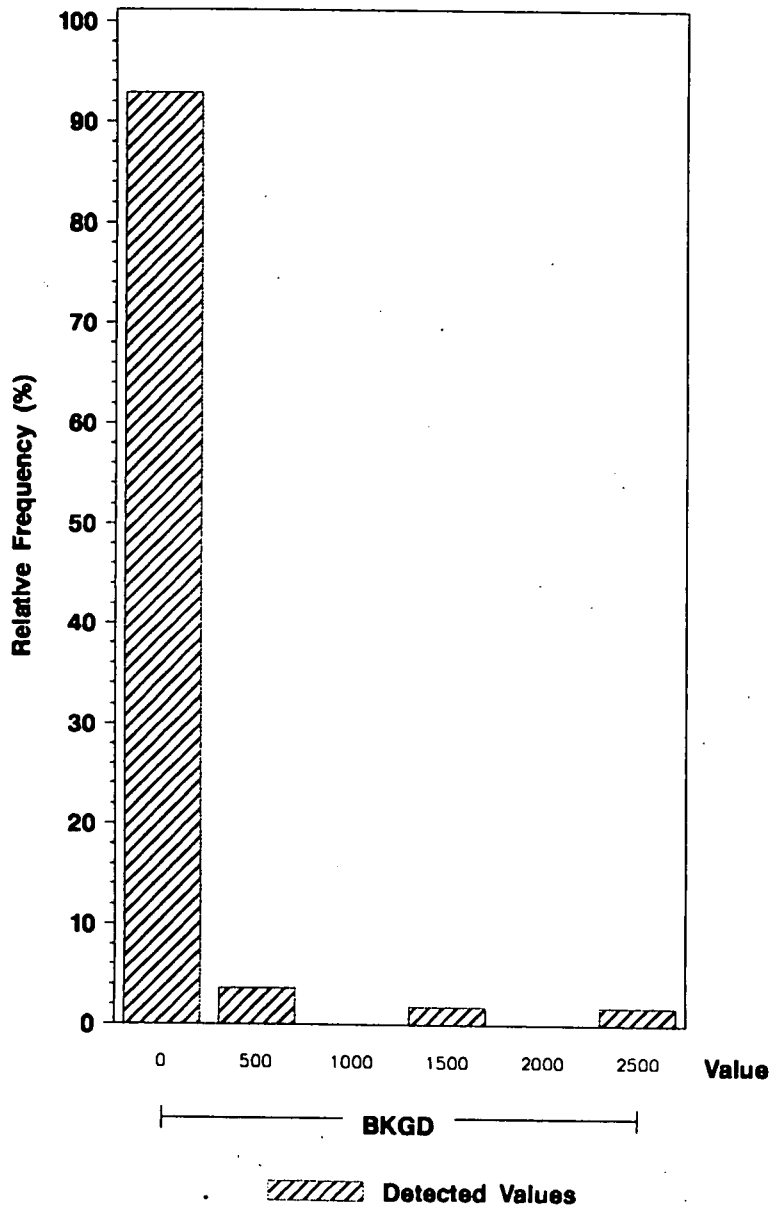
ANALYTE=TOTAL RADIOCESIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Surface Water

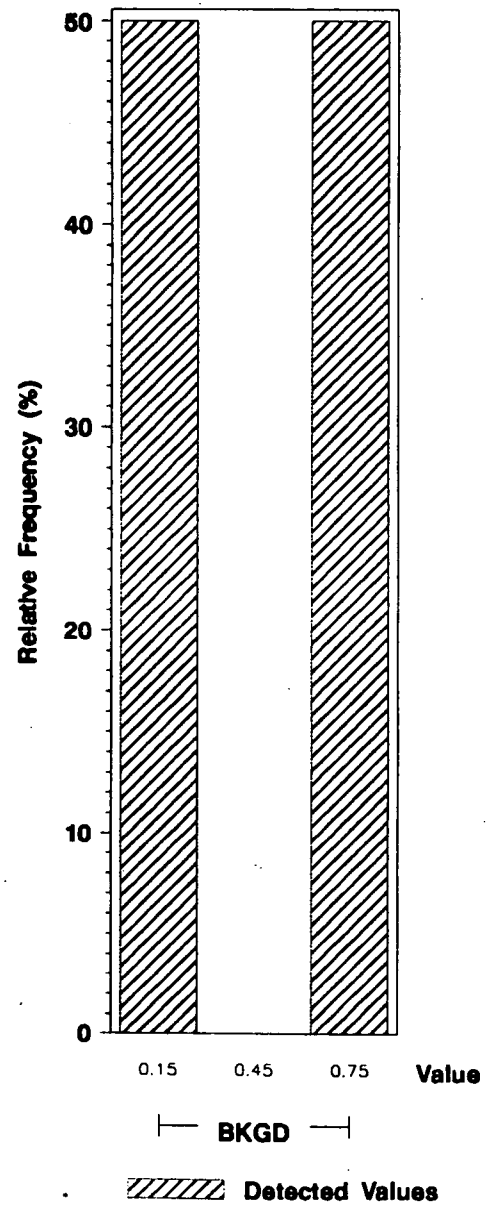
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved URANIUM, TOTAL (pCi/L) in Surface Water

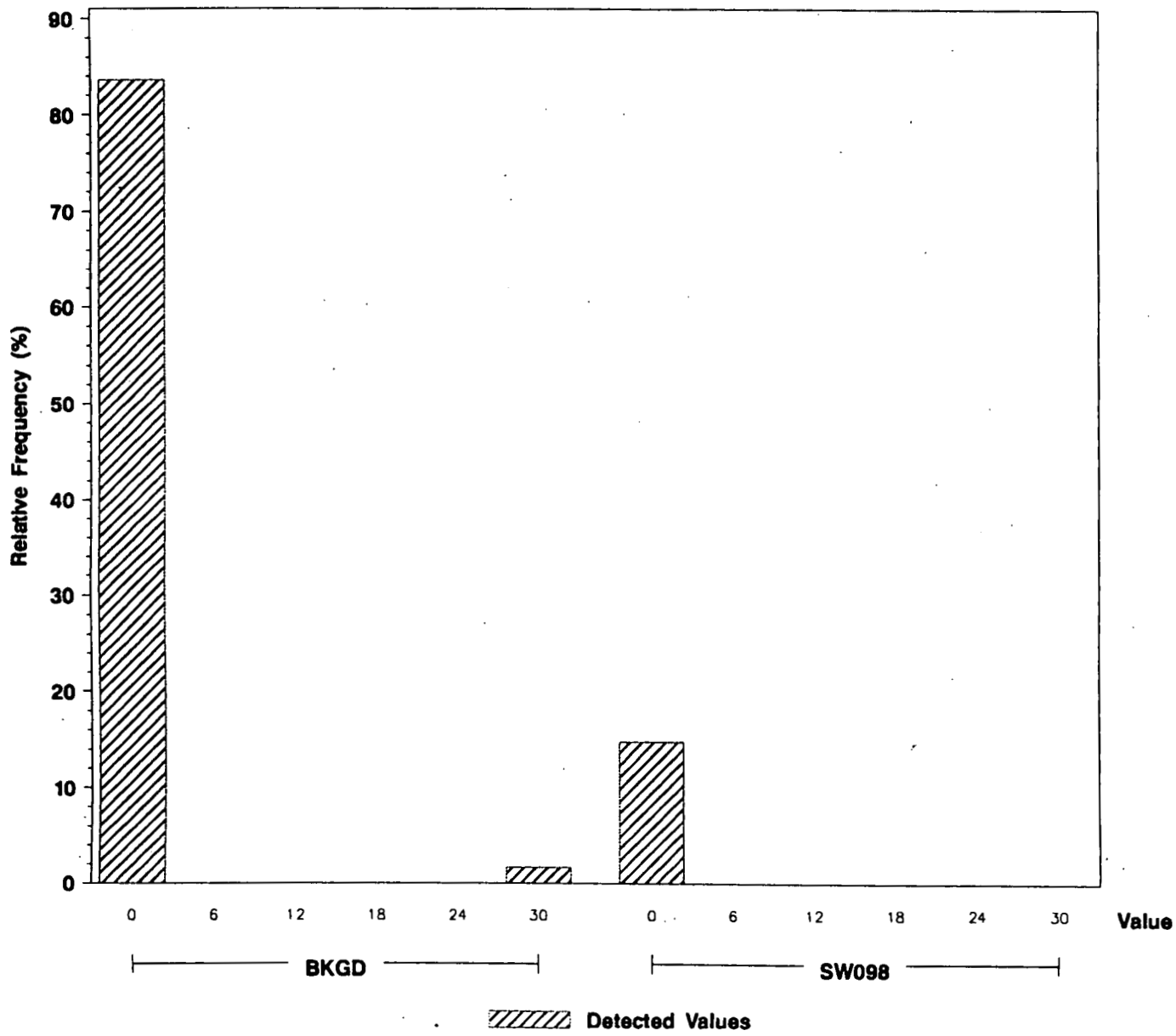
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Surface Water

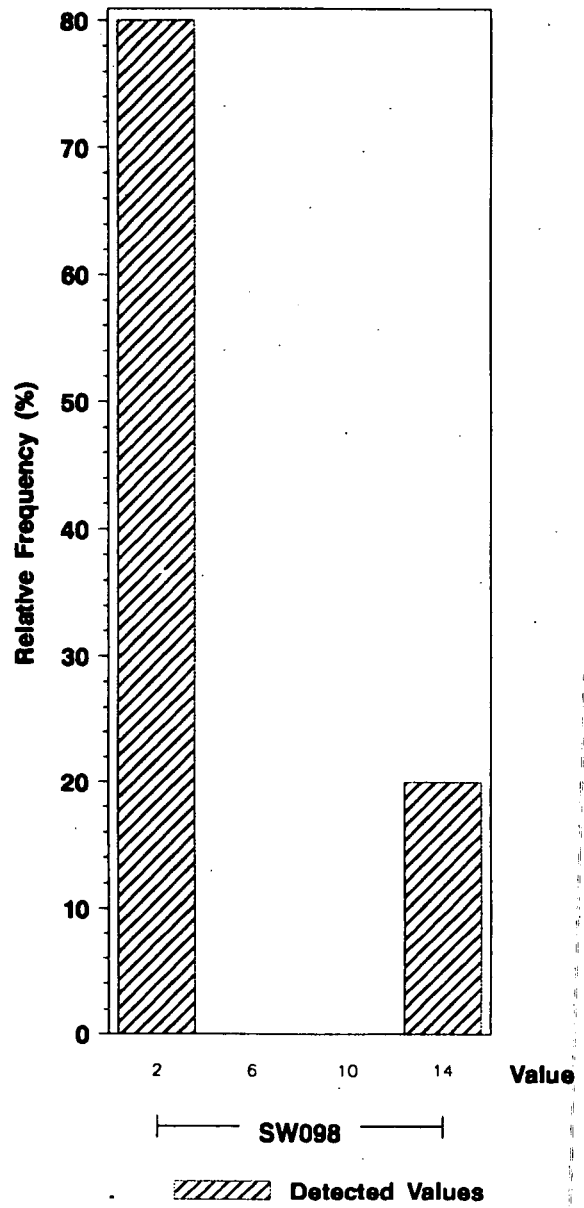
ANALYTE = URANIUM-233,-234



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved URANIUM – 234 (pCi/L) in Surface Water

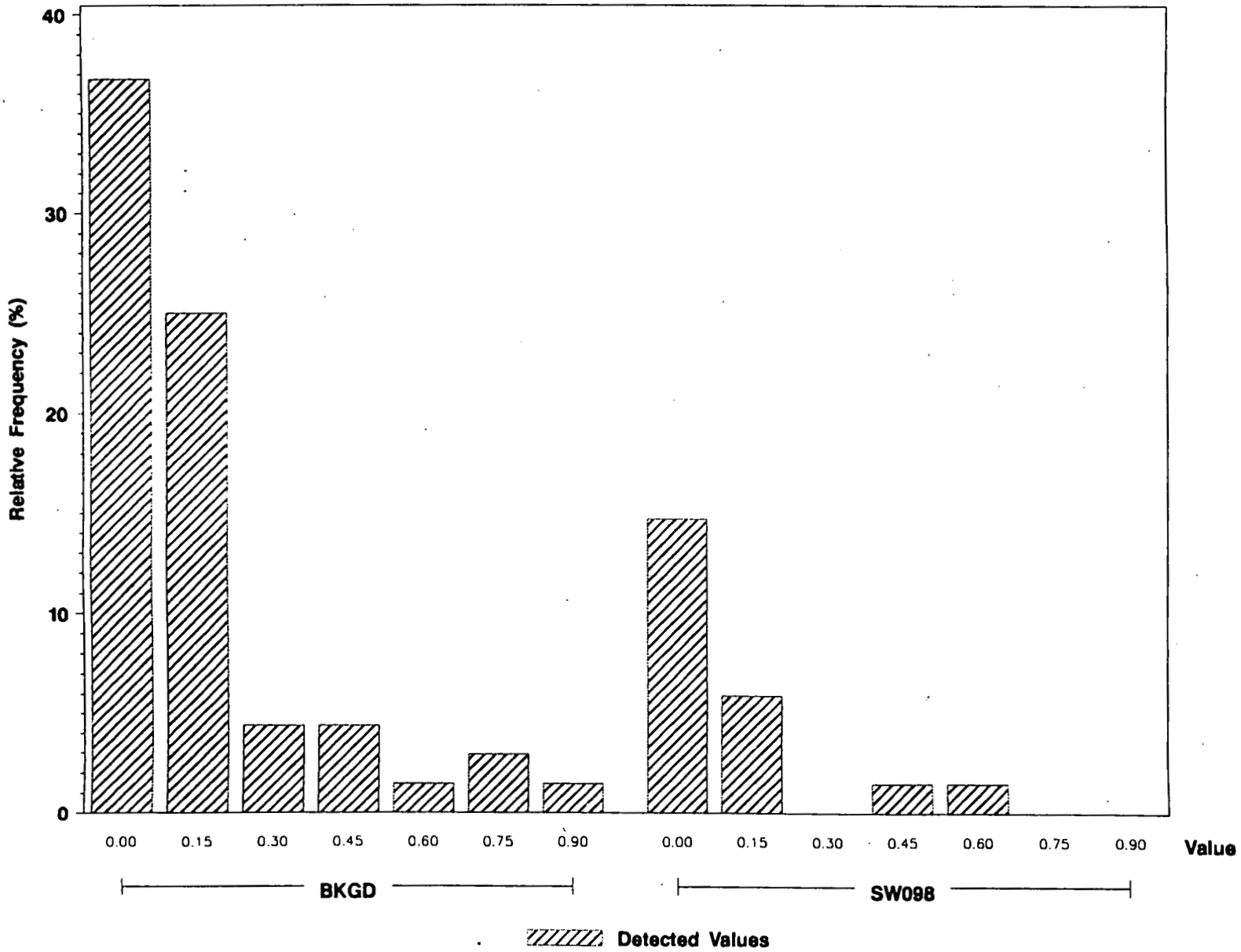
ANALYTE = URANIUM – 234



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved URANIUM – 235 (pCi/L) in Surface Water

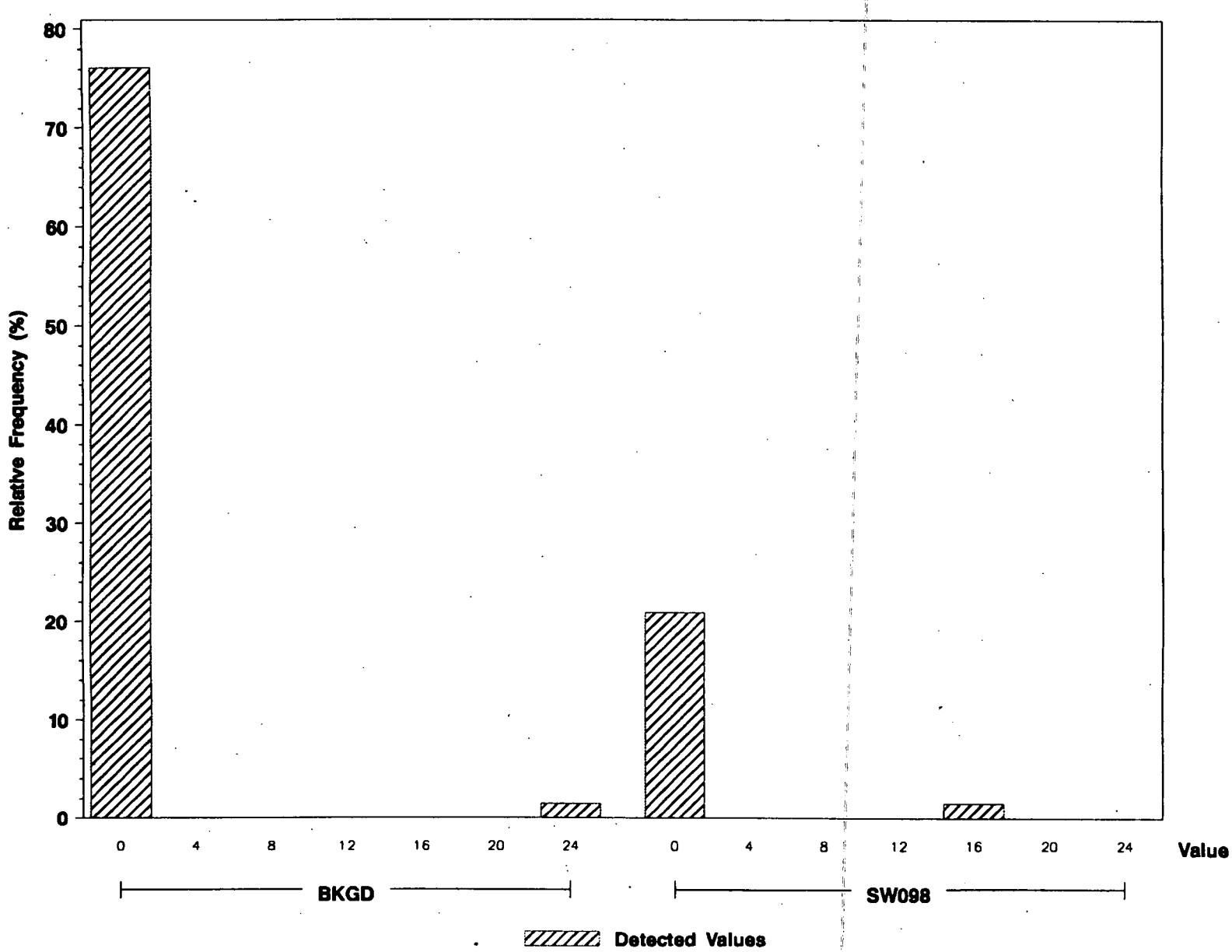
ANALYTE = URANIUM – 235



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved URANIUM-238 (pCi/L) in Surface Water

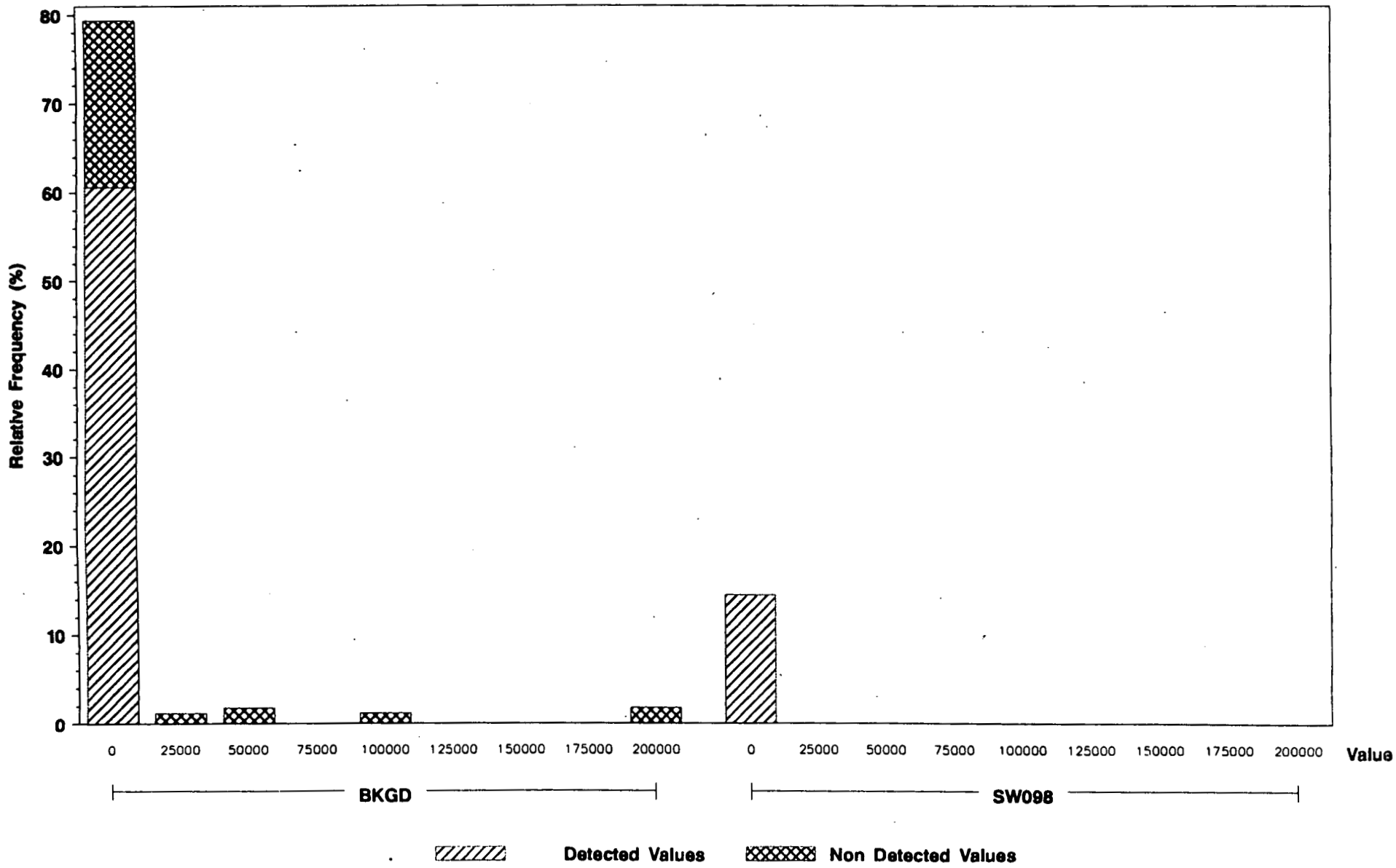
ANALYTE = URANIUM-238



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved BARIUM (ug/L) in Surface Water

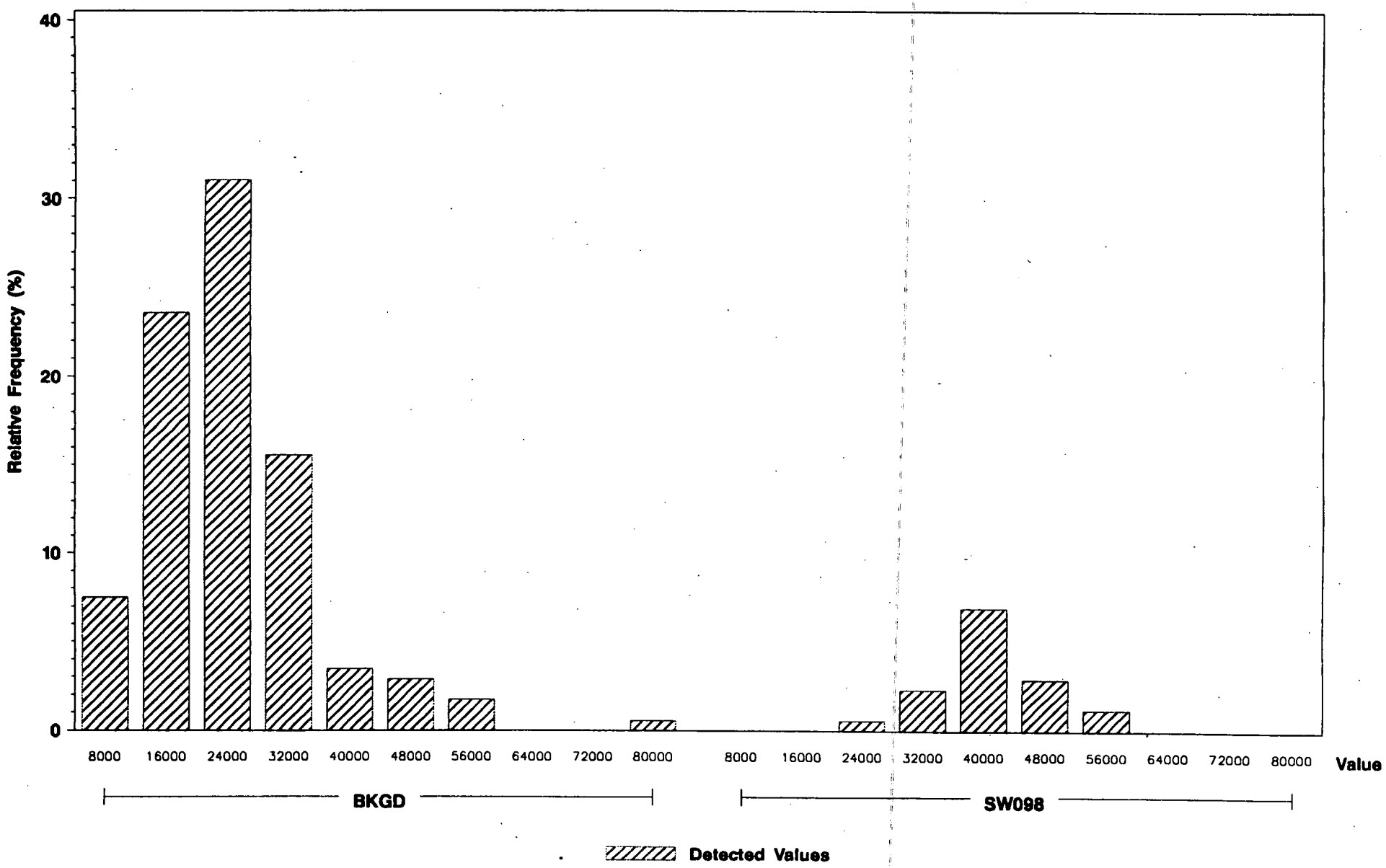
ANALYTE = BARIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Surface Water

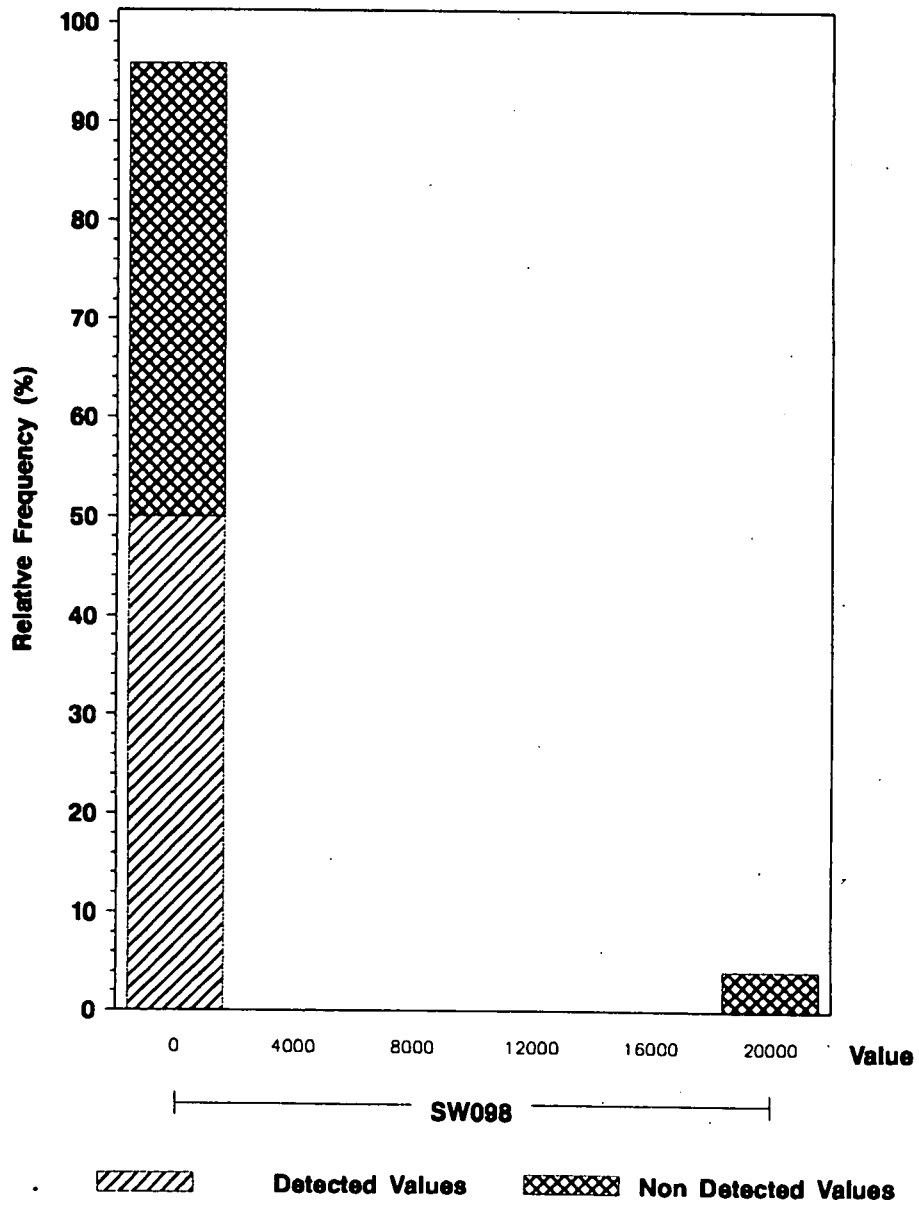
ANALYTE = CALCIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved COPPER (ug/L) in Surface Water

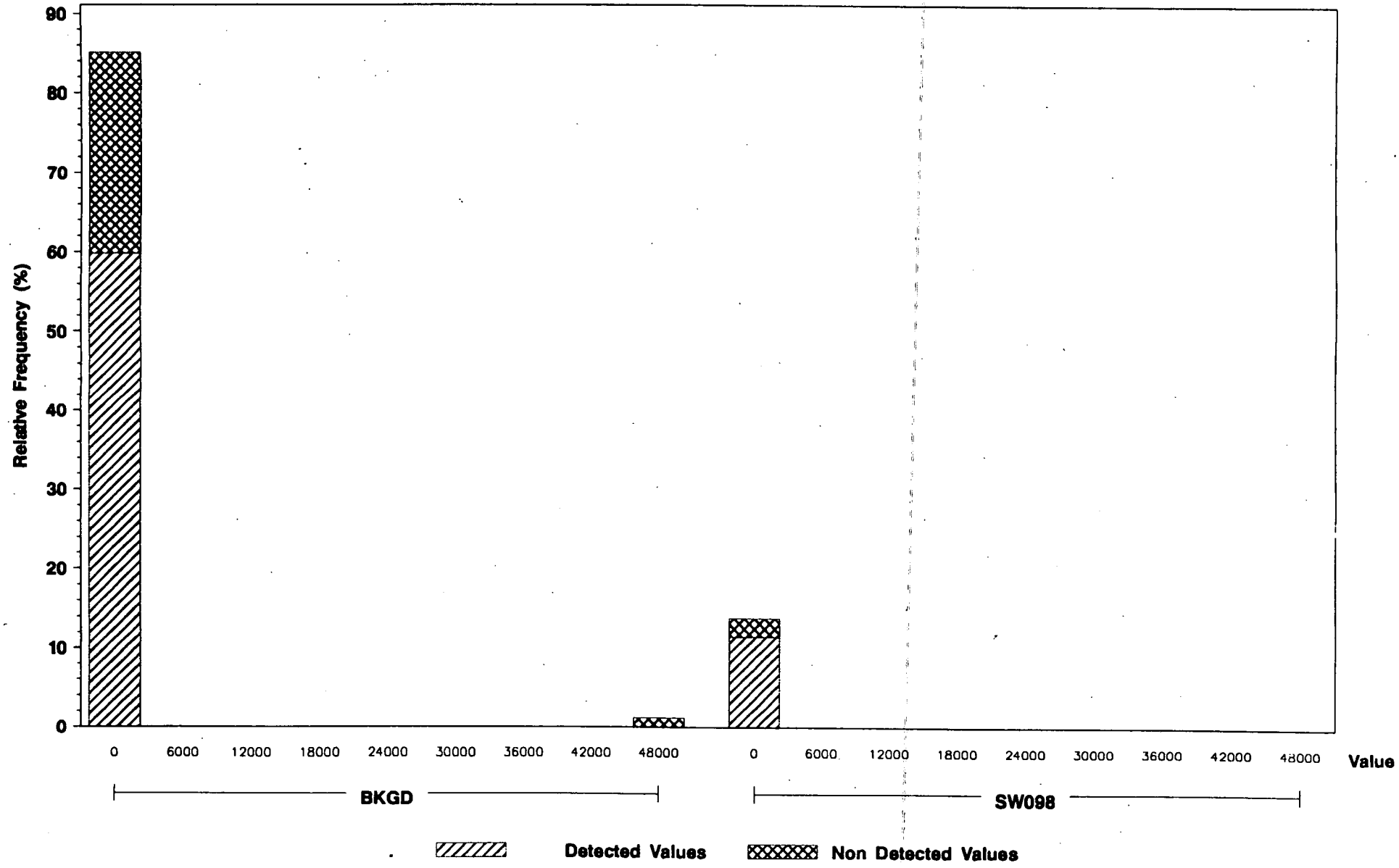
ANALYTE=COPPER



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved IRON (ug/L) in Surface Water

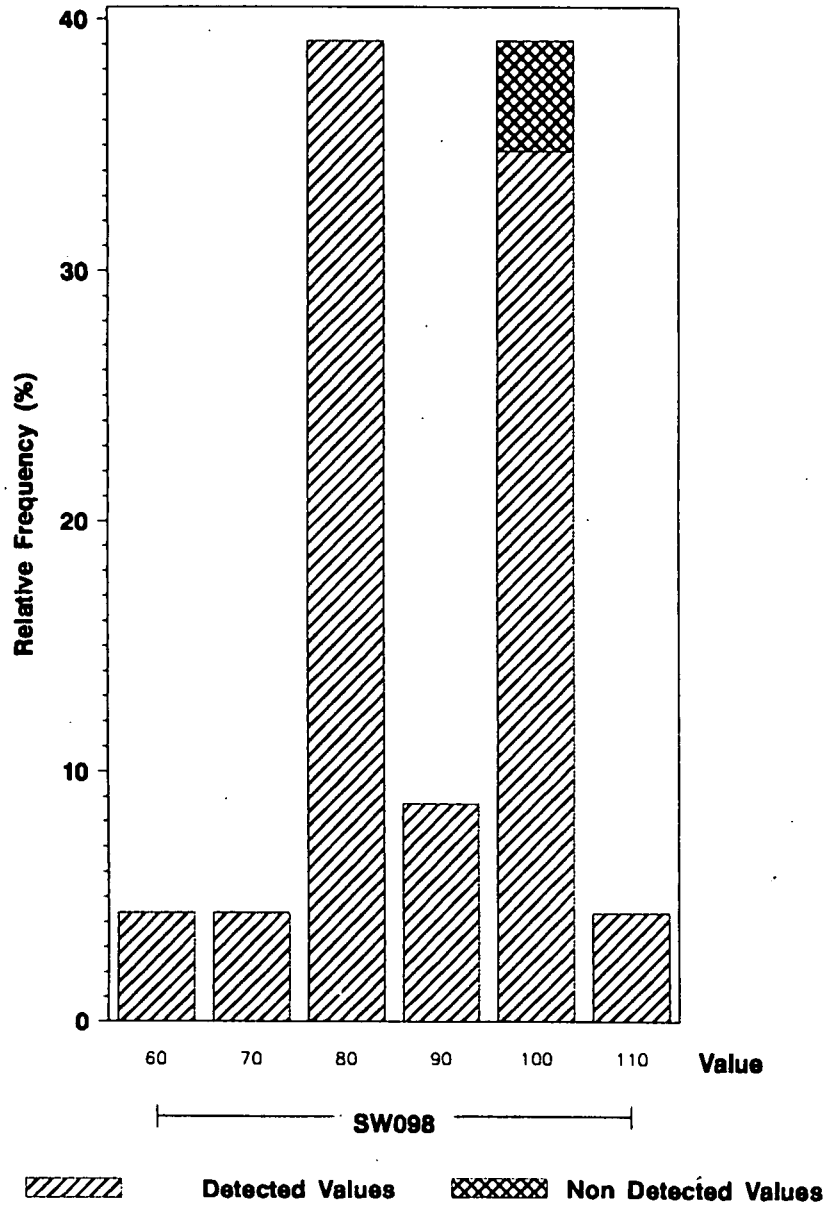
ANALYTE=IRON



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Surface Water

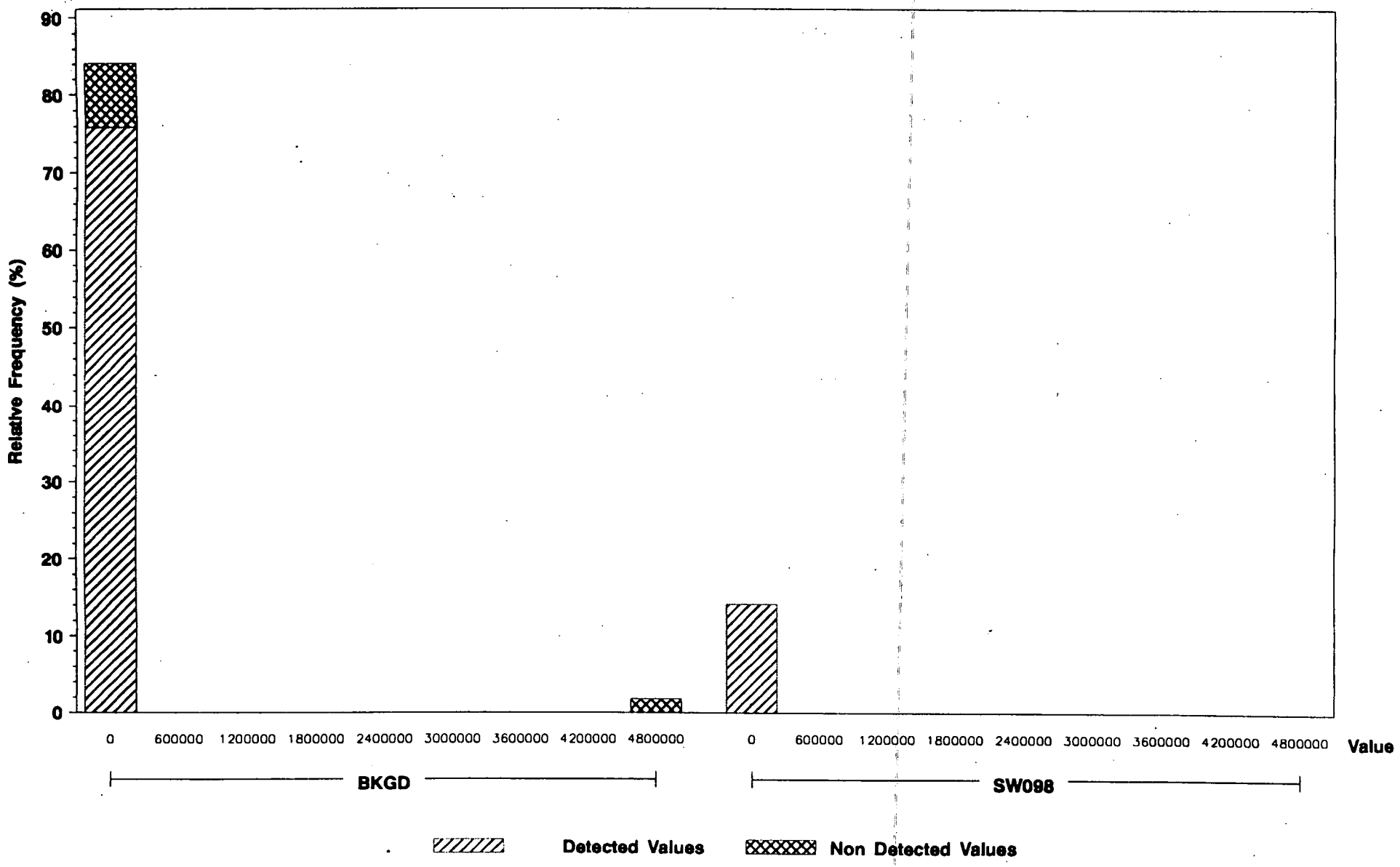
ANALYTE = LITHIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Surface Water

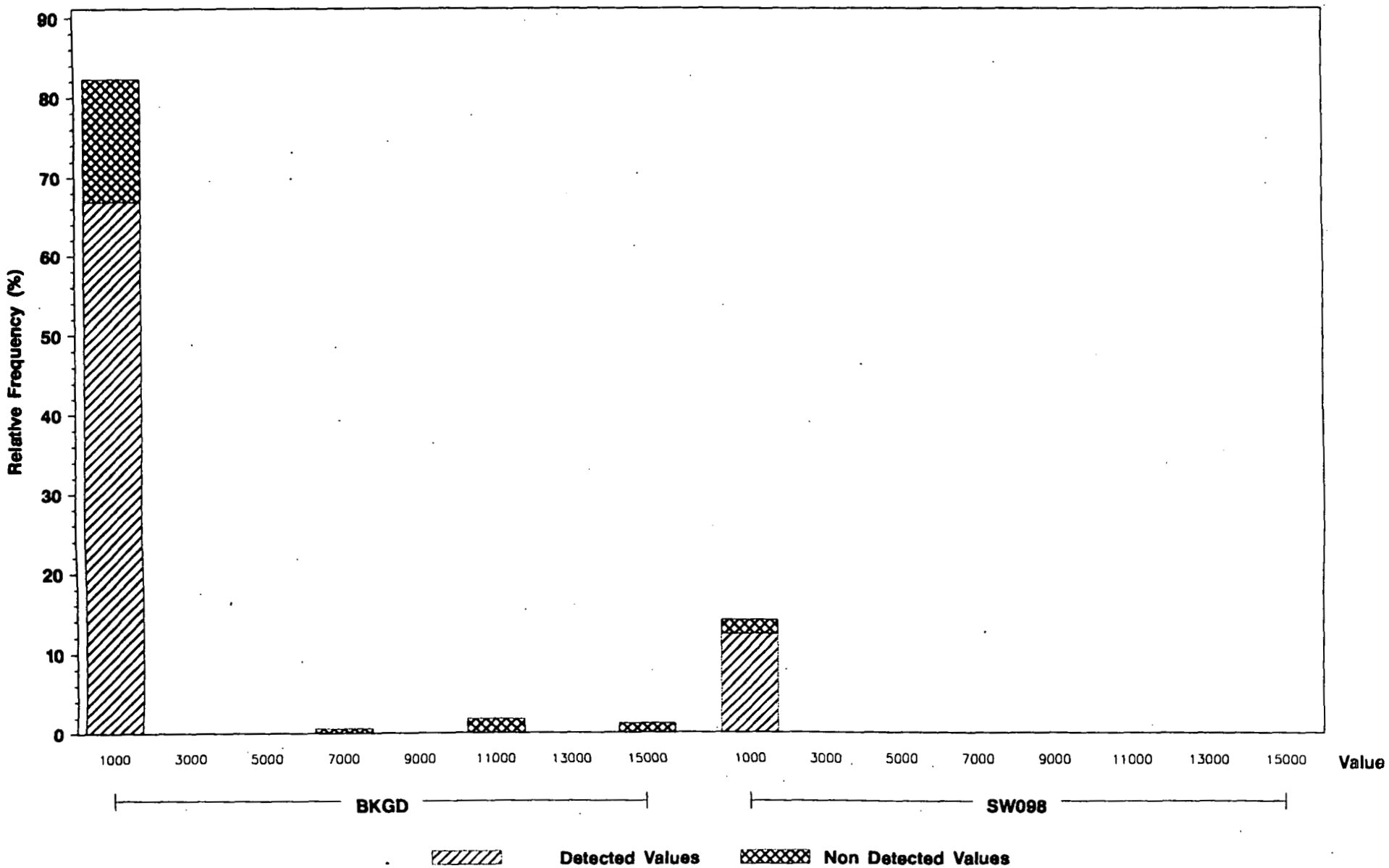
ANALYTE = MAGNESIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Surface Water

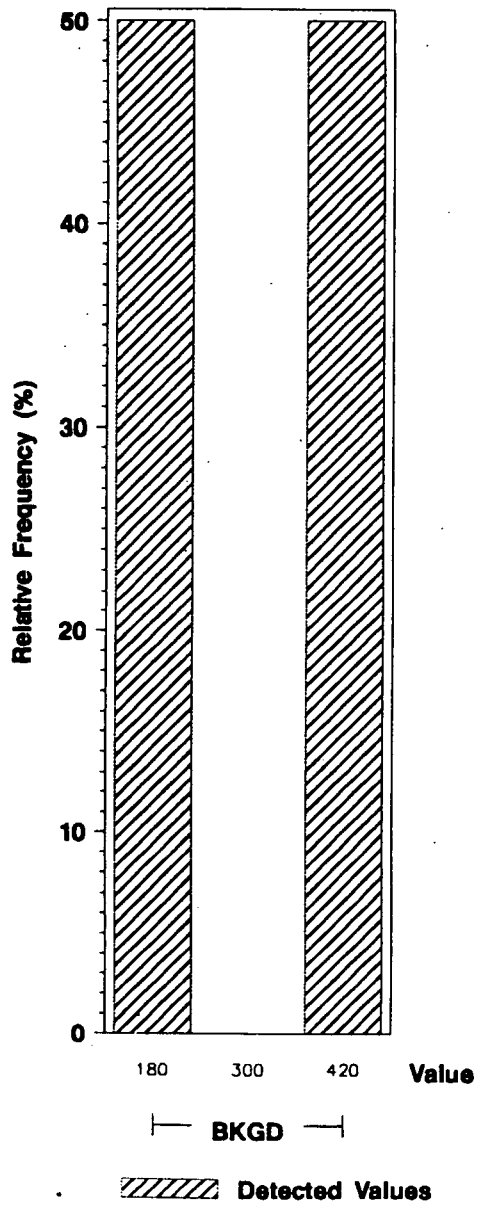
ANALYTE = MANGANESE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved PHOSPHORUS (ug/L) in Surface Water

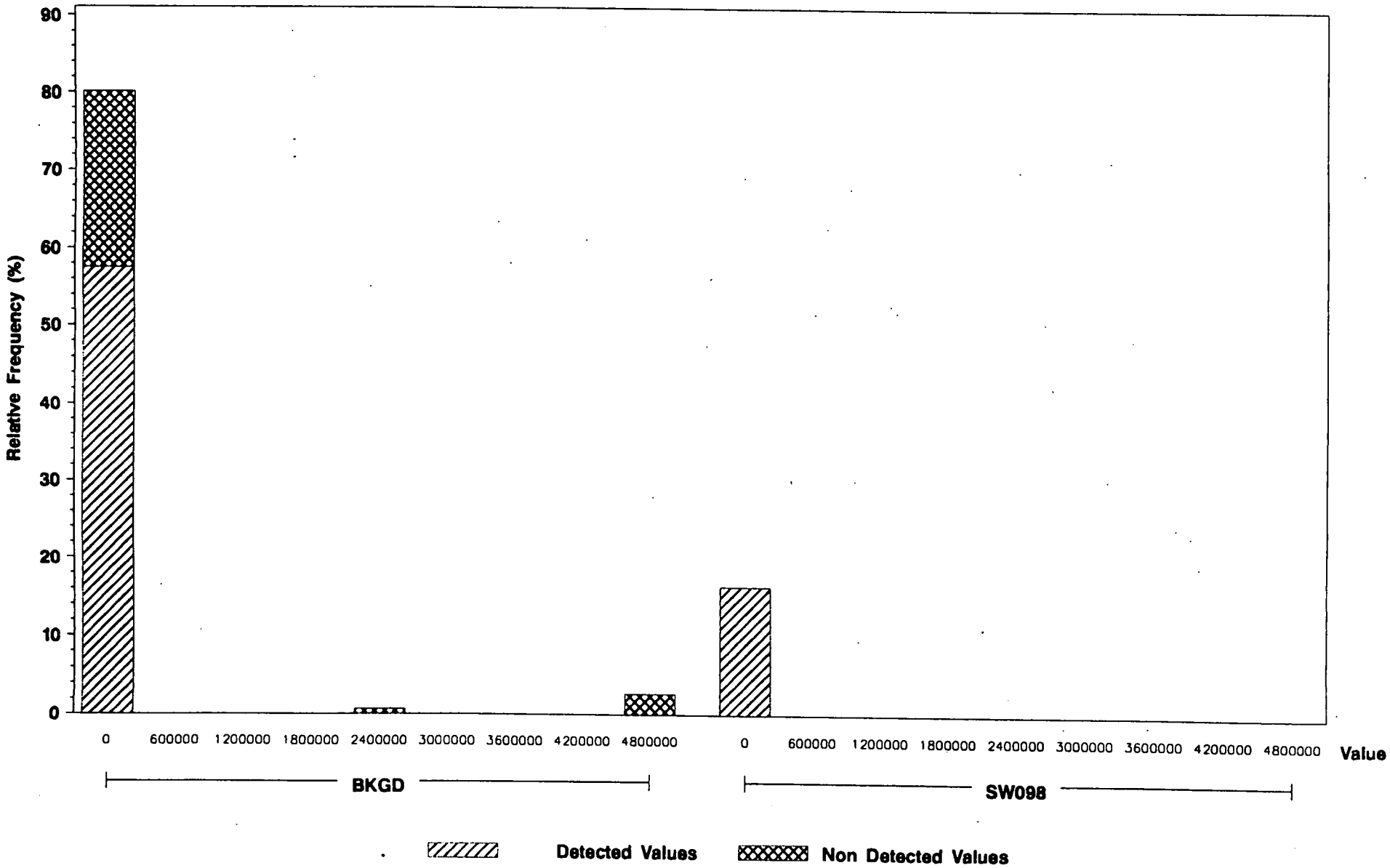
ANALYTE = PHOSPHORUS



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved POTASSIUM (ug/L) In Surface Water

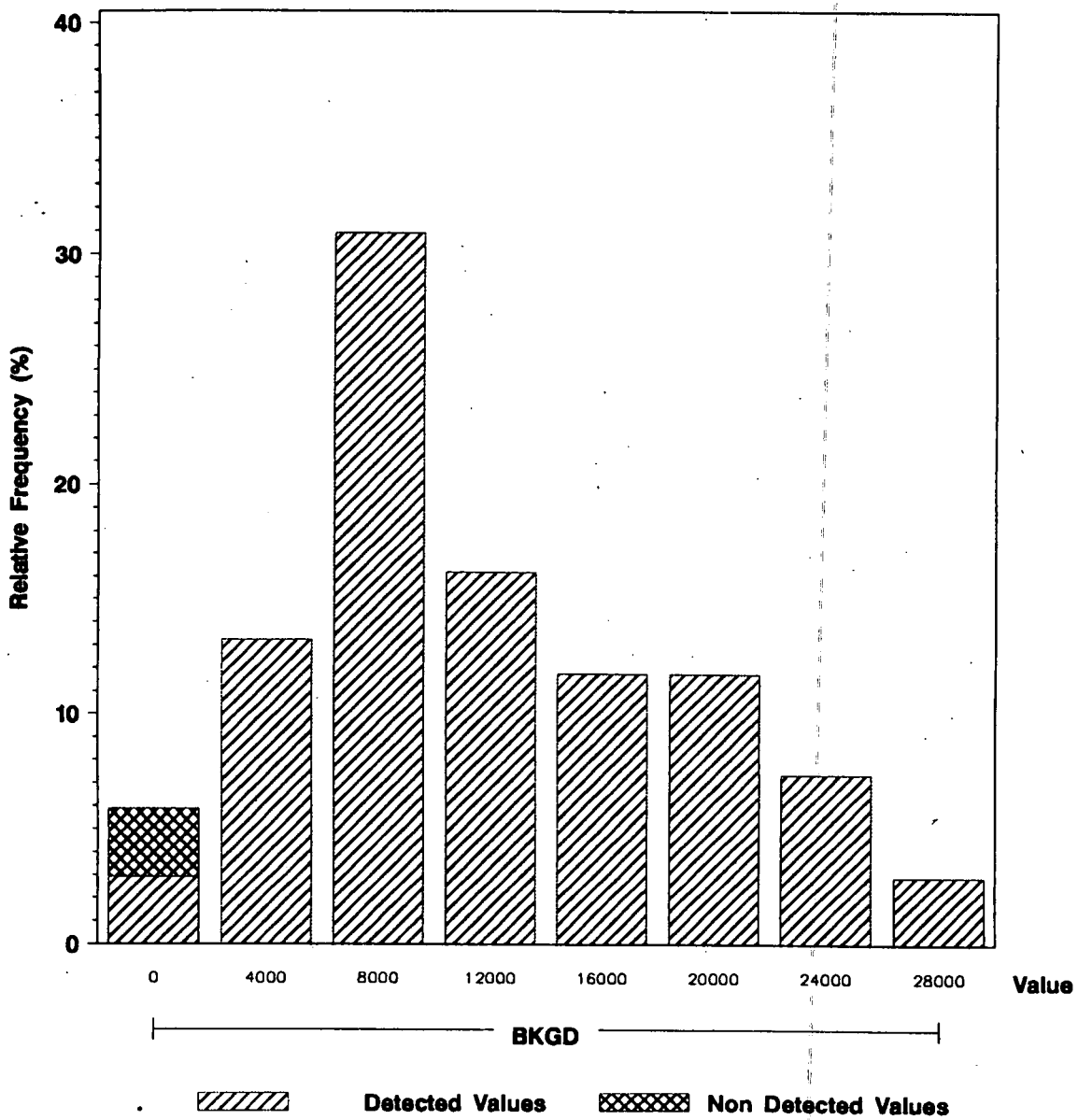
ANALYTE = POTASSIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved SILICA (ug/L) in Surface Water

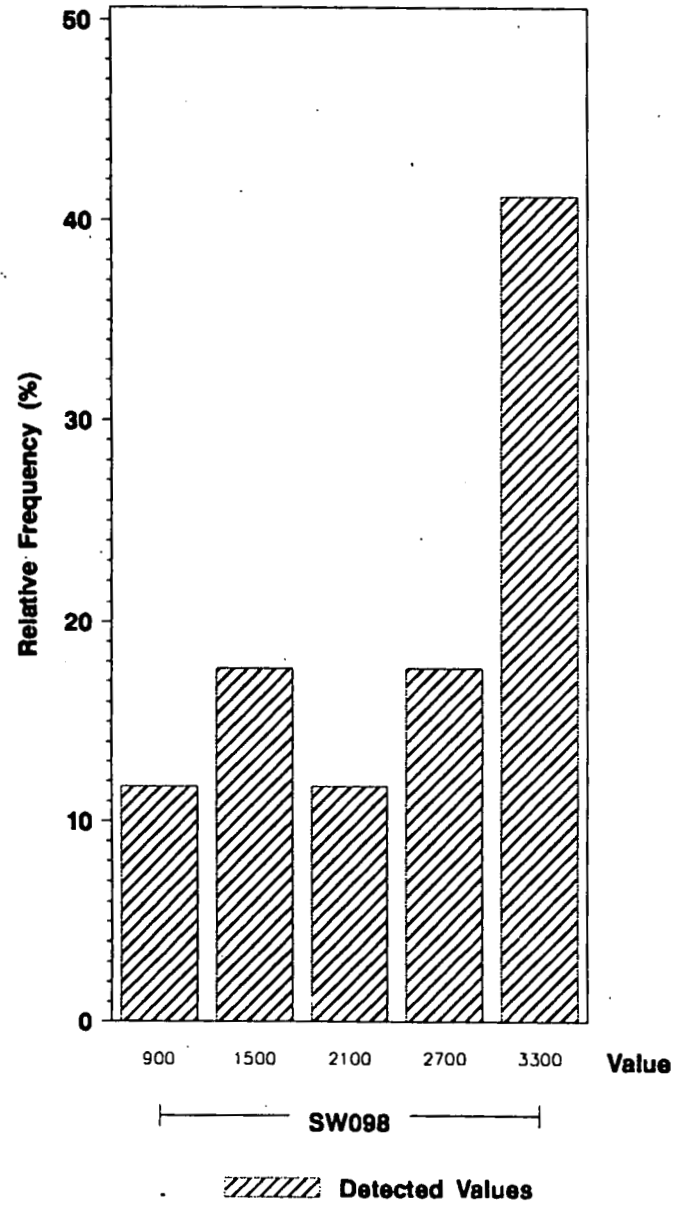
ANALYTE = SILICA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved SILICON (ug/L) in Surface Water

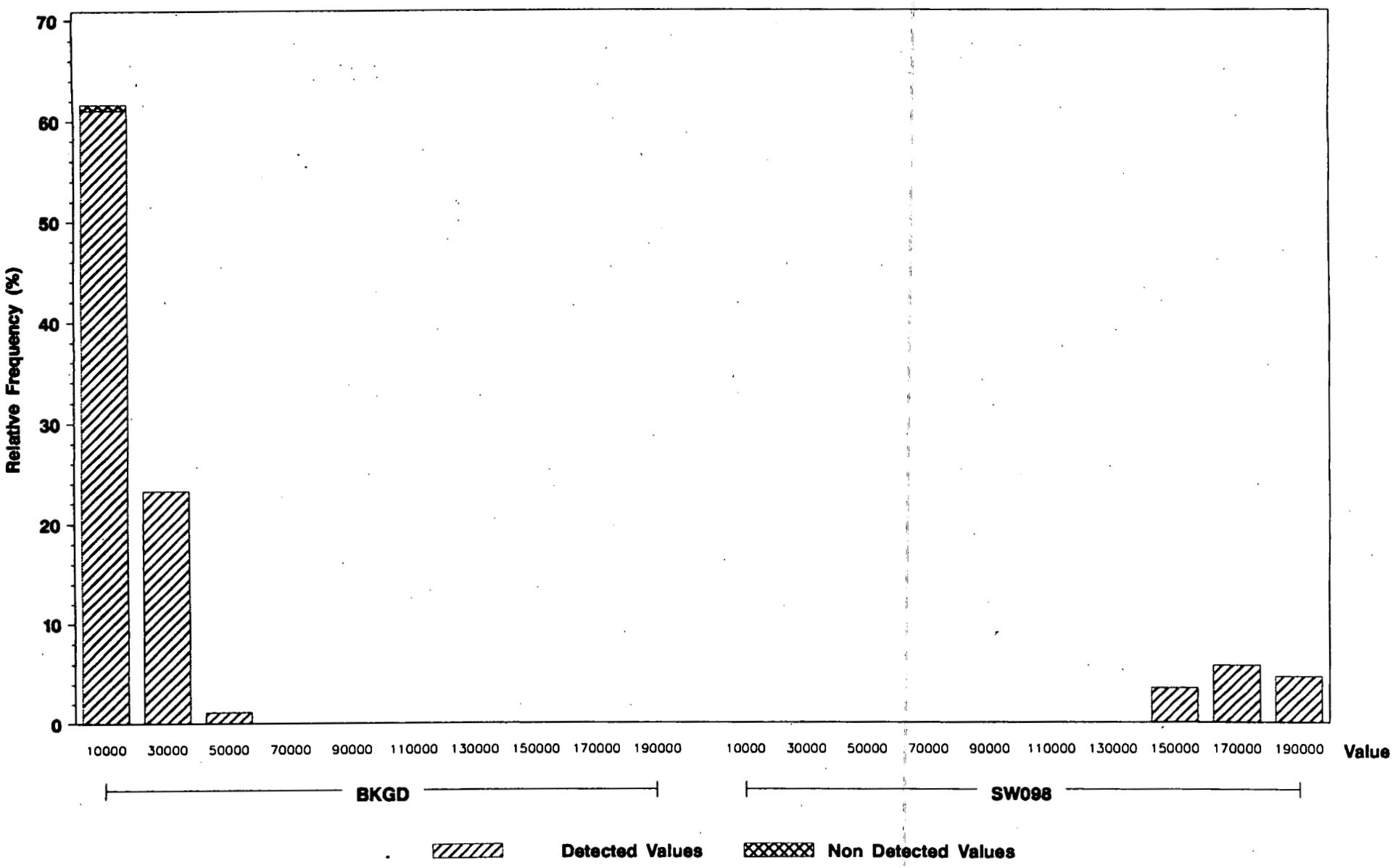
ANALYTE = SILICON



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved SODIUM (ug/L) in Surface Water

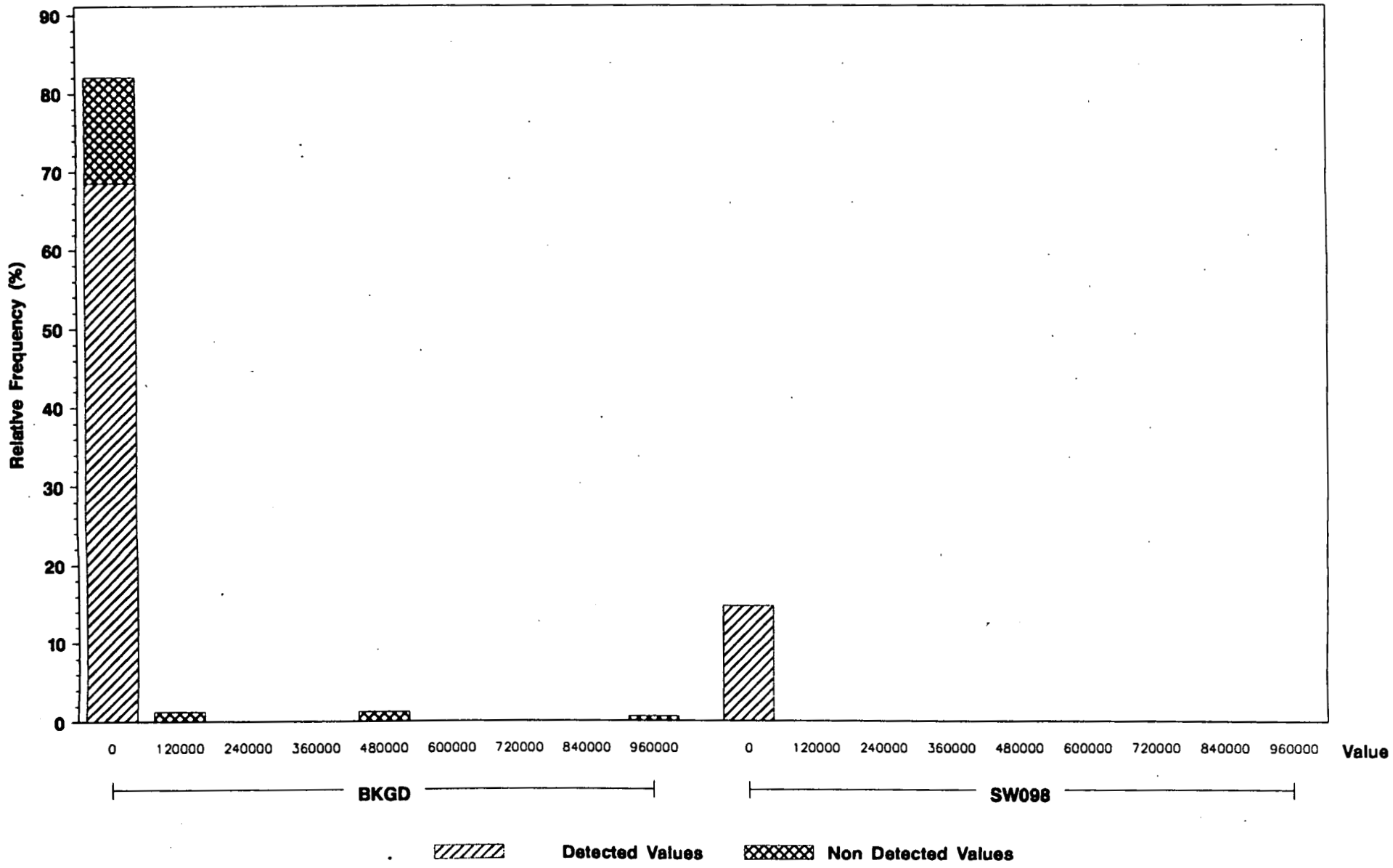
ANALYTE = SODIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Surface Water

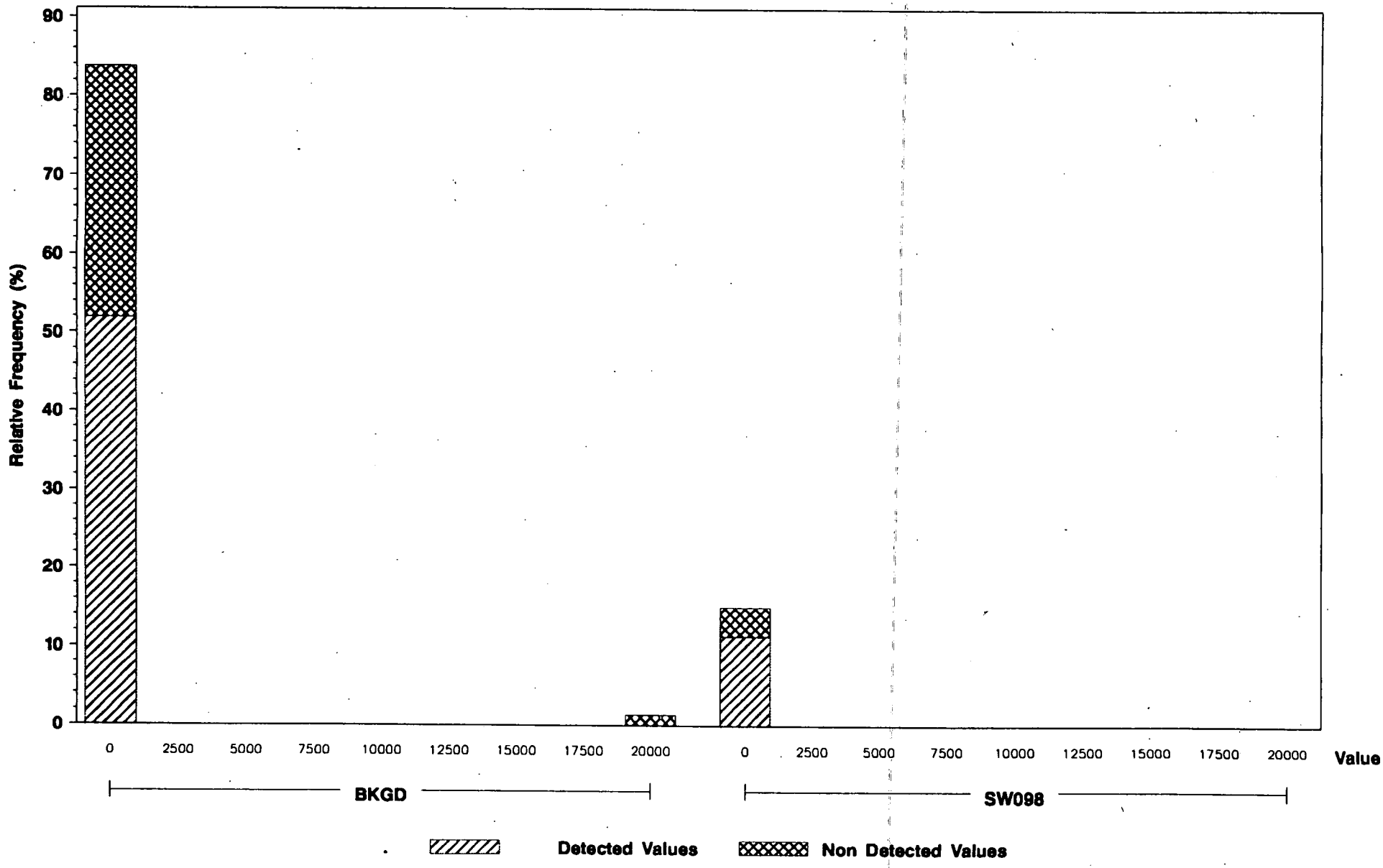
ANALYTE = STRONTIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Dissolved ZINC (ug/L) in Surface Water

ANALYTE=ZINC



**Surface Water**

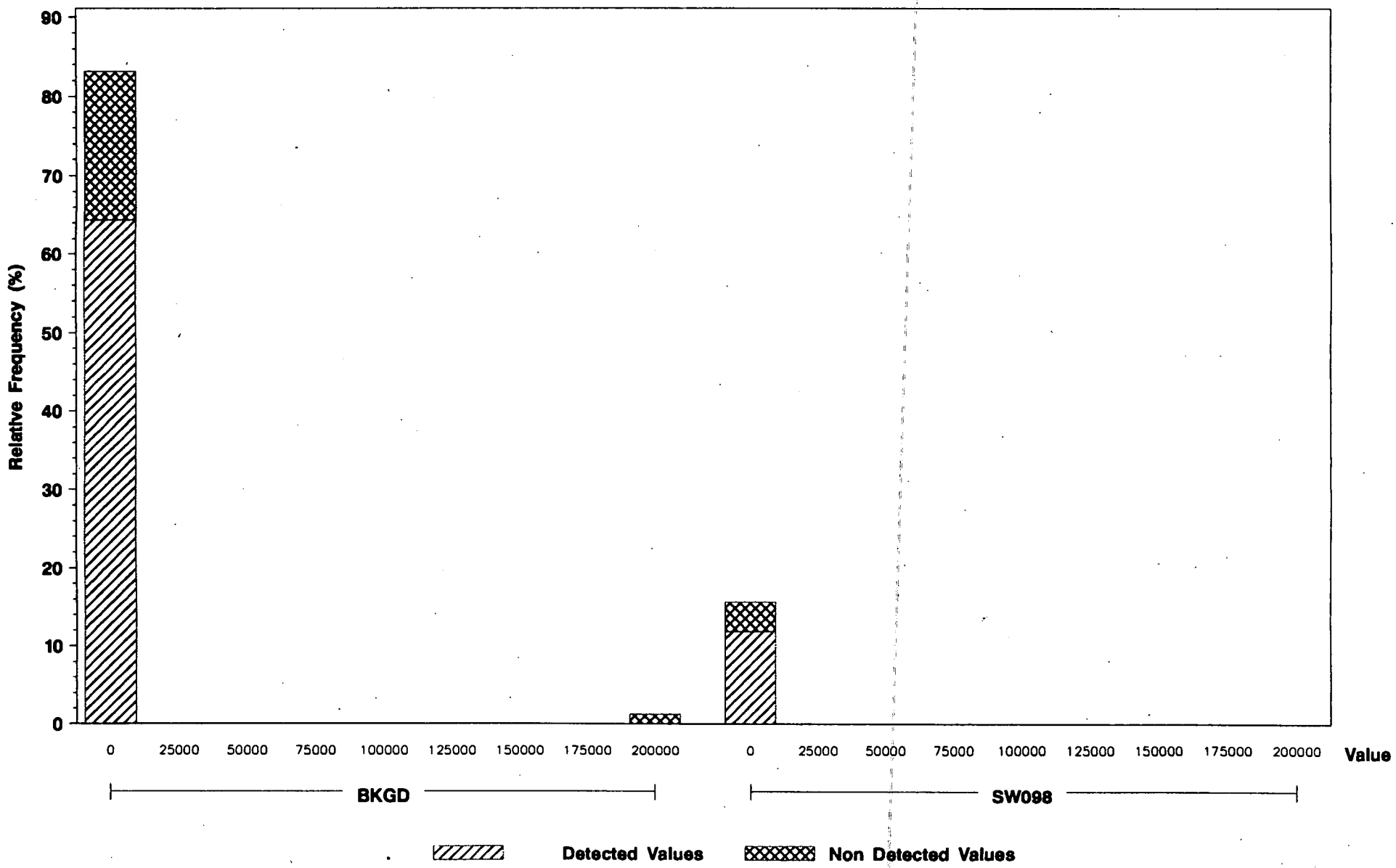
**(Total)**

**Background vs. OU 7 (SW098)**

# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total ALUMINUM (ug/L) in Surface Water

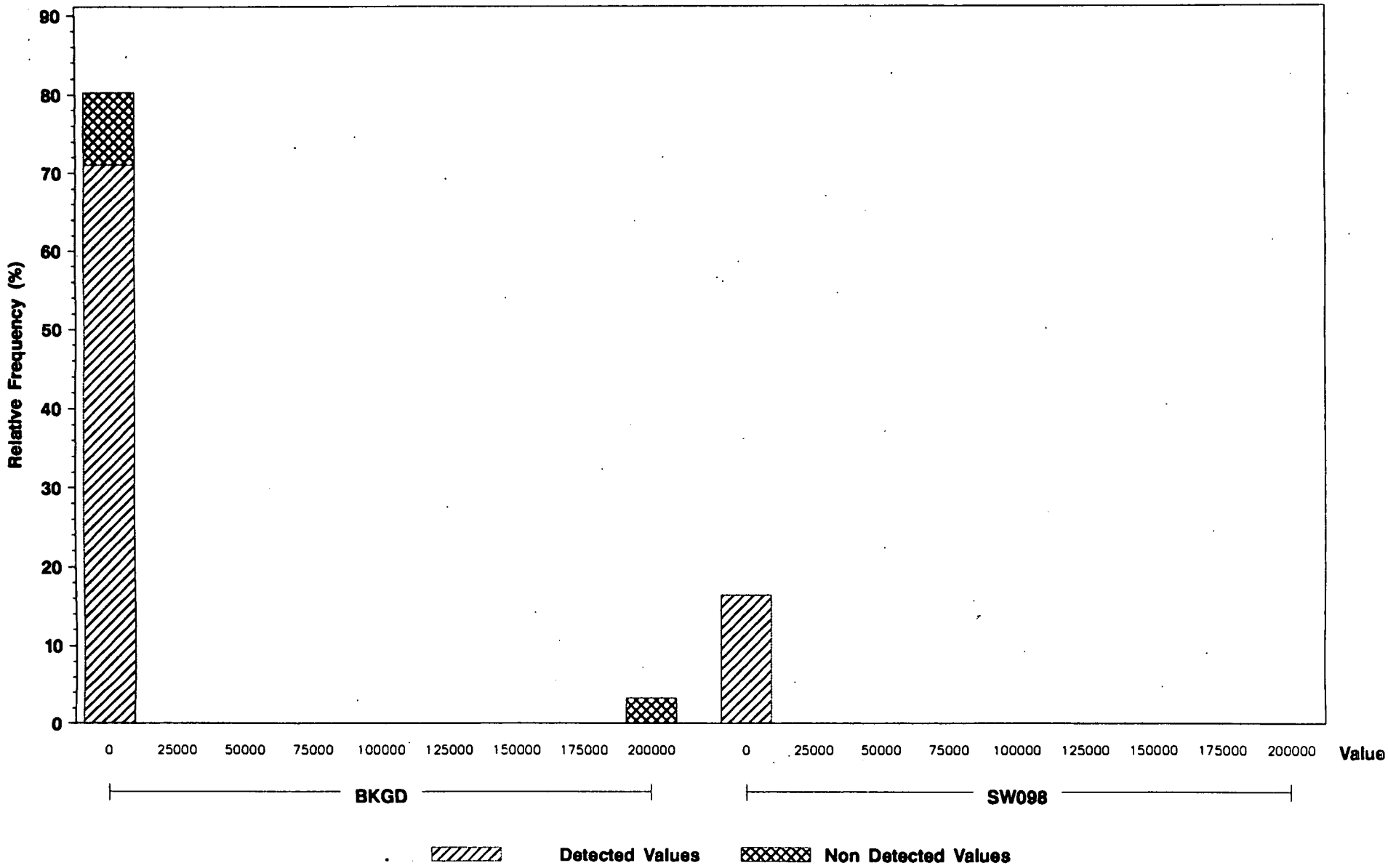
ANALYTE = ALUMINUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total BARIUM (ug/L) in Surface Water

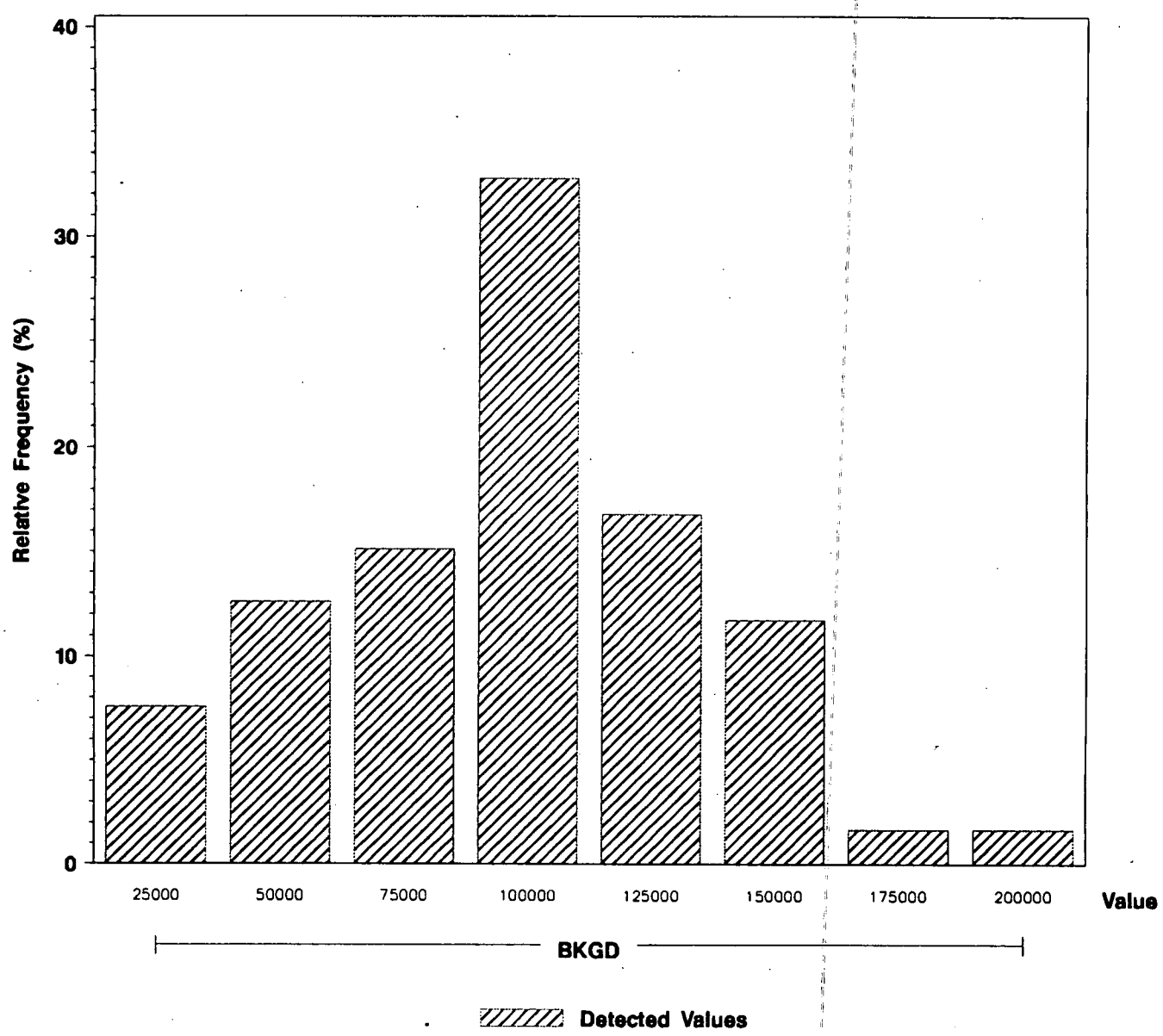
ANALYTE = BARIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total BICARBONATE (ug/L) in Surface Water

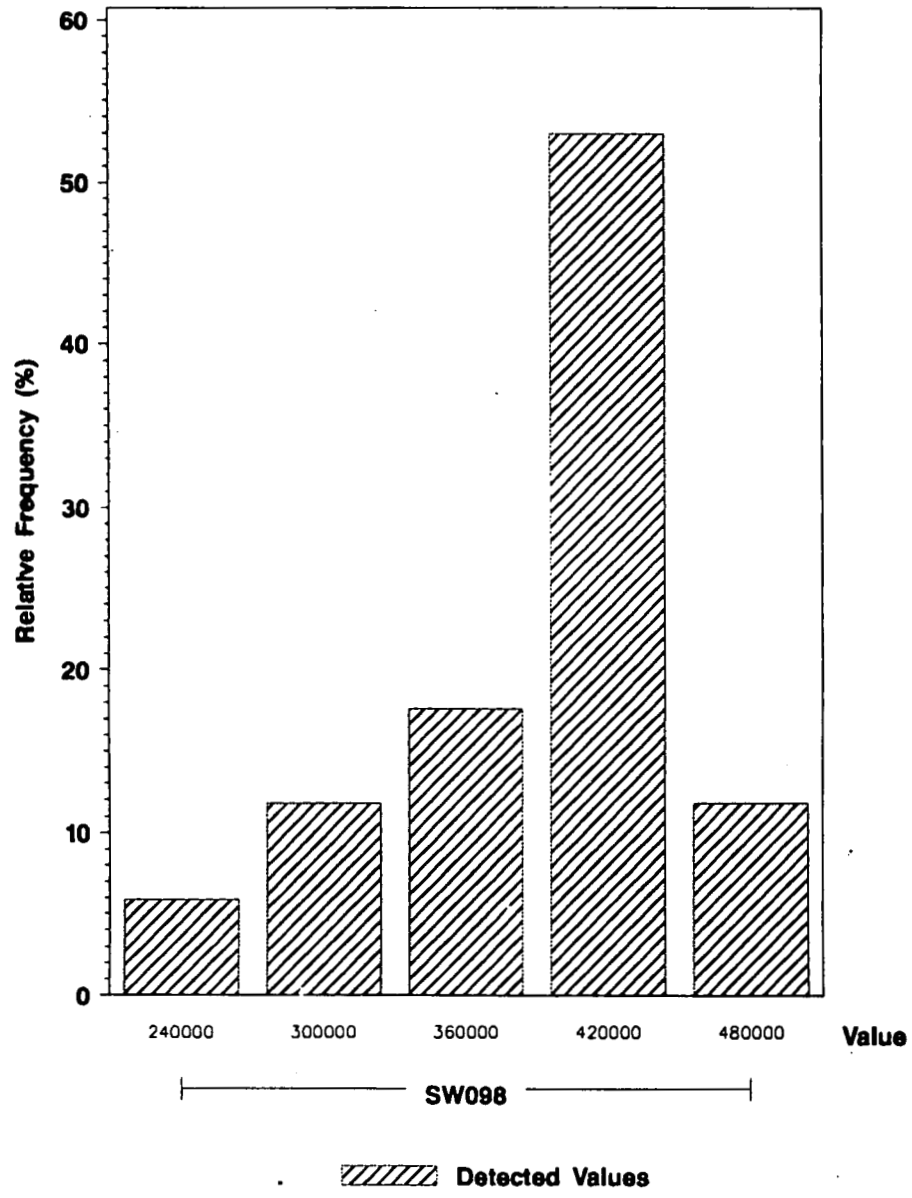
ANALYTE = BICARBONATE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Surface Water

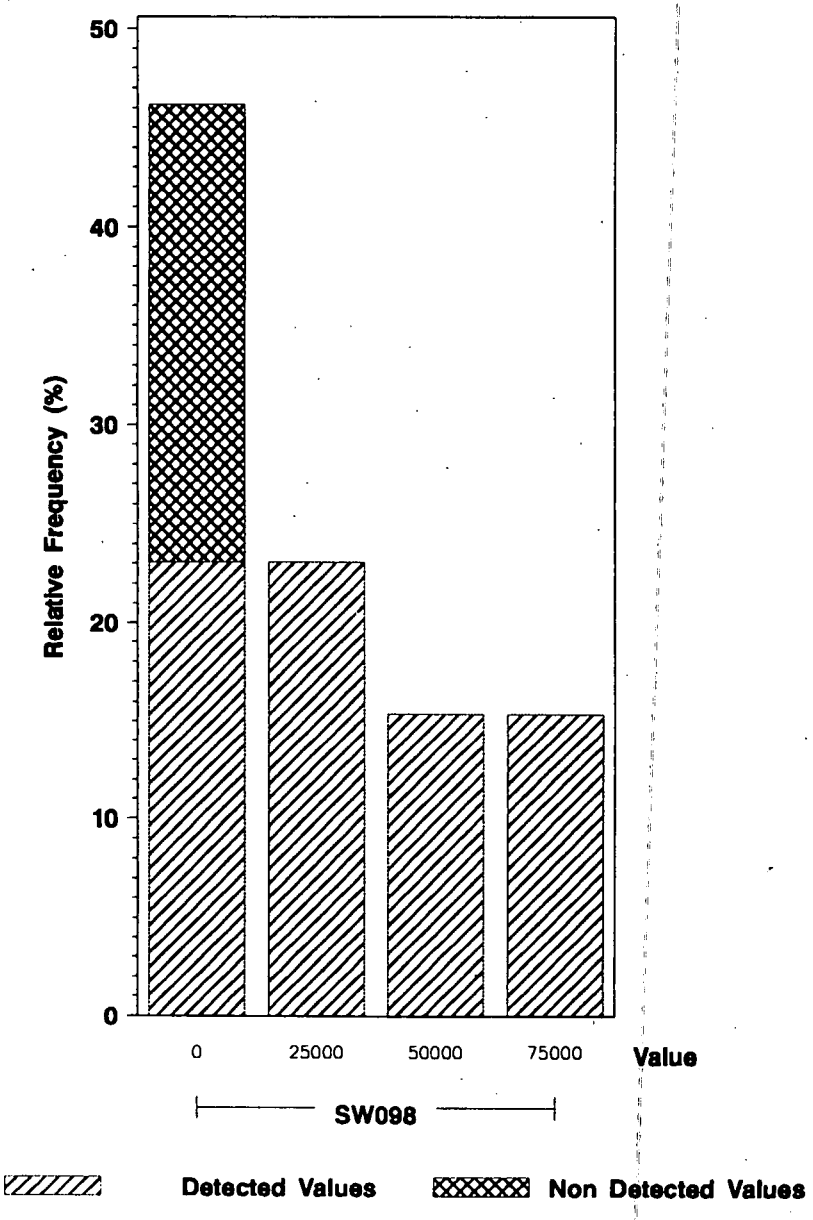
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total CARBONATE AS CACO3 (ug/L) in Surface Water

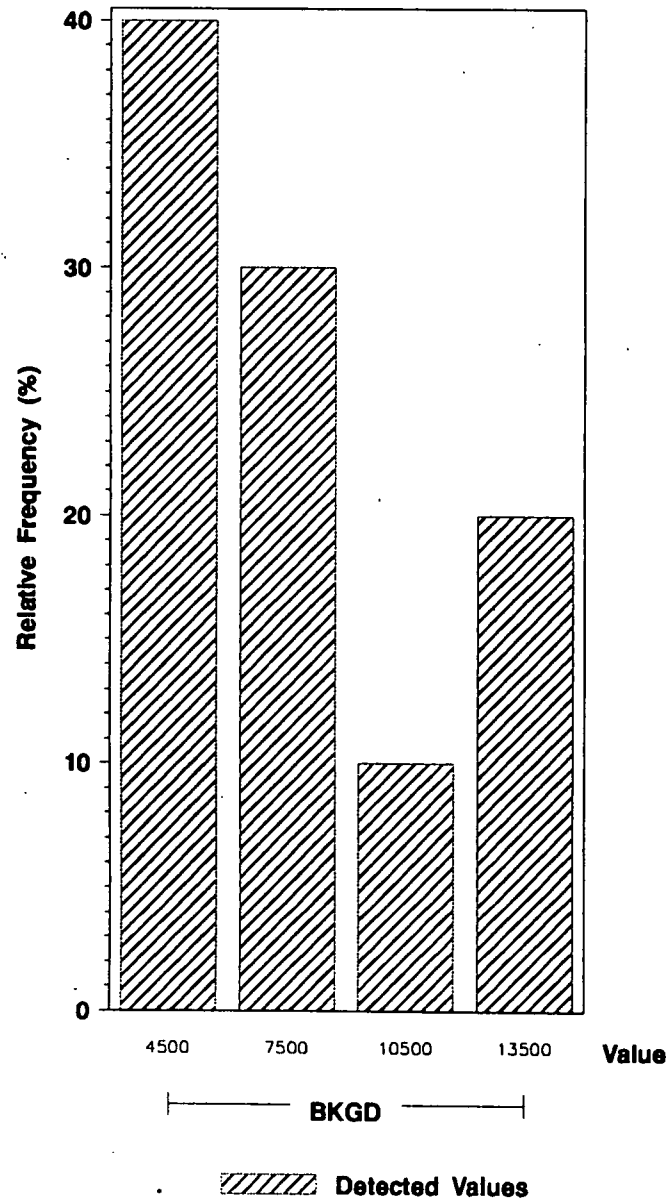
ANALYTE=CARBONATE AS CACO3



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total CBOD5 (ug/L) in Surface Water

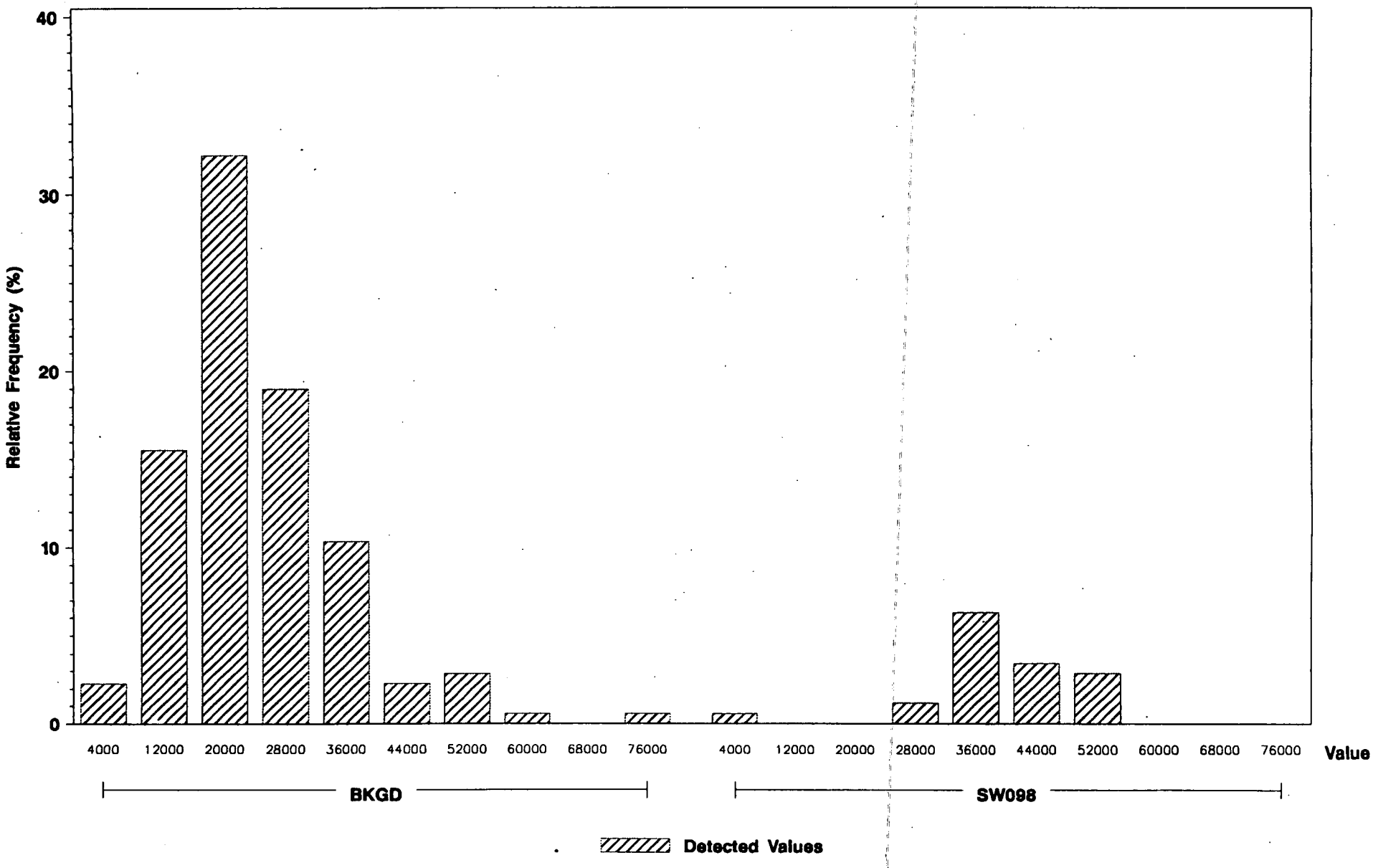
ANALYTE = CBOD5



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total CALCIUM (ug/L) in Surface Water

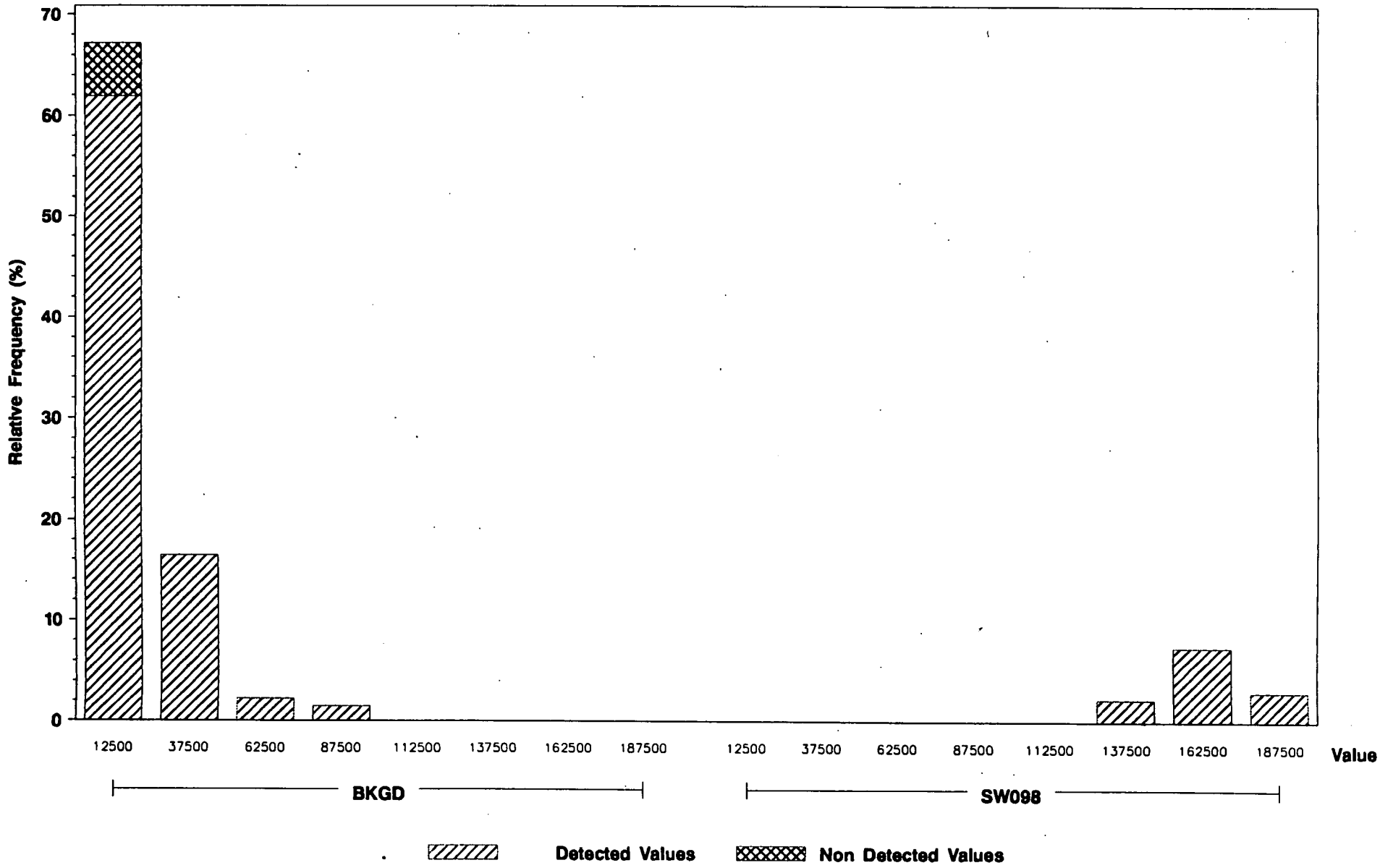
ANALYTE=CALCIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total CHLORIDE (ug/L) in Surface Water

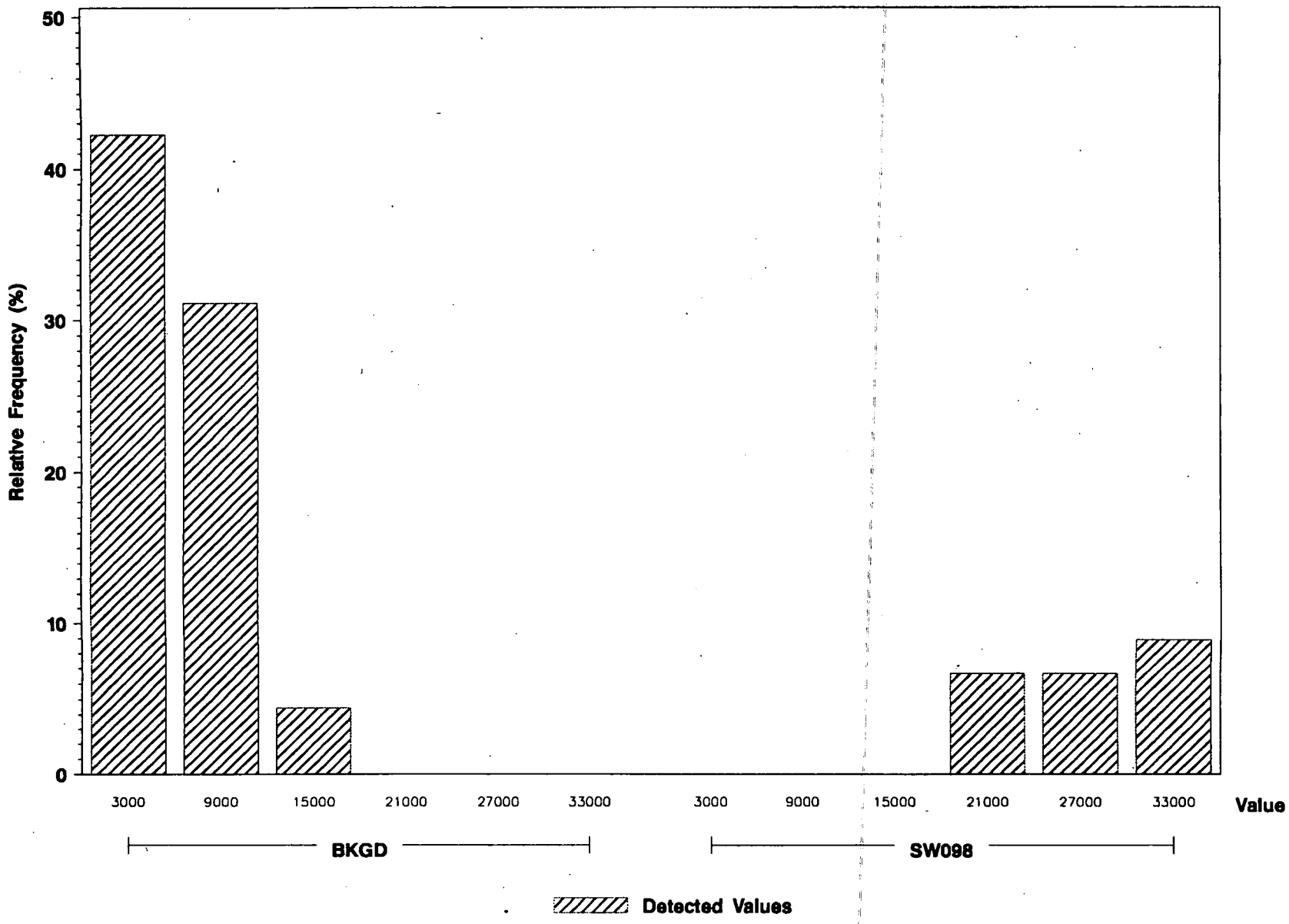
ANALYTE = CHLORIDE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total DISSOLVED ORGANIC CARBON (ug/L) in Surface Water

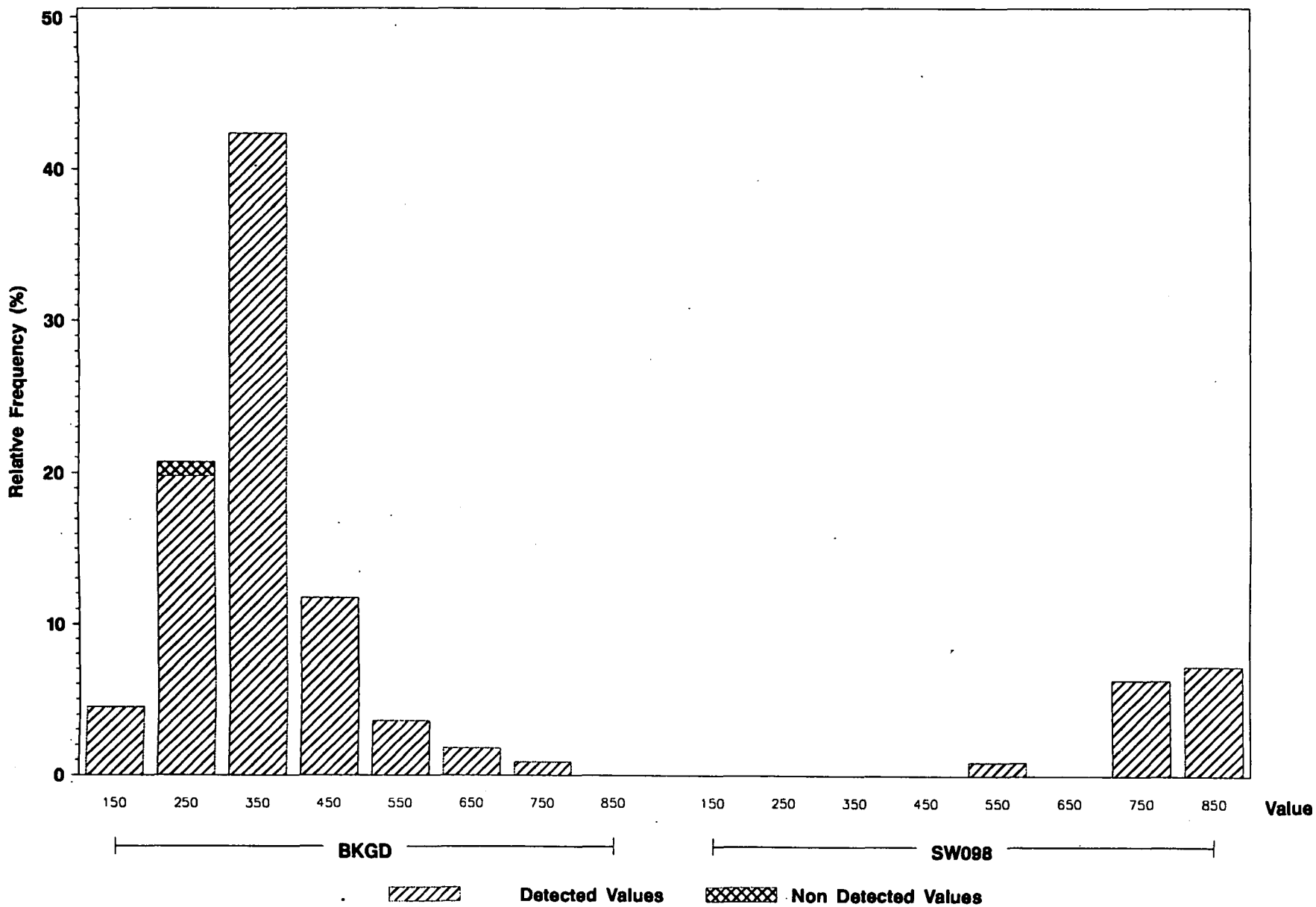
ANALYTE = DISSOLVED ORGANIC CARBON



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total FLUORIDE (ug/L) in Surface Water

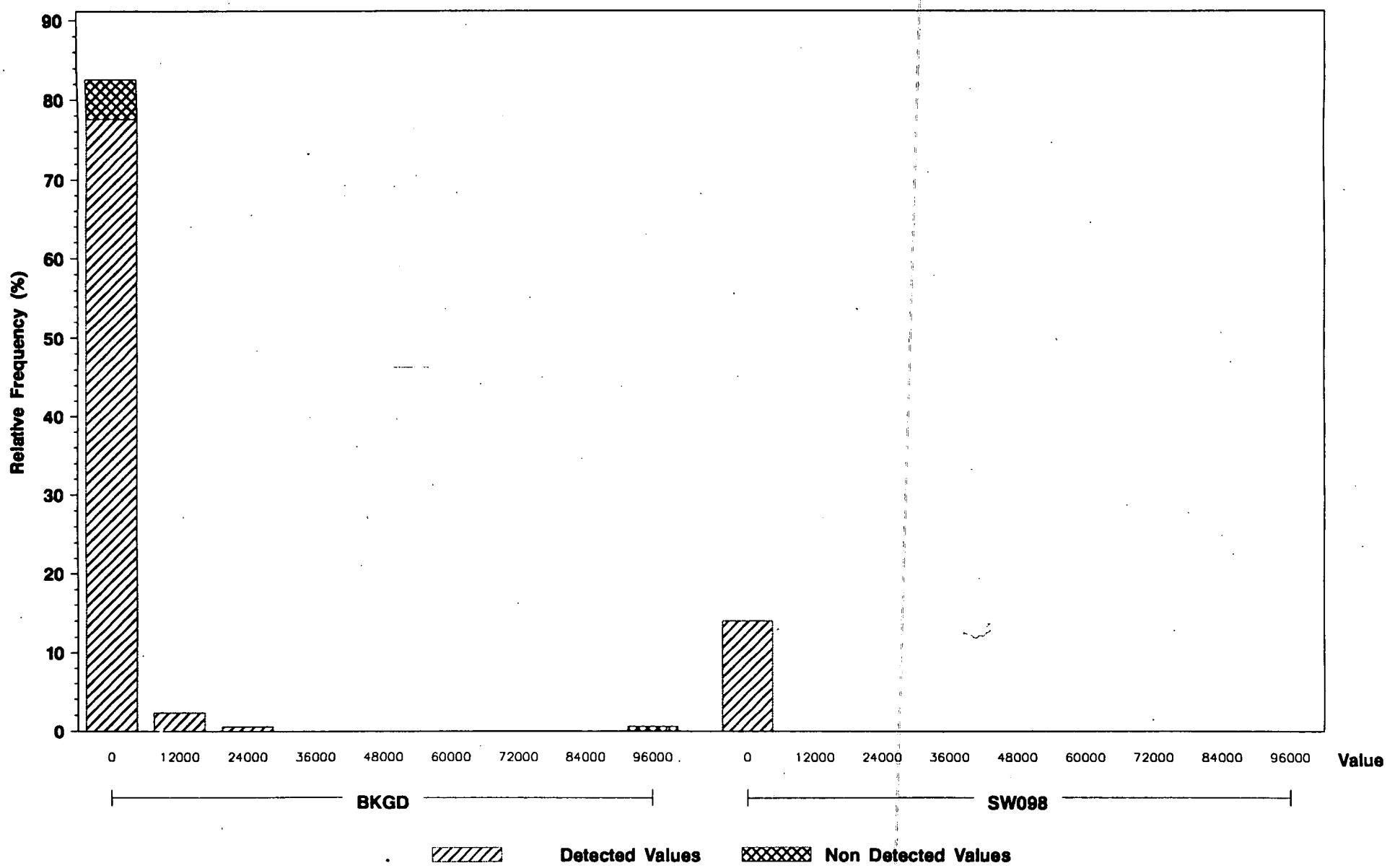
ANALYTE=FLUORIDE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total IRON (ug/L) in Surface Water

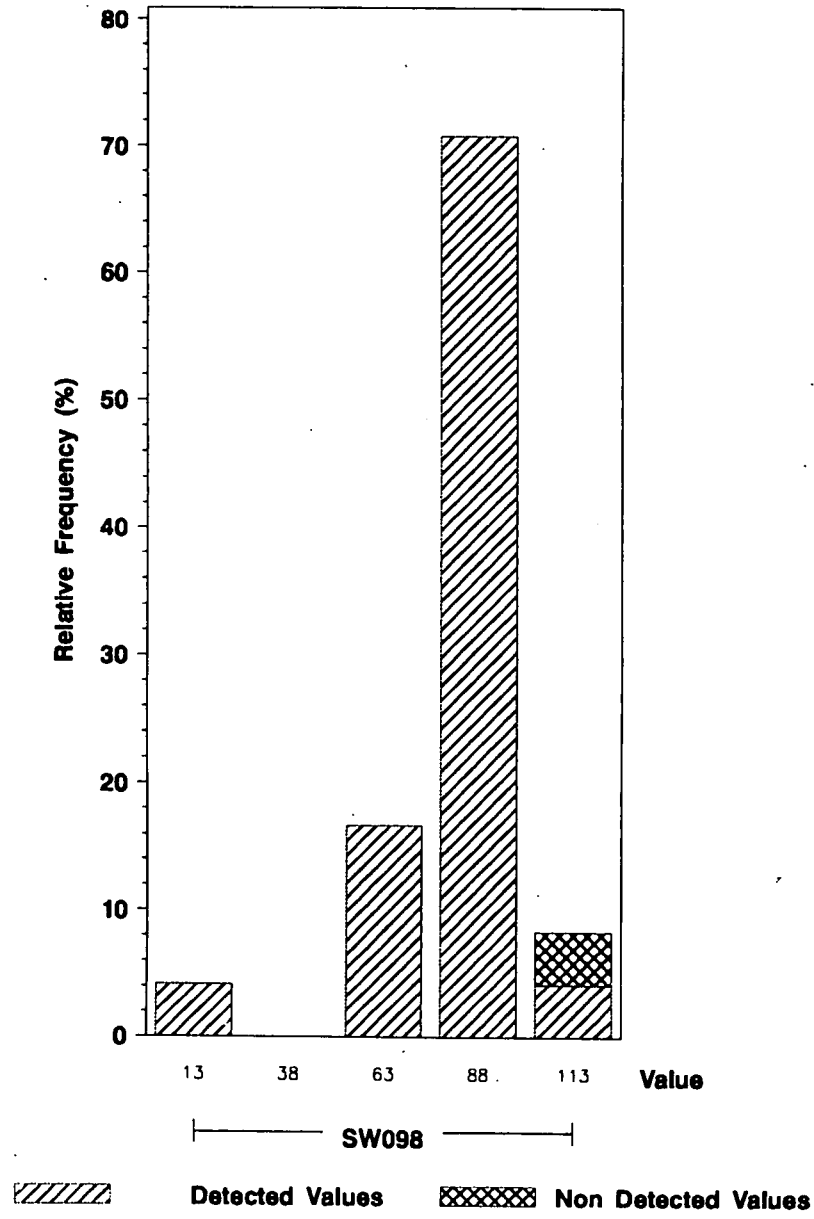
ANALYTE = IRON



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total LITHIUM (ug/L) in Surface Water

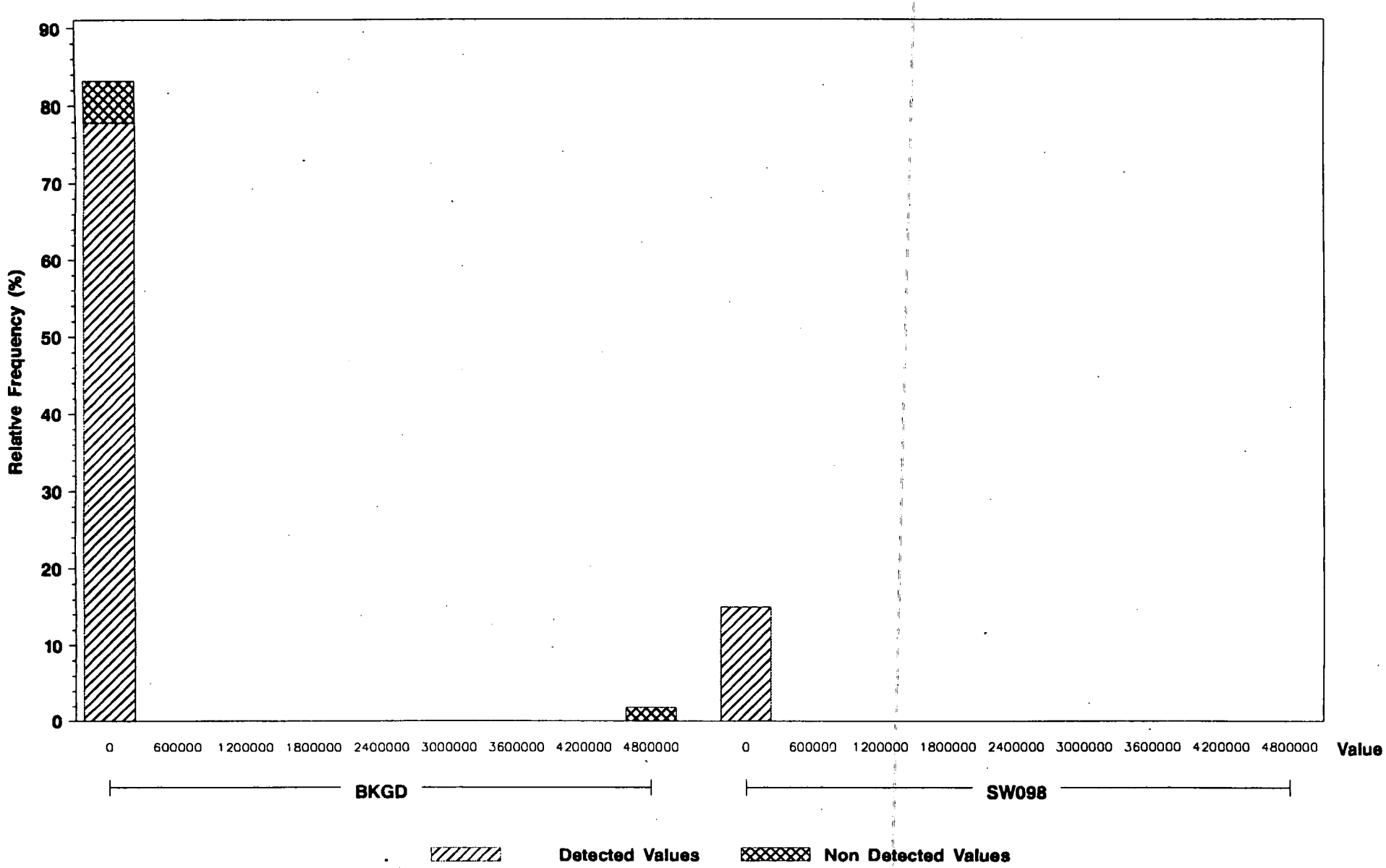
ANALYTE = LITHIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total MAGNESIUM (ug/L) in Surface Water

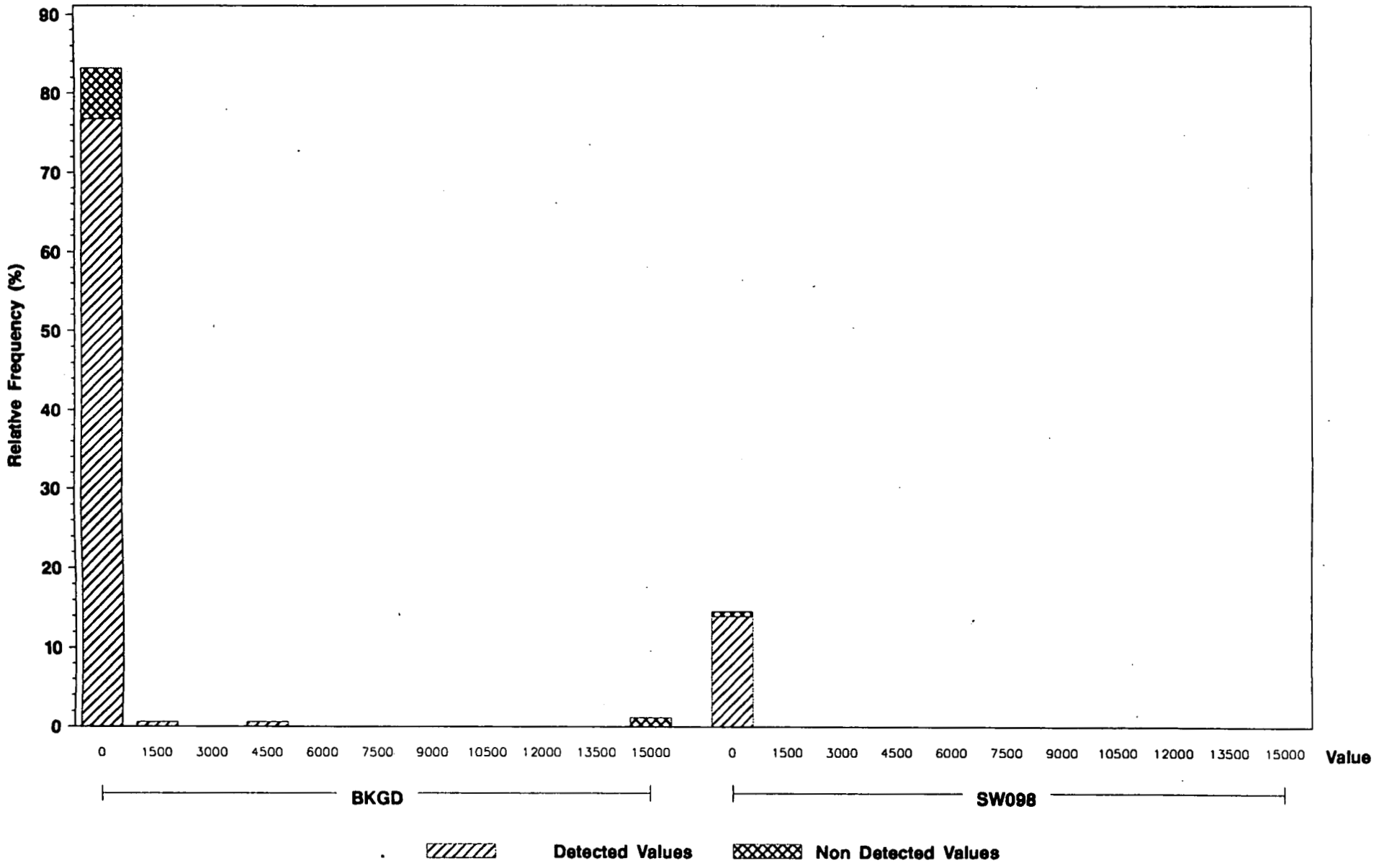
ANALYTE = MAGNESIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total MANGANESE (ug/L) in Surface Water

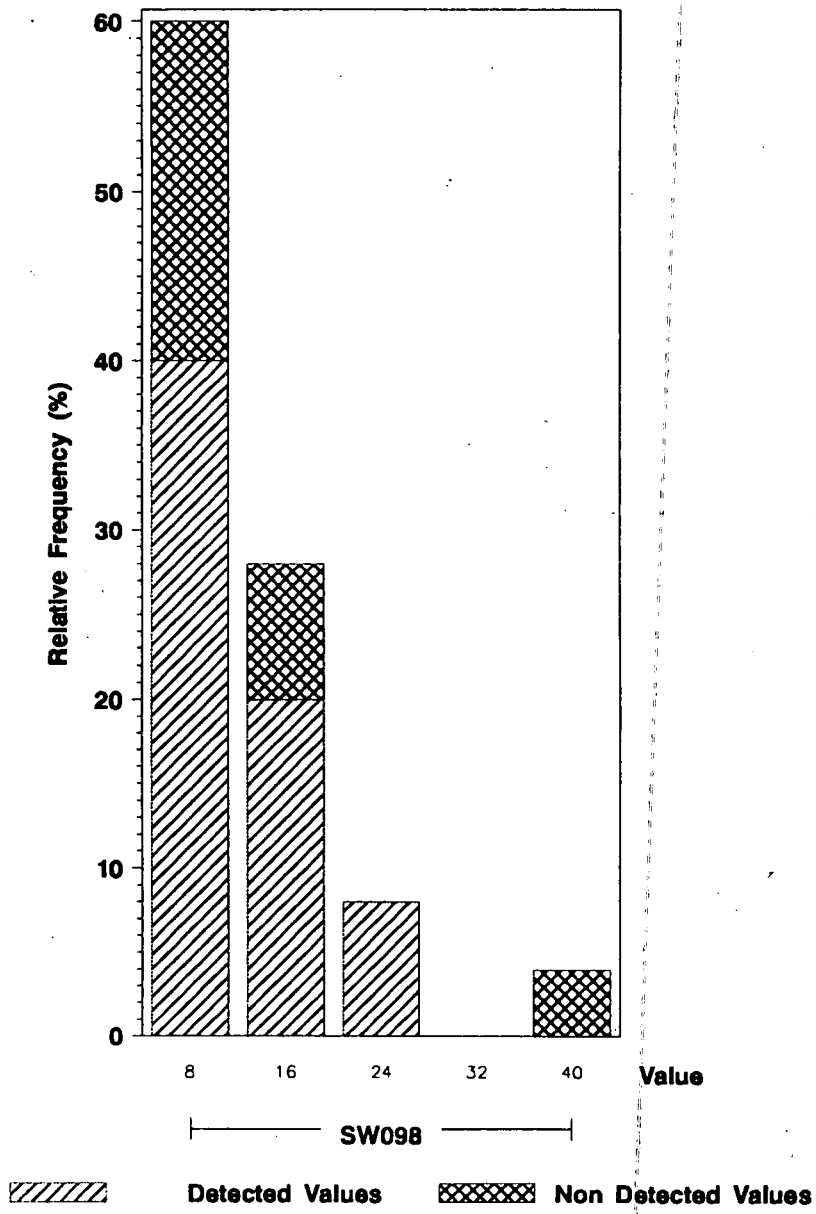
ANALYTE=MANGANESE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total NICKEL (ug/L) in Surface Water

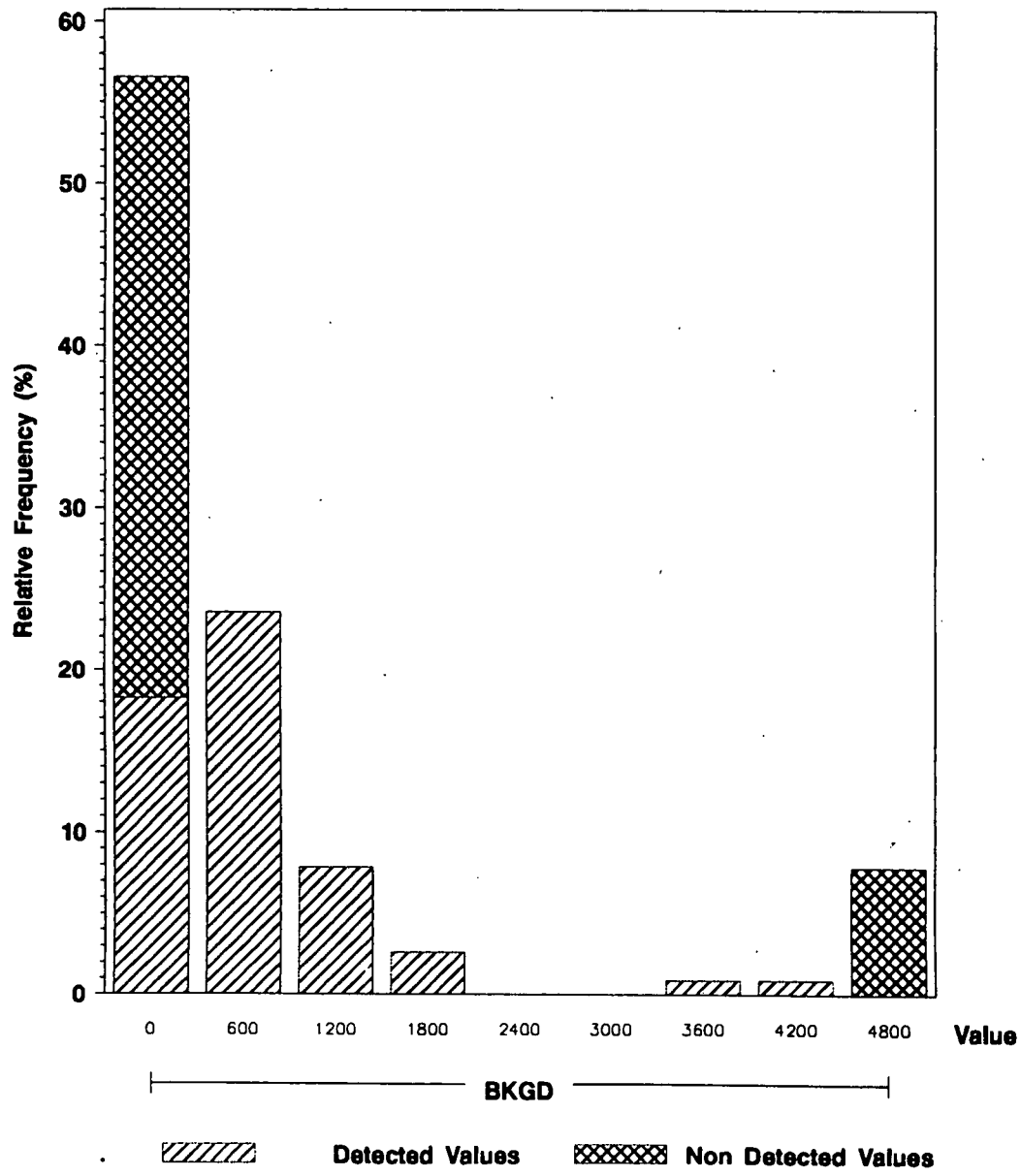
ANALYTE = NICKEL



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Surface Water

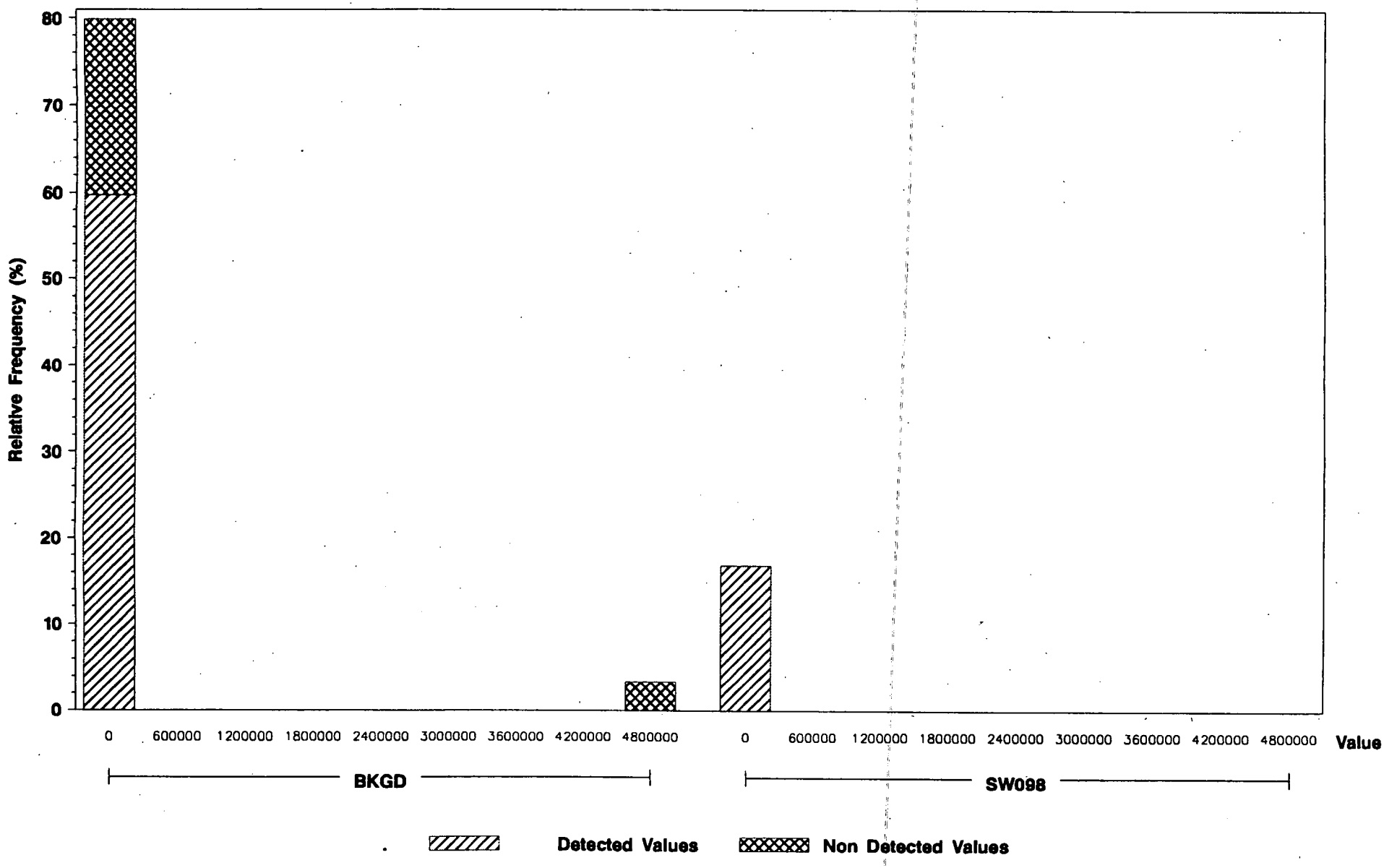
ANALYTE = NITRATE/NITRITE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total POTASSIUM (ug/L) in Surface Water

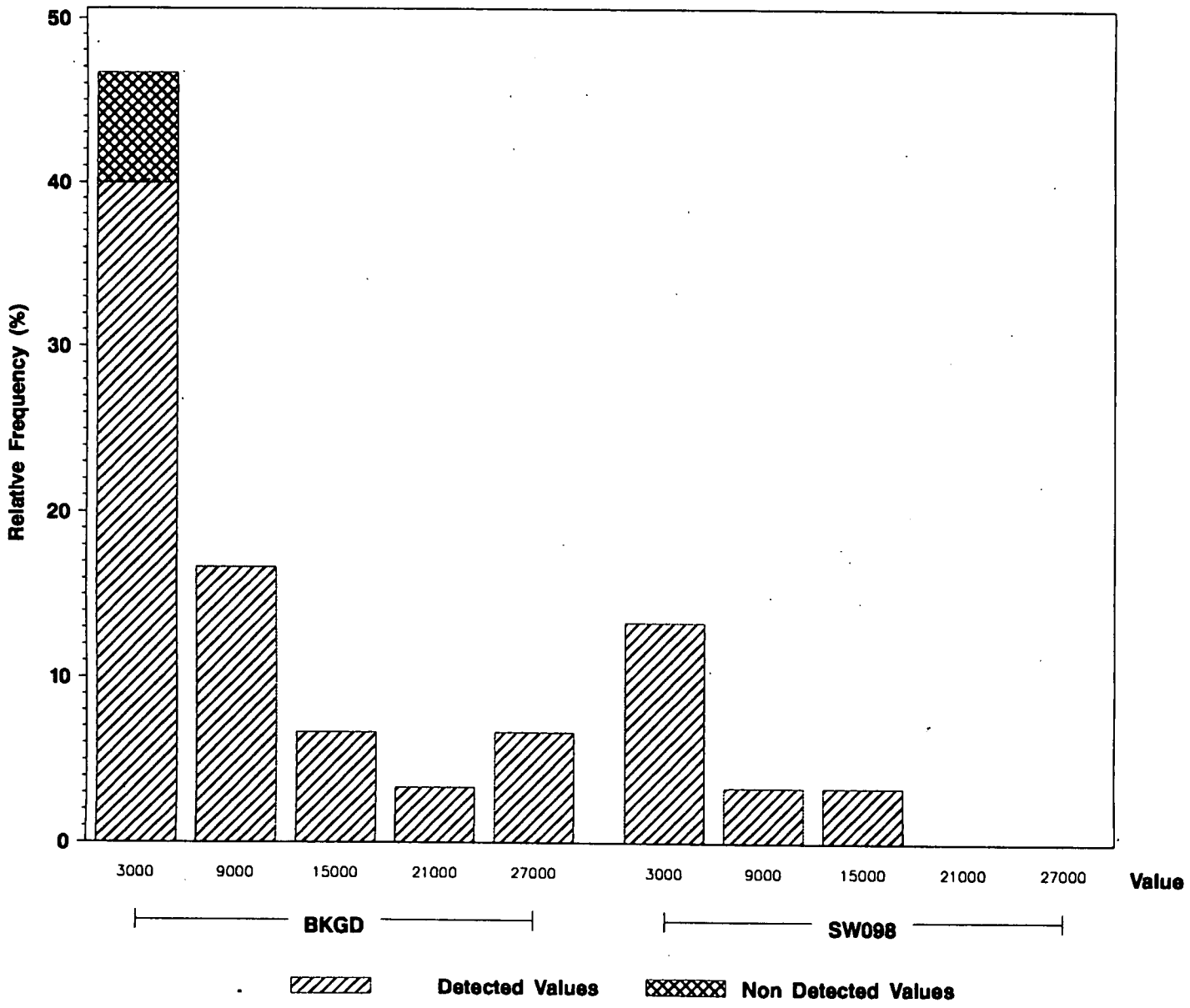
ANALYTE = POTASSIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total SILICA (ug/L) in Surface Water

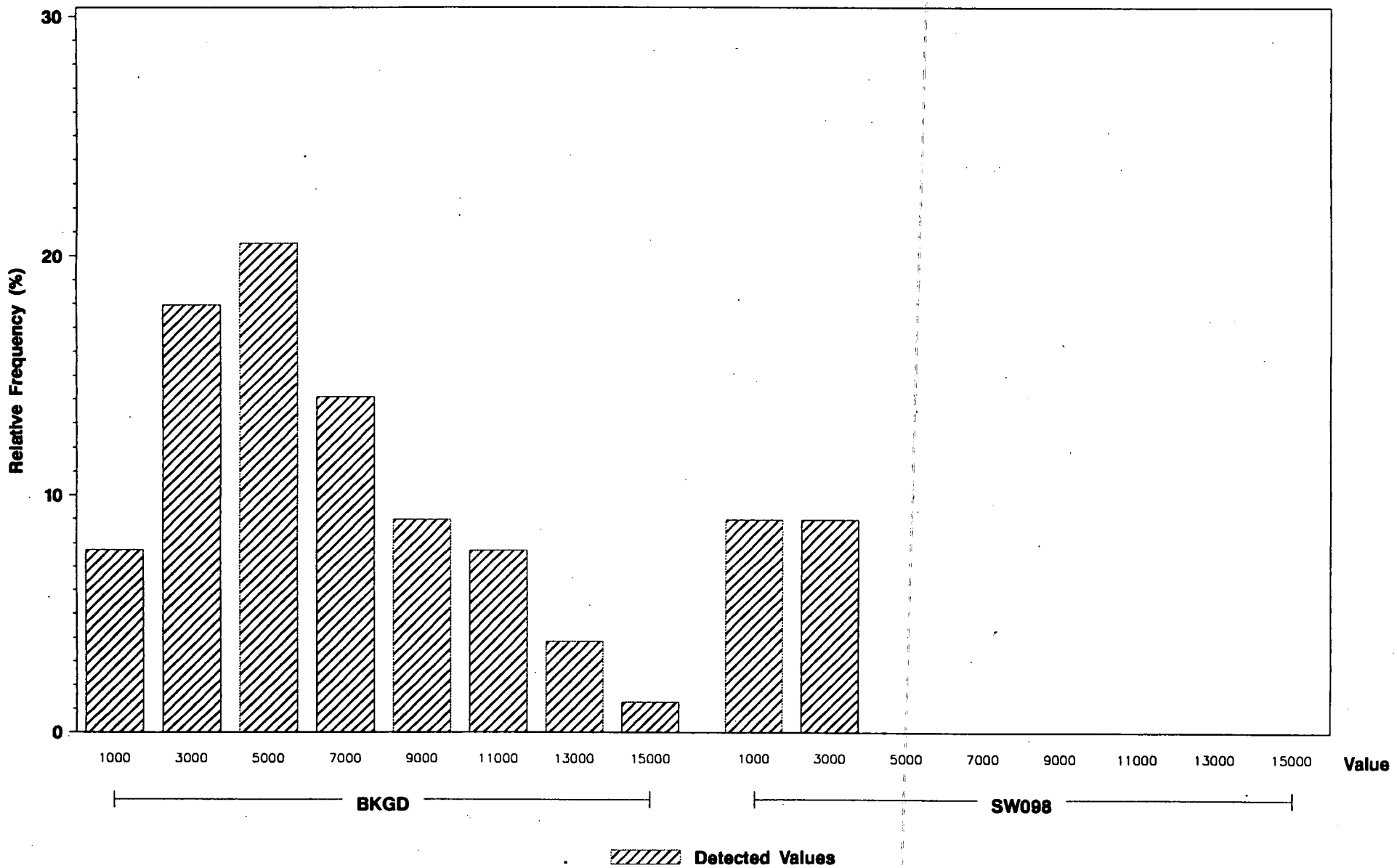
ANALYTE = SILICA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total SILICON (ug/L) in Surface Water

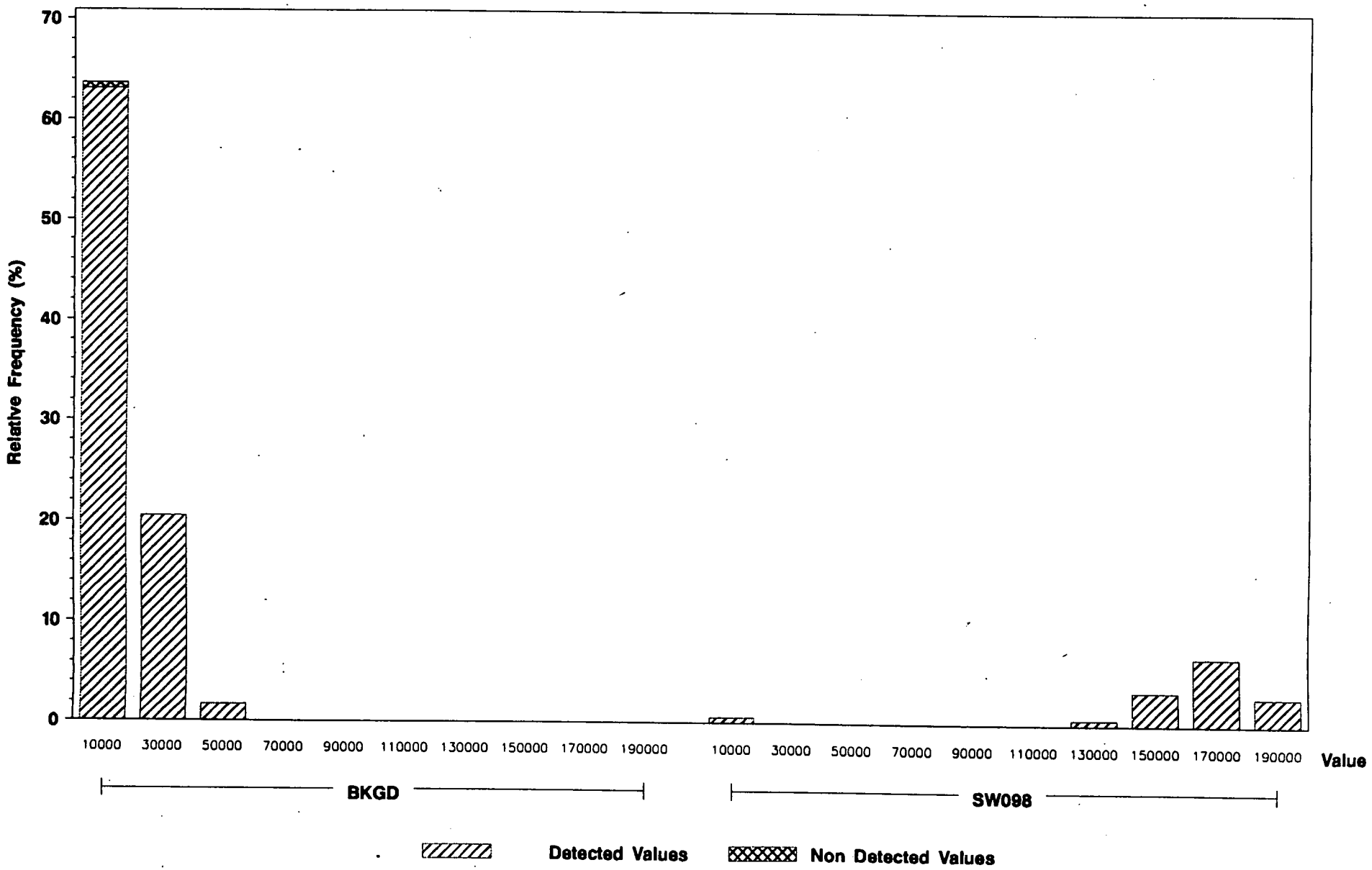
ANALYTE = SILICON



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total SODIUM (ug/L) in Surface Water

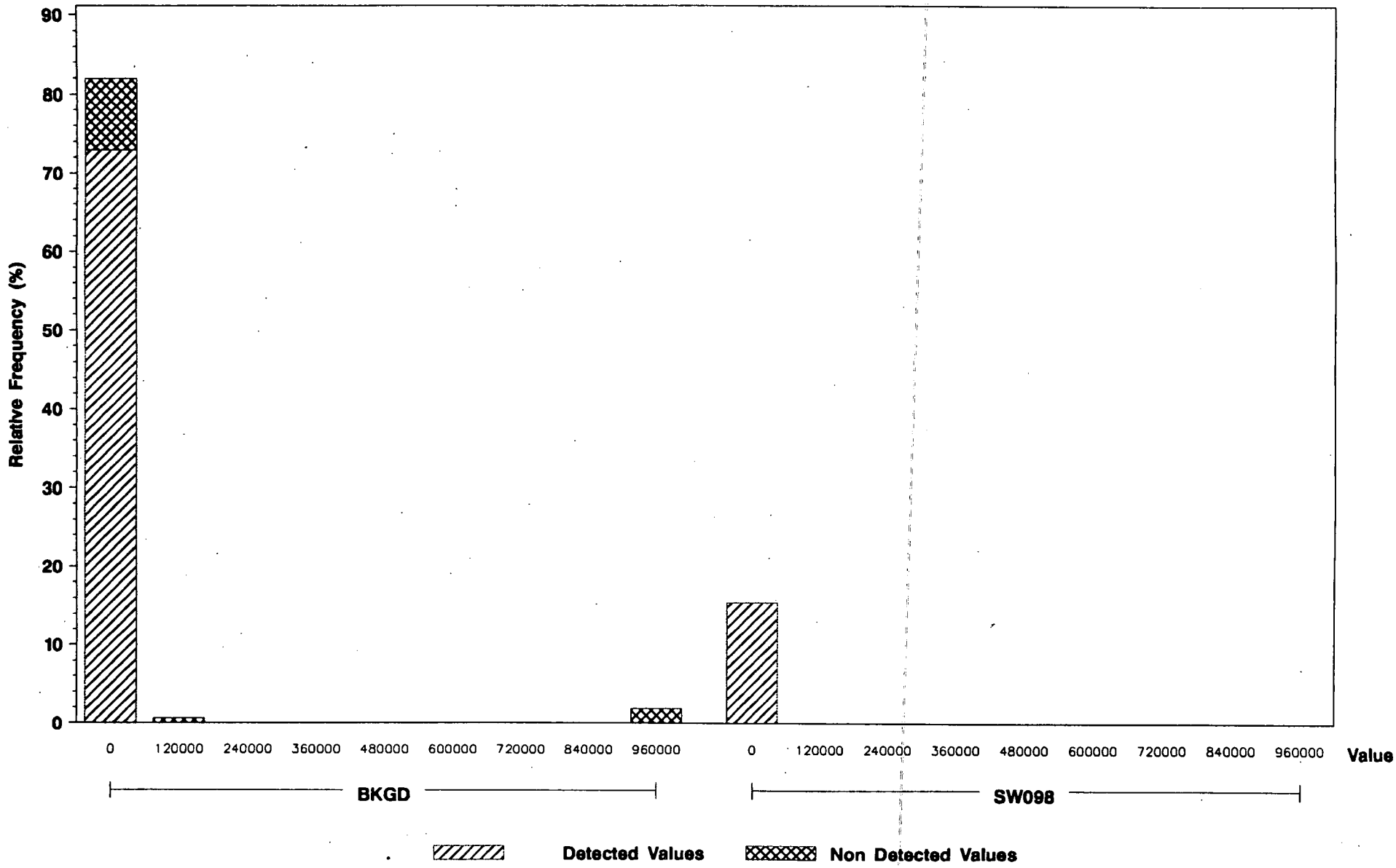
ANALYTE = SODIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total STRONTIUM (ug/L) in Surface Water

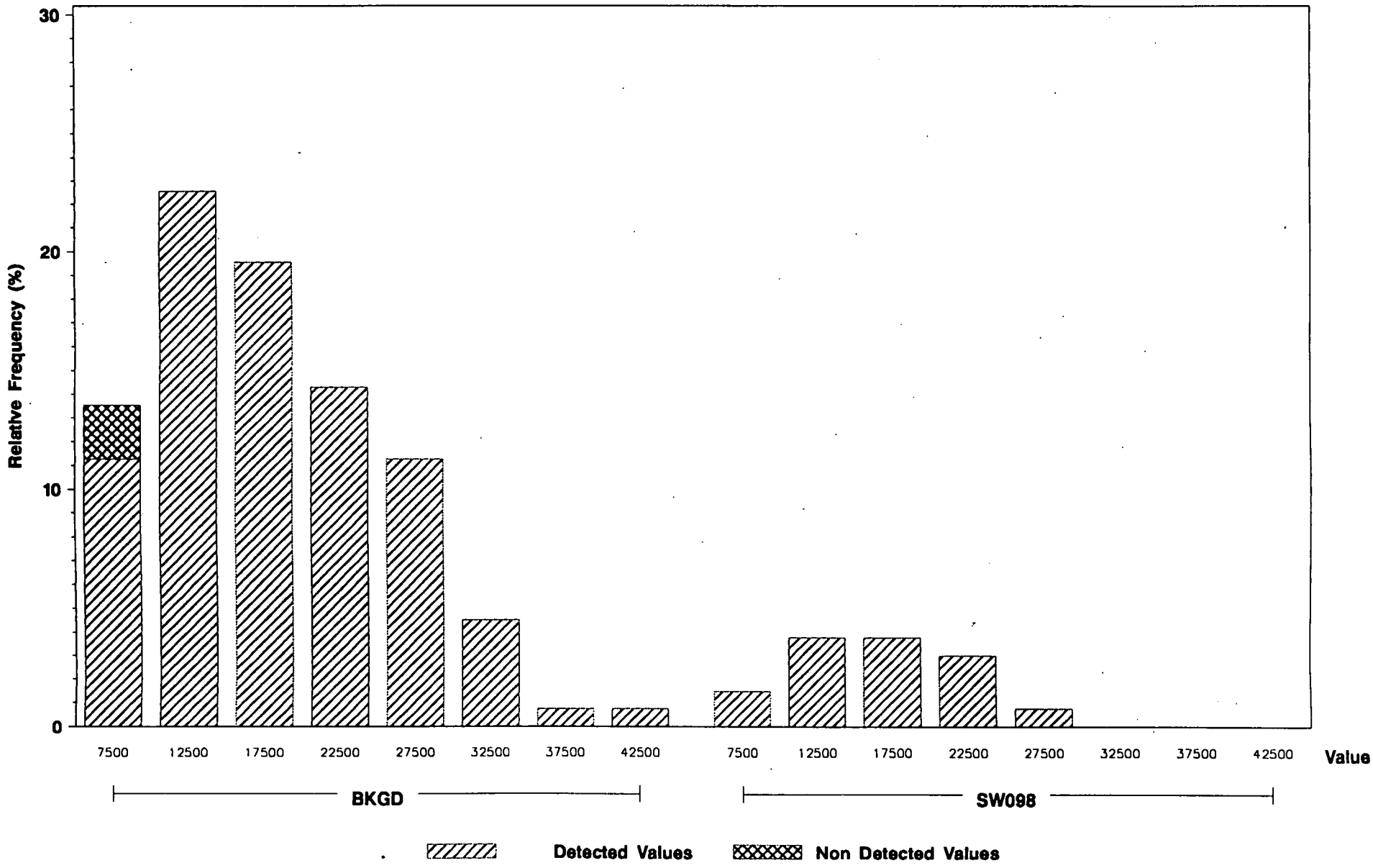
ANALYTE = STRONTIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total SULFATE (ug/L) in Surface Water

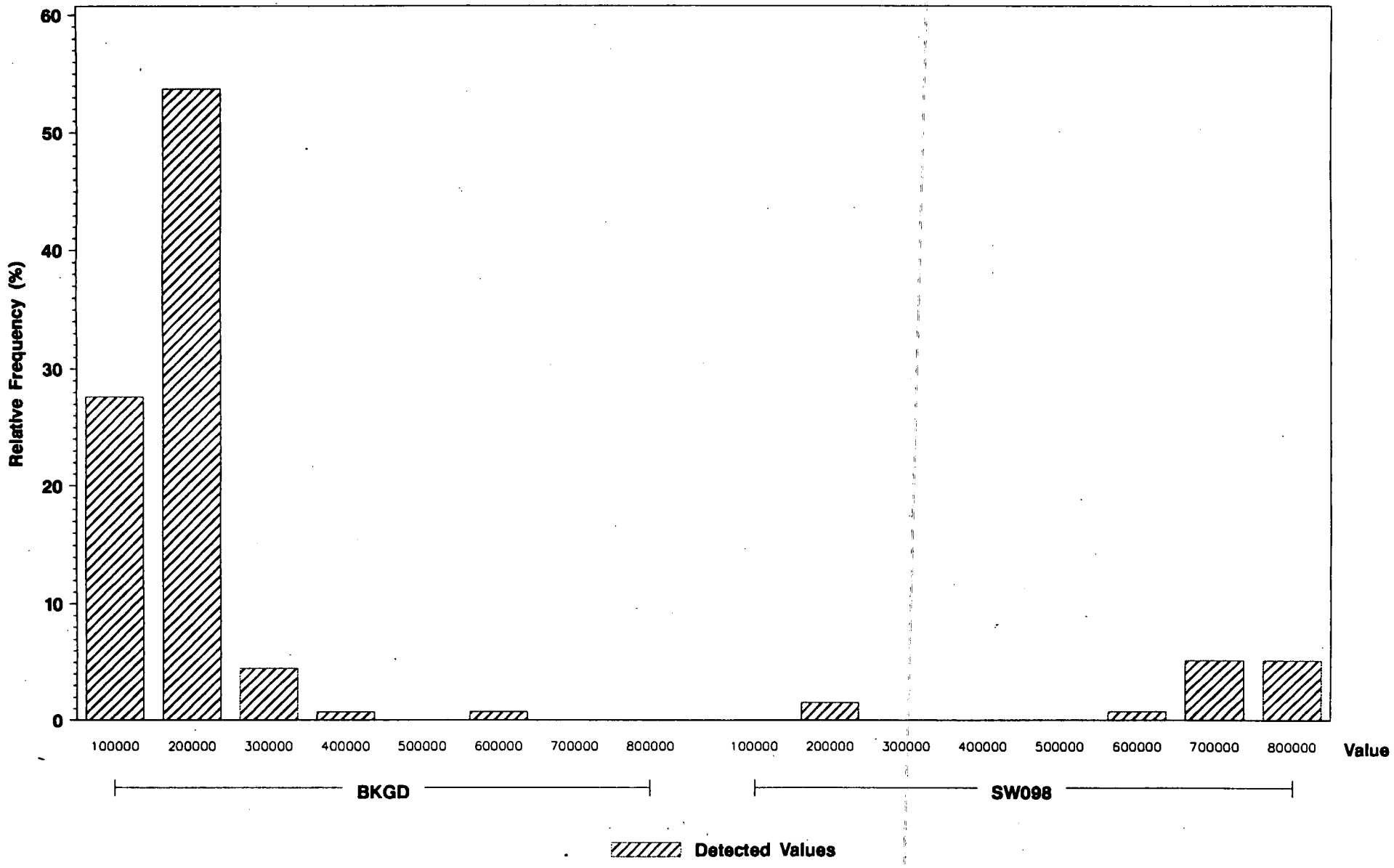
ANALYTE = SULFATE



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total TOTAL DISSOLVED SOLIDS (ug/L) in Surface Water

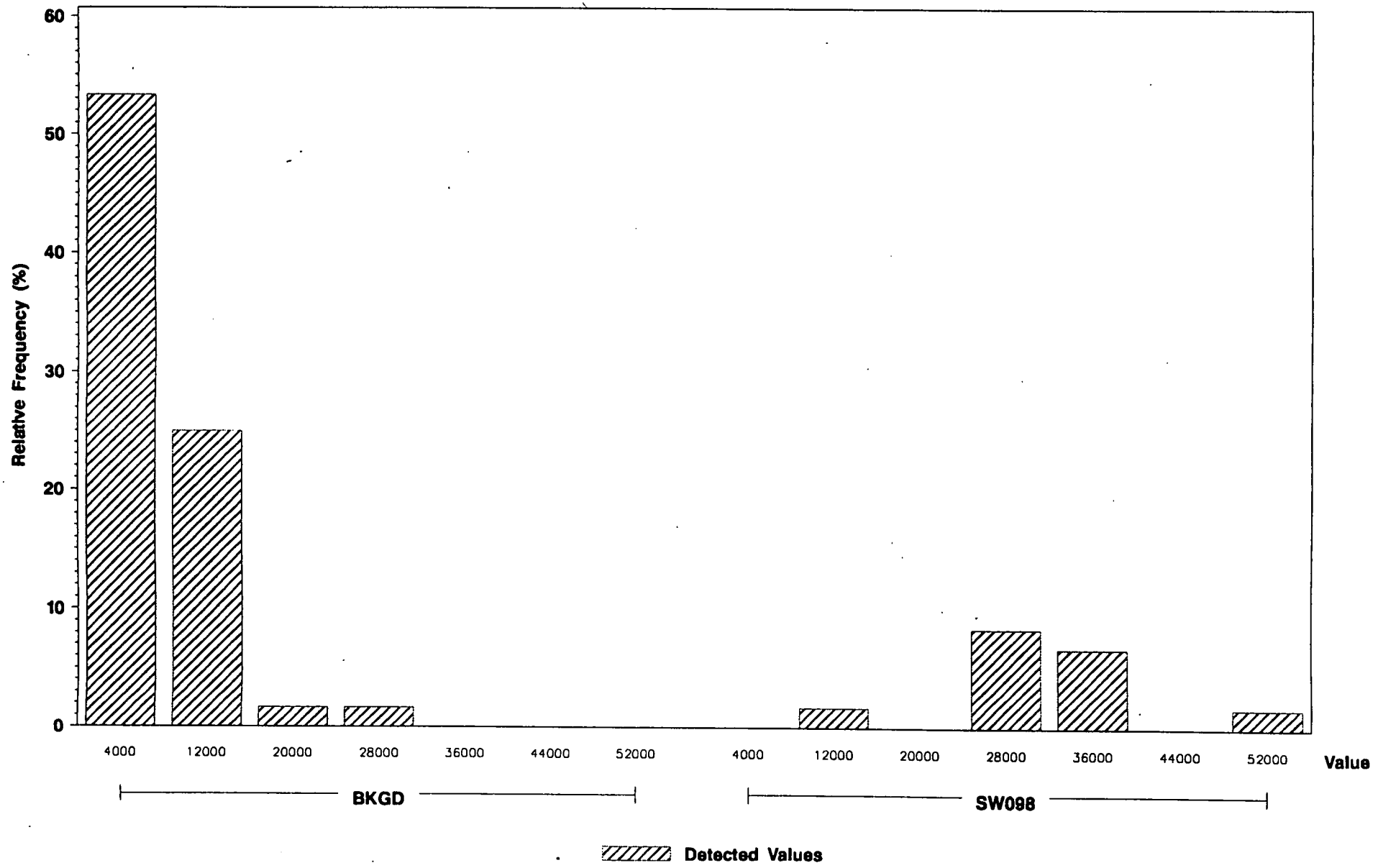
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total TOTAL ORGANIC CARBON (ug/L) in Surface Water

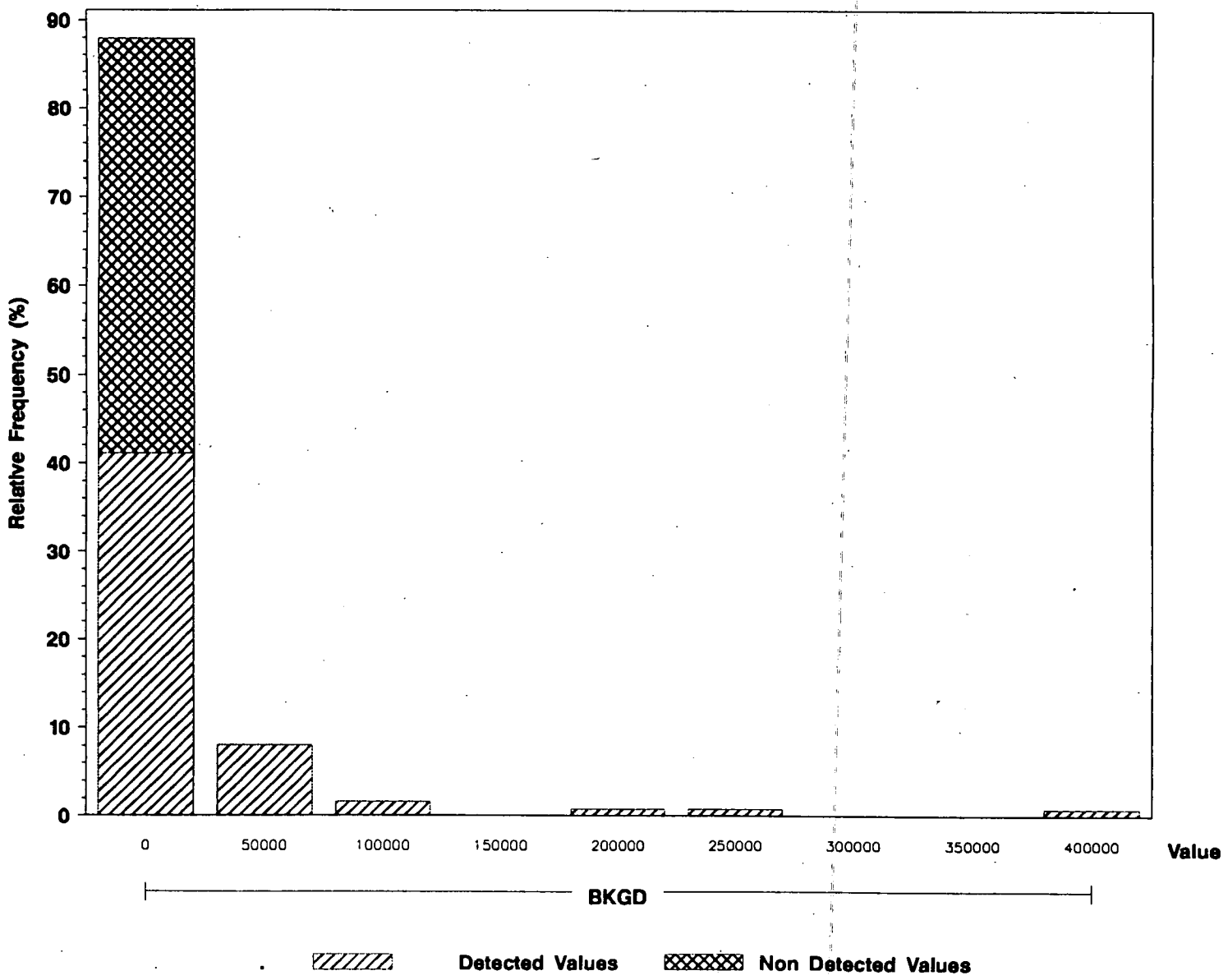
ANALYTE=TOTAL ORGANIC CARBON



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total TOTAL SUSPENDED SOLIDS (ug/L) in Surface Water

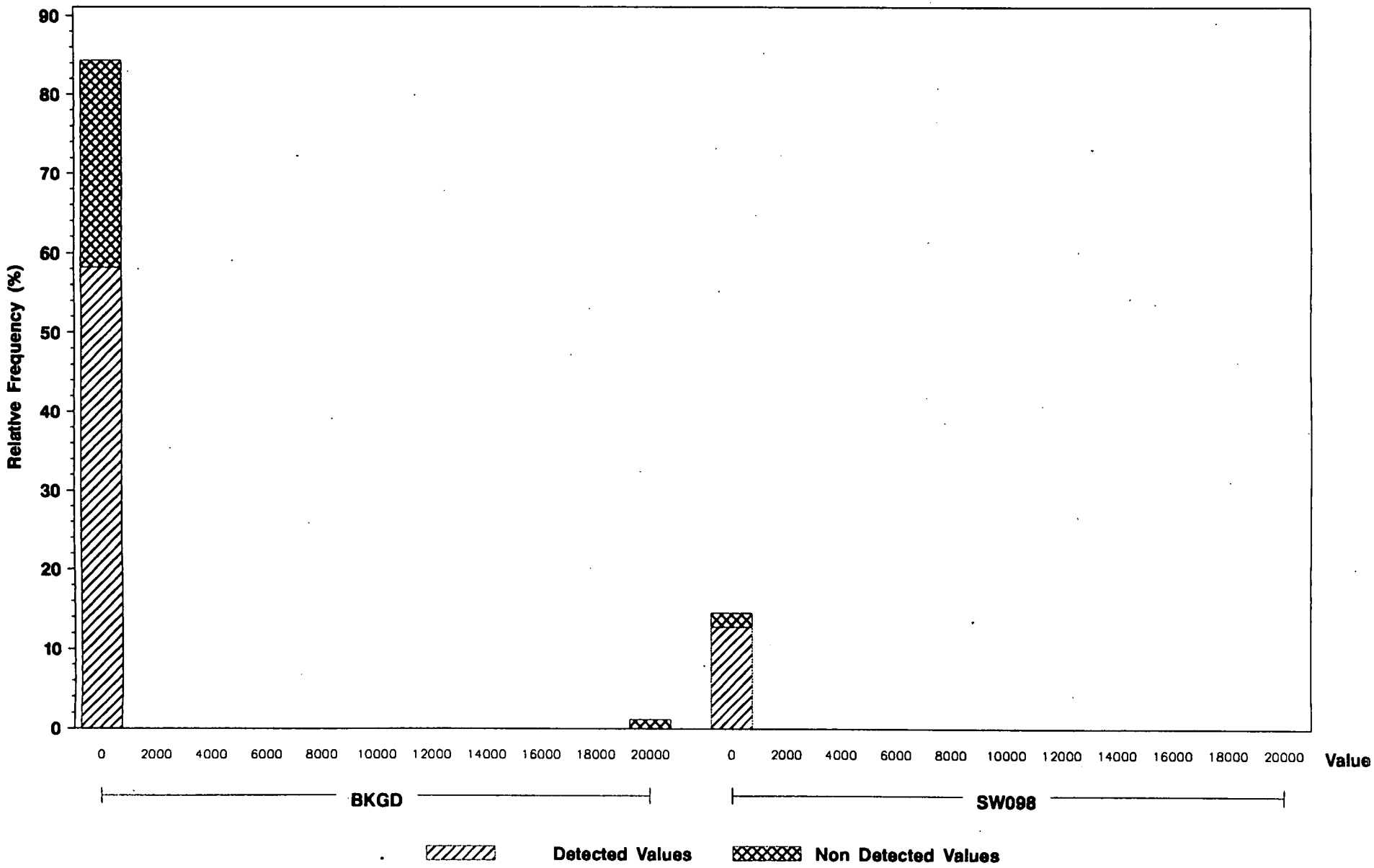
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total ZINC (ug/L) in Surface Water

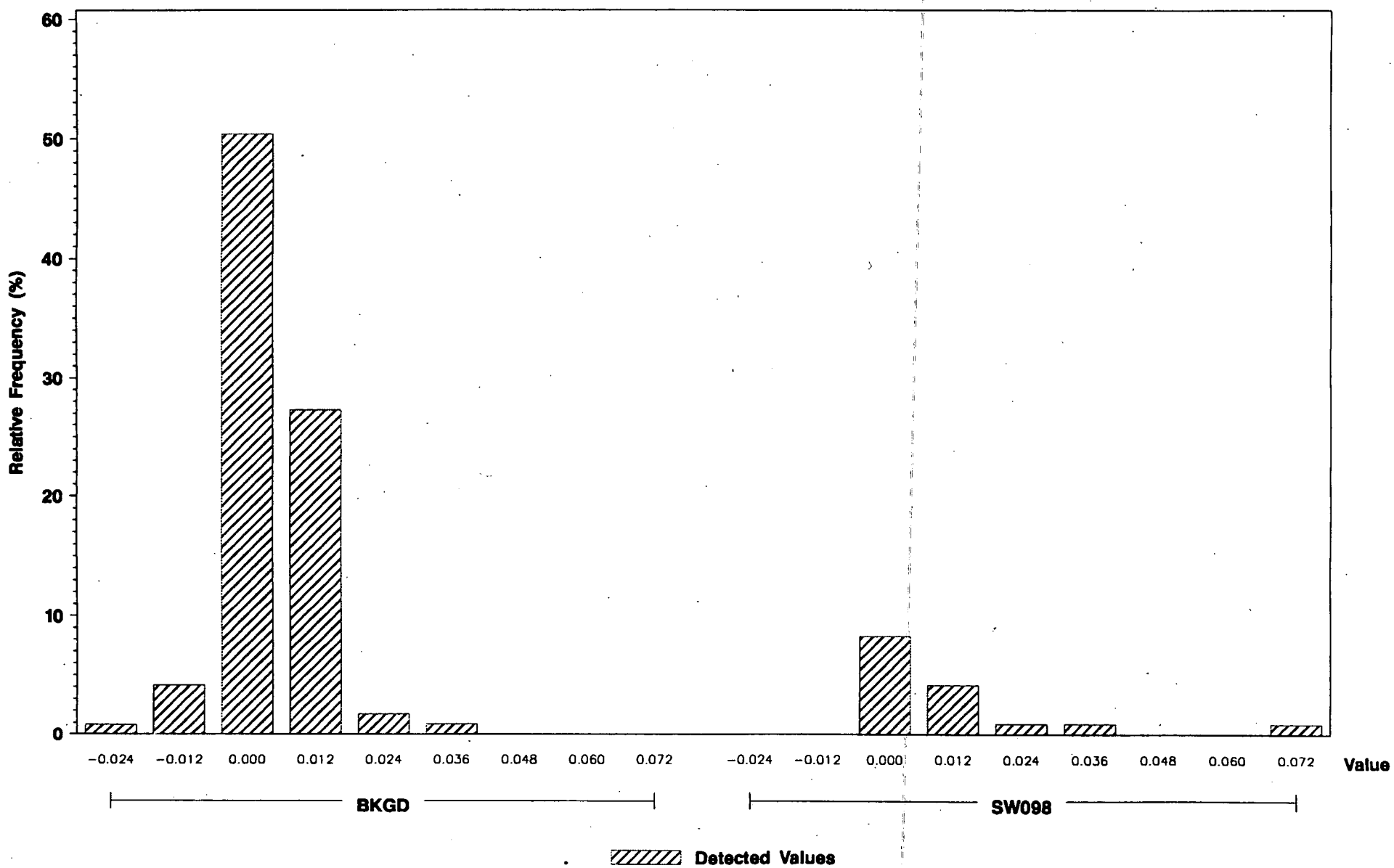
ANALYTE=ZINC



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total AMERICIUM – 241 (pCi/L) in Surface Water

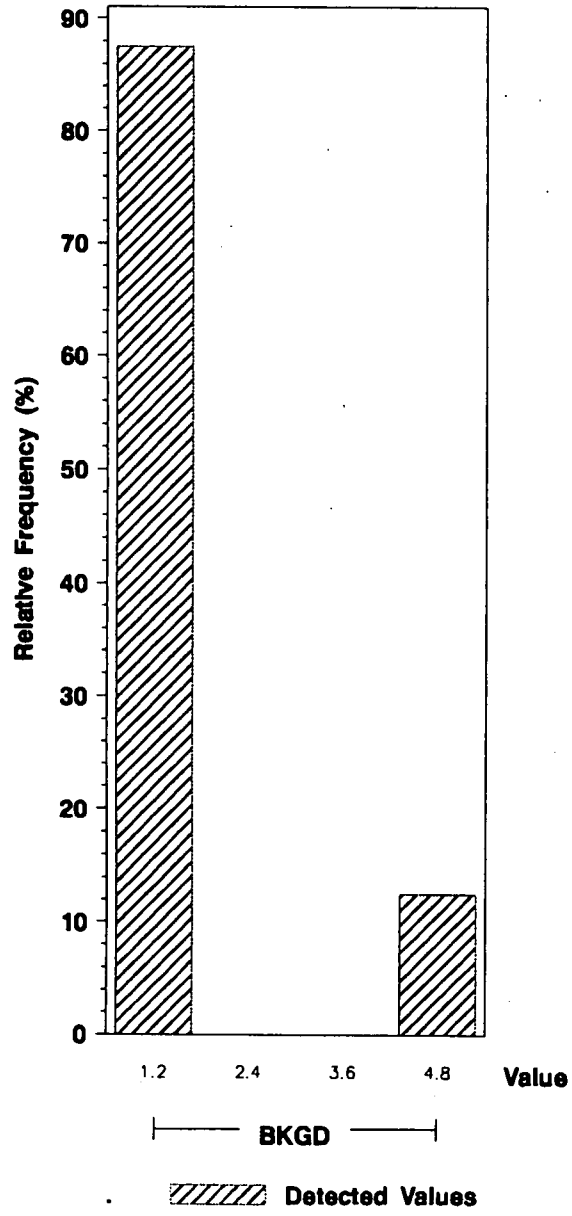
ANALYTE = AMERICIUM – 241



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Surface Water

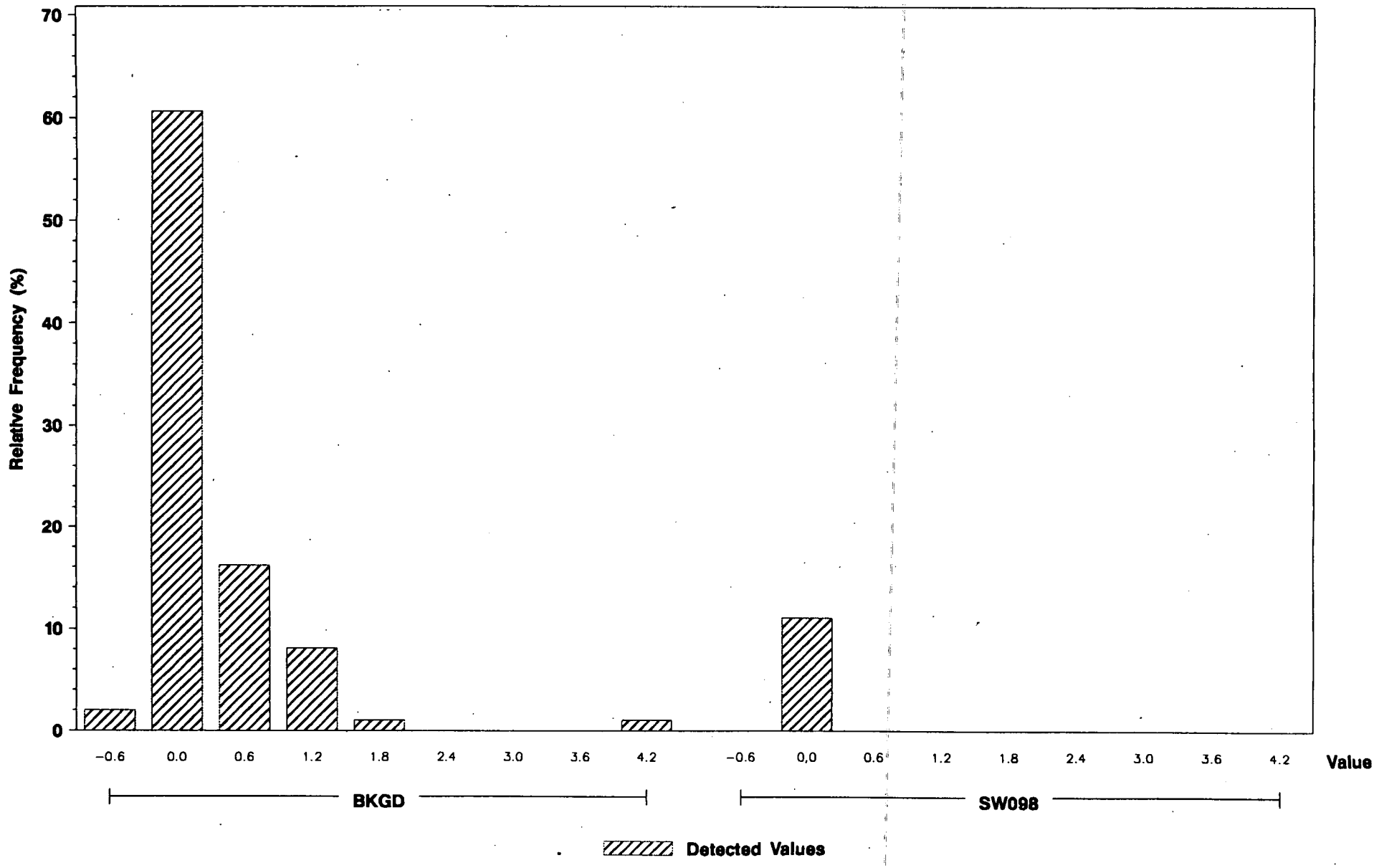
ANALYTE = CESIUM-134



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Surface Water

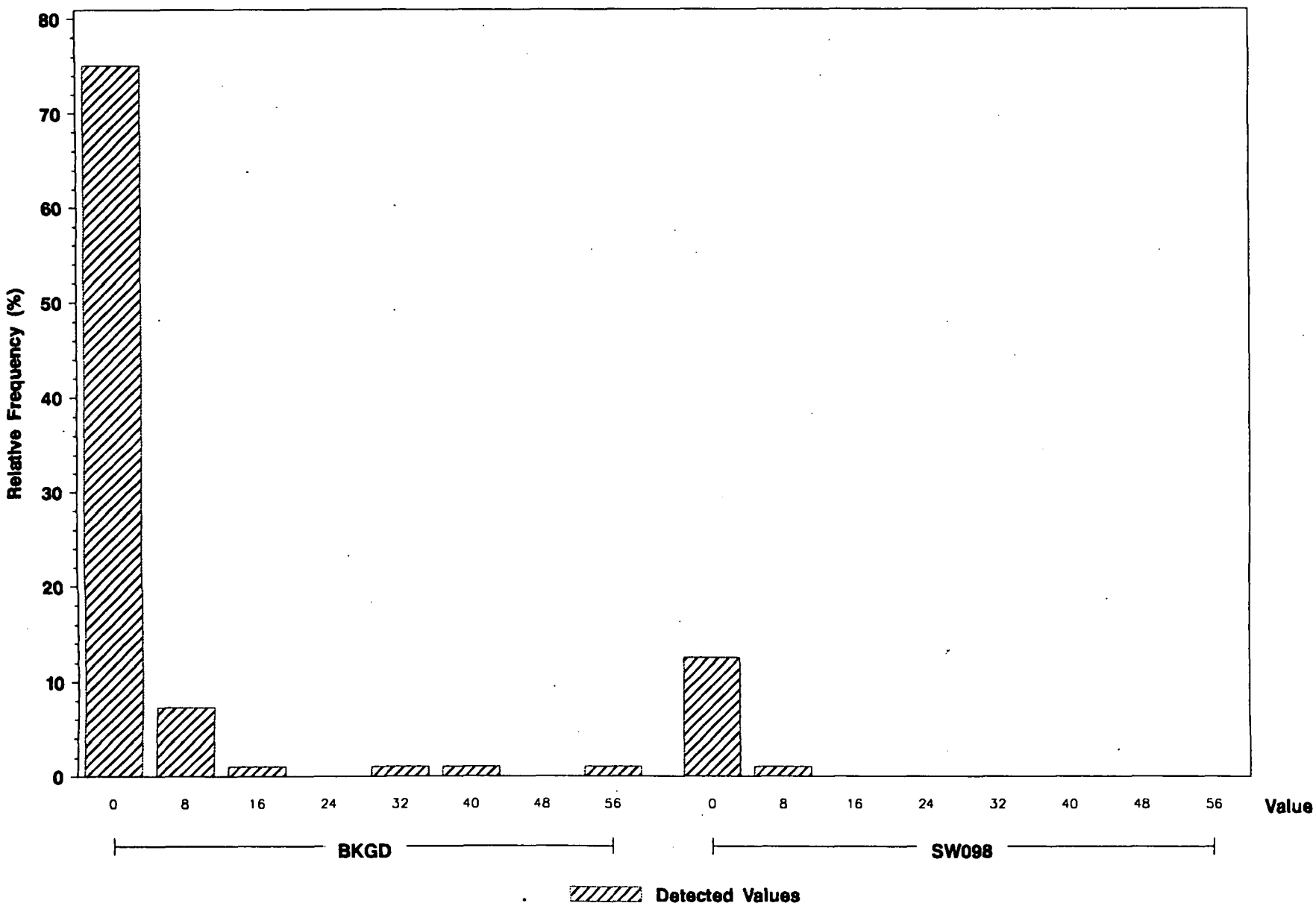
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Surface Water

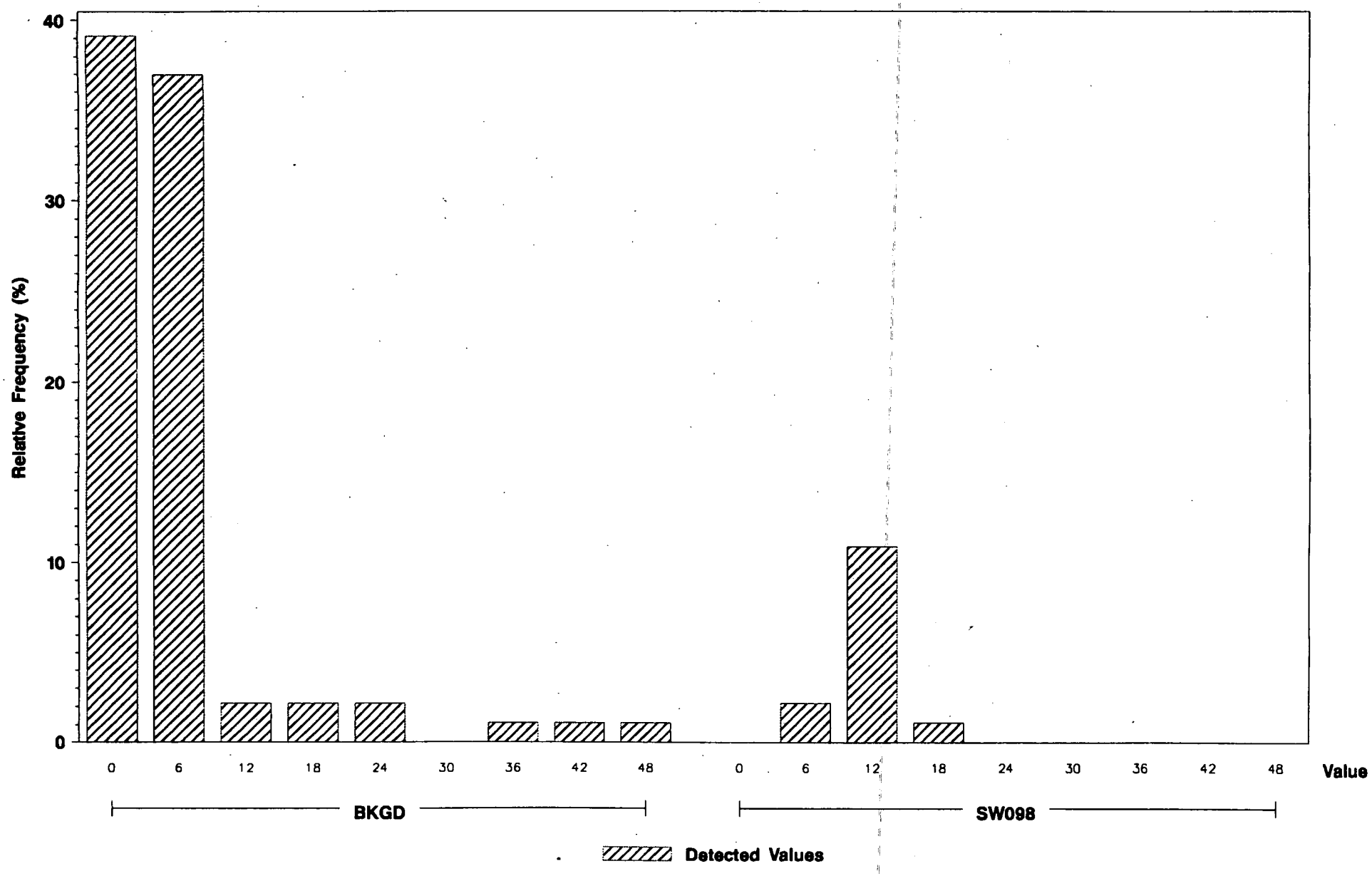
ANALYTE=GROSS ALPHA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total GROSS BETA (pCi/L) in Surface Water

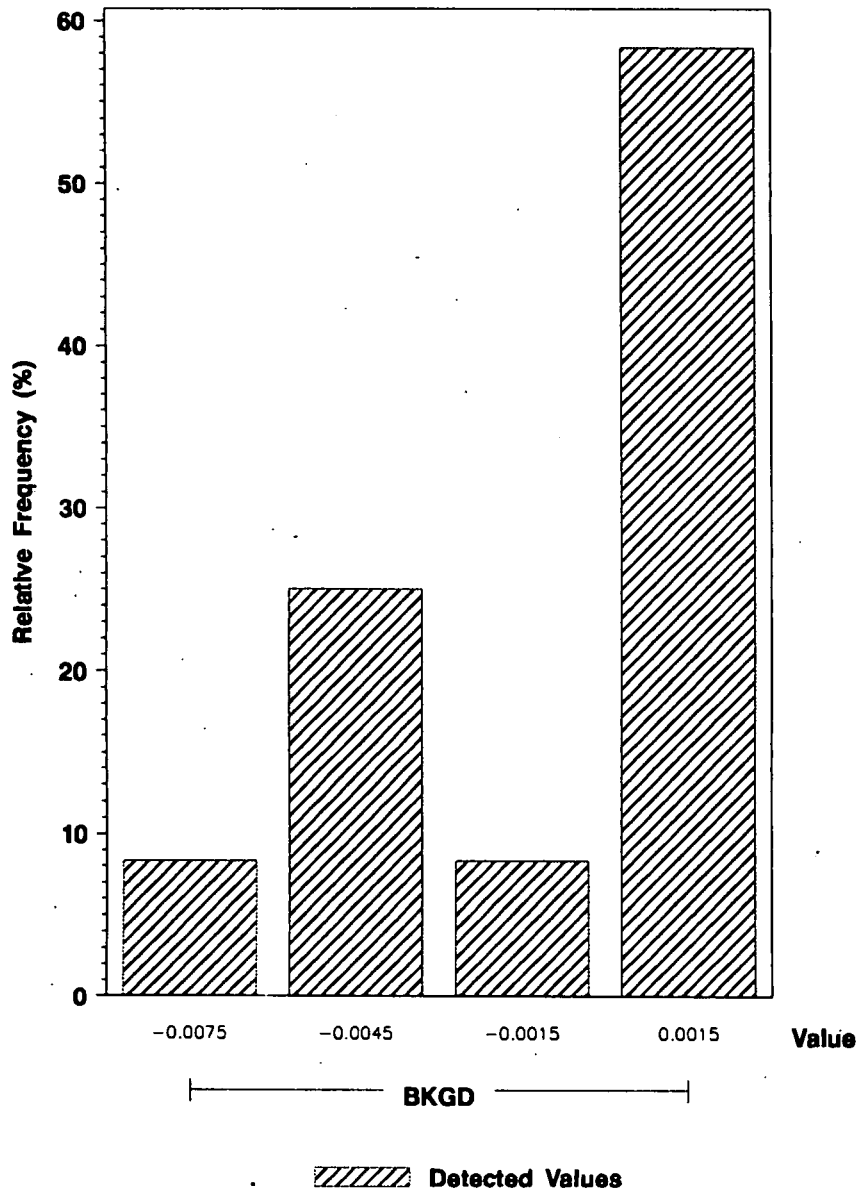
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total PLUTONIUM-236 (pCi/L) in Surface Water

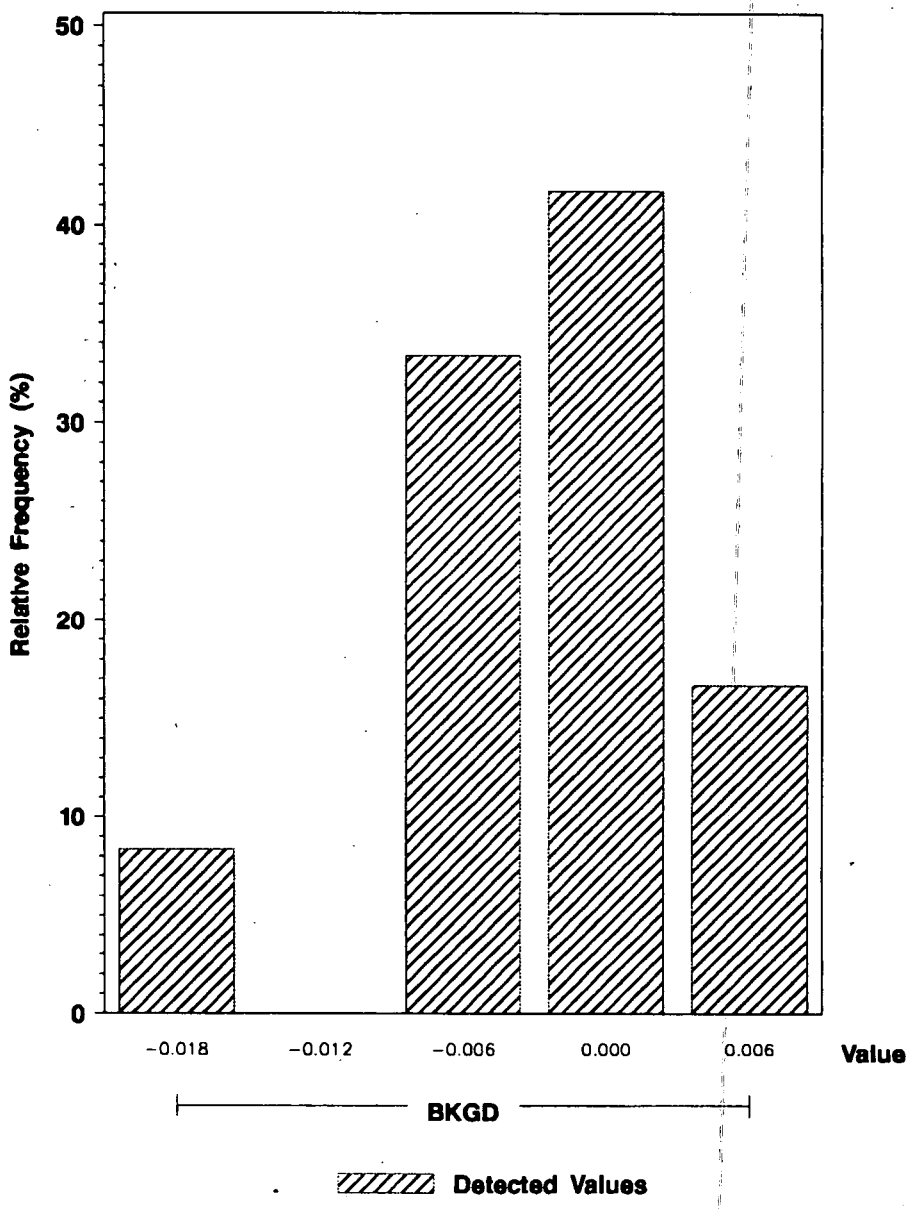
ANALYTE = PLUTONIUM-236



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total PLUTONIUM – 238 (pCi/L) in Surface Water

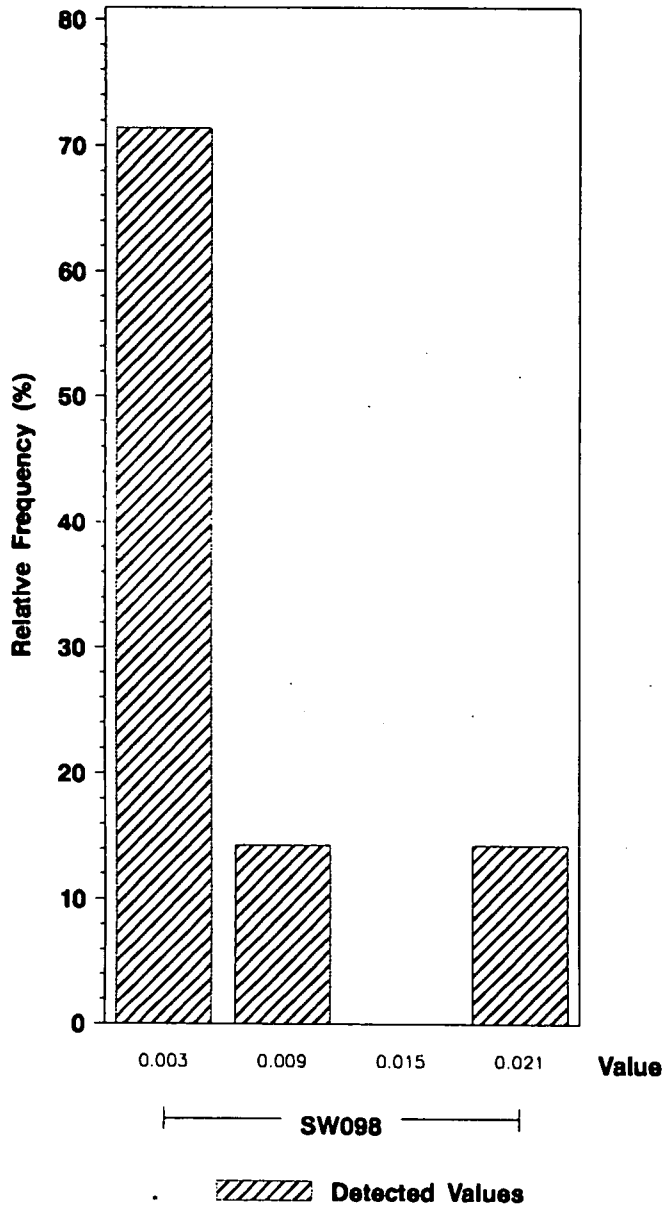
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total PLUTONIUM – 239 (pCi/L) in Surface Water

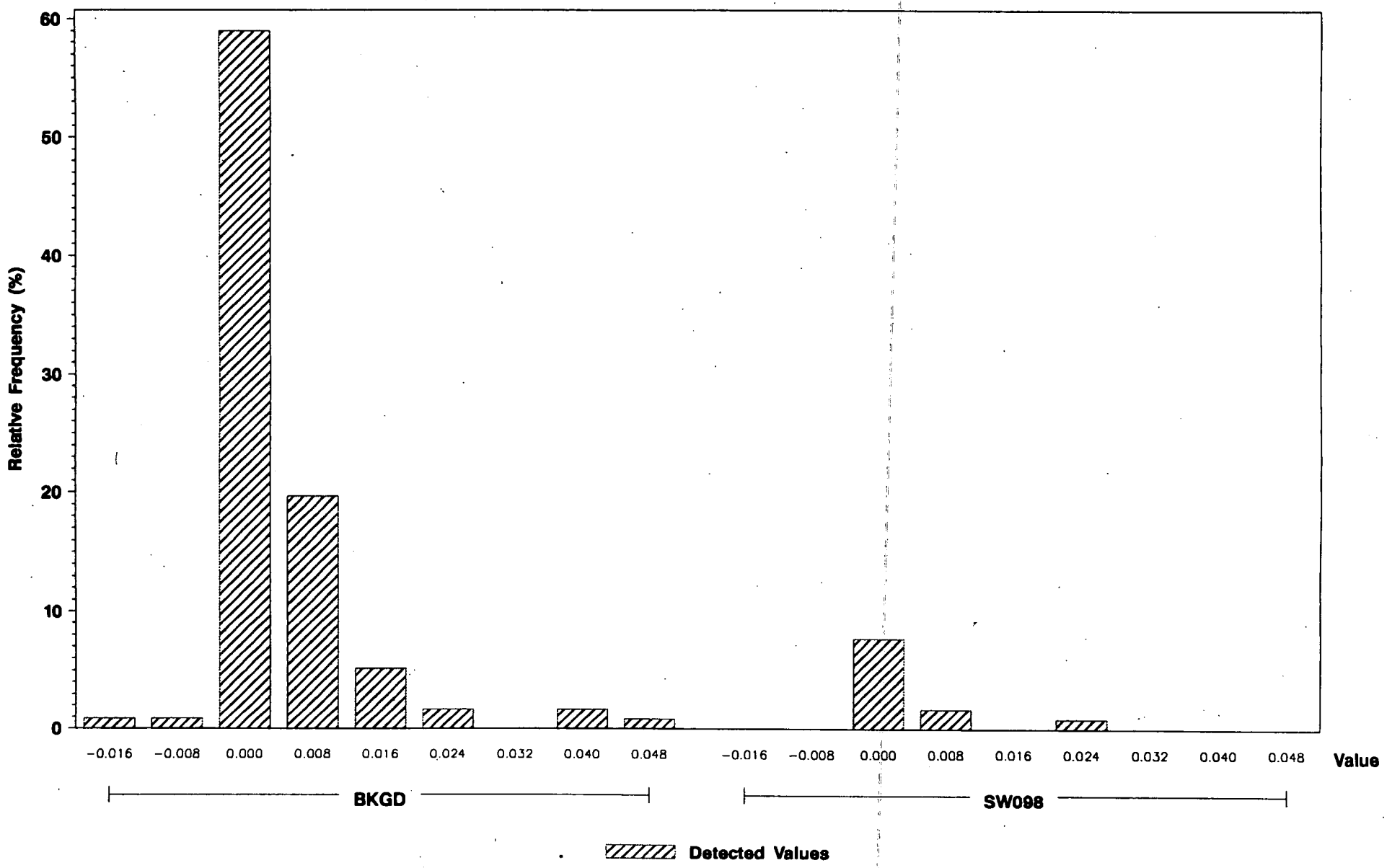
ANALYTE = PLUTONIUM – 239



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Surface Water

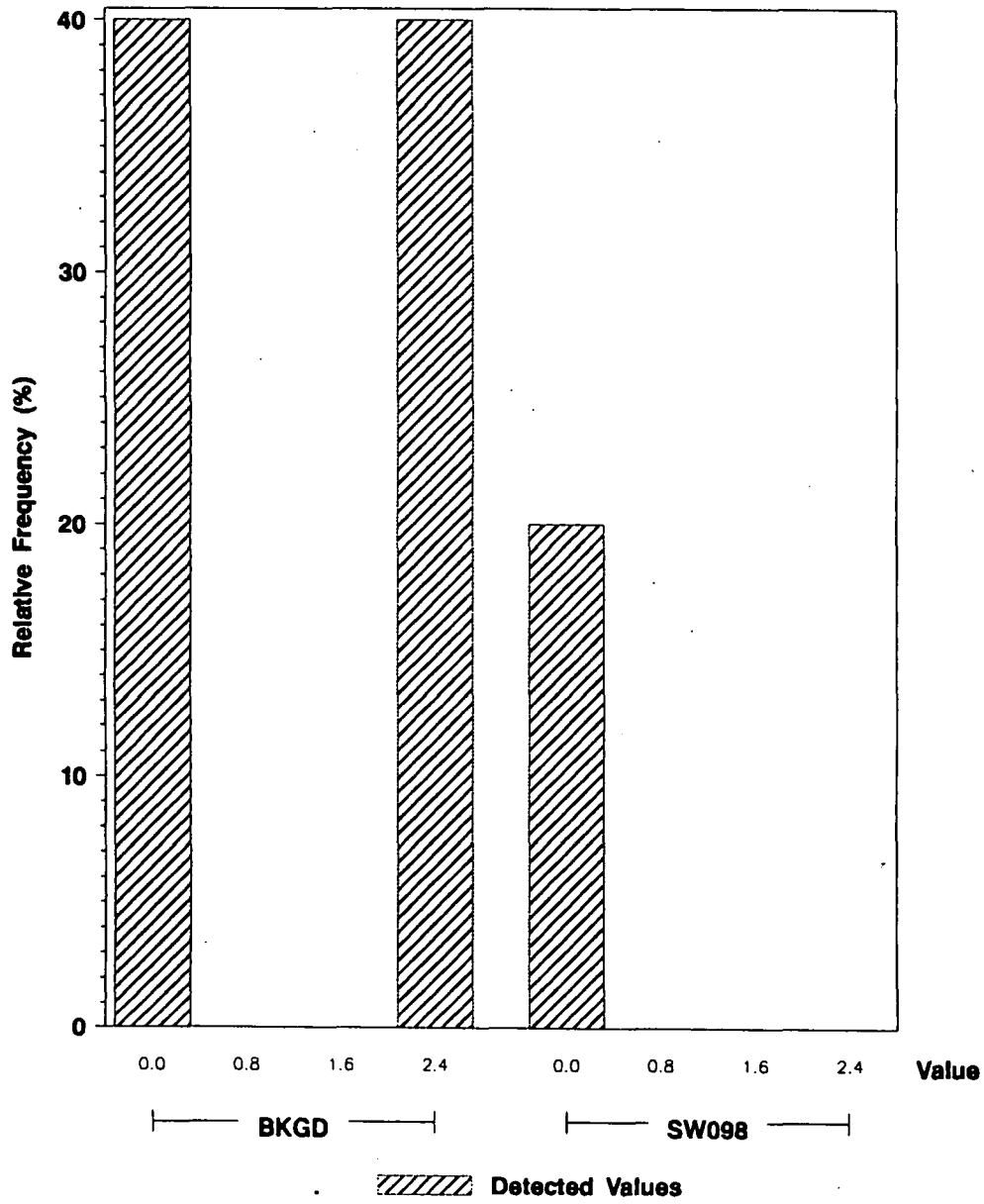
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total RADIUM-226 (pCi/L) in Surface Water

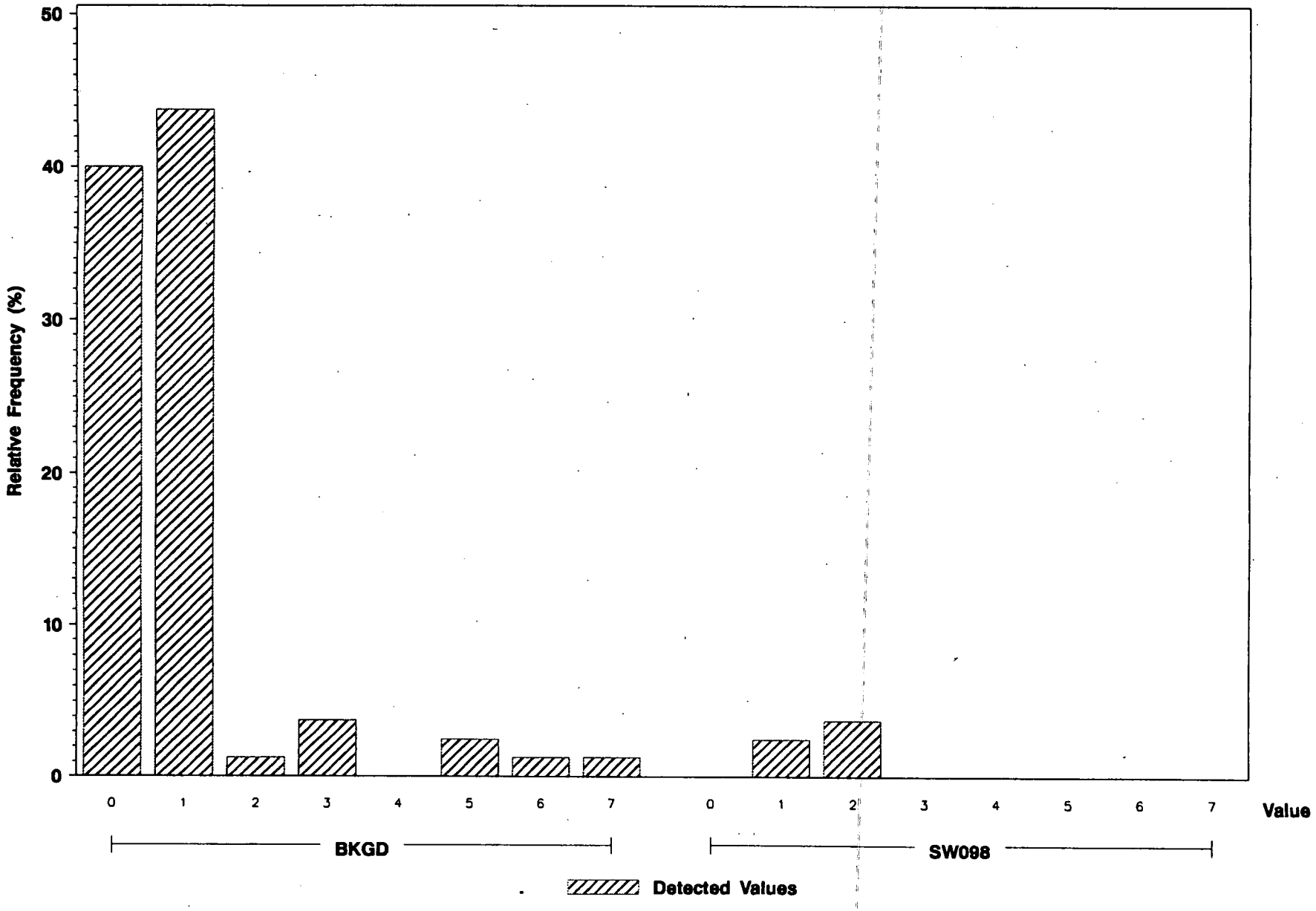
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Surface Water

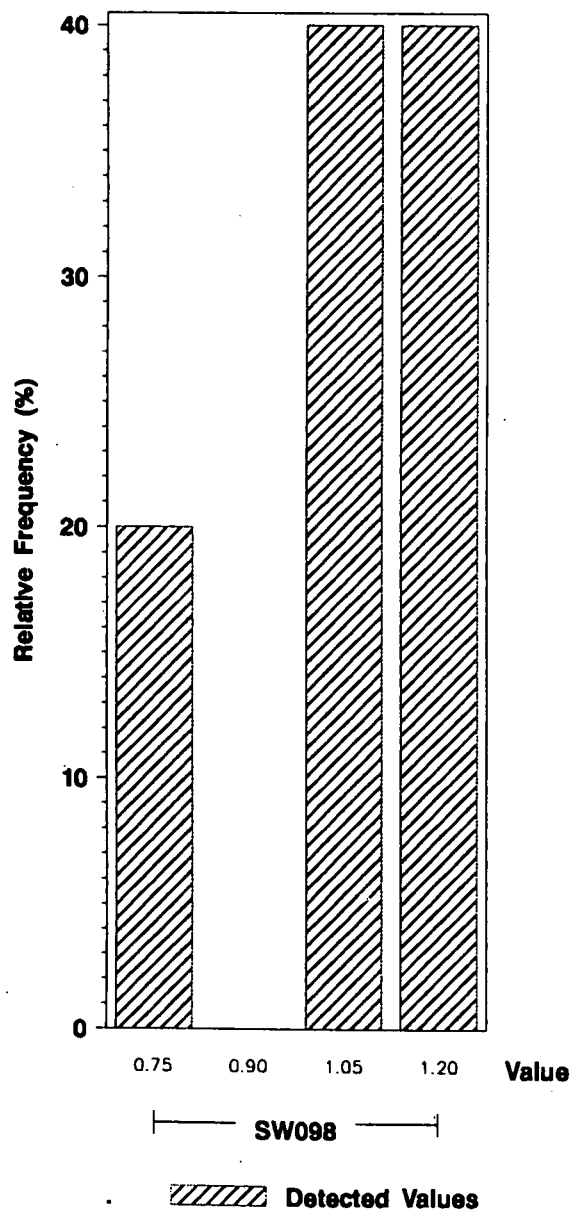
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Surface Water

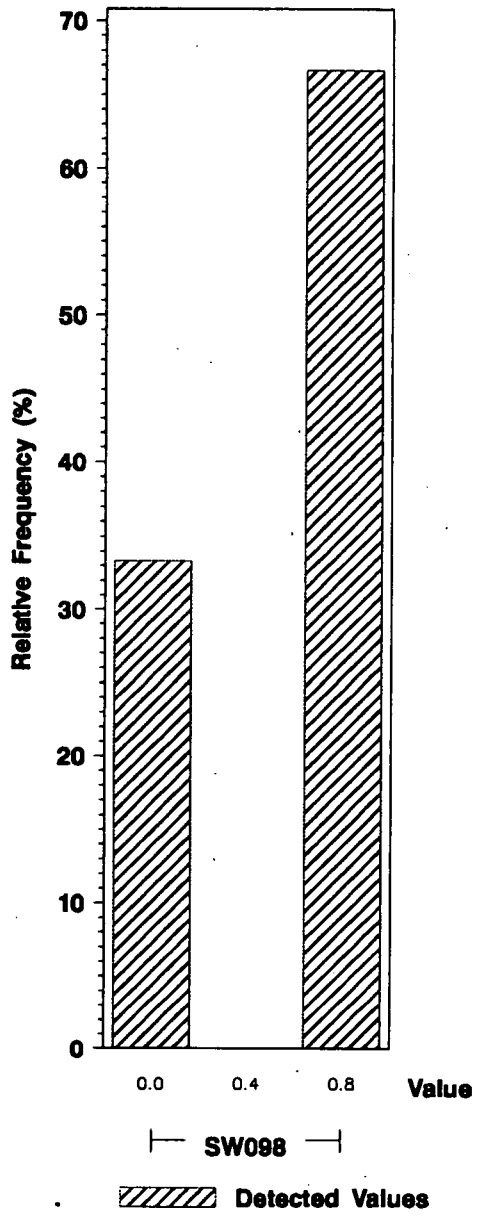
ANALYTE=STRONTIUM-90



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total TOTAL RADIOCESIUM (pCi/L) in Surface Water

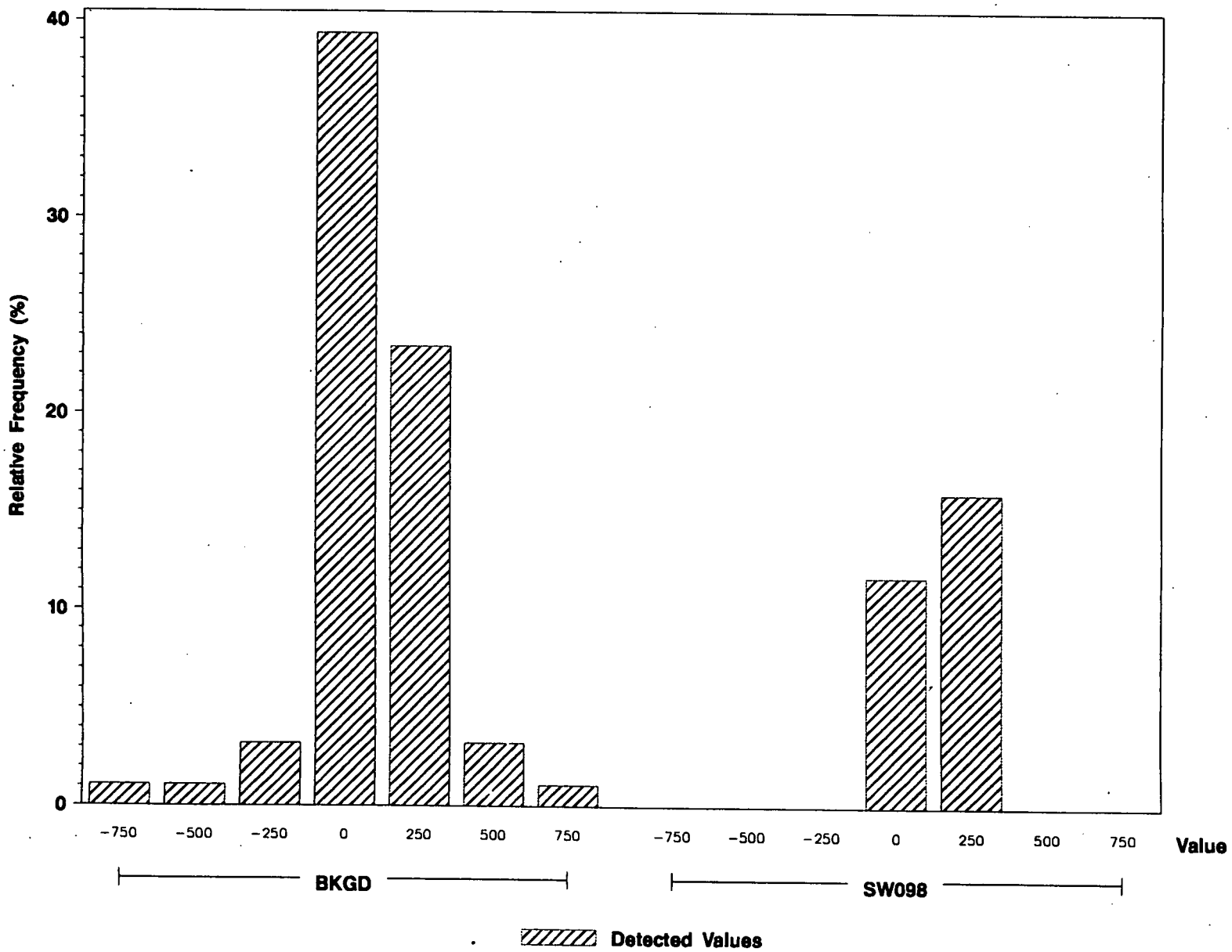
ANALYTE=TOTAL RADIOCESIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total TRITIUM (pCi/L) in Surface Water

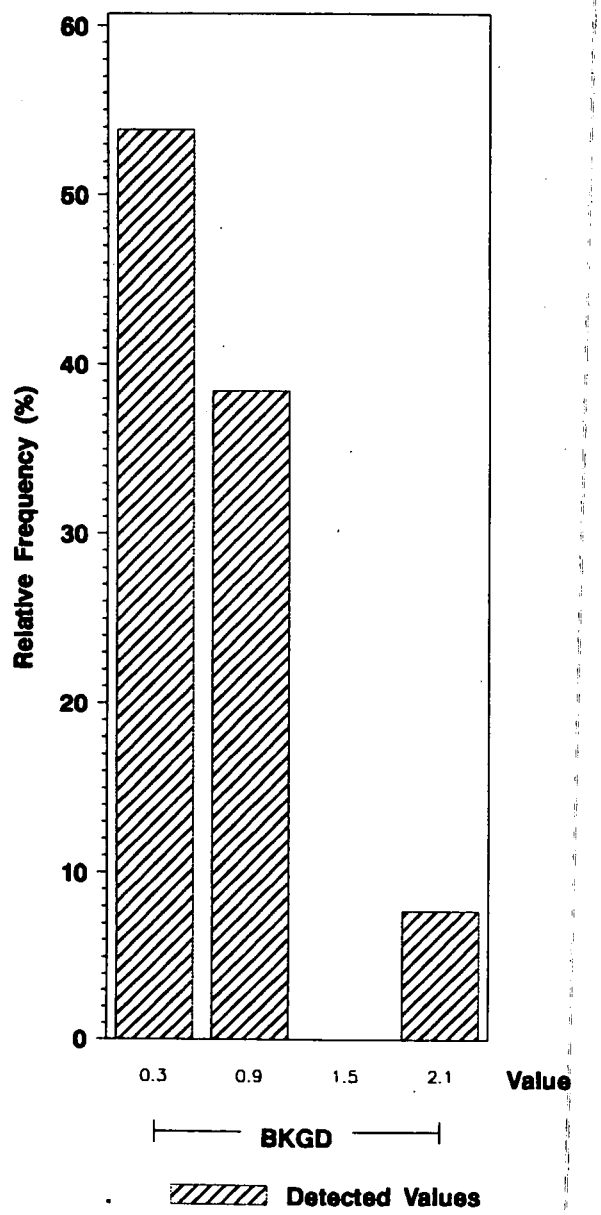
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Surface Water

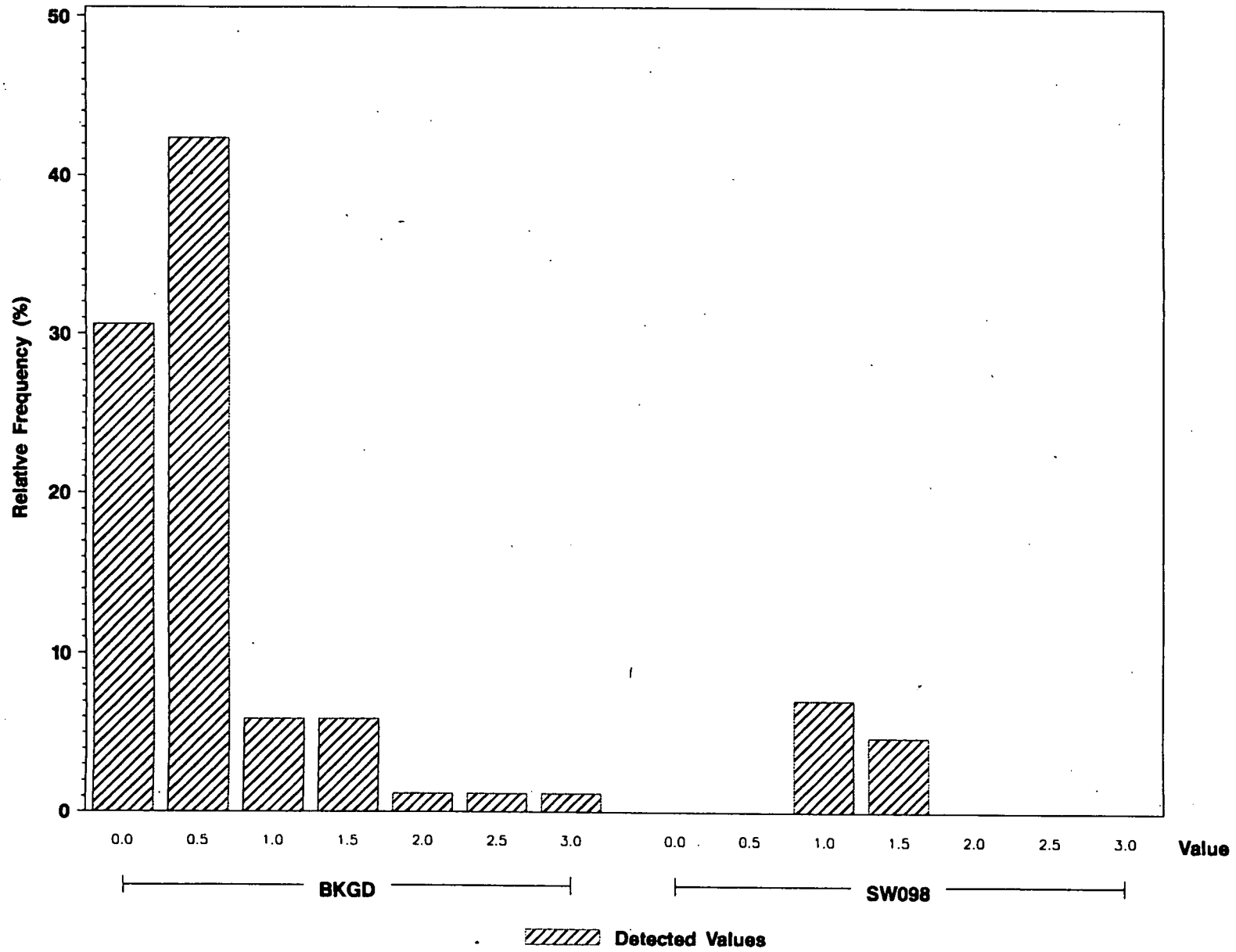
ANALYTE=URANIUM, TOTAL



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total URANIUM-233,-234 (pCi/L) in Surface Water

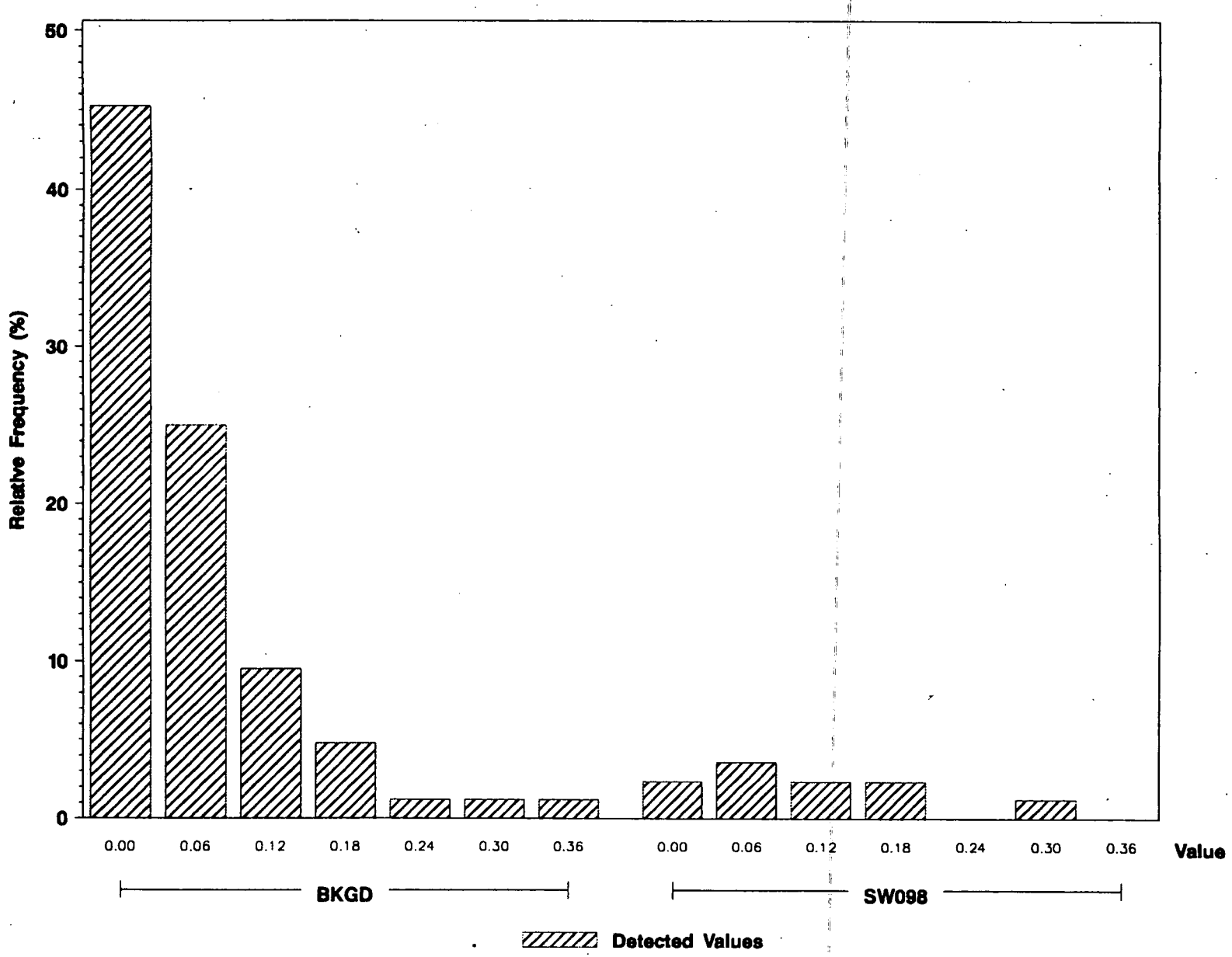
ANALYTE=URANIUM-233,-234



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total URANIUM-235 (pCi/L) in Surface Water

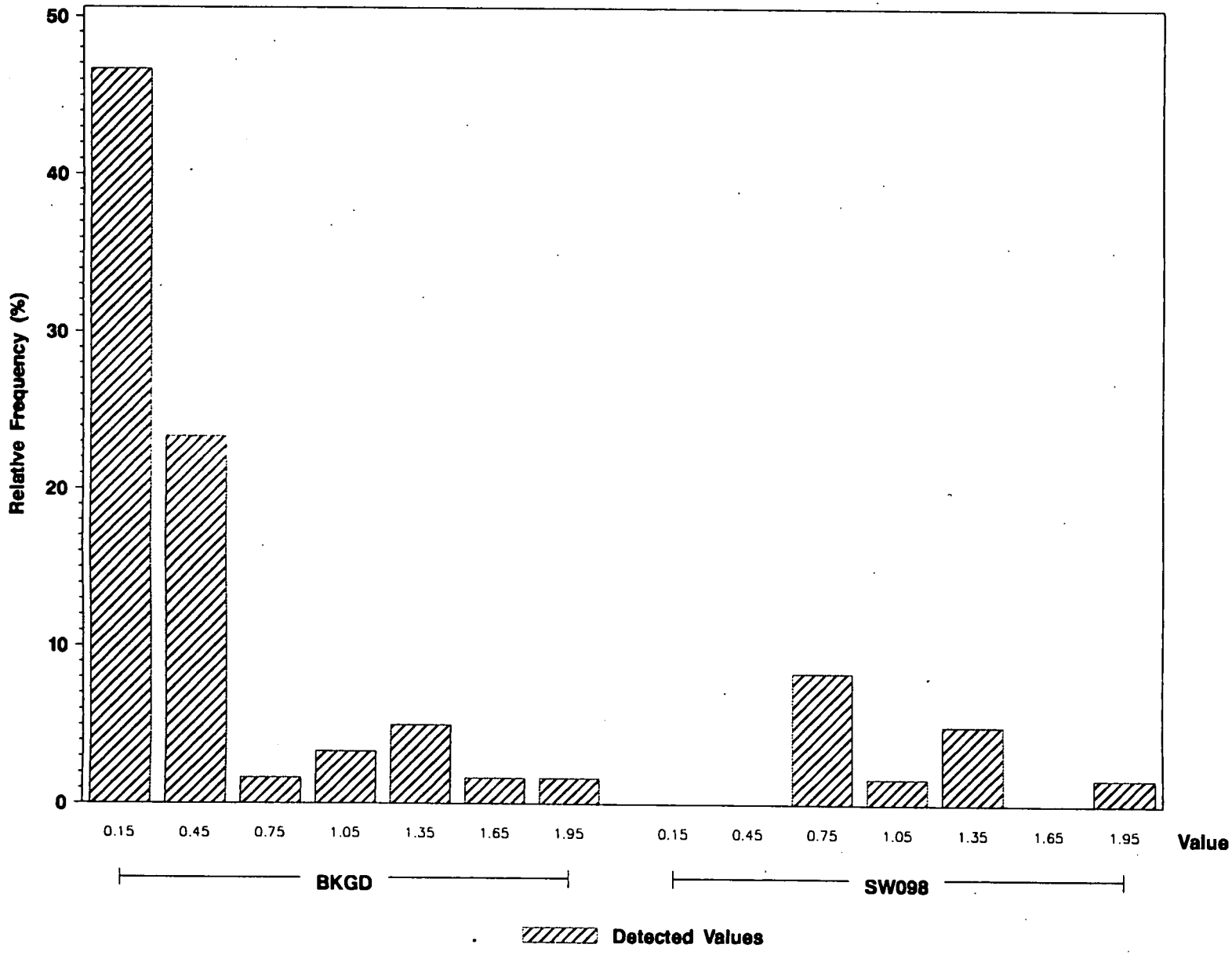
ANALYTE=URANIUM-235



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Surface Water

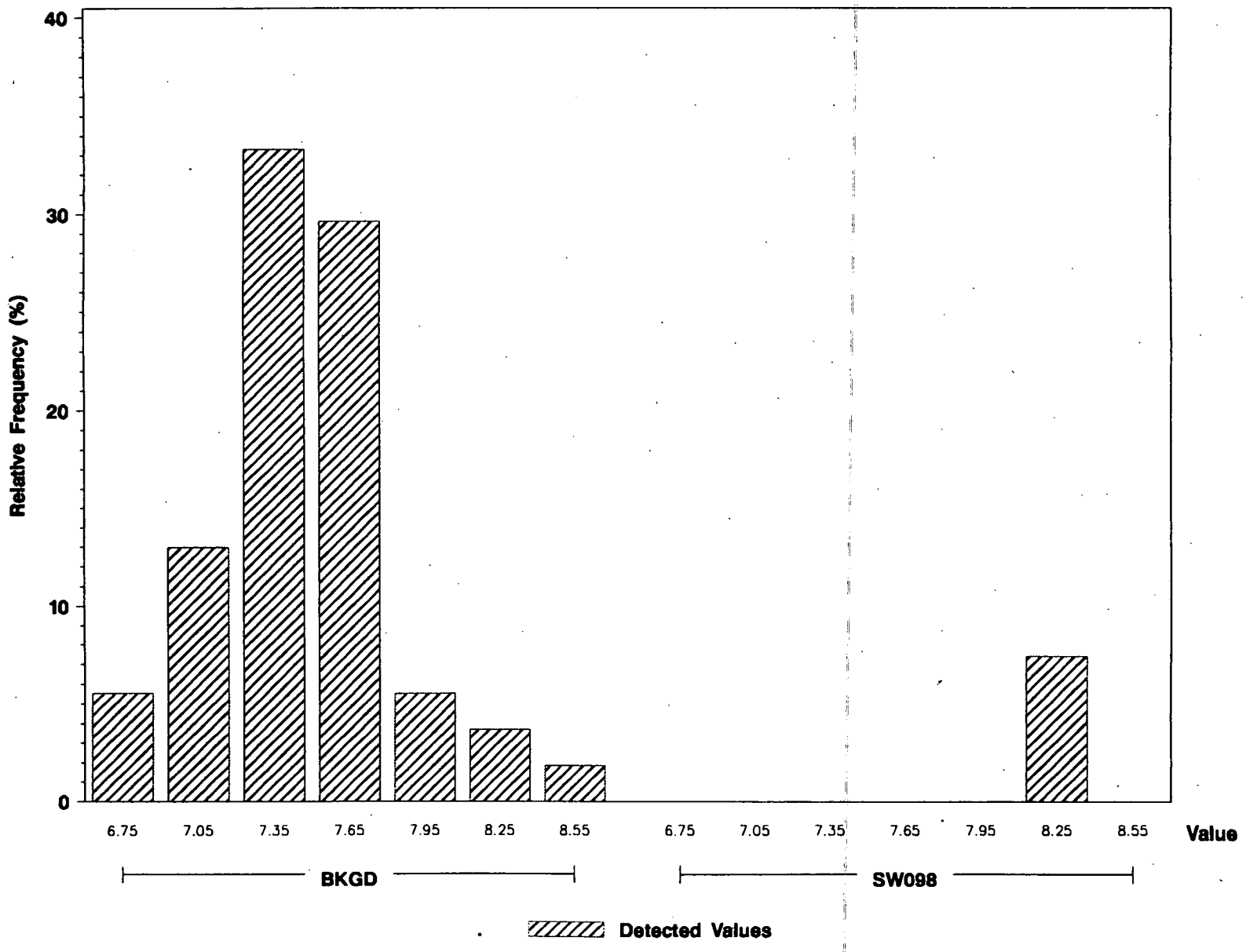
ANALYTE=URANIUM-238



# Background vs OU7 Surface Water (SW098) Frequency Histogram

## Total pH in Surface Water

ANALYTE = pH



**Surface Water**

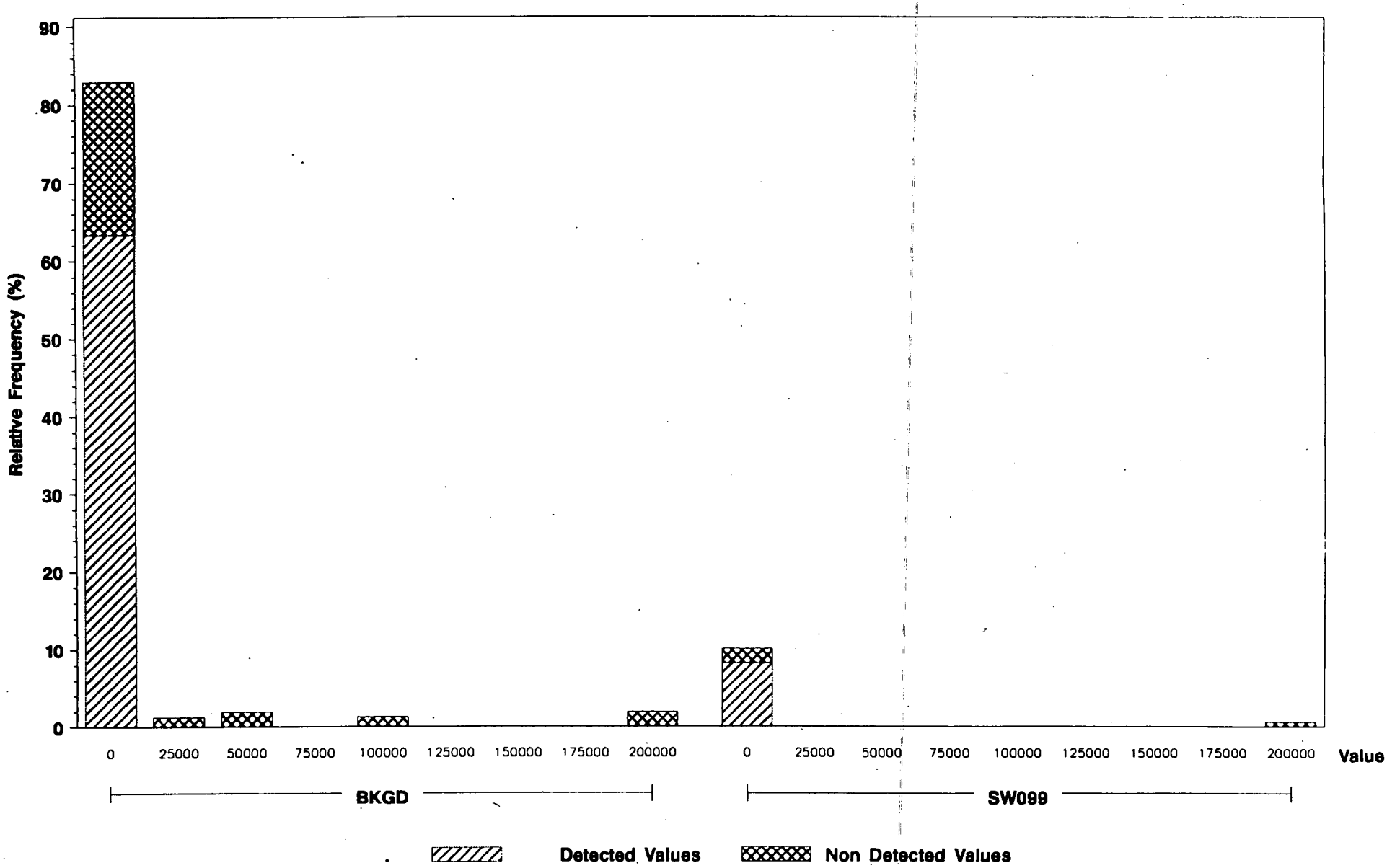
**(Dissolved)**

**Background vs. OU 7 (SW099)**

# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved BARIUM (ug/L) in Surface Water

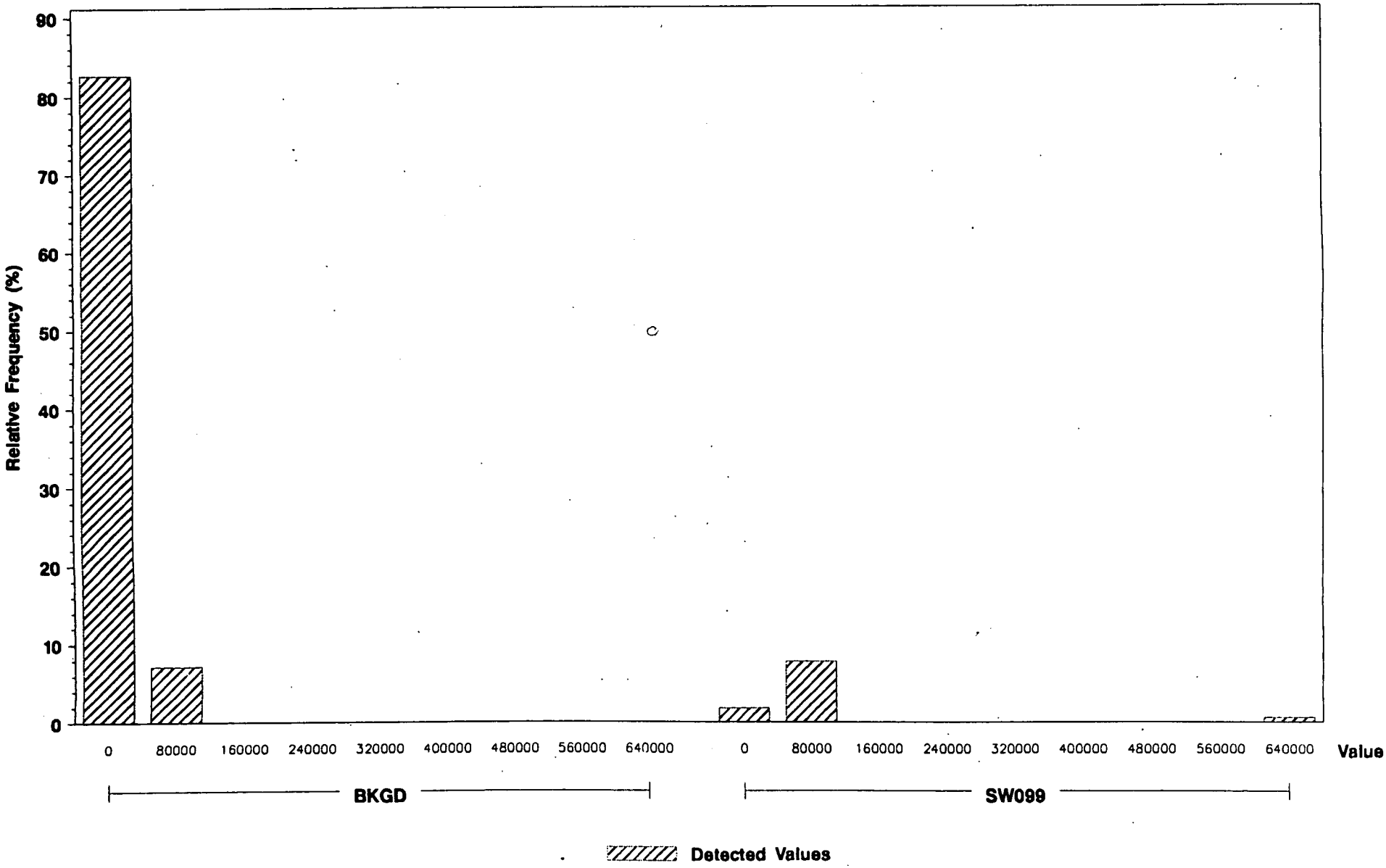
ANALYTE = BARIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Surface Water

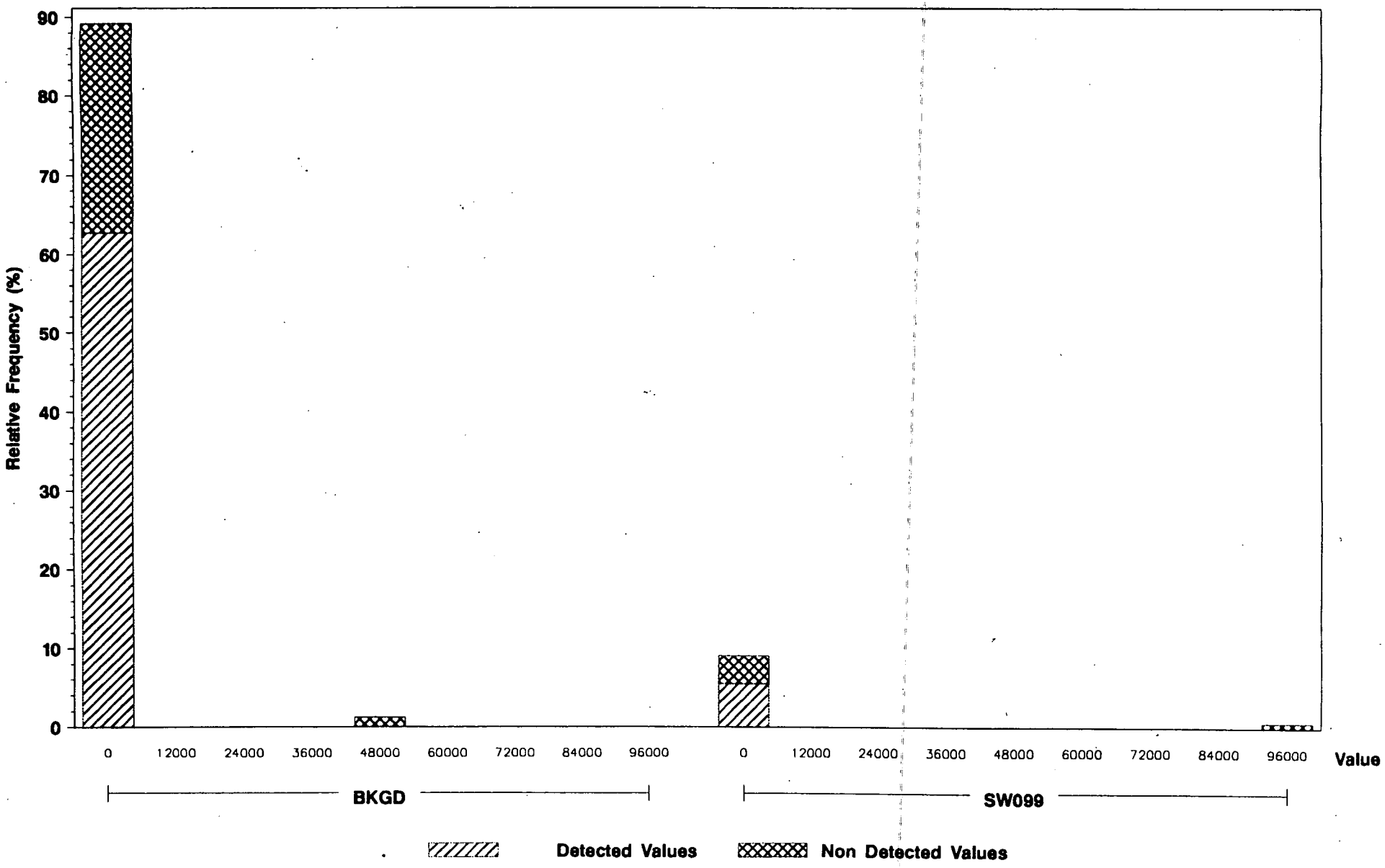
ANALYTE=CALCIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved IRON (ug/L) in Surface Water

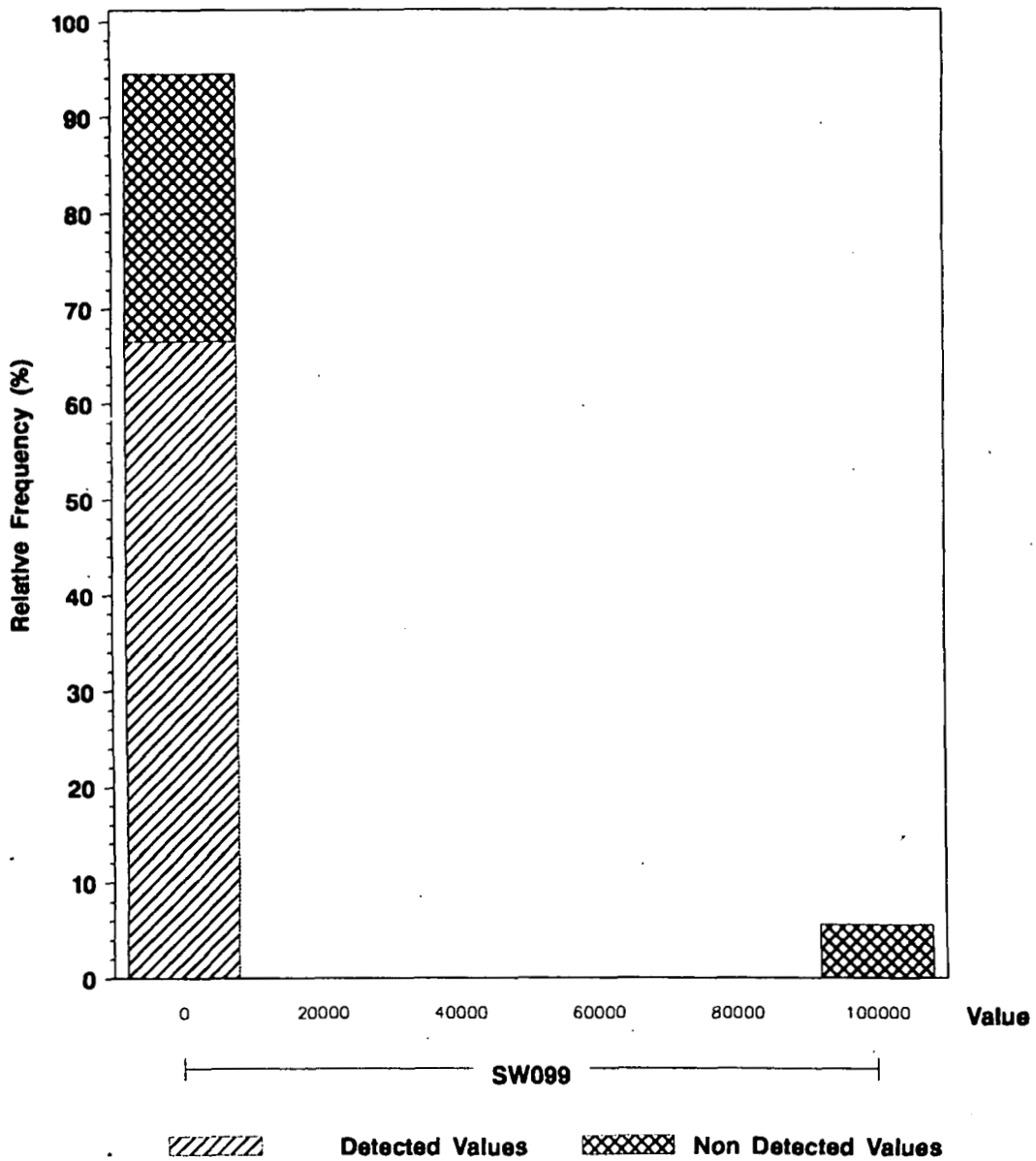
ANALYTE = IRON



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Surface Water

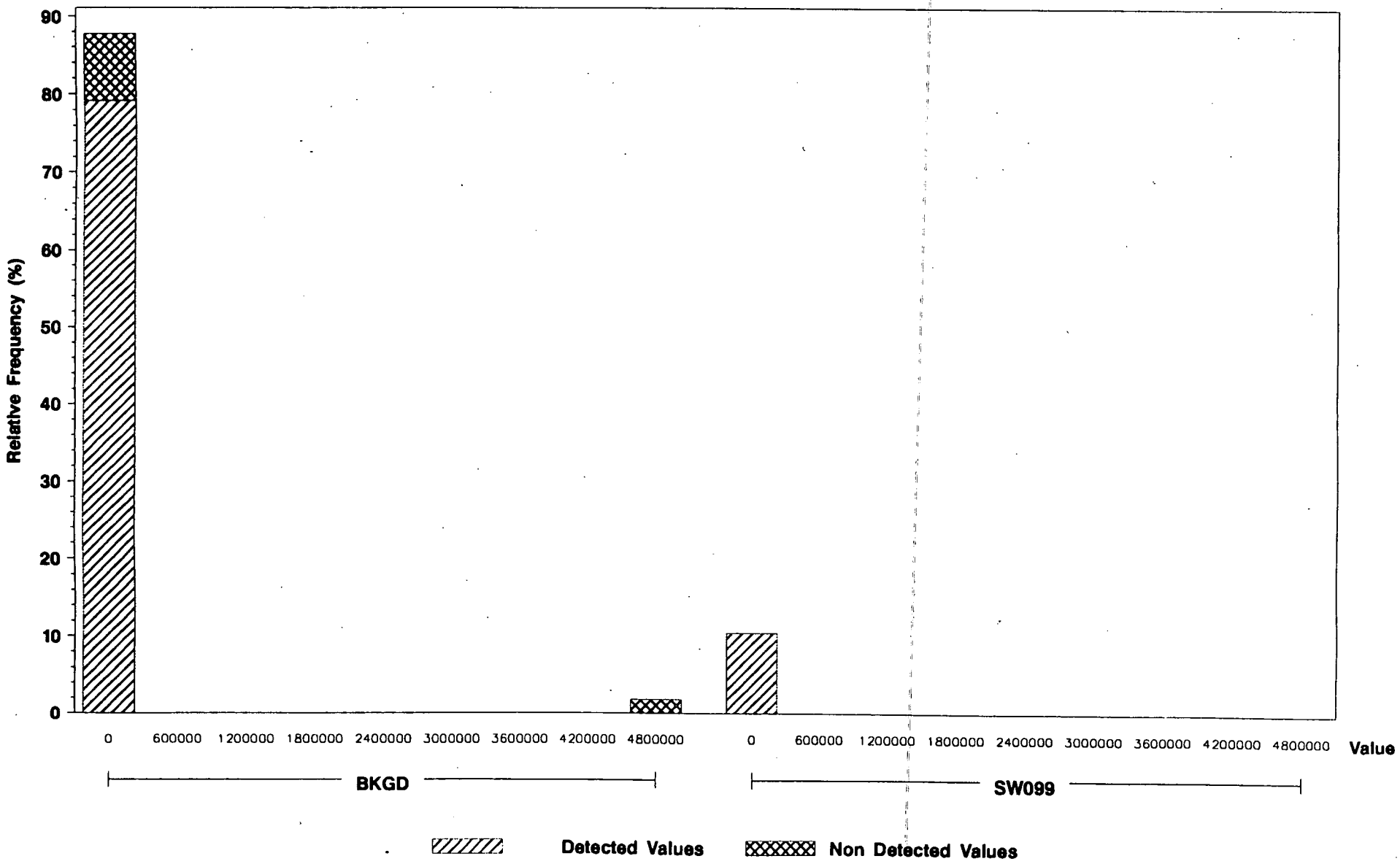
ANALYTE = LITHIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Surface Water

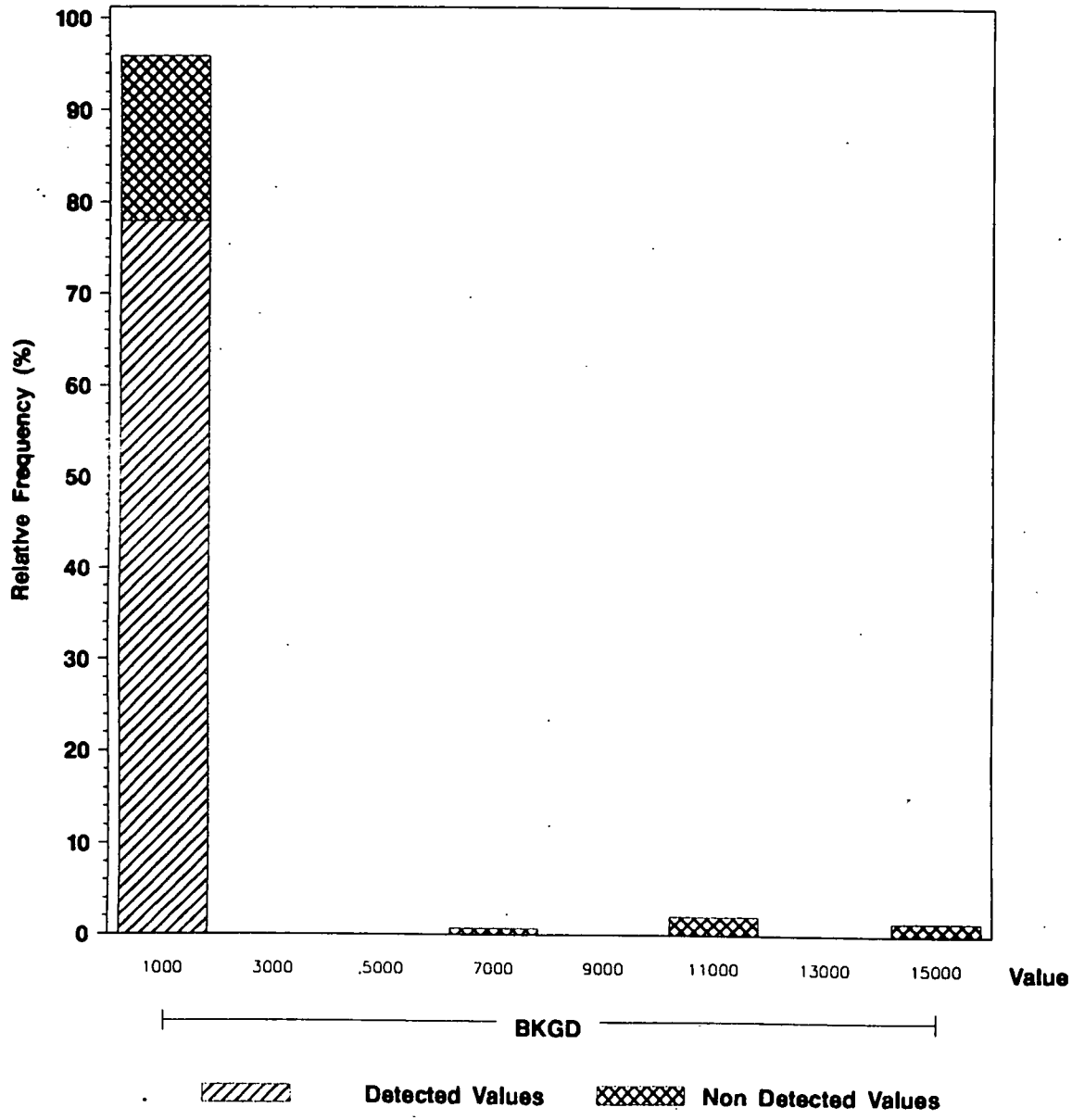
ANALYTE = MAGNESIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Surface Water

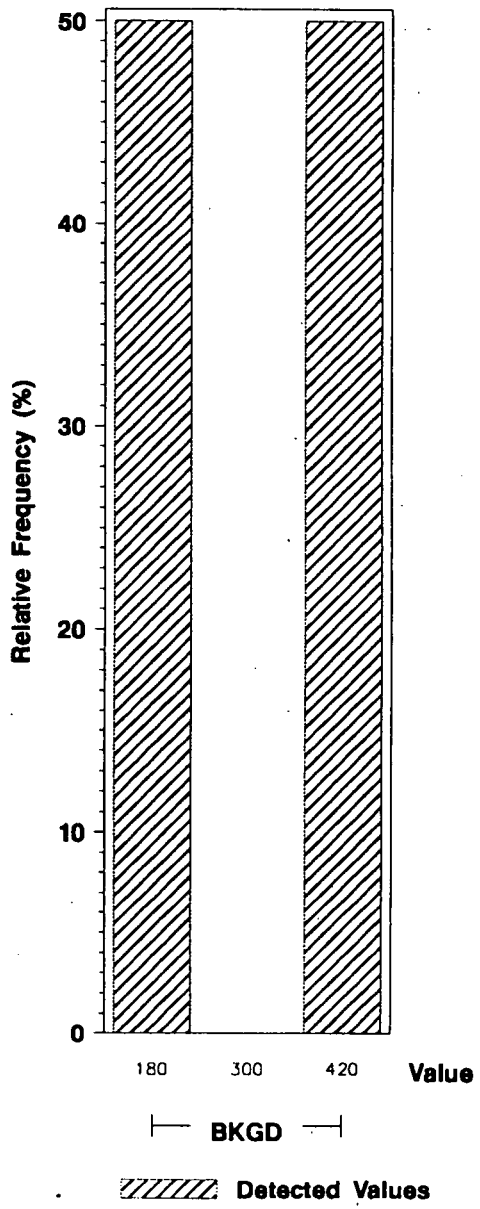
ANALYTE = MANGANESE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved PHOSPHORUS (ug/L) in Surface Water

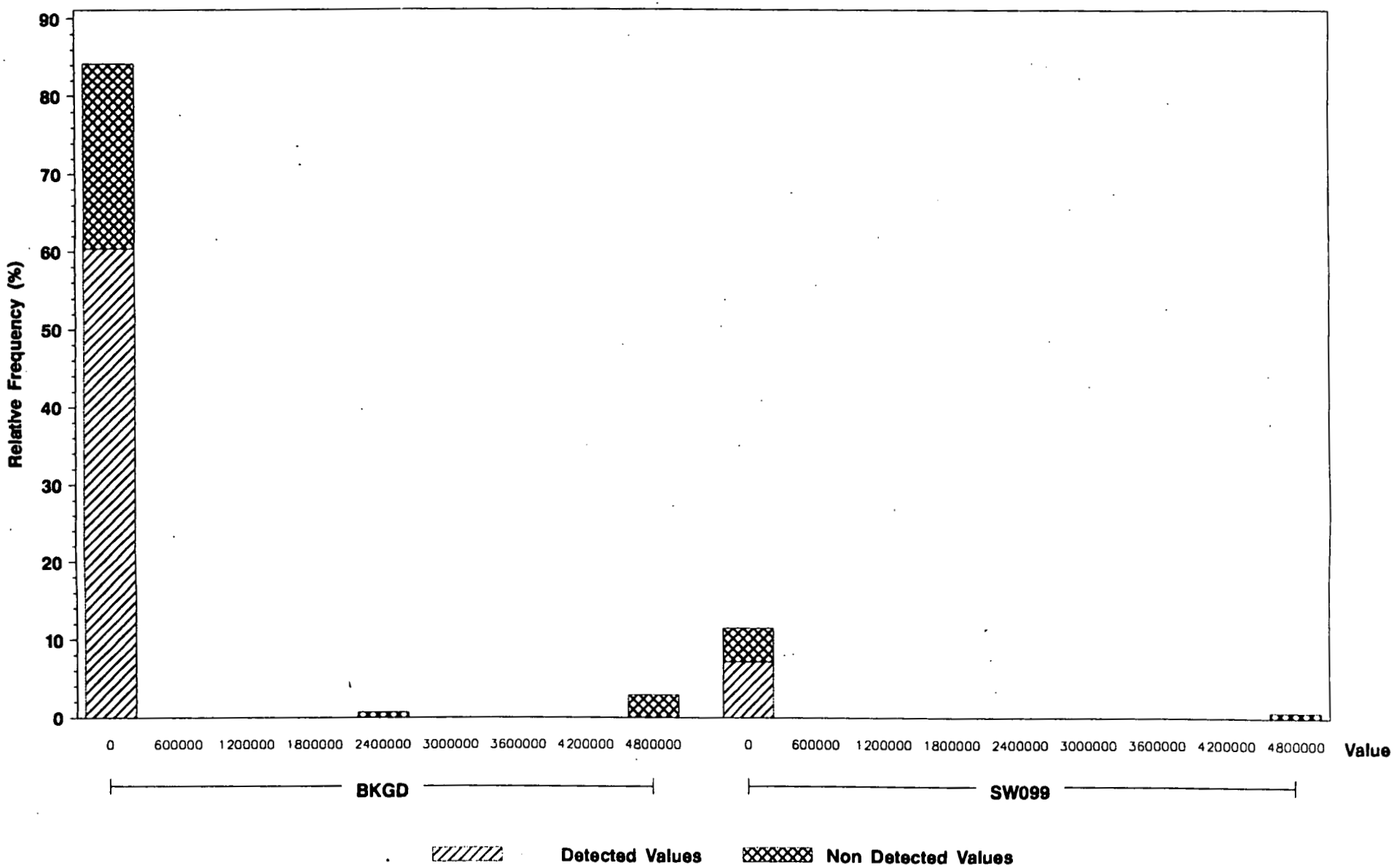
ANALYTE = PHOSPHORUS



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Surface Water

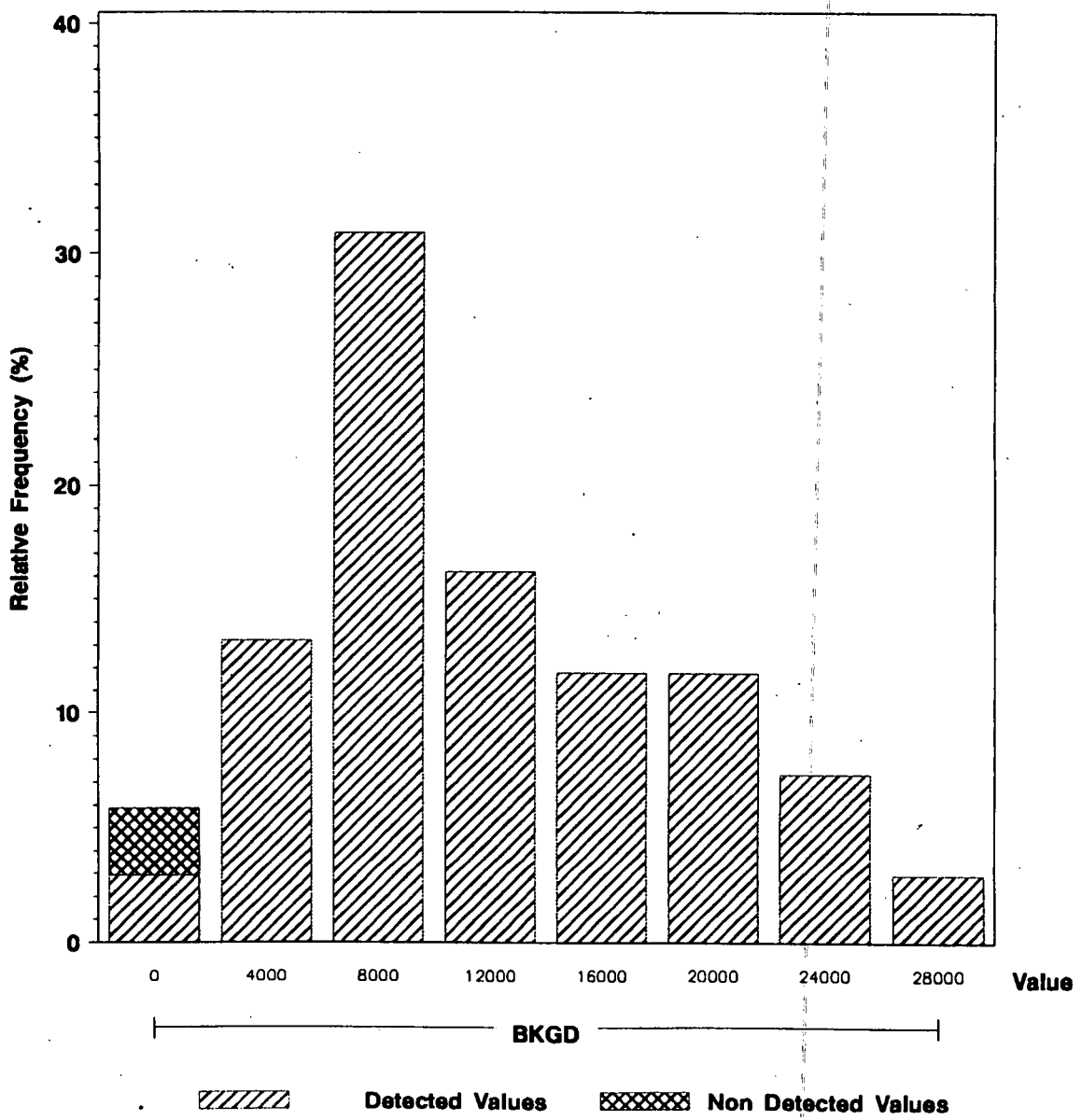
ANALYTE = POTASSIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved SILICA (ug/L) in Surface Water

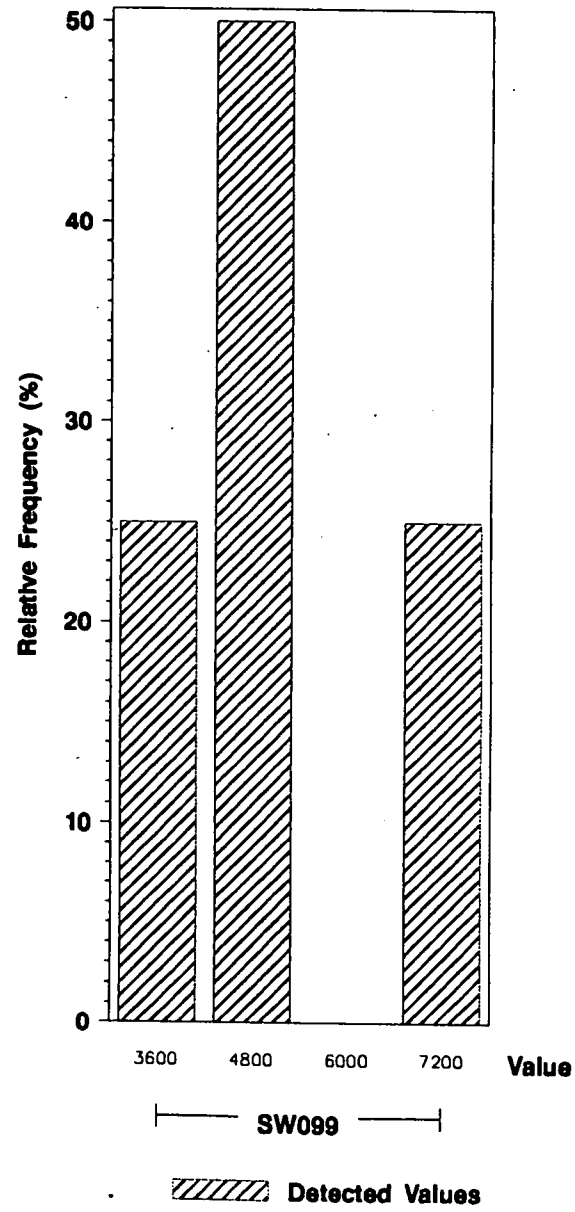
ANALYTE = SILICA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved SILICON (ug/L) in Surface Water

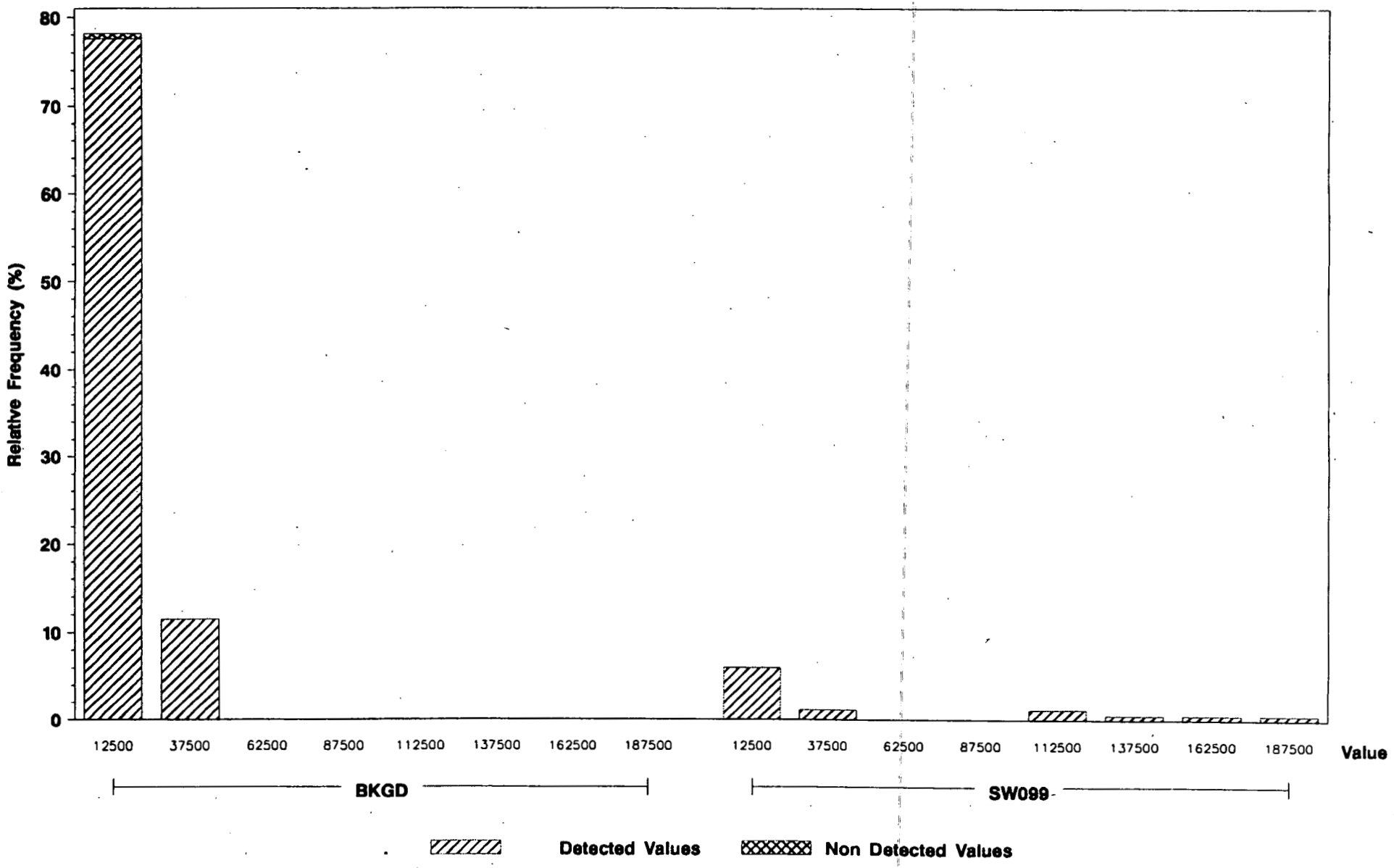
ANALYTE = SILICON



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved SODIUM (ug/L) in Surface Water

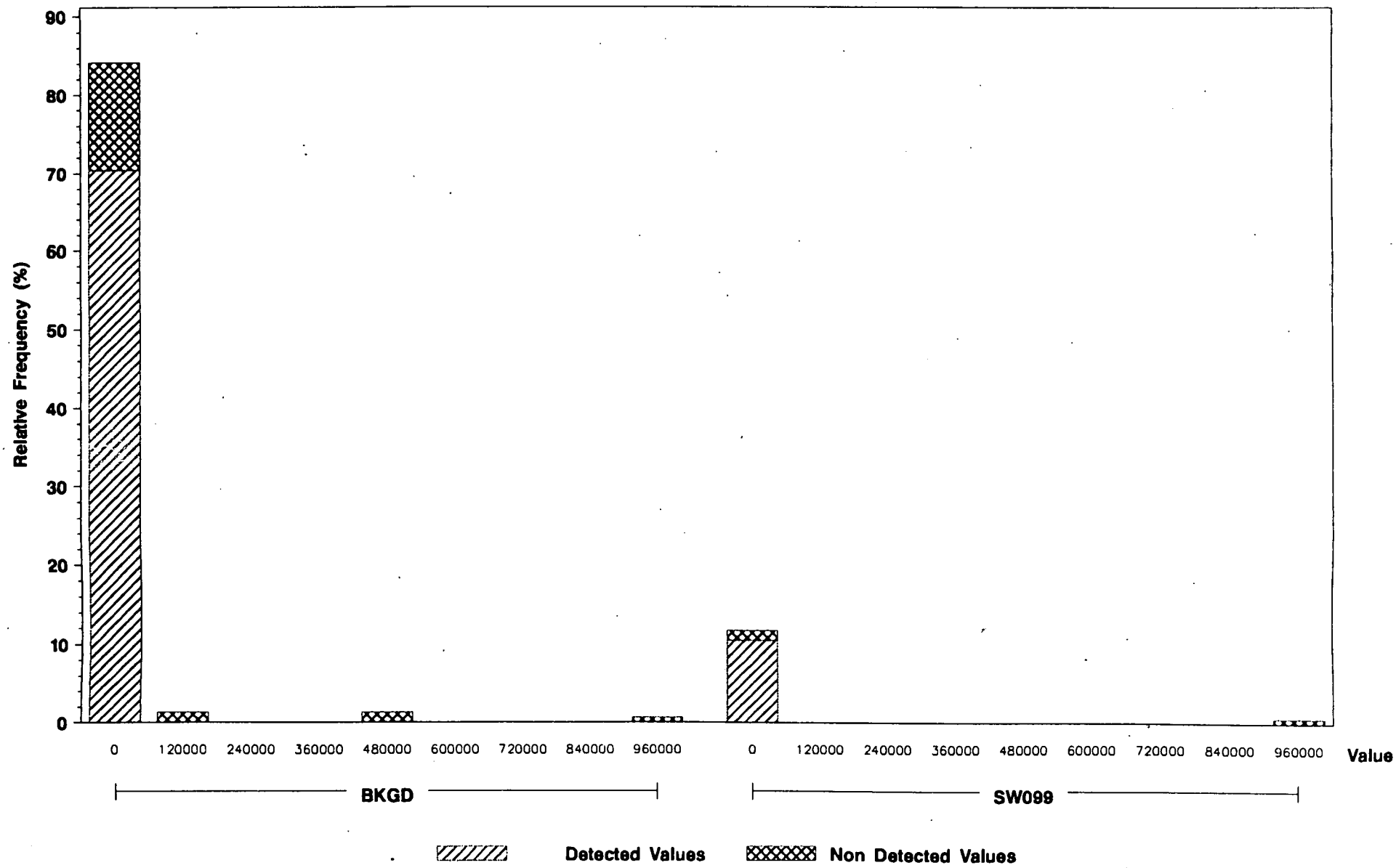
ANALYTE=SODIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Surface Water

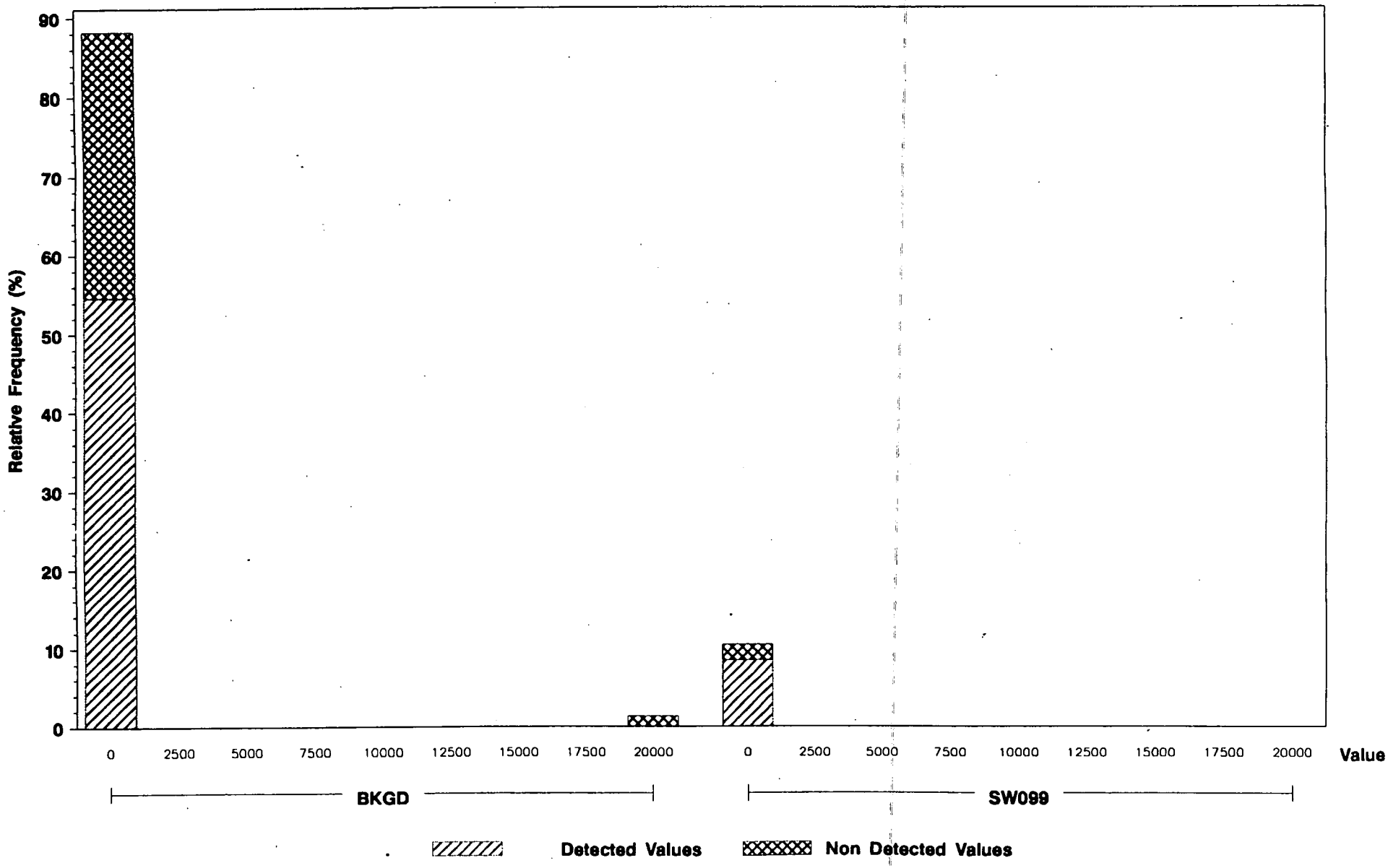
ANALYTE = STRONTIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved ZINC (ug/L) in Surface Water

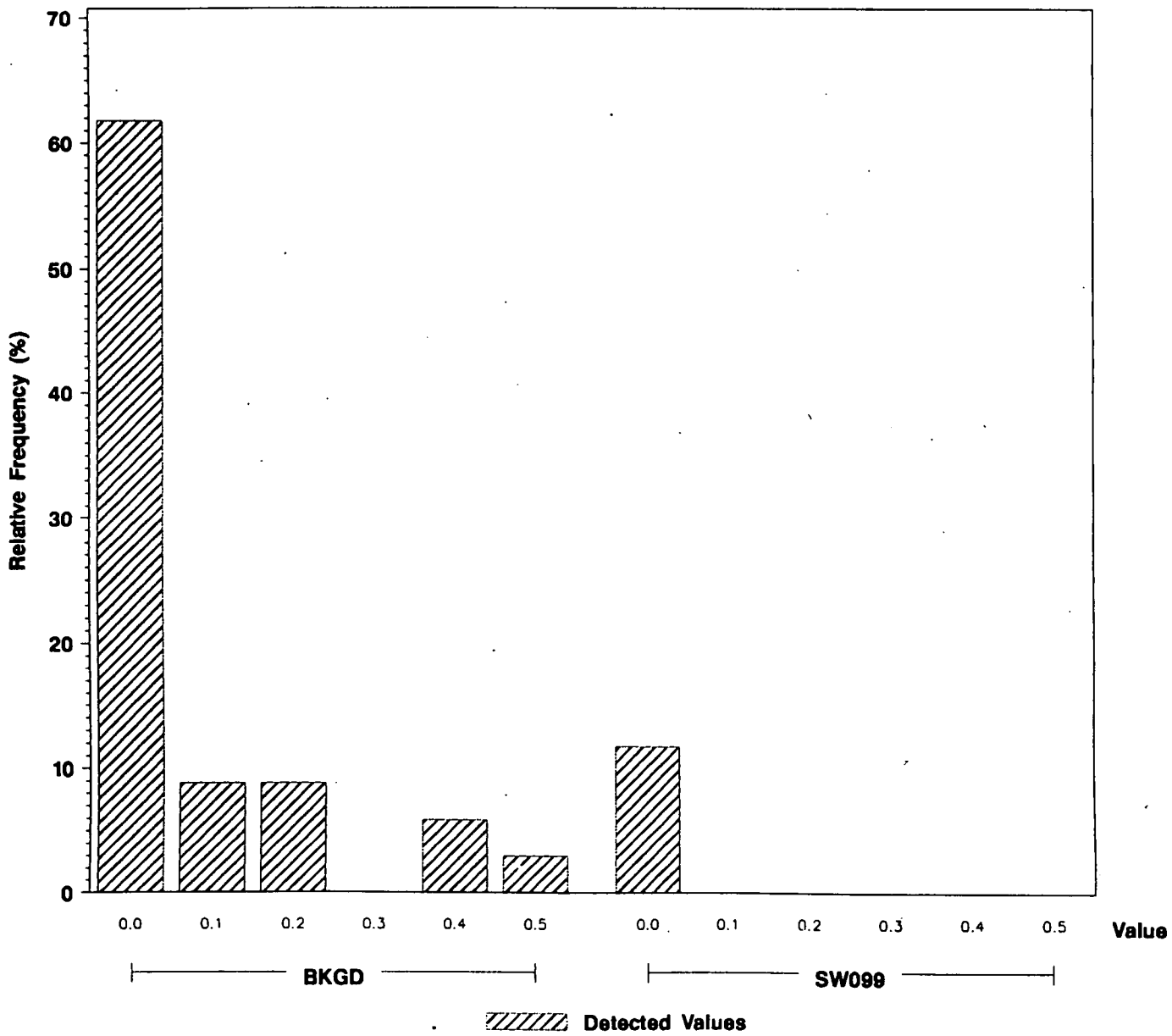
ANALYTE=ZINC



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Surface Water

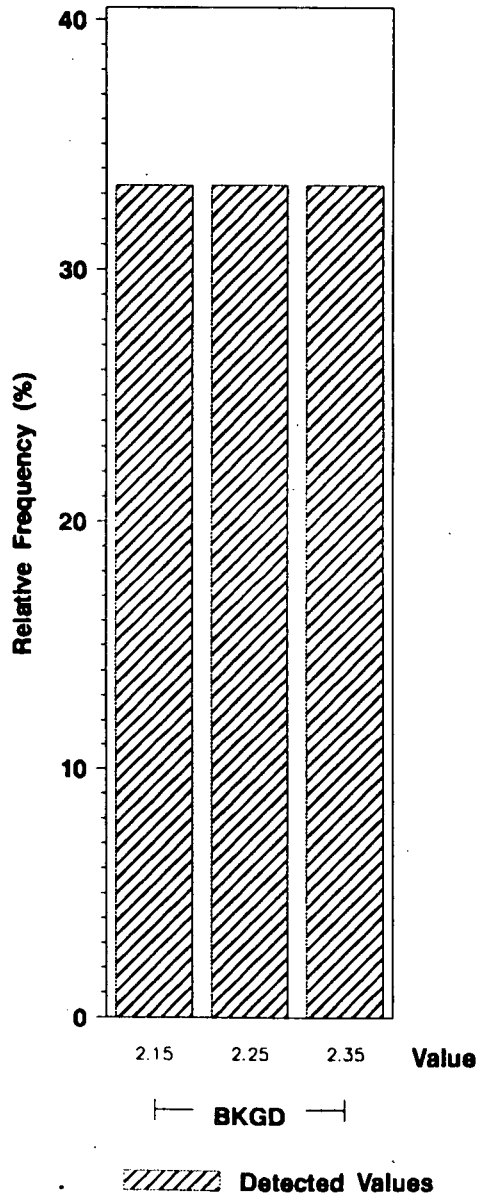
ANALYTE = AMERICIUM – 241



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Surface Water

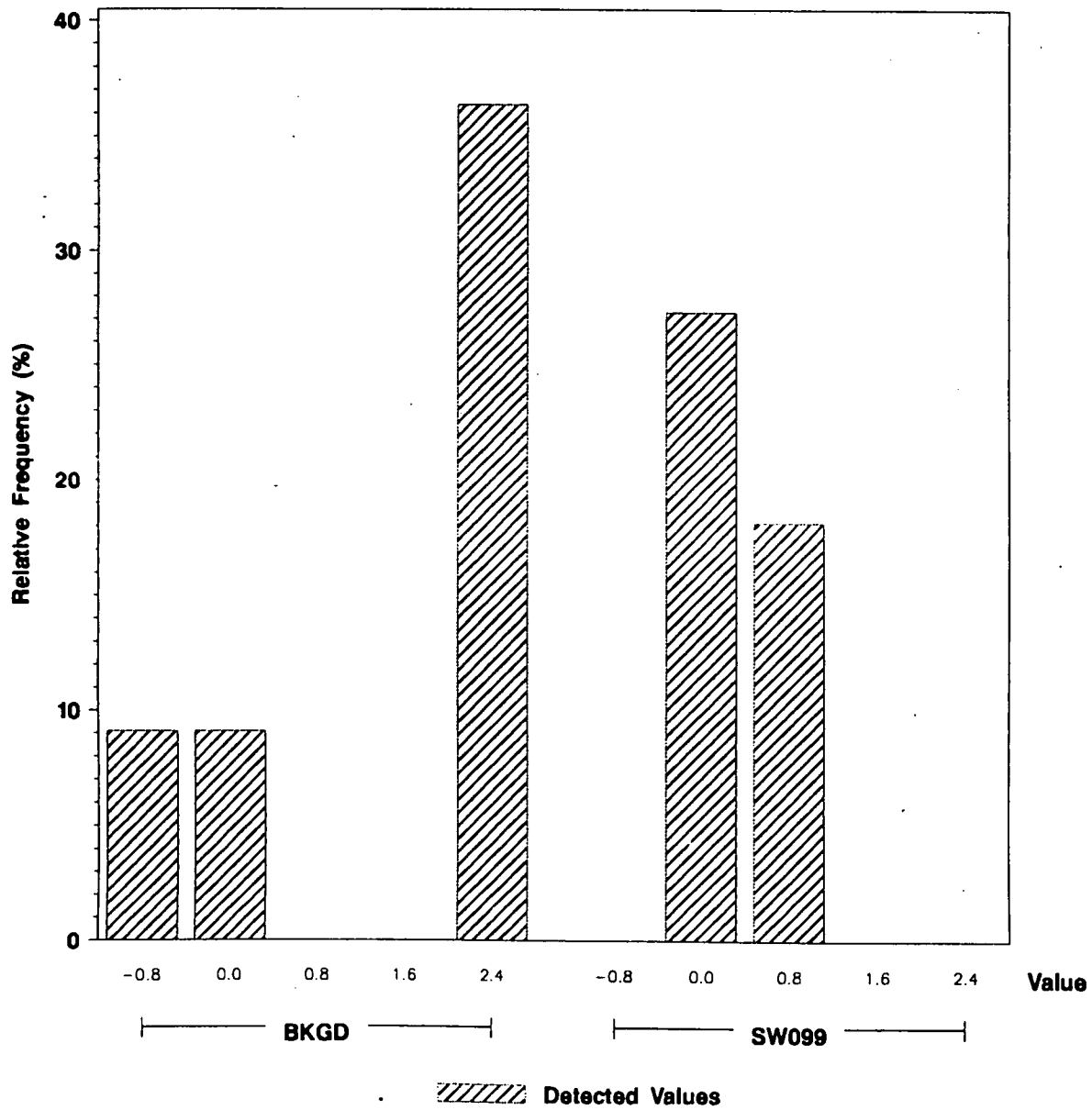
ANALYTE = CESIUM – 134



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Surface Water

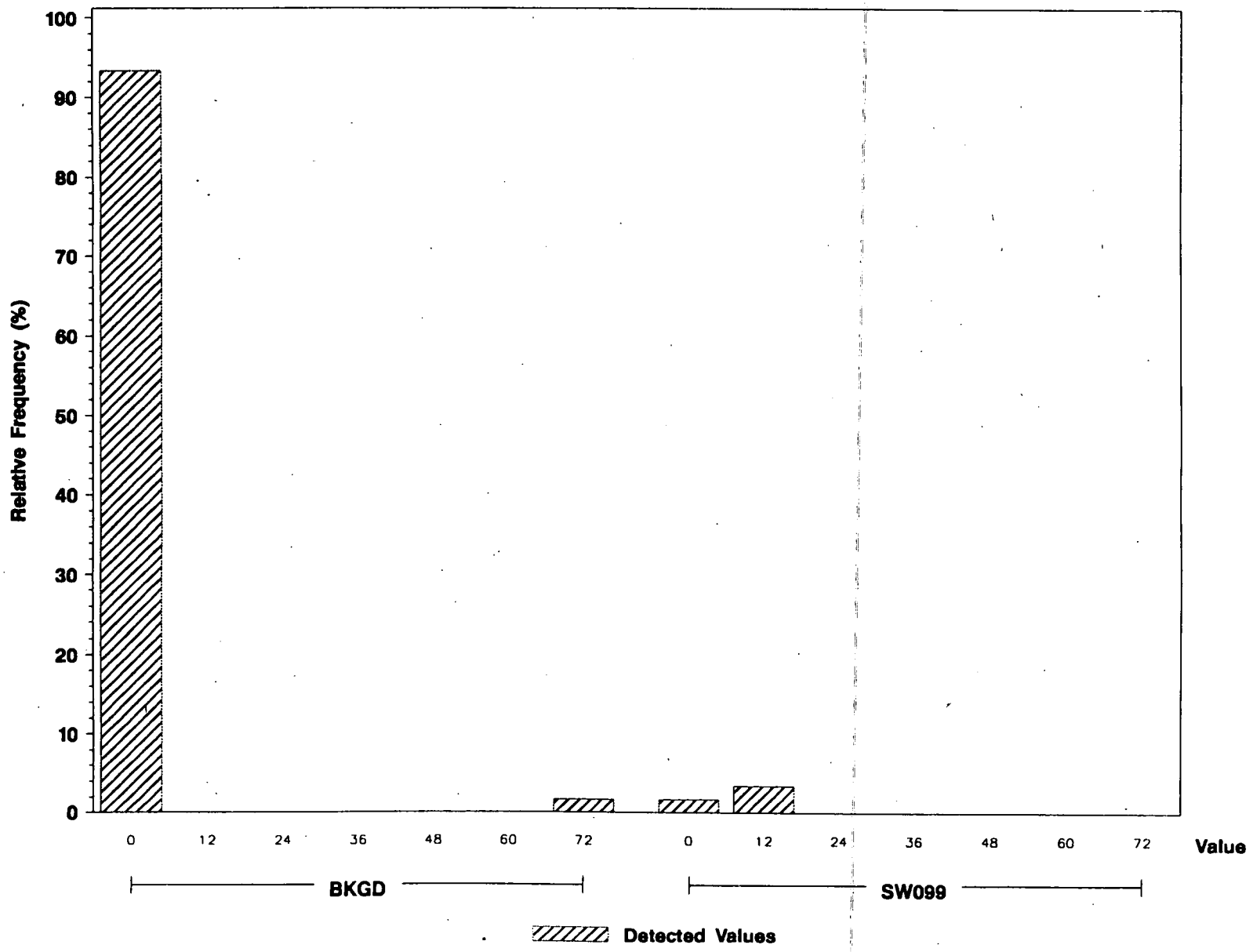
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Surface Water

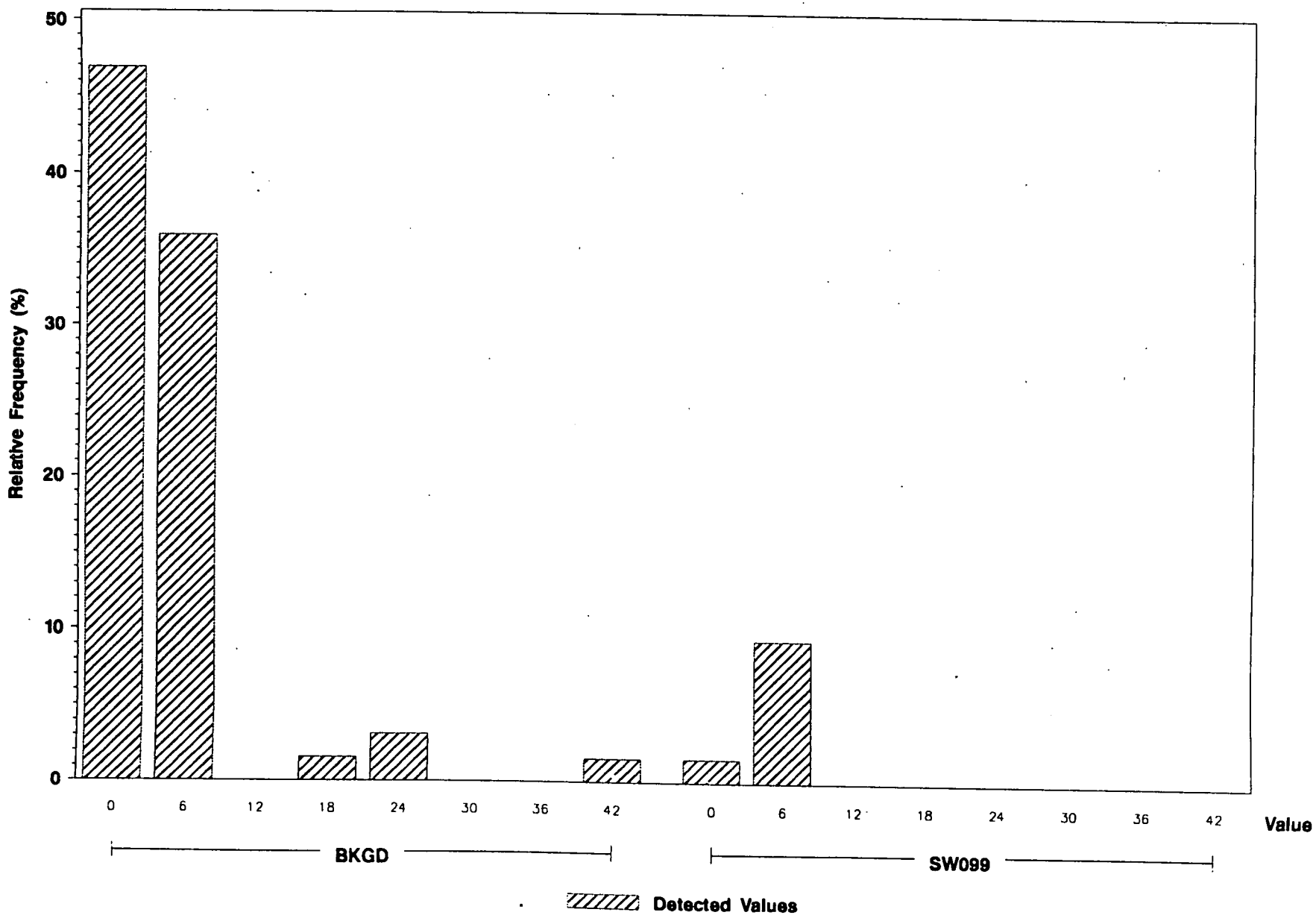
ANALYTE = GROSS ALPHA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Surface Water

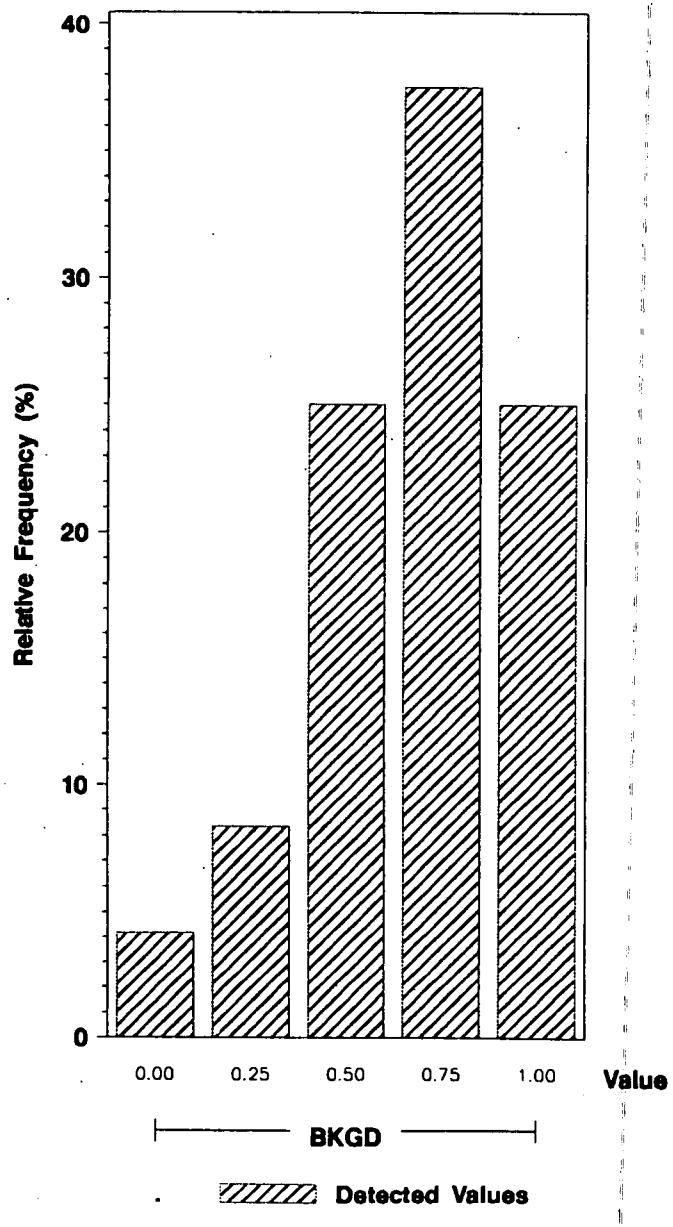
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved GROSS GAMMA (pCi/L) in Surface Water

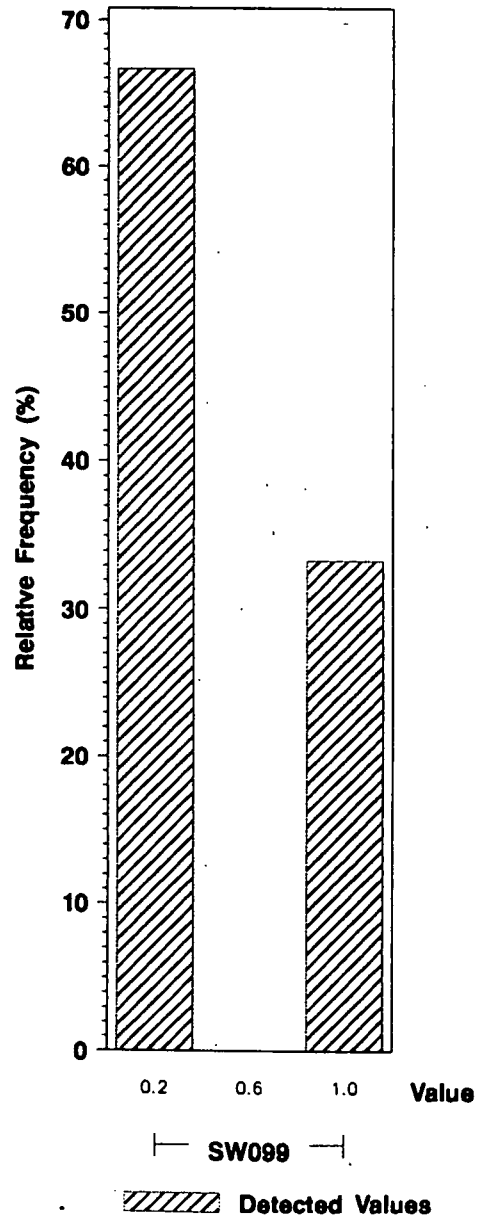
ANALYTE = GROSS GAMMA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved NEPTUNIUM – 237 (pCi/L) in Surface Water

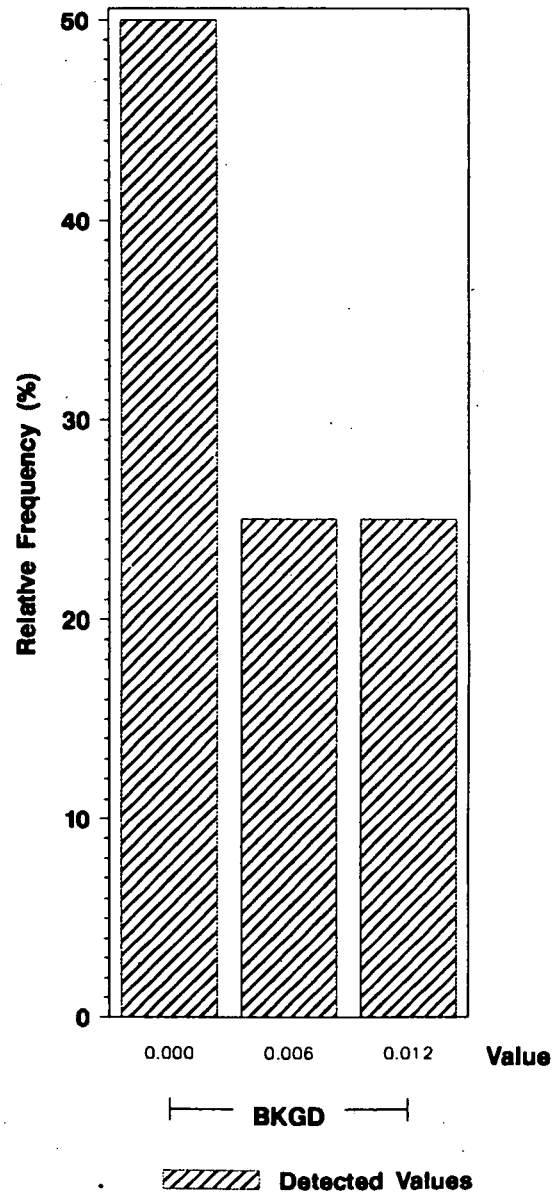
ANALYTE = NEPTUNIUM – 237



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved PLUTONIUM – 236 (pCi/L) in Surface Water

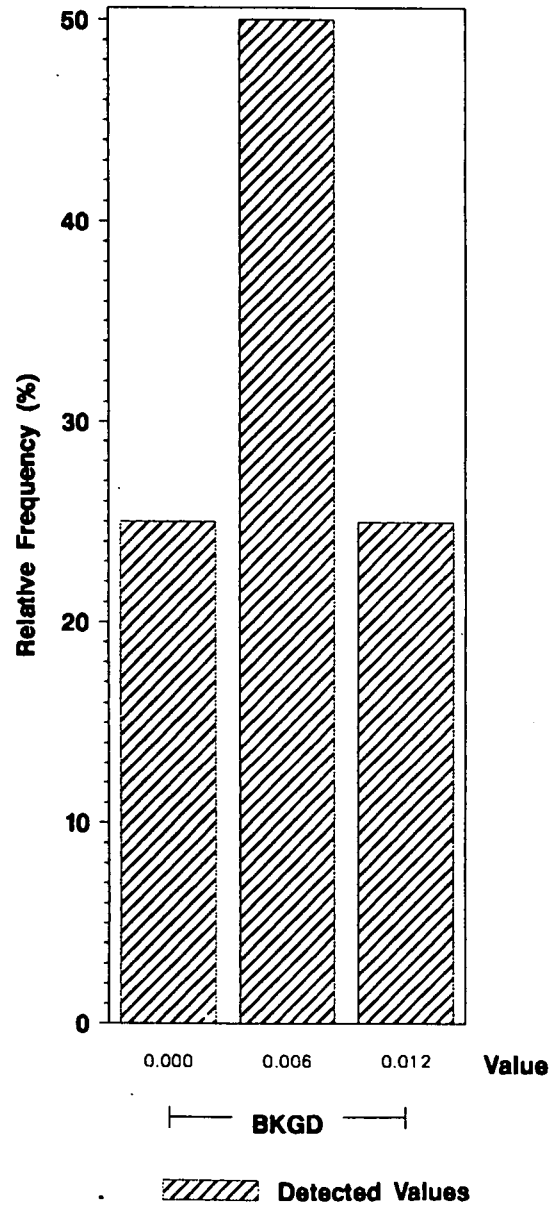
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved PLUTONIUM – 238 (pCi/L) in Surface Water

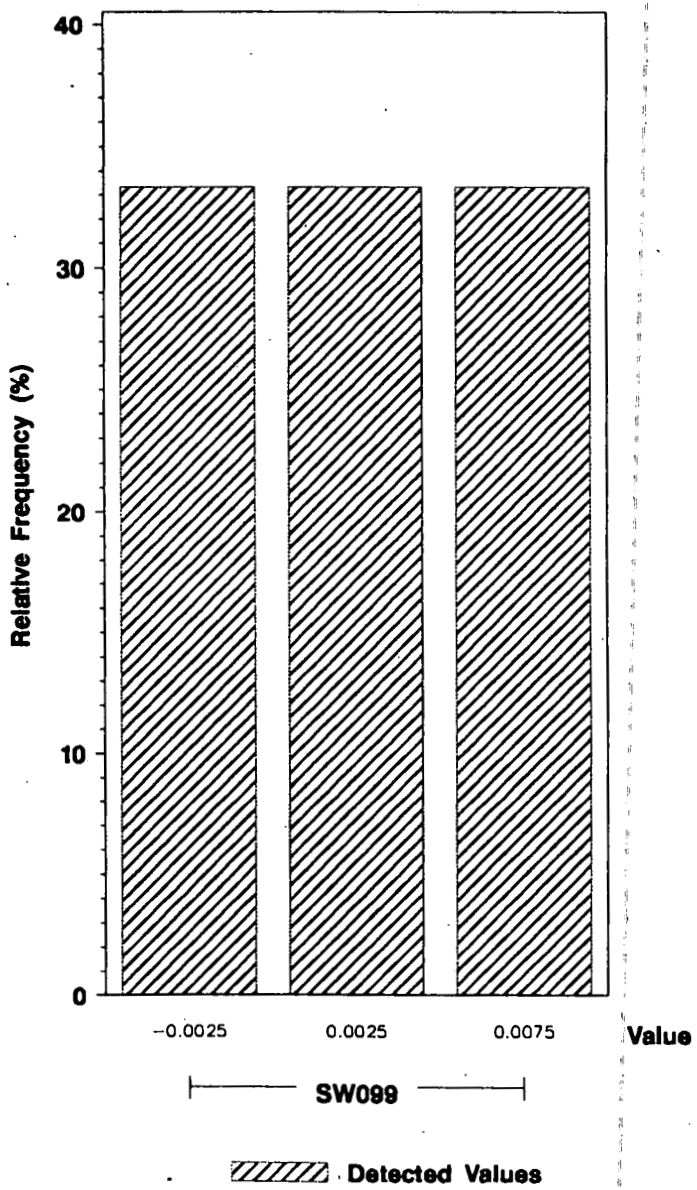
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved PLUTONIUM-239 (pCi/L) in Surface Water

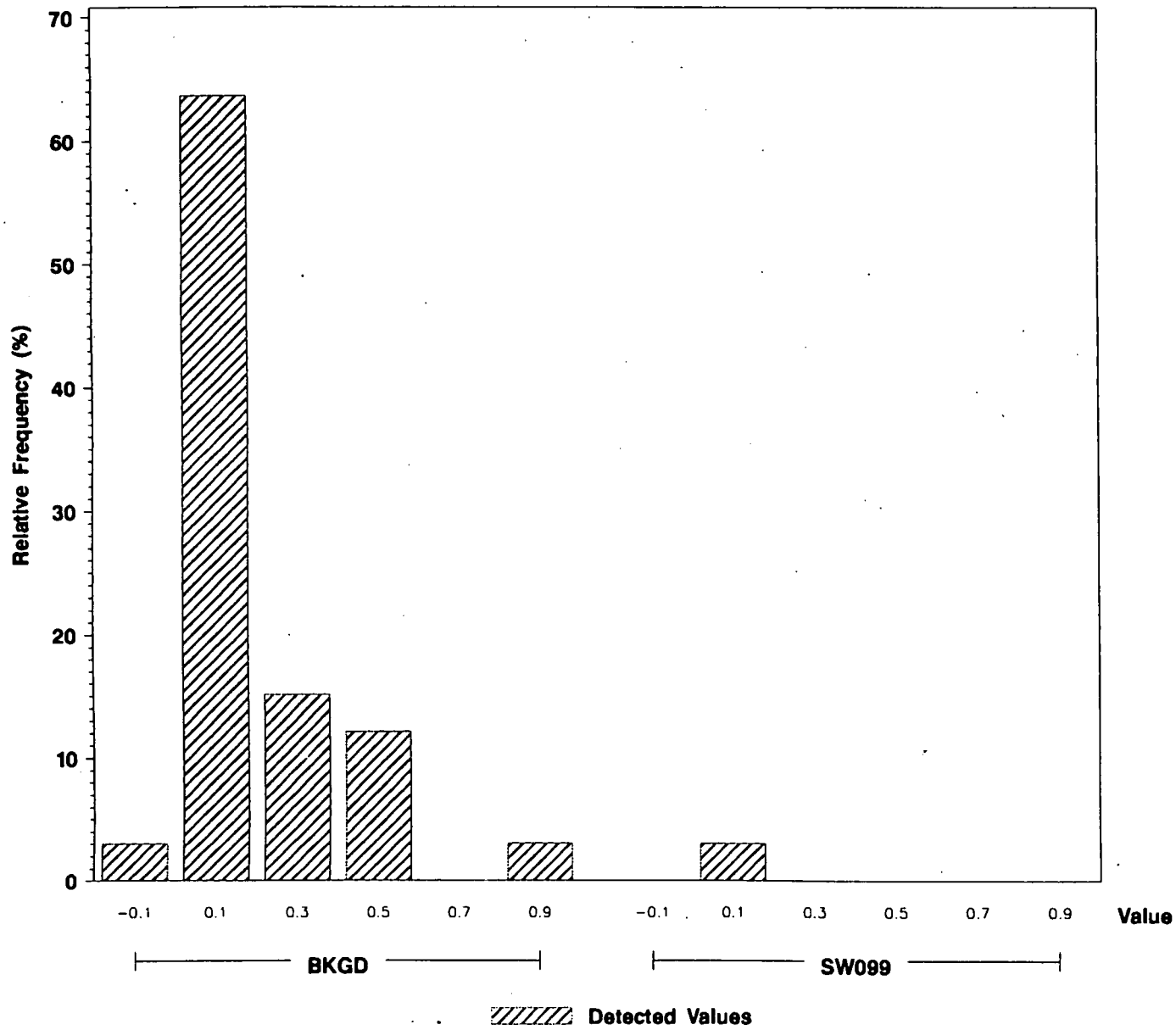
ANALYTE = PLUTONIUM-239



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved PLUTONIUM-239/240 (pCi/L) in Surface Water

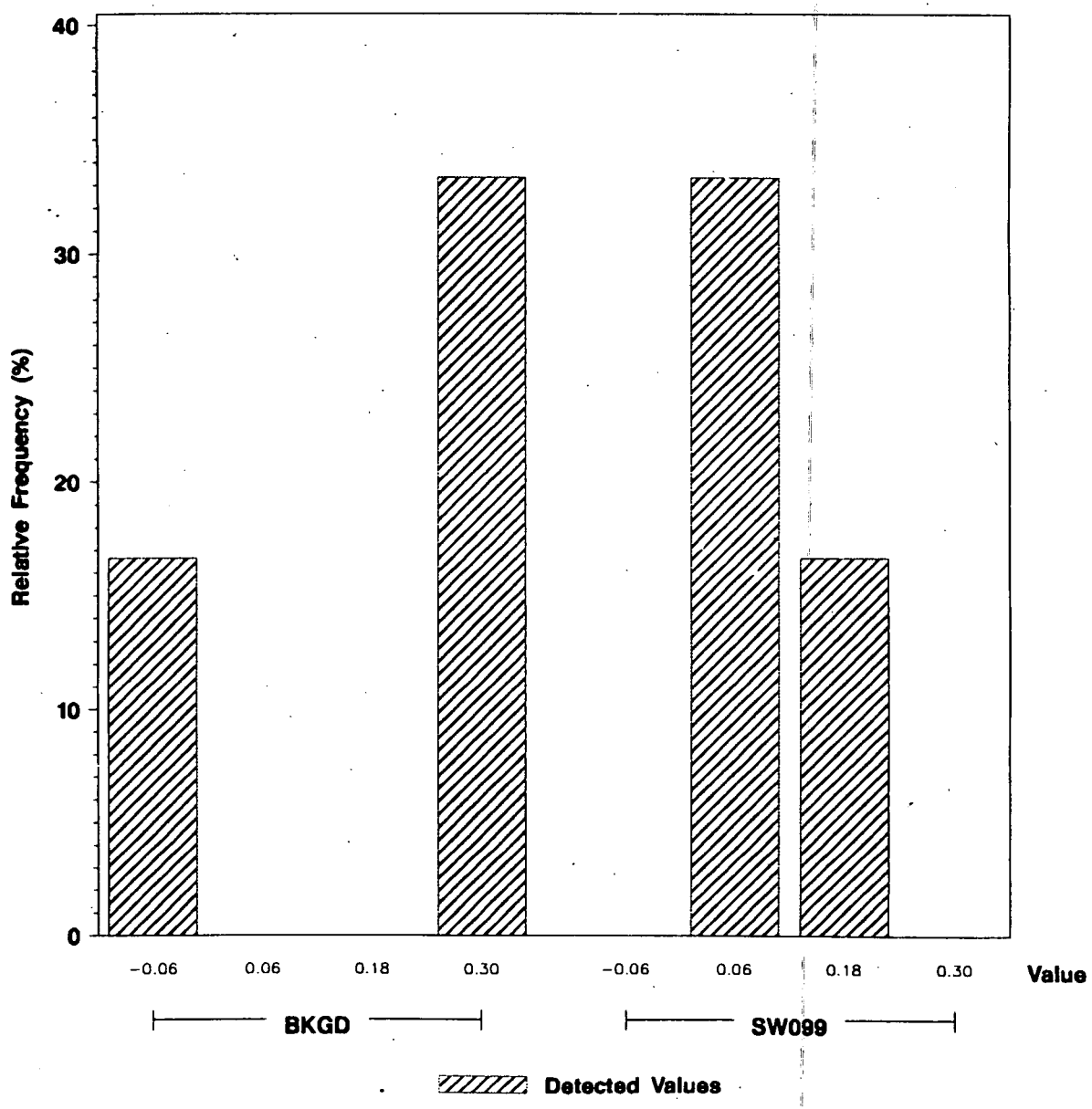
ANALYTE = PLUTONIUM-239/240



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved RADIUM-226 (pCi/L) in Surface Water

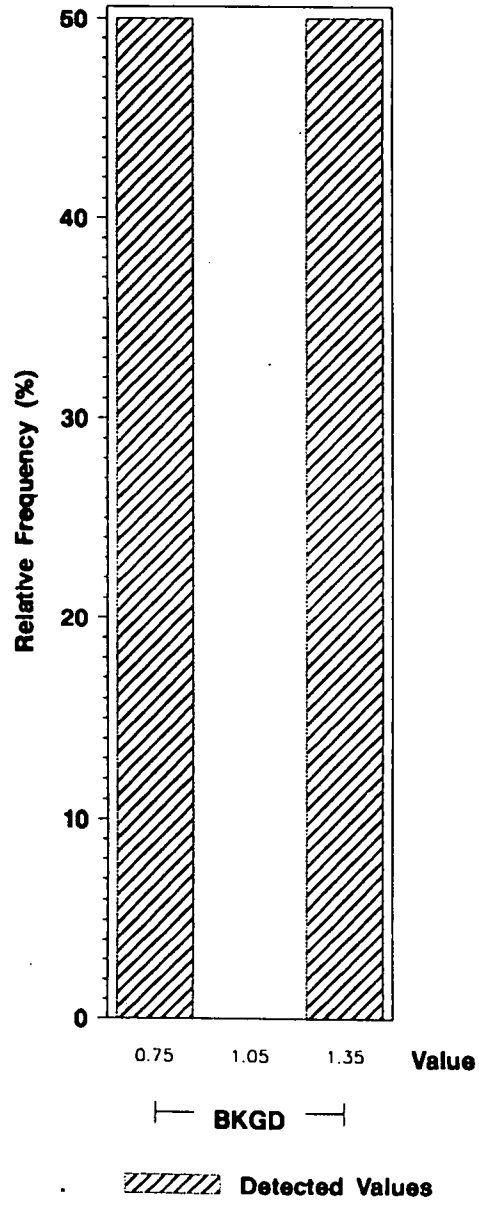
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved RADIUM – 228 (pCi/L) in Surface Water

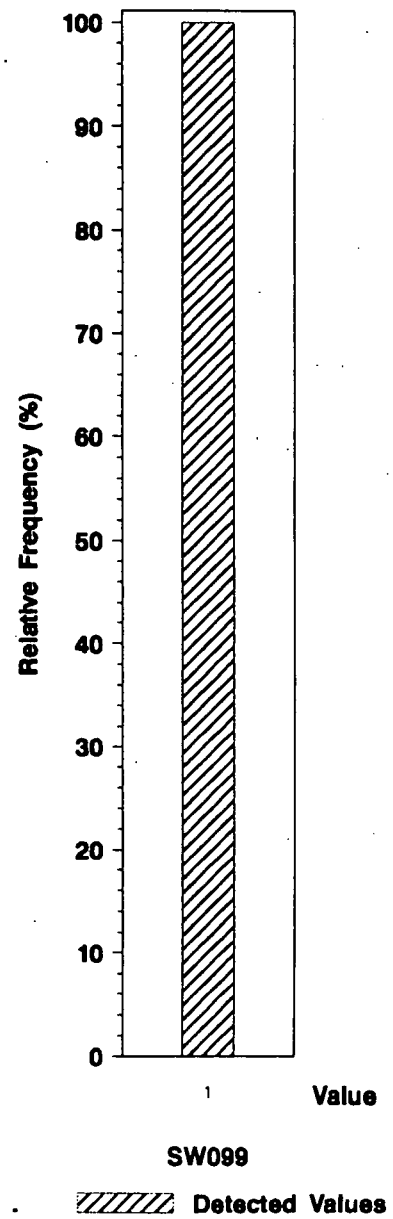
ANALYTE = RADIUM – 228



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved STRONTIUM – 89 (pCi/L) in Surface Water

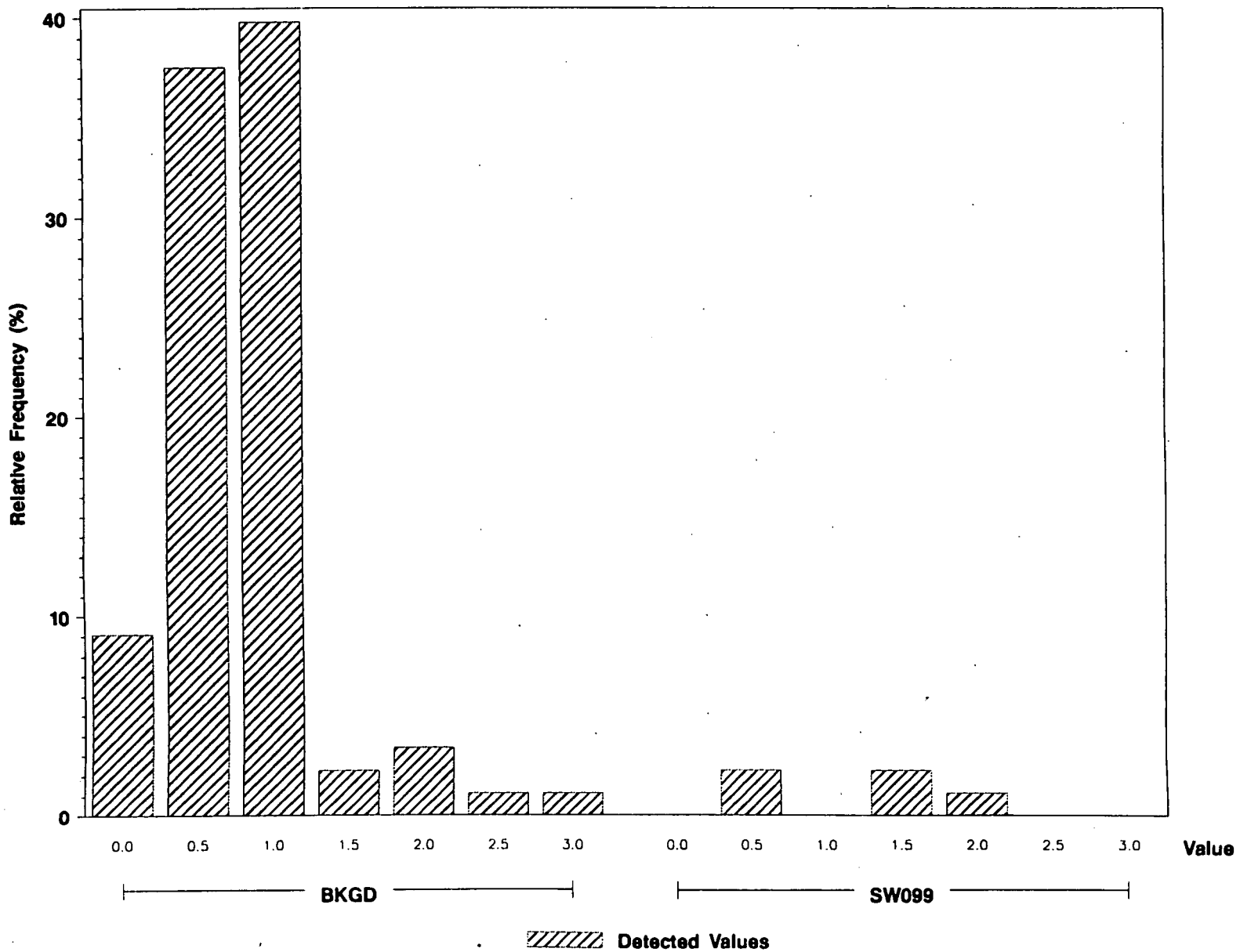
ANALYTE = STRONTIUM – 89



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Surface Water

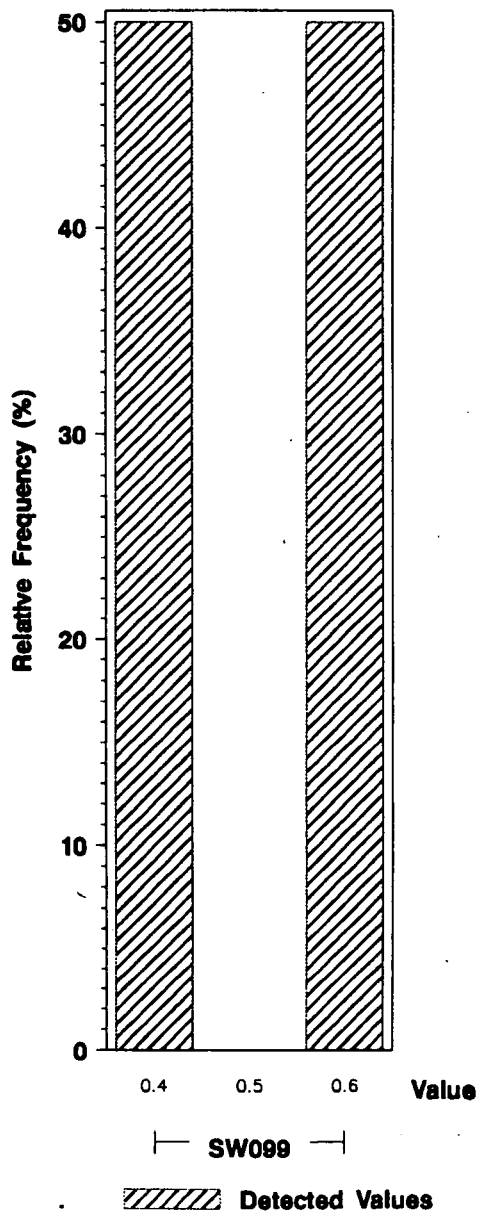
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved STRONTIUM – 90 (pCi/L) in Surface Water

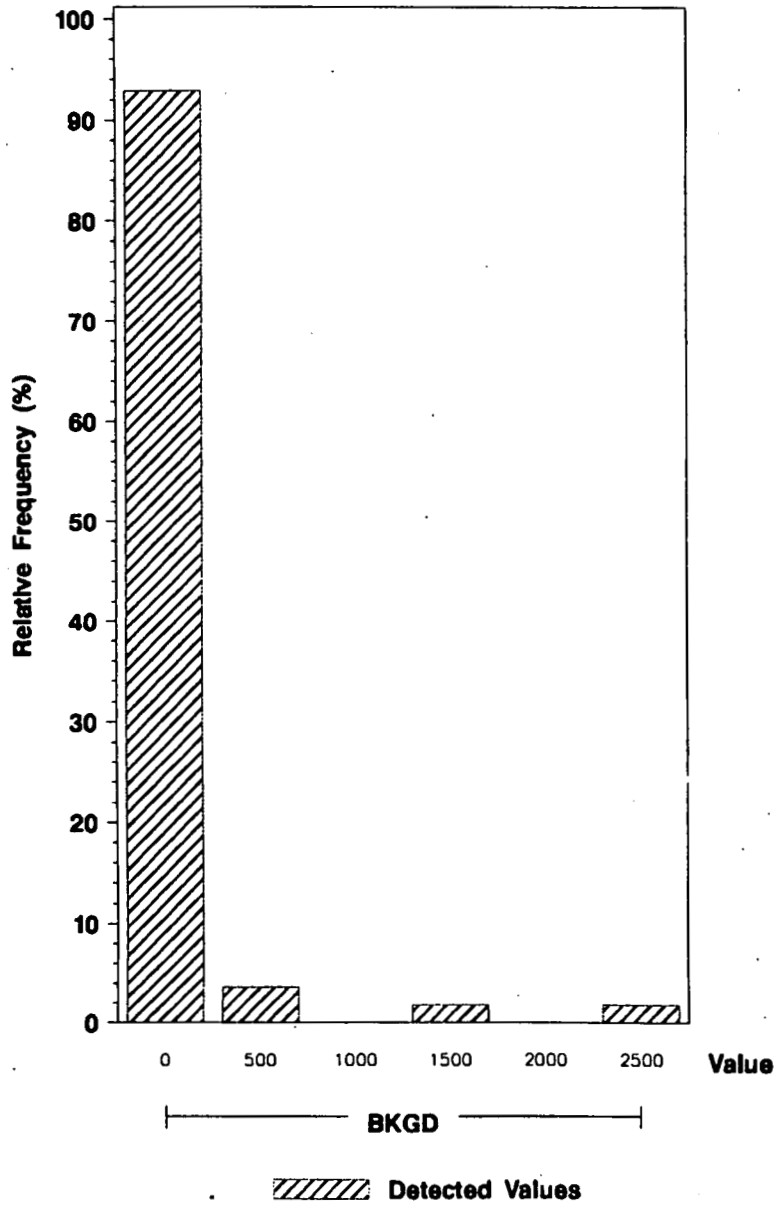
ANALYTE = STRONTIUM – 90



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Surface Water

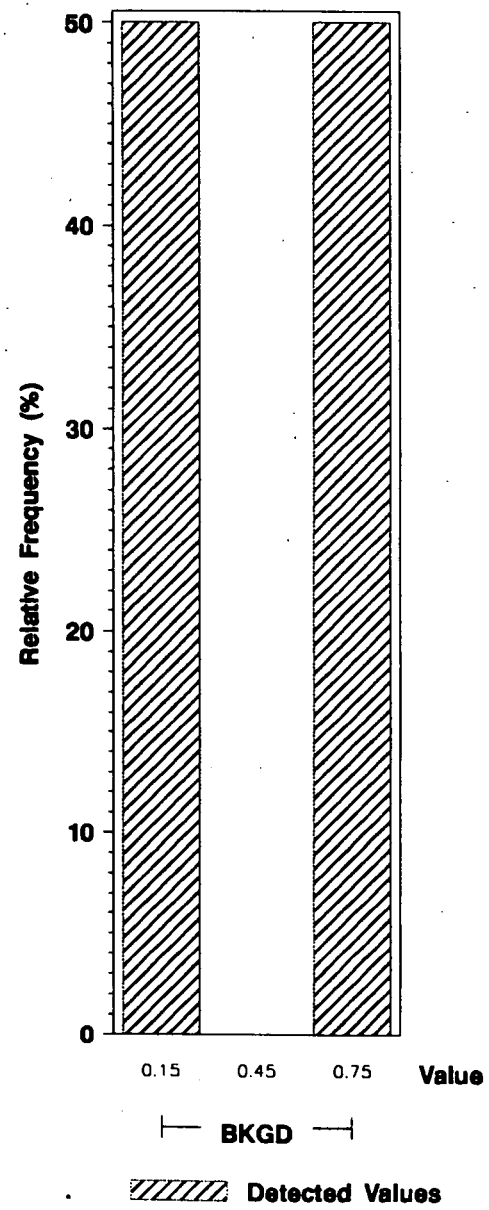
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved URANIUM, TOTAL (pCi/L) in Surface Water

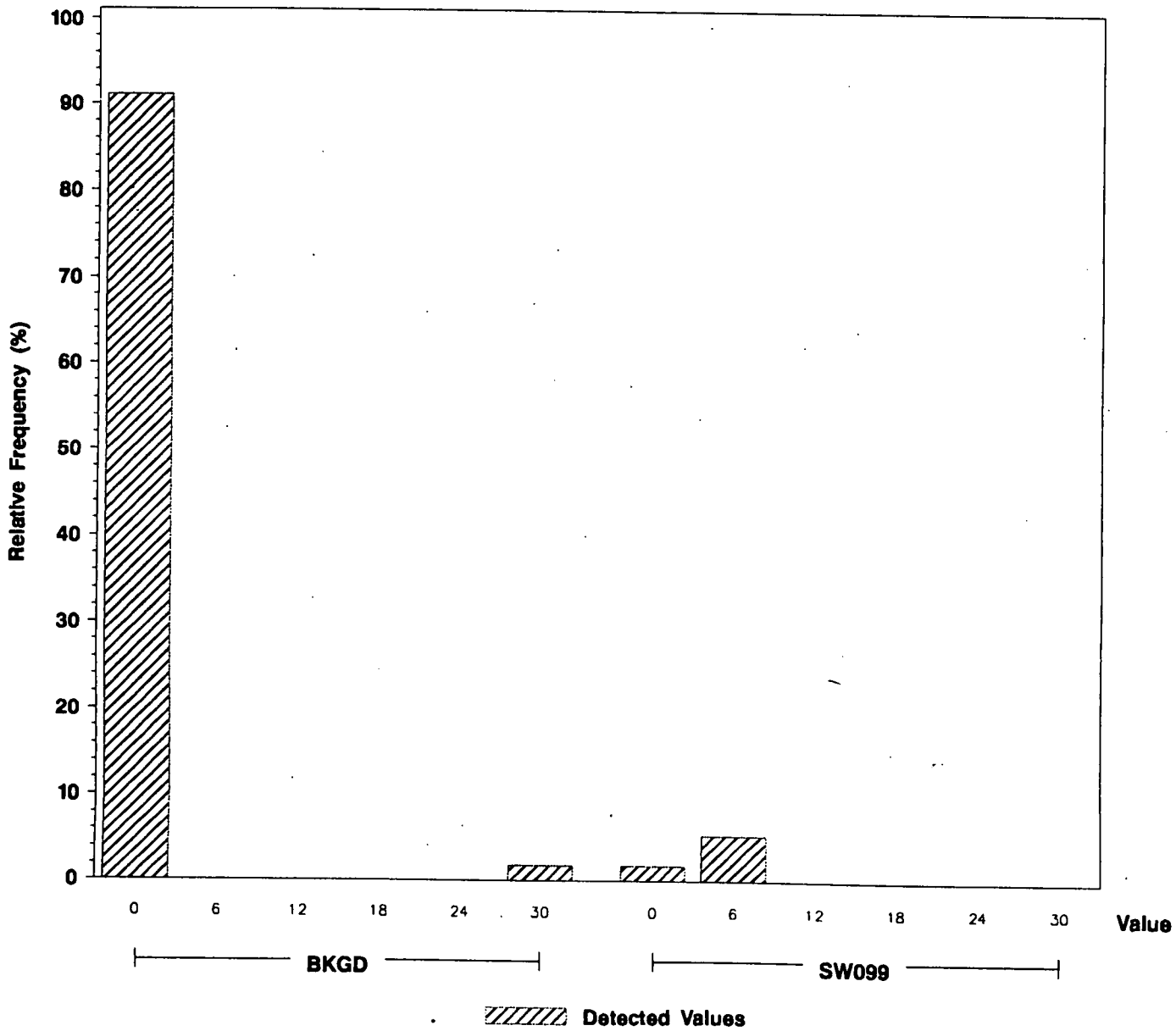
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Surface Water

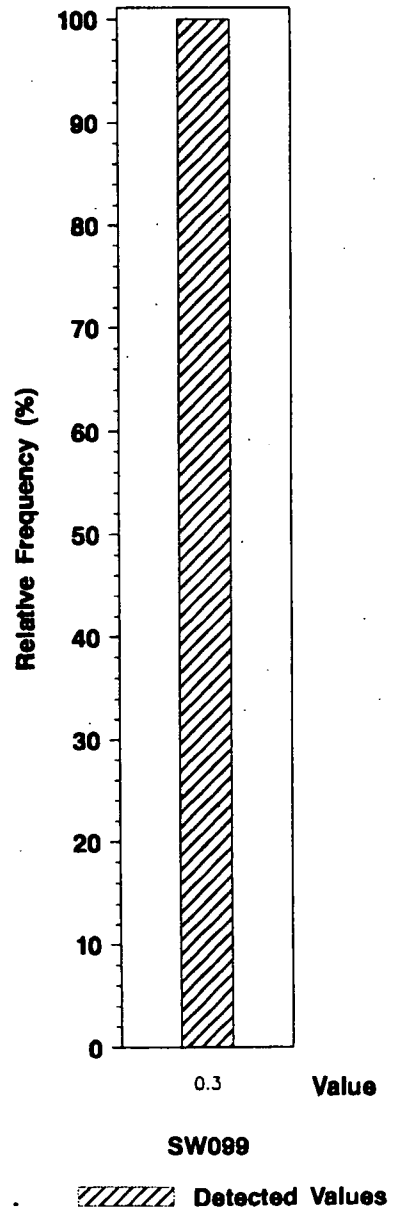
ANALYTE=URANIUM-233,-234



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved URANIUM – 234 (pCi/L) in Surface Water

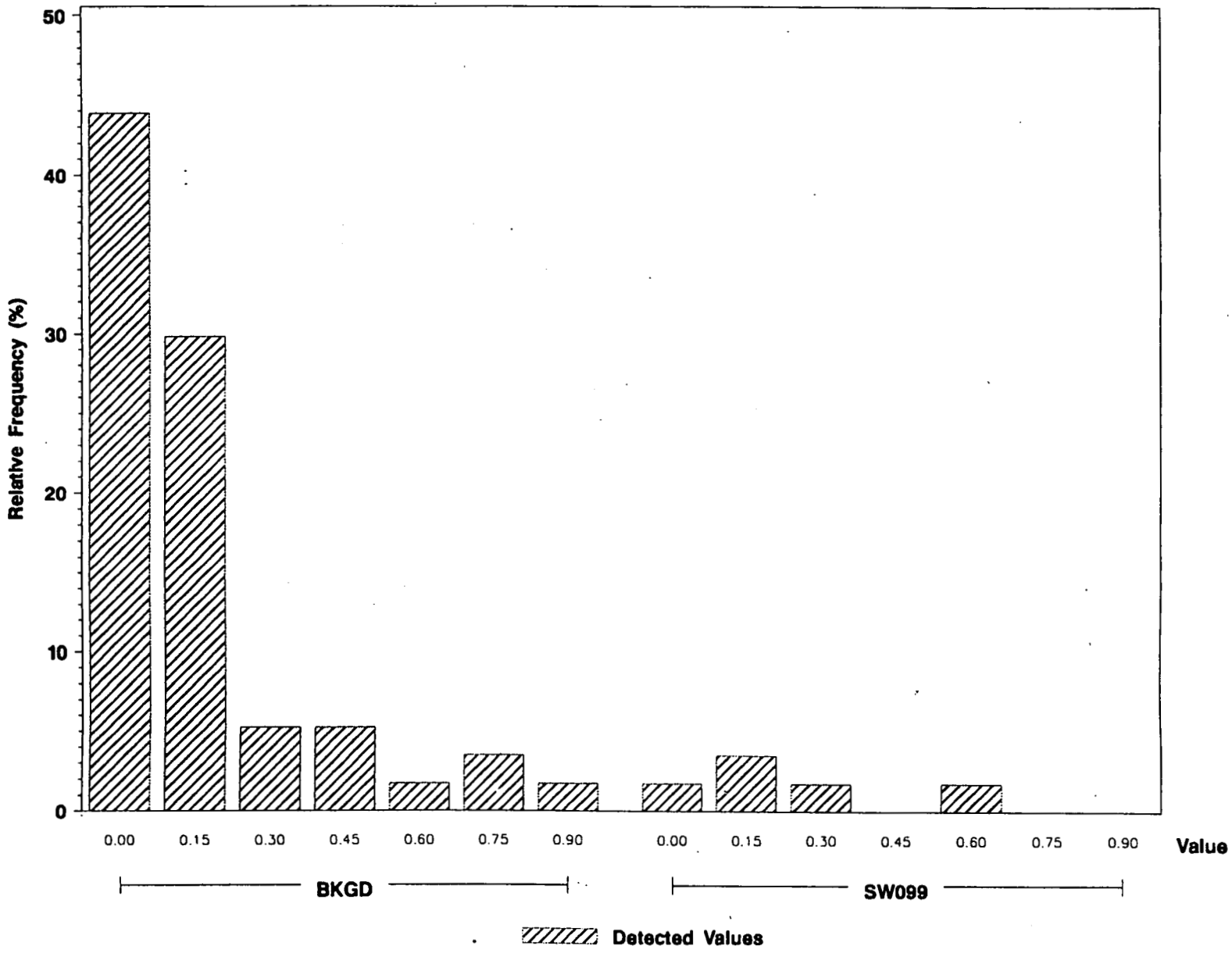
ANALYTE = URANIUM – 234



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved URANIUM-235 (pCi/L) in Surface Water

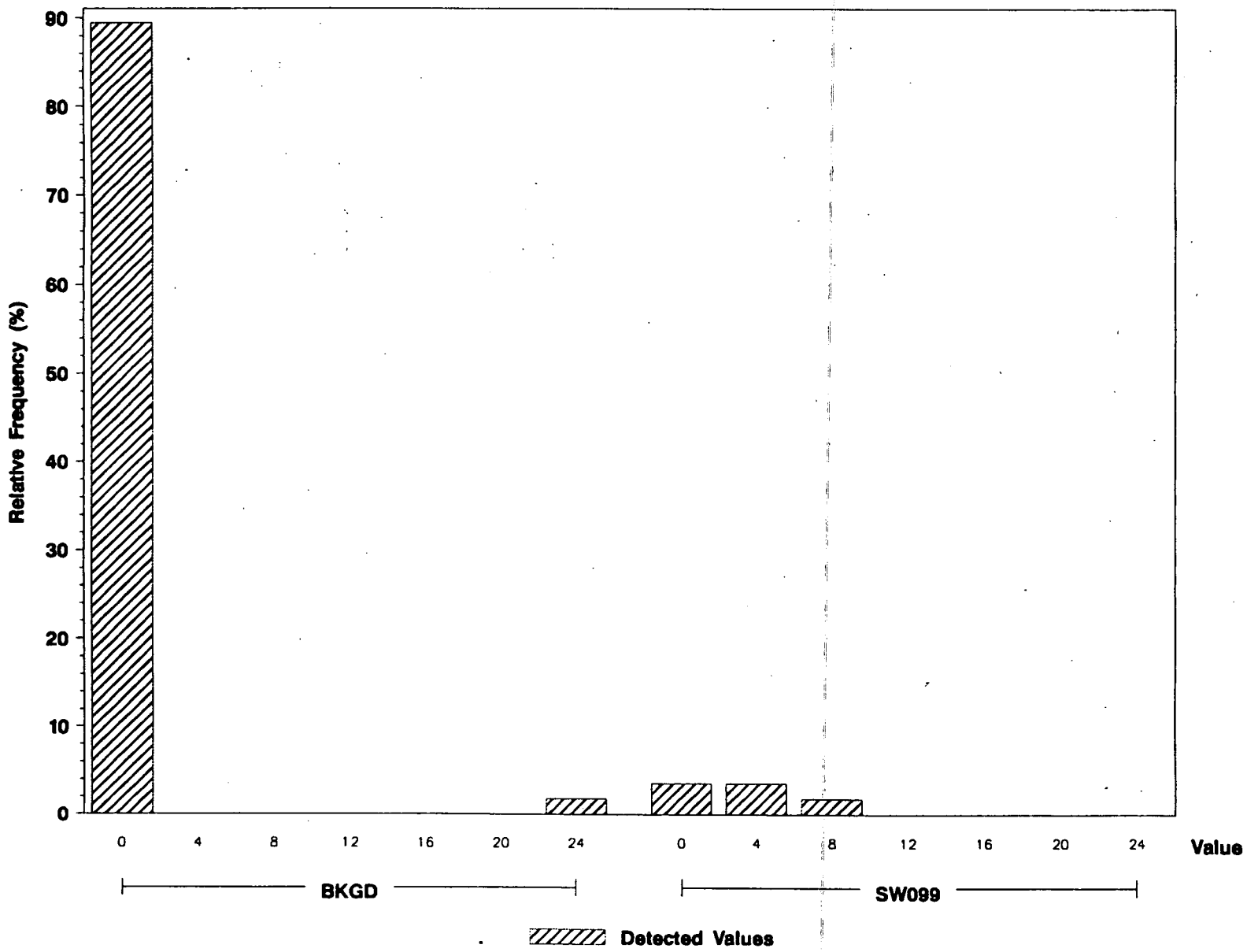
ANALYTE=URANIUM-235



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Dissolved URANIUM – 238 (pCi/L) in Surface Water

ANALYTE = URANIUM – 238



**Surface Water**

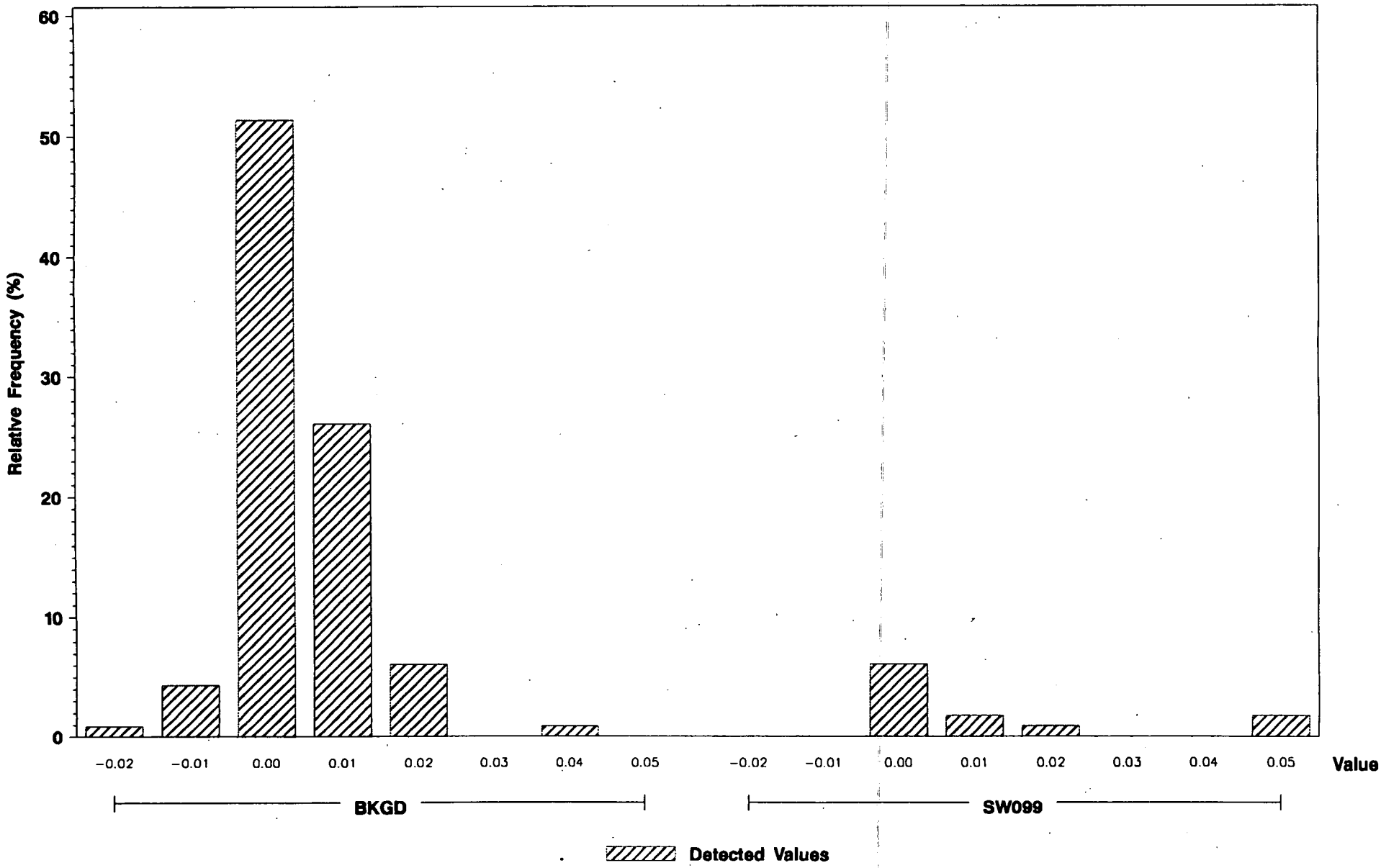
**(Total)**

**Background vs. OU 7 (SW099)**

# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Surface Water

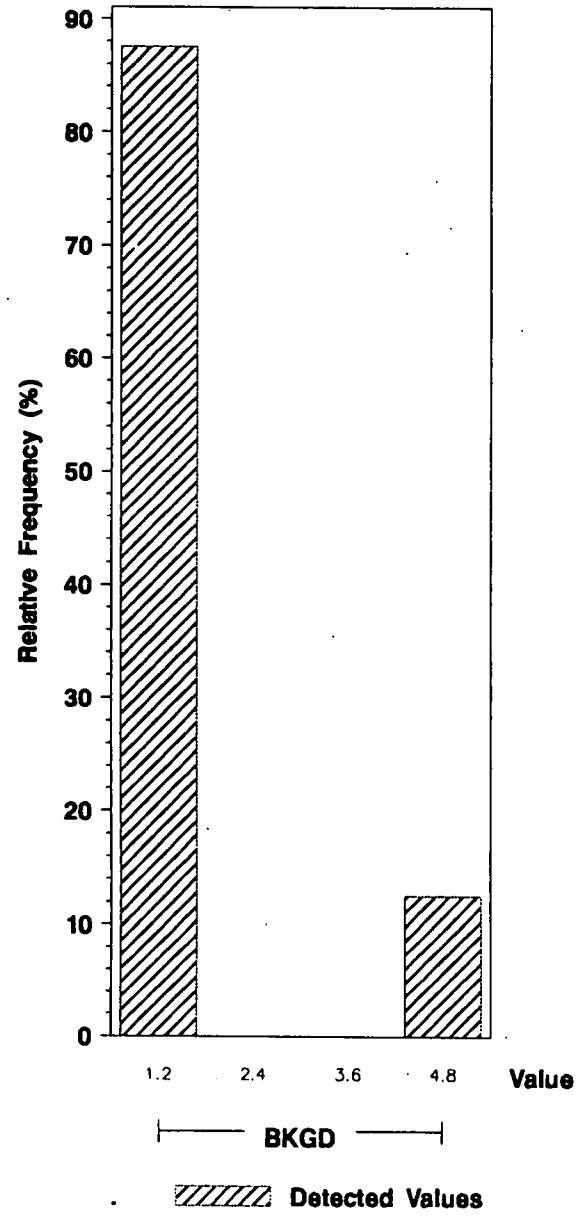
ANALYTE = AMERICIUM-241



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Surface Water

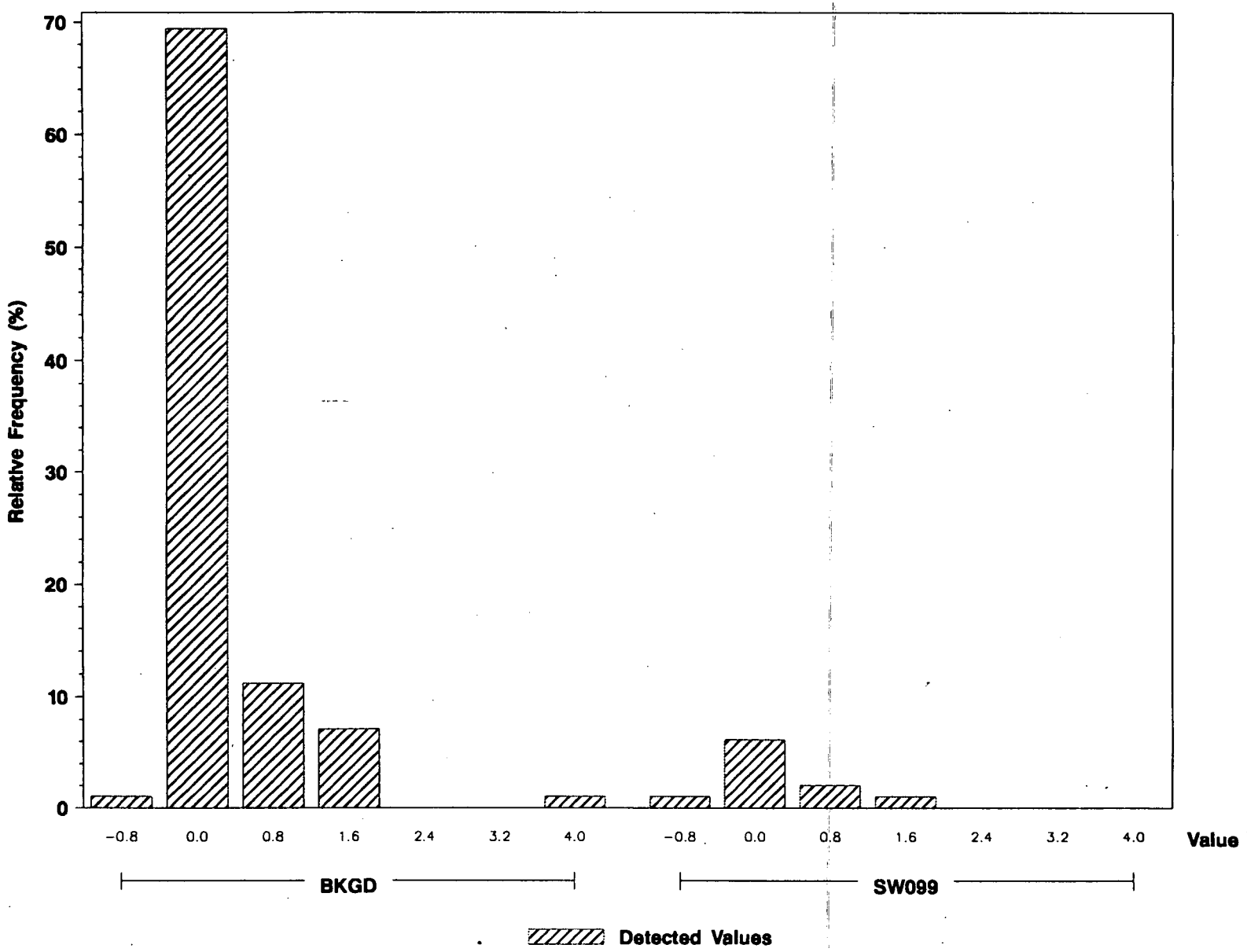
ANALYTE = CESIUM-134



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Surface Water

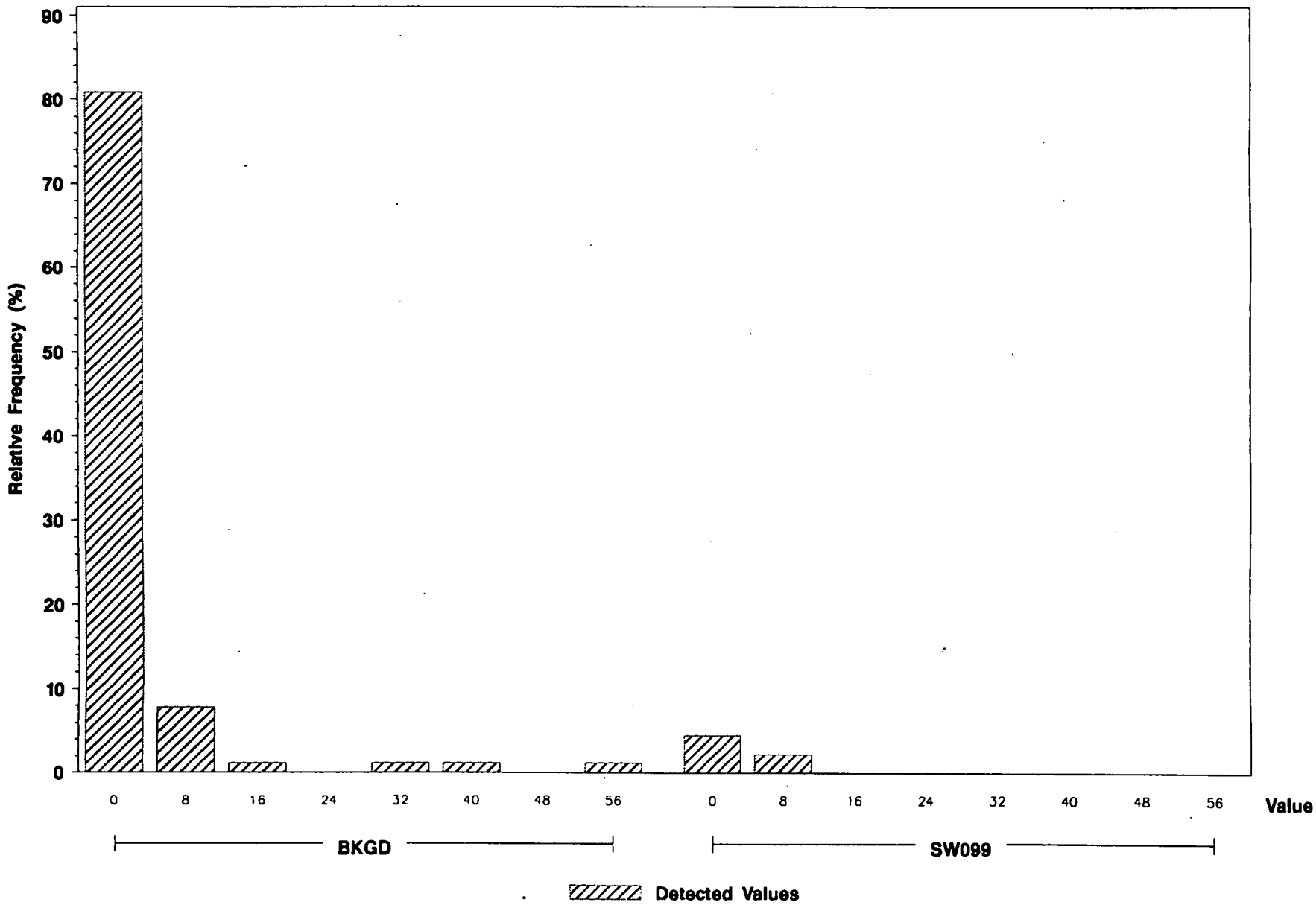
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Surface Water

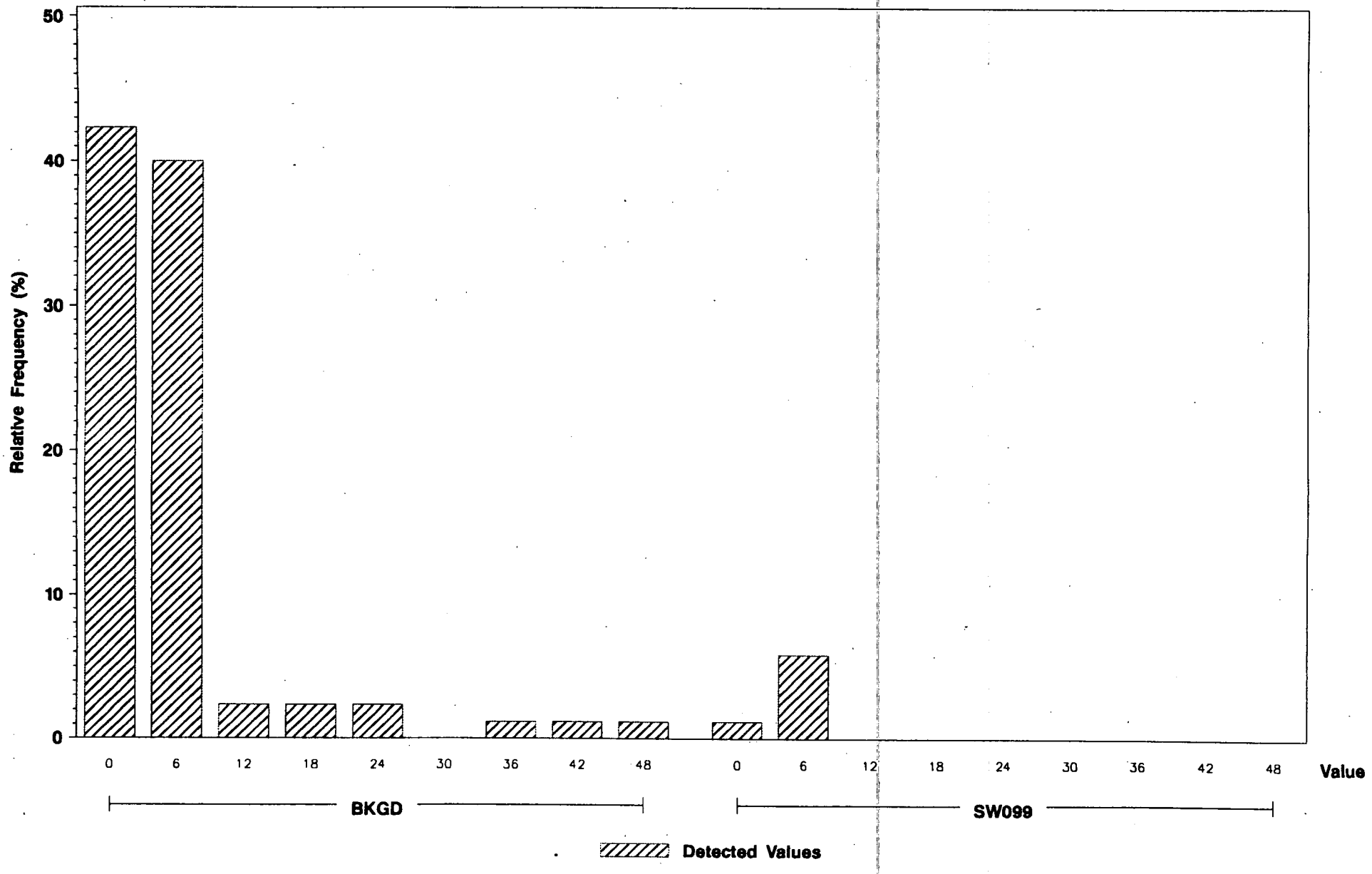
ANALYTE = GROSS ALPHA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total GROSS BETA (pCi/L) in Surface Water

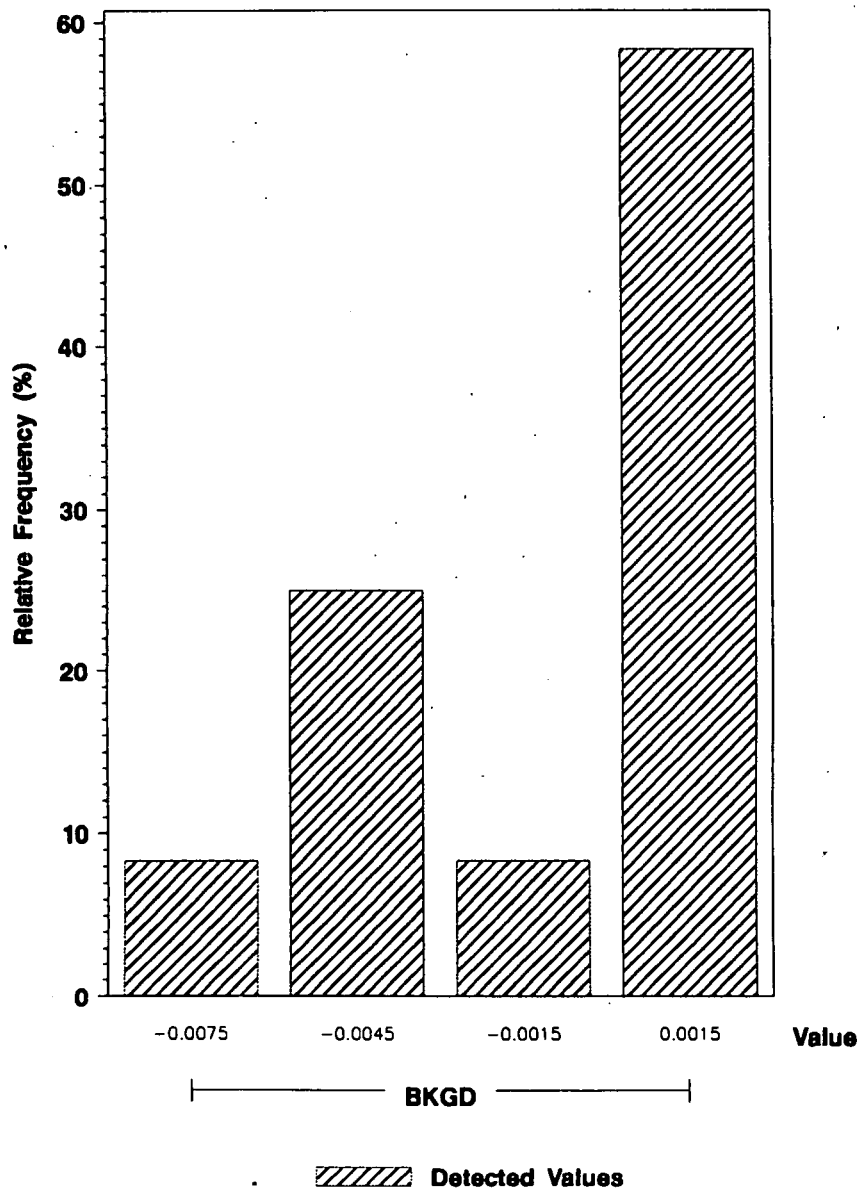
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total PLUTONIUM – 236 (pCi/L) in Surface Water

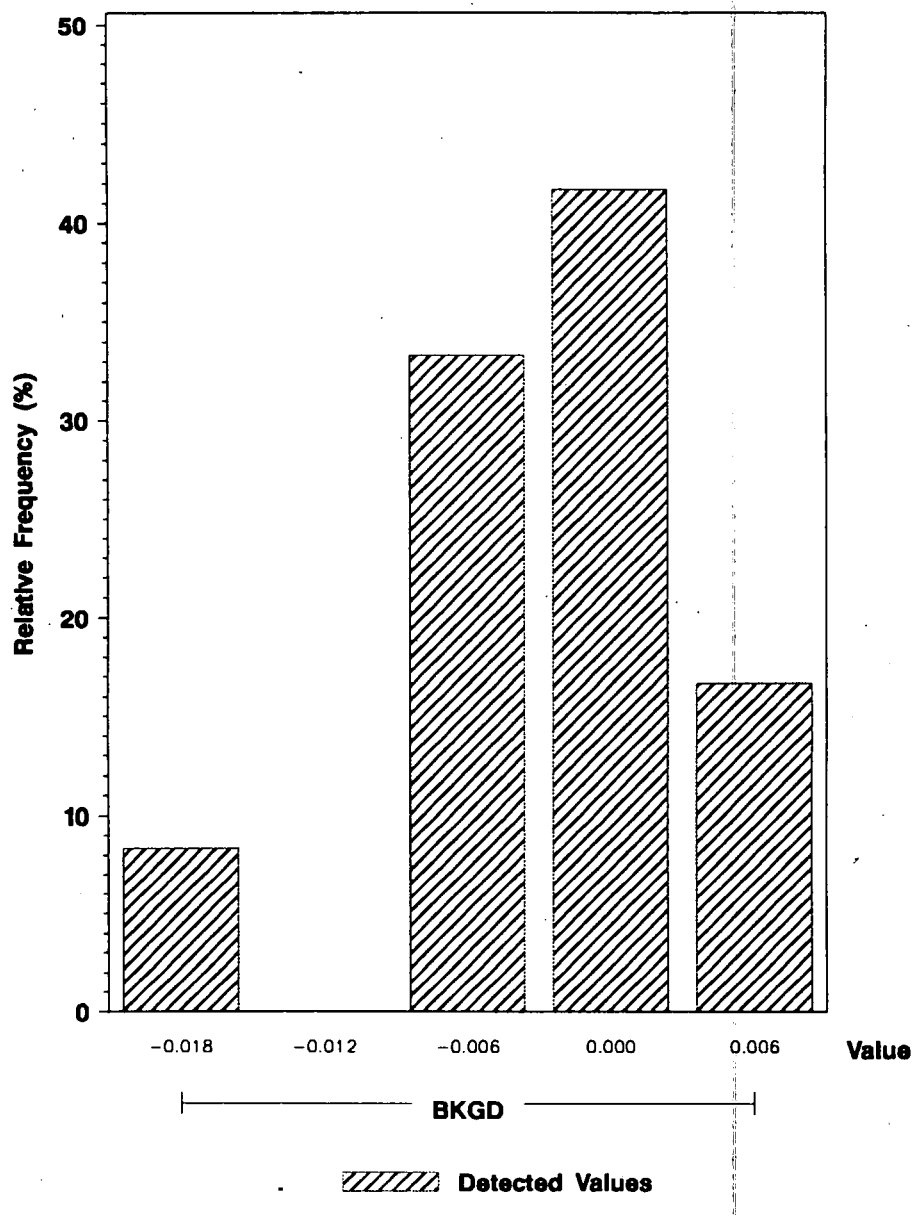
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total PLUTONIUM – 238 (pCi/L) in Surface Water

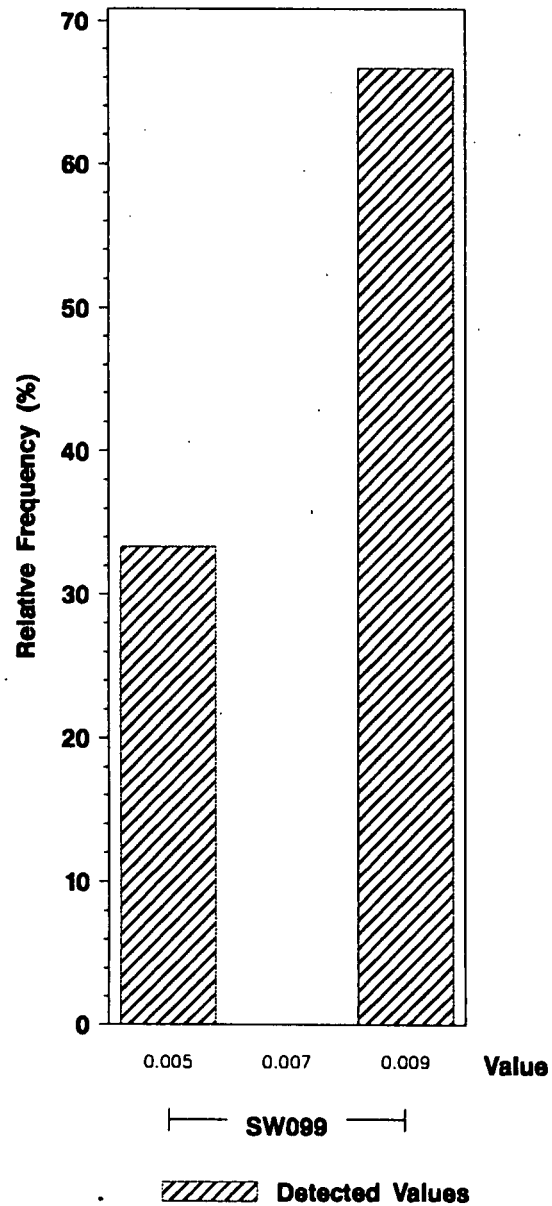
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total PLUTONIUM-239 (pCi/L) in Surface Water

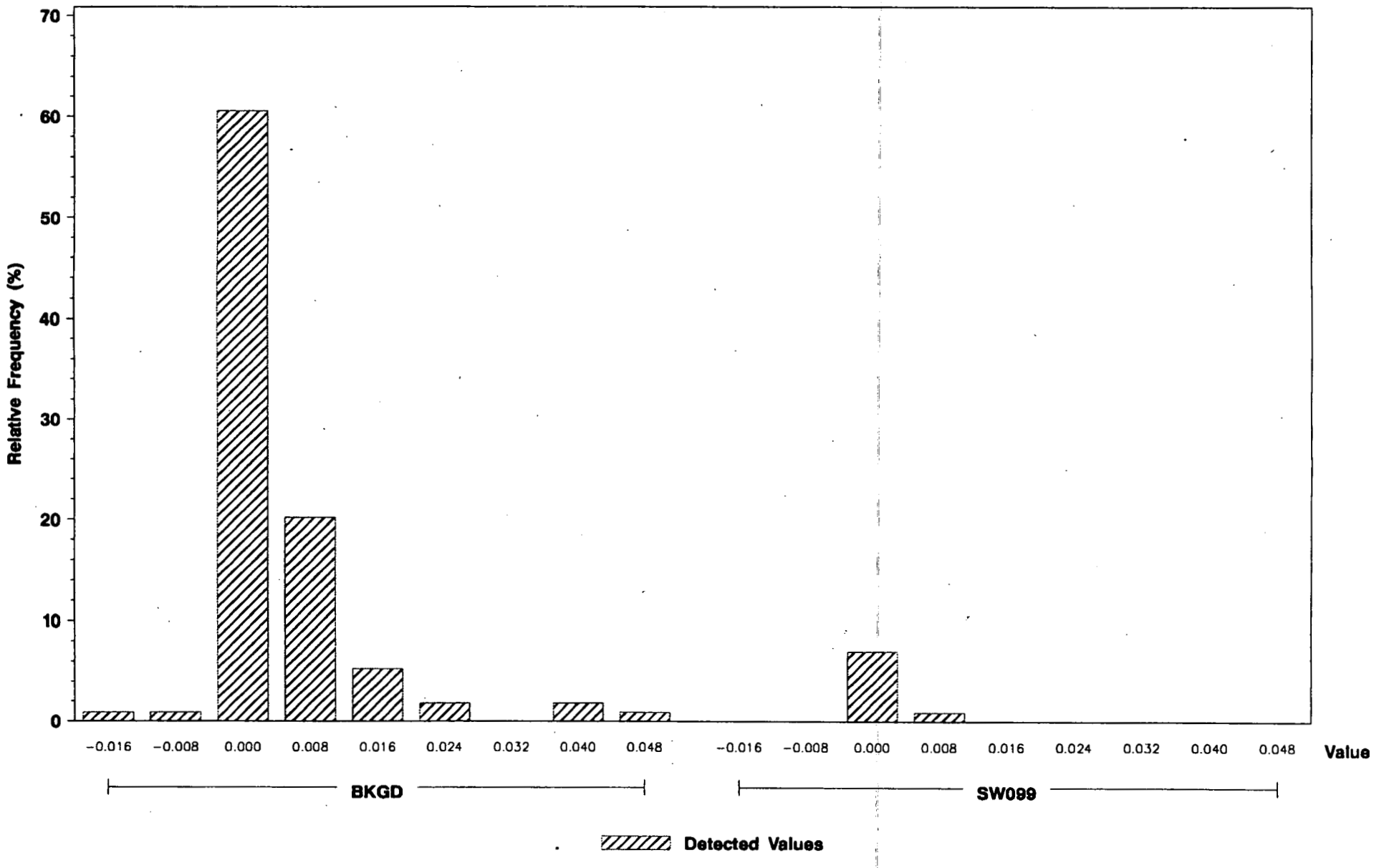
ANALYTE = PLUTONIUM-239



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Surface Water

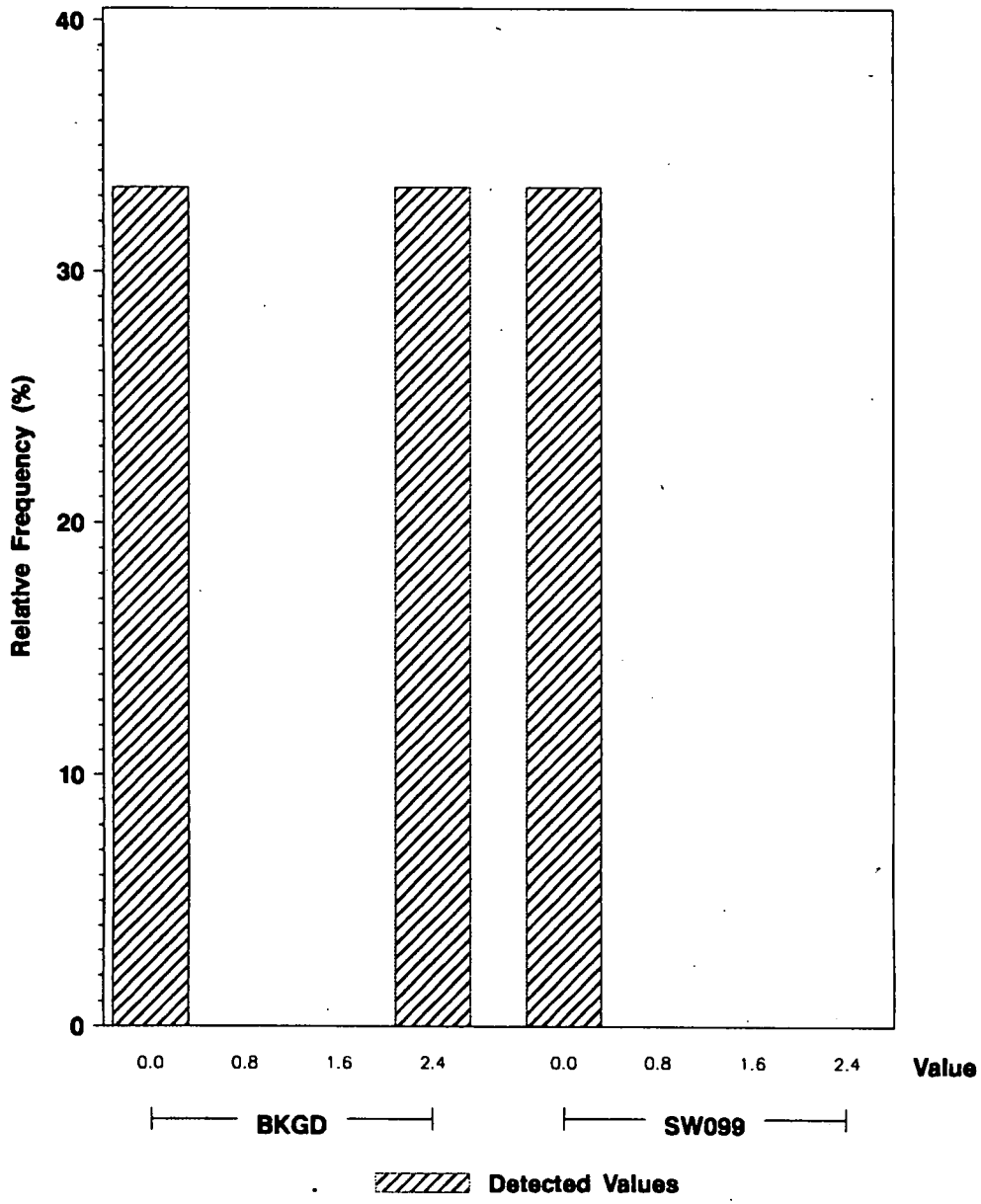
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total RADIUM-226 (pCi/L) in Surface Water

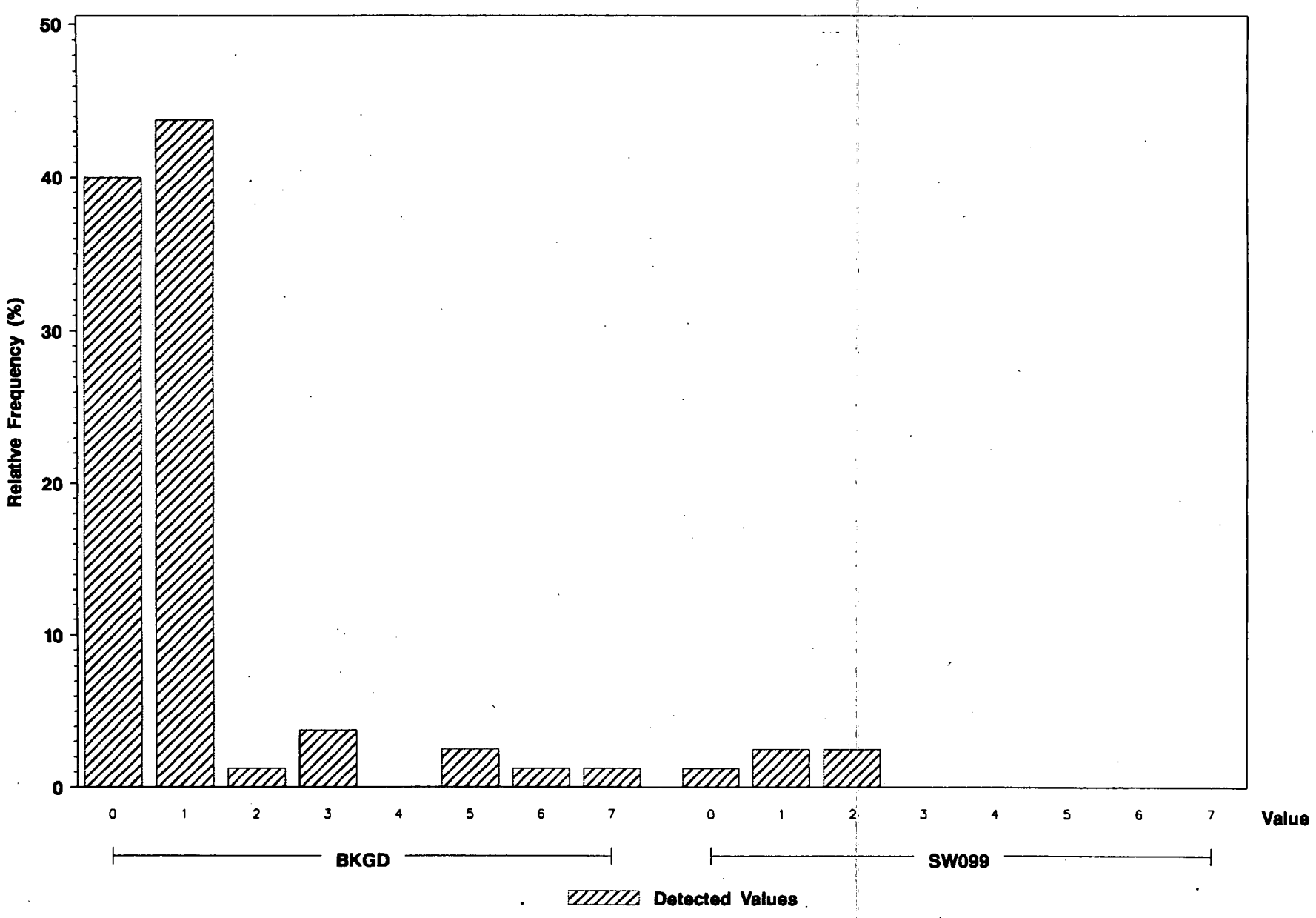
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Surface Water

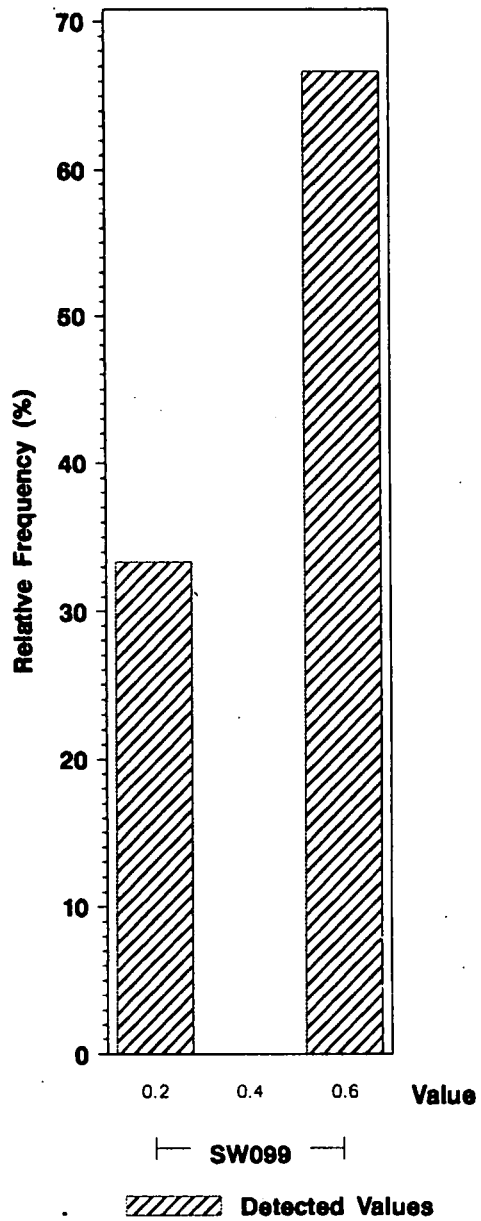
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Surface Water

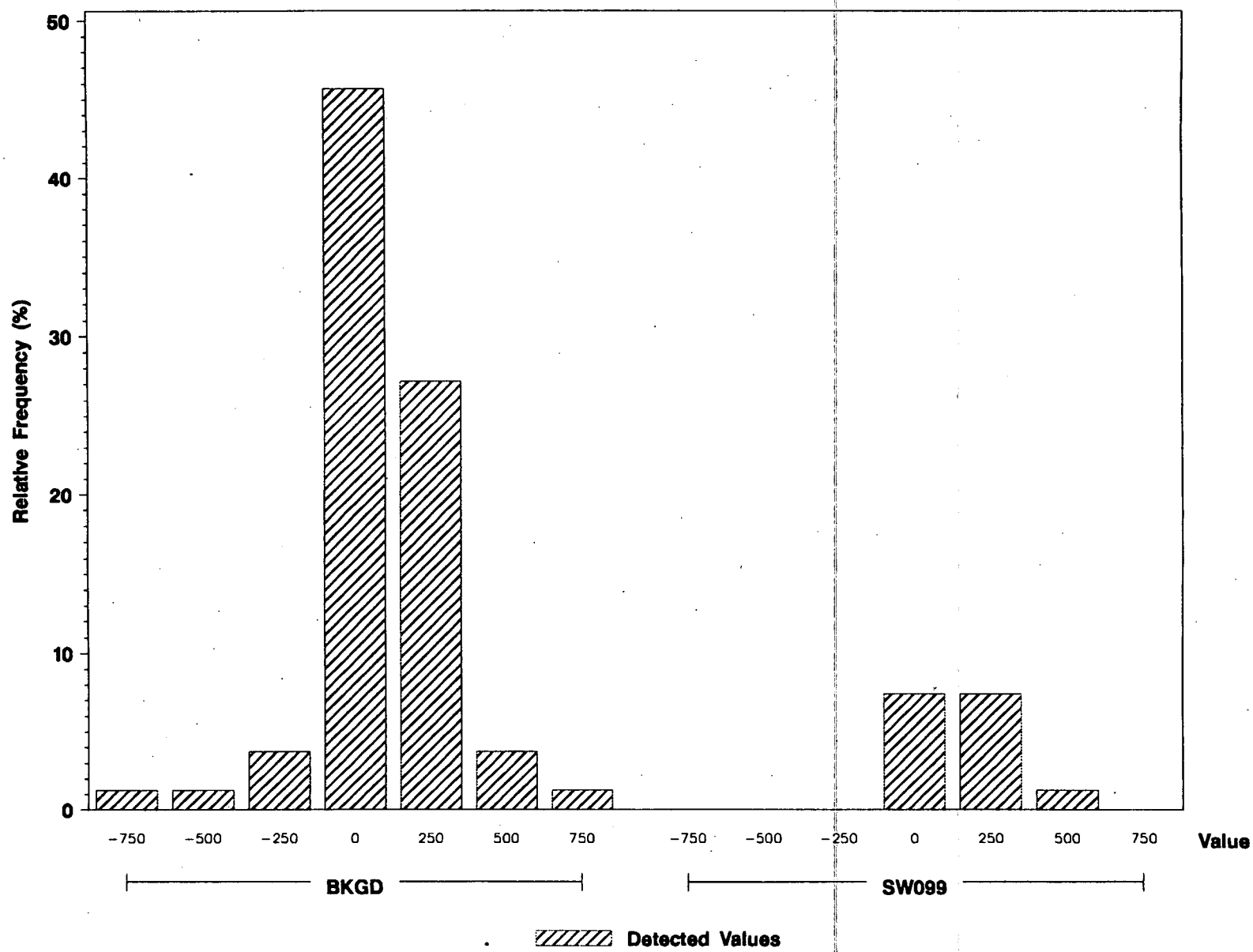
ANALYTE=STRONTIUM-90



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total TRITIUM (pCi/L) in Surface Water

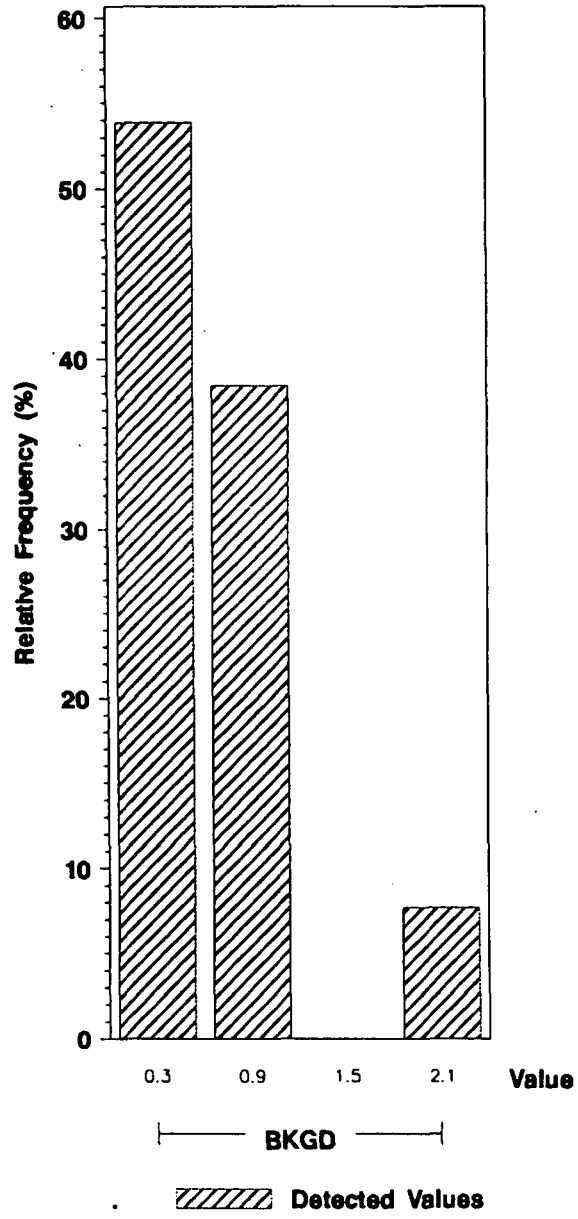
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Surface Water

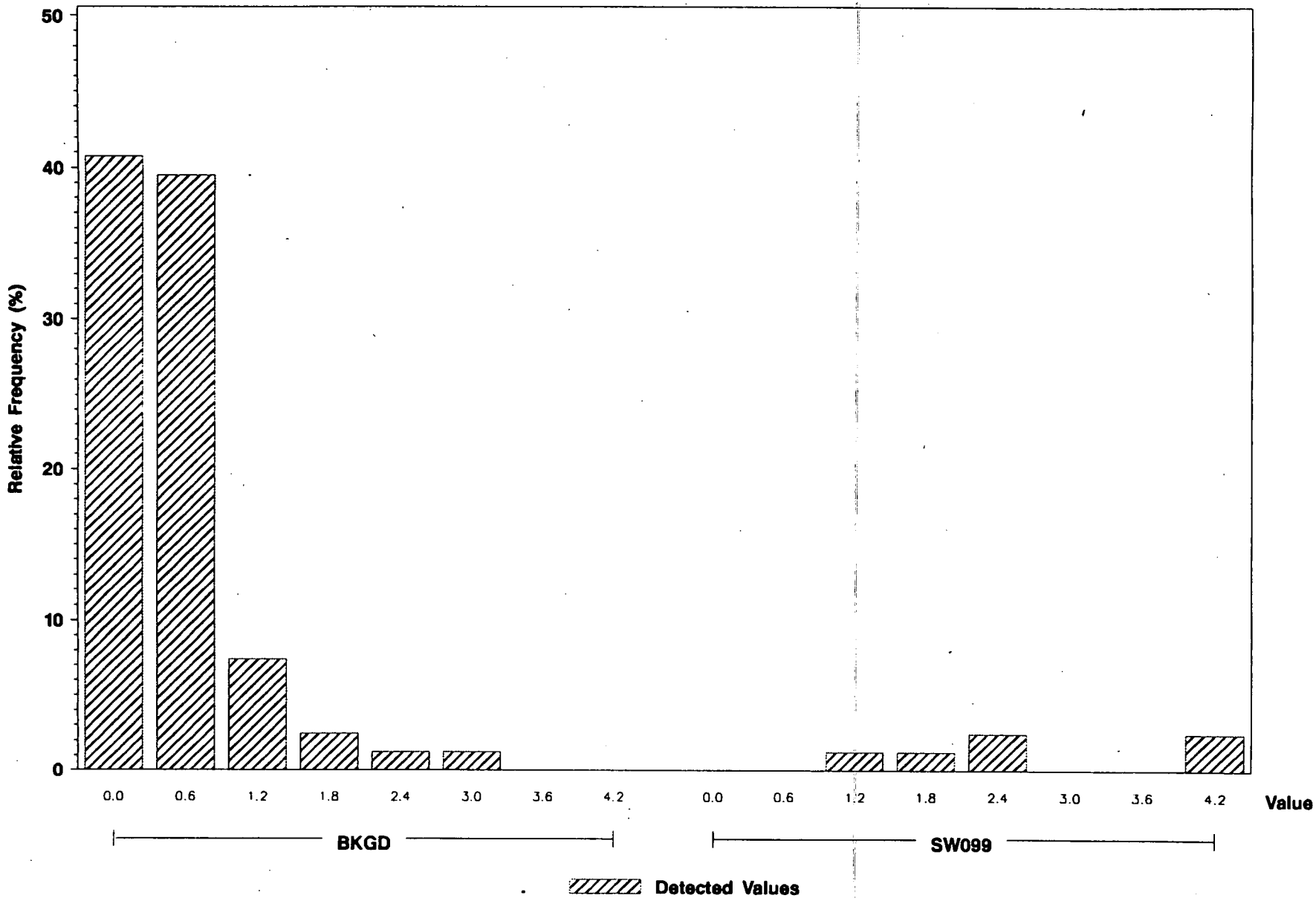
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total URANIUM-233,-234 (pCi/L) in Surface Water

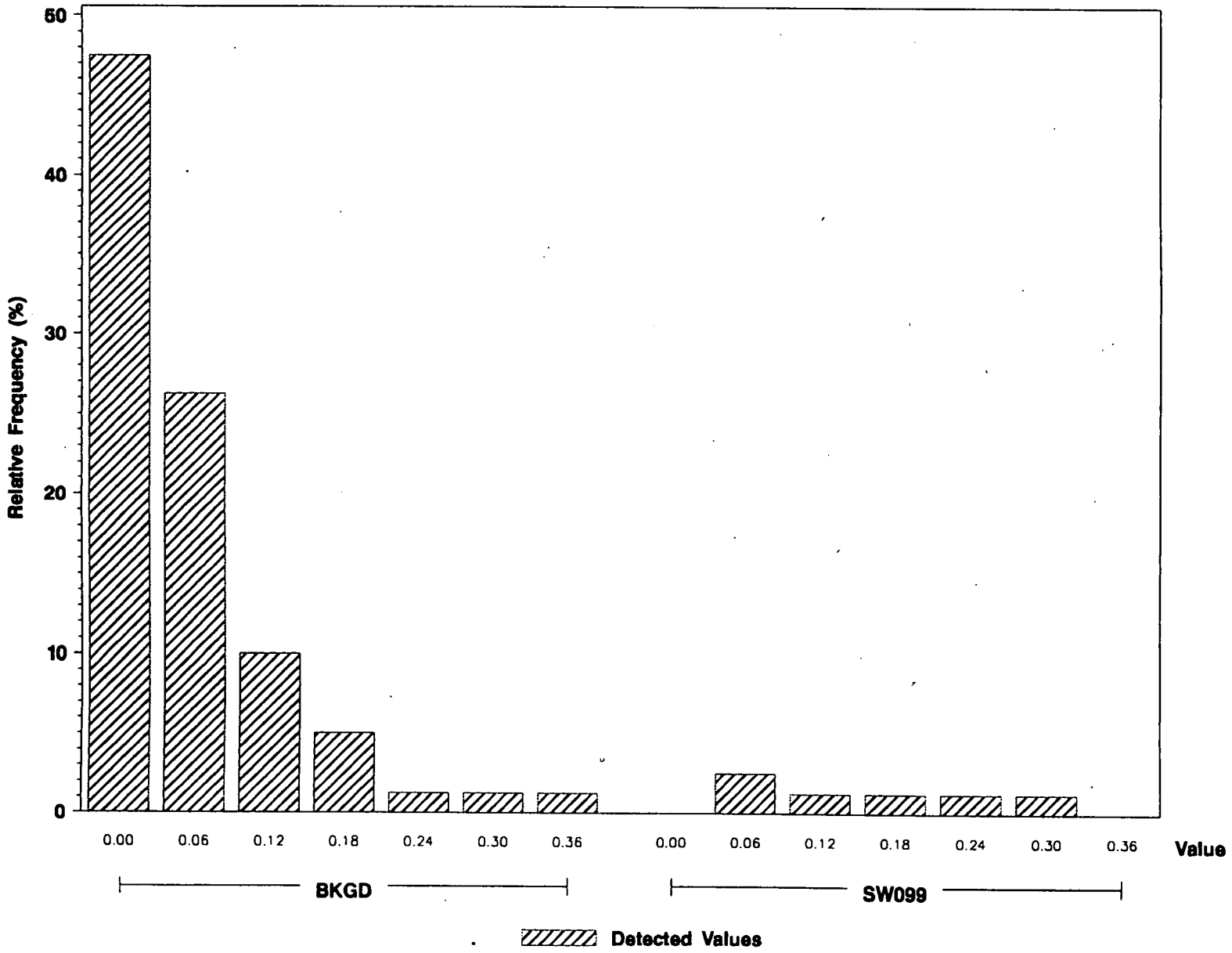
ANALYTE=URANIUM-233,-234



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total URANIUM-235 (pCi/L) in Surface Water

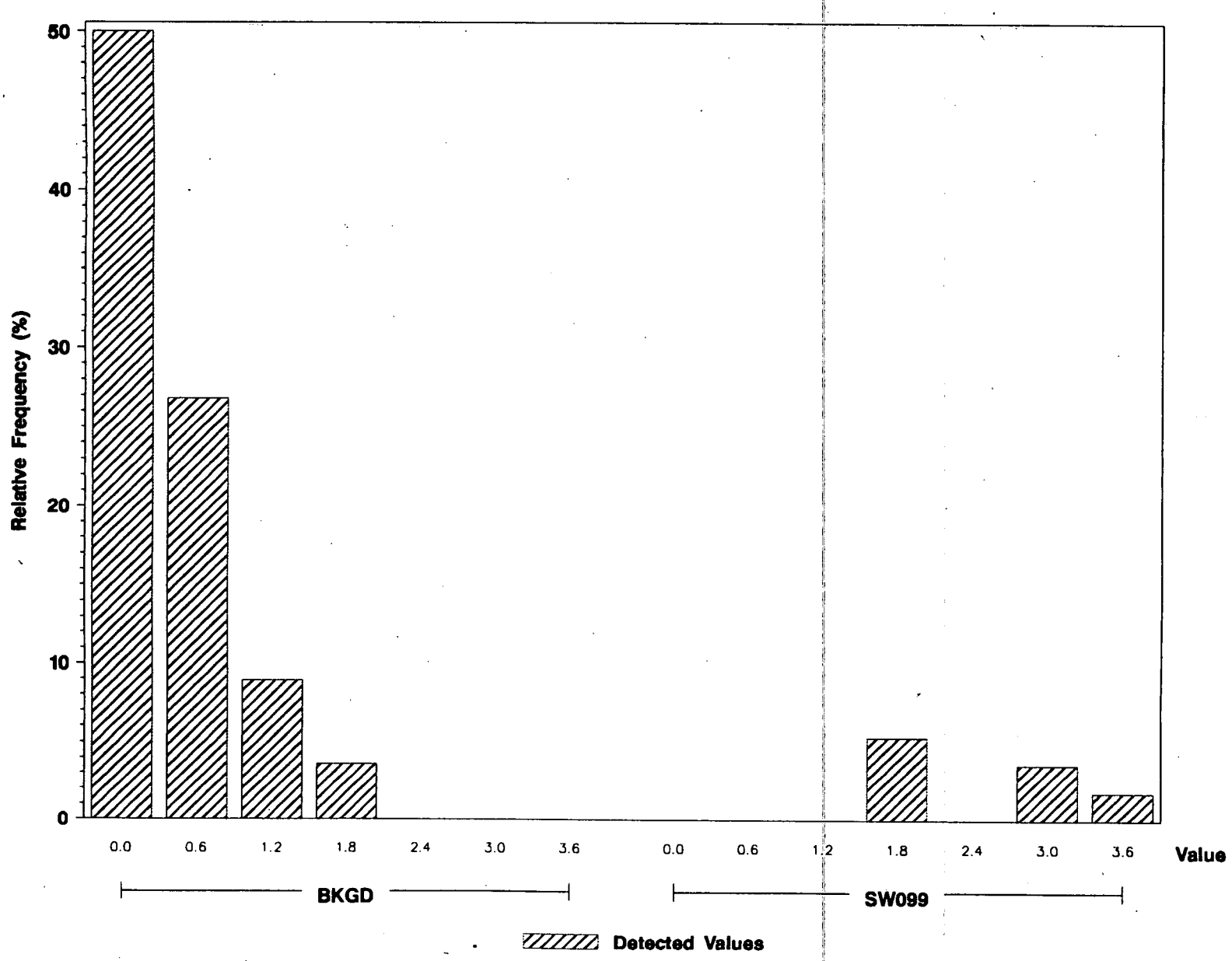
ANALYTE = URANIUM-235



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Surface Water

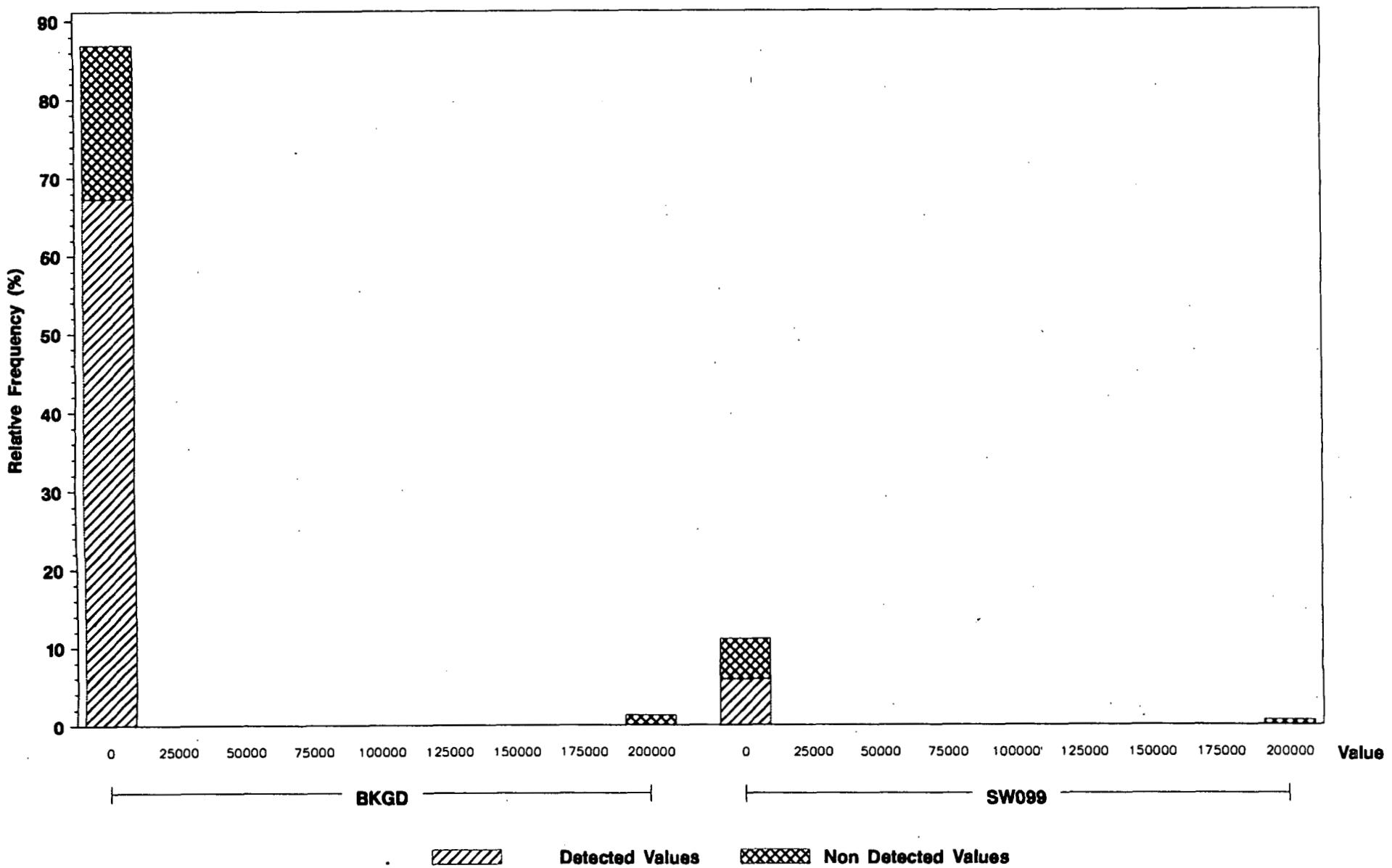
ANALYTE = URANIUM-238



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total ALUMINUM (ug/L) in Surface Water

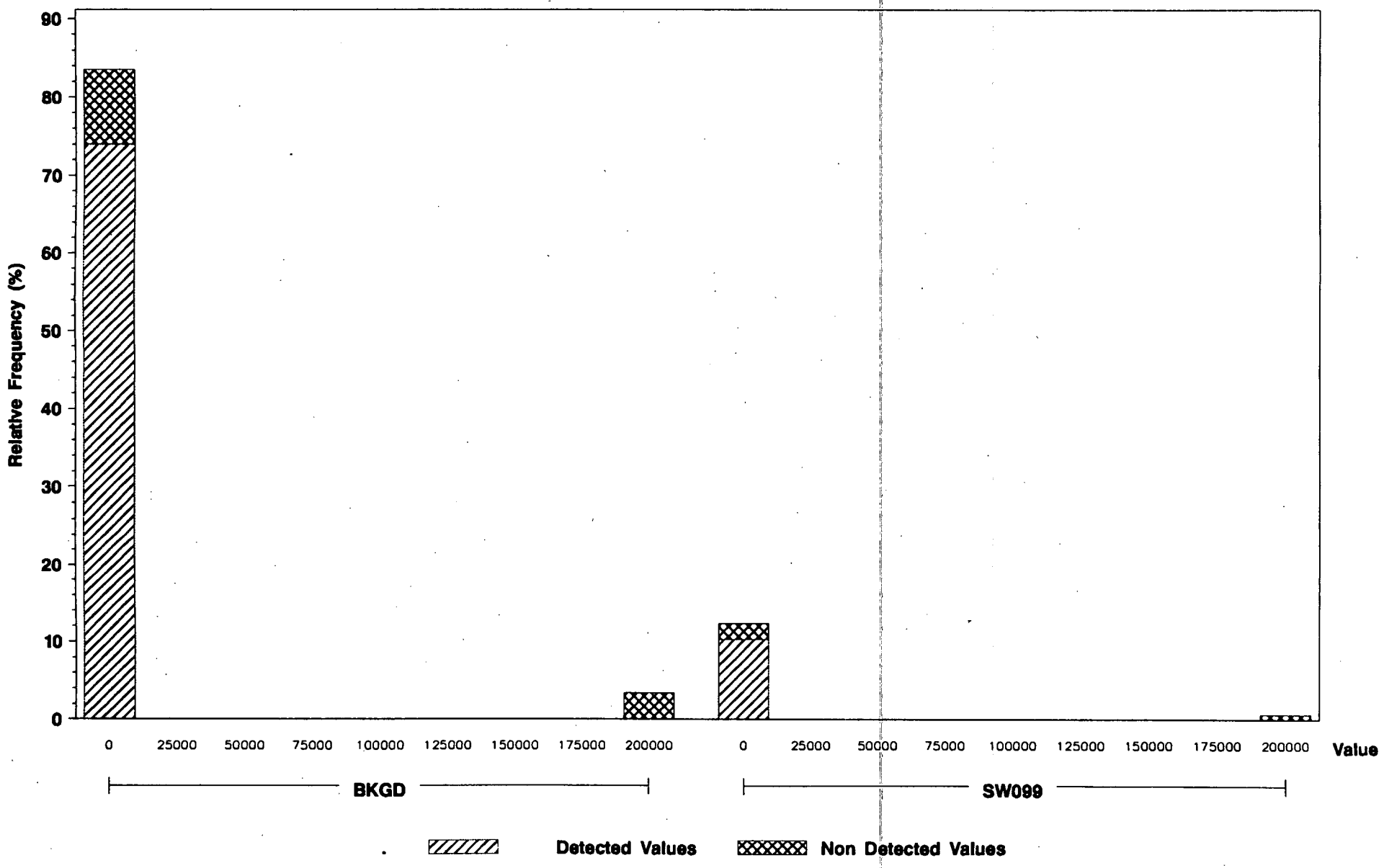
ANALYTE = ALUMINUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total BARIUM (ug/L) in Surface Water

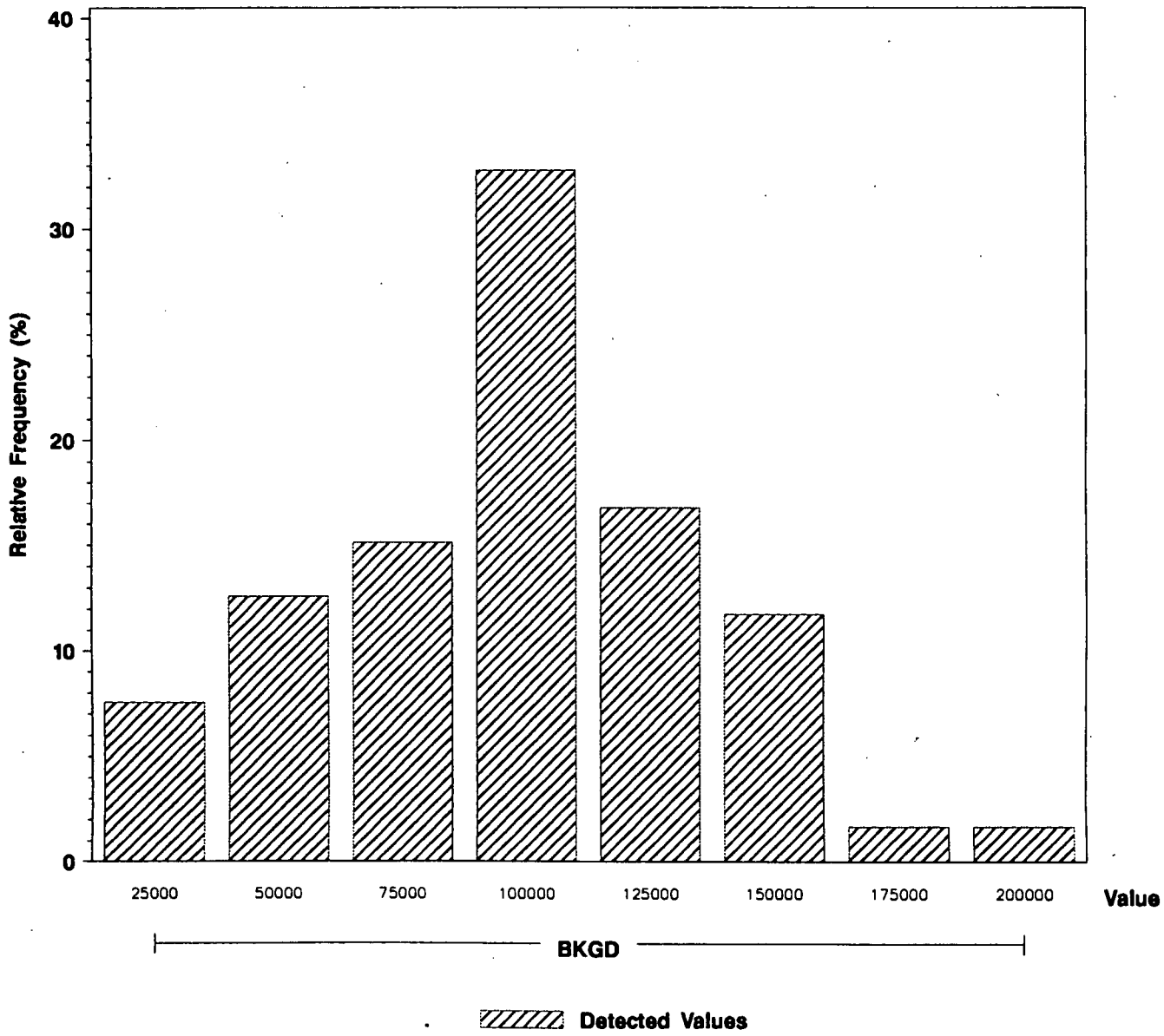
ANALYTE = BARIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total BICARBONATE (ug/L) in Surface Water

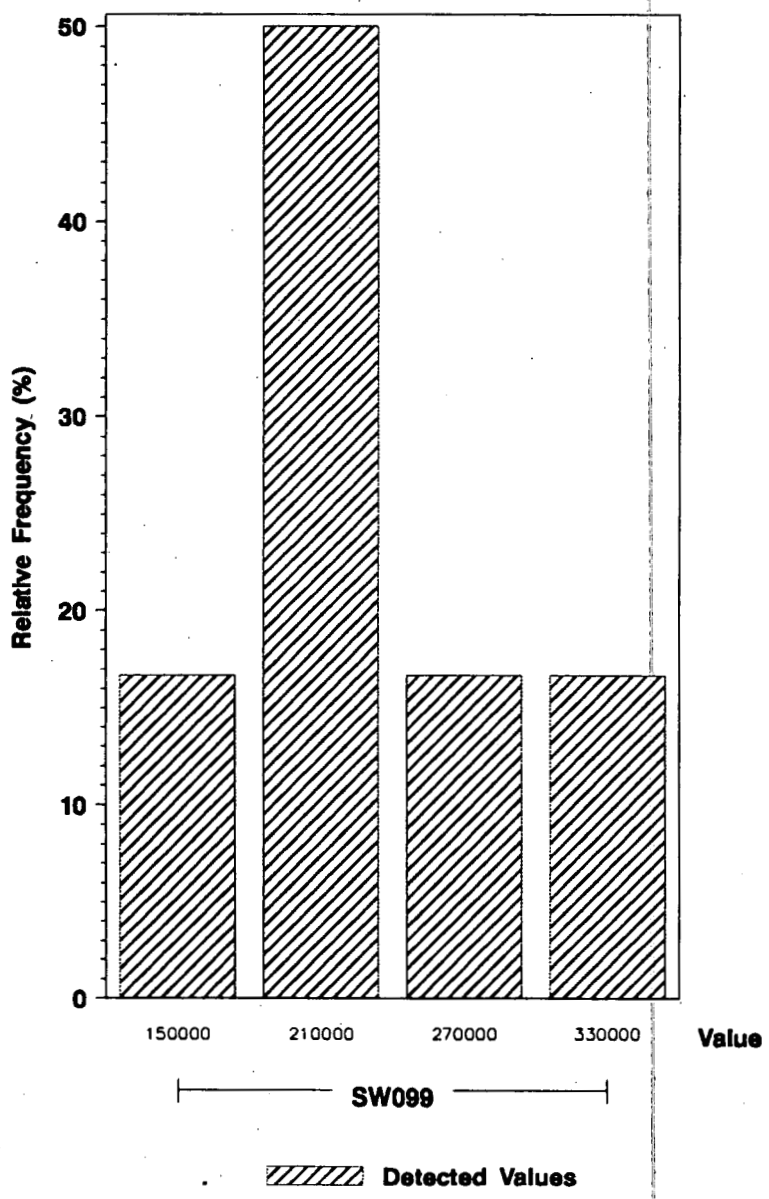
ANALYTE = BICARBONATE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Surface Water

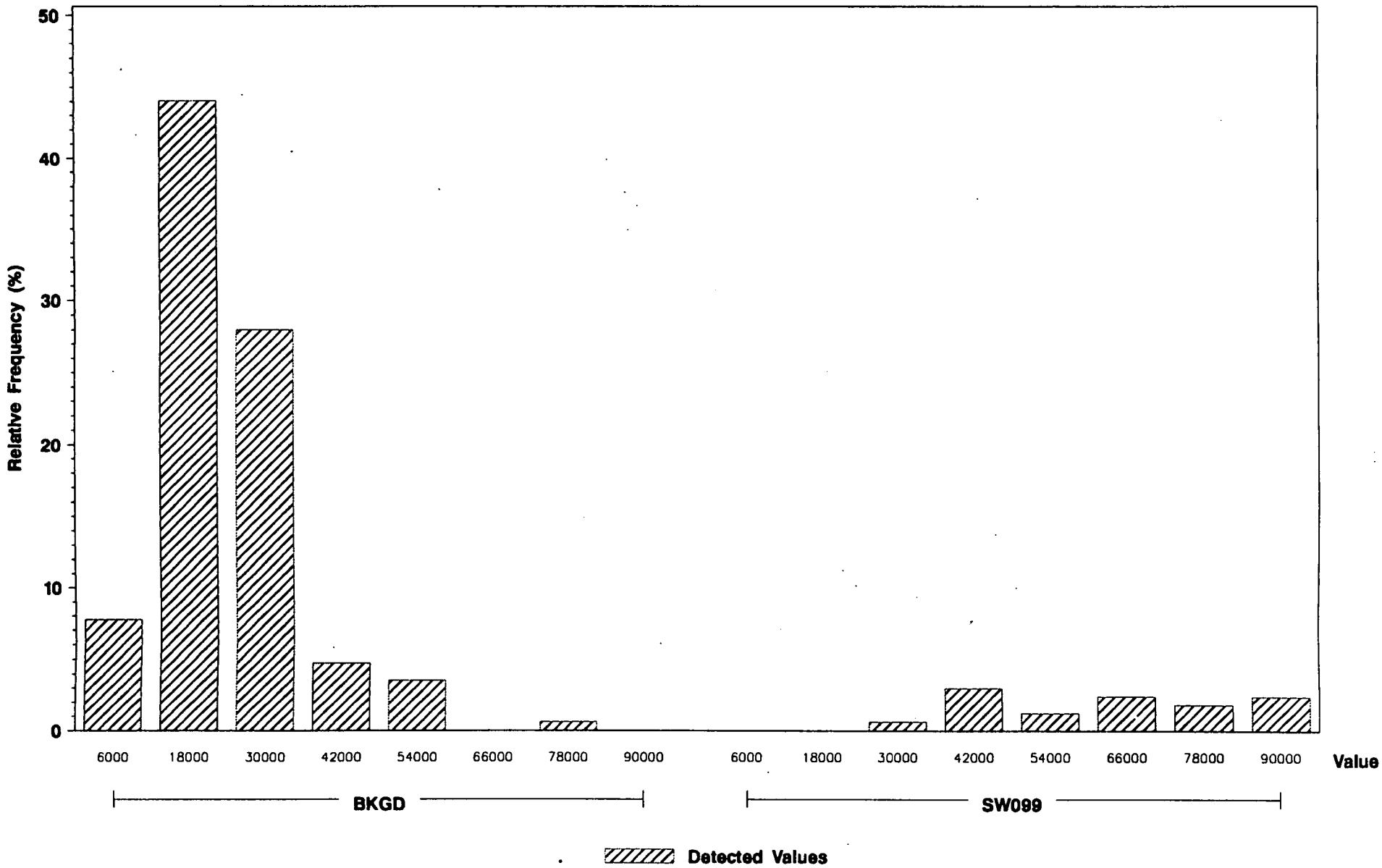
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total CALCIUM (ug/L) in Surface Water

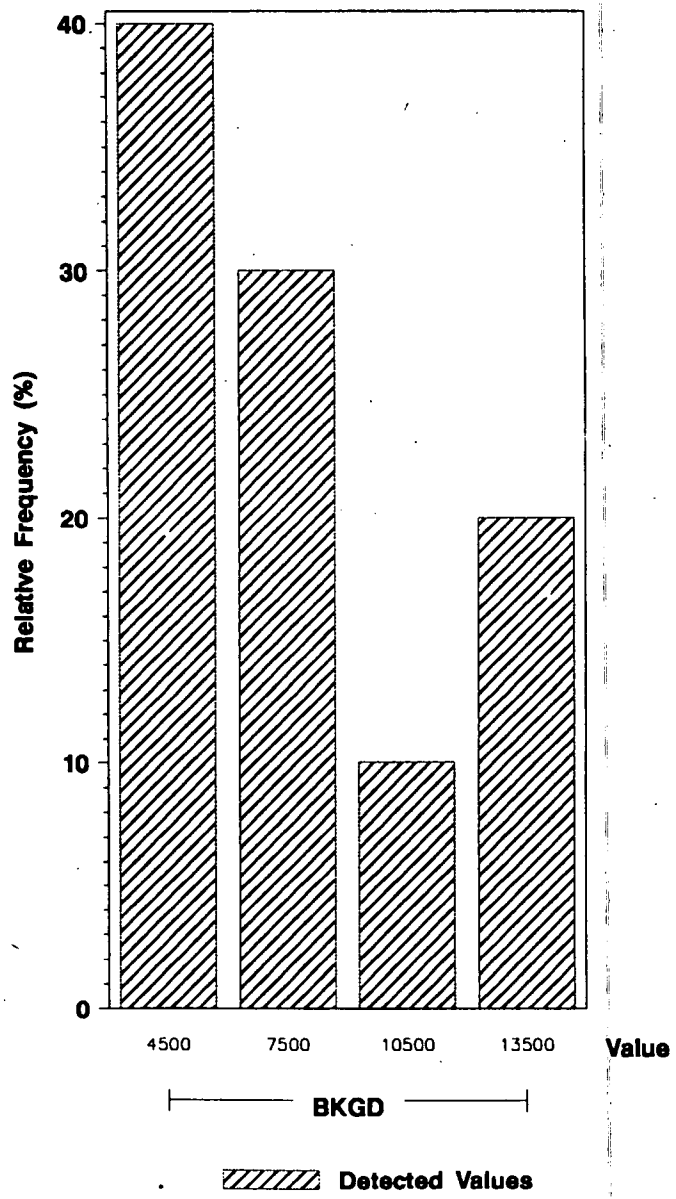
ANALYTE=CALCIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total CBOD5 (ug/L) in Surface Water

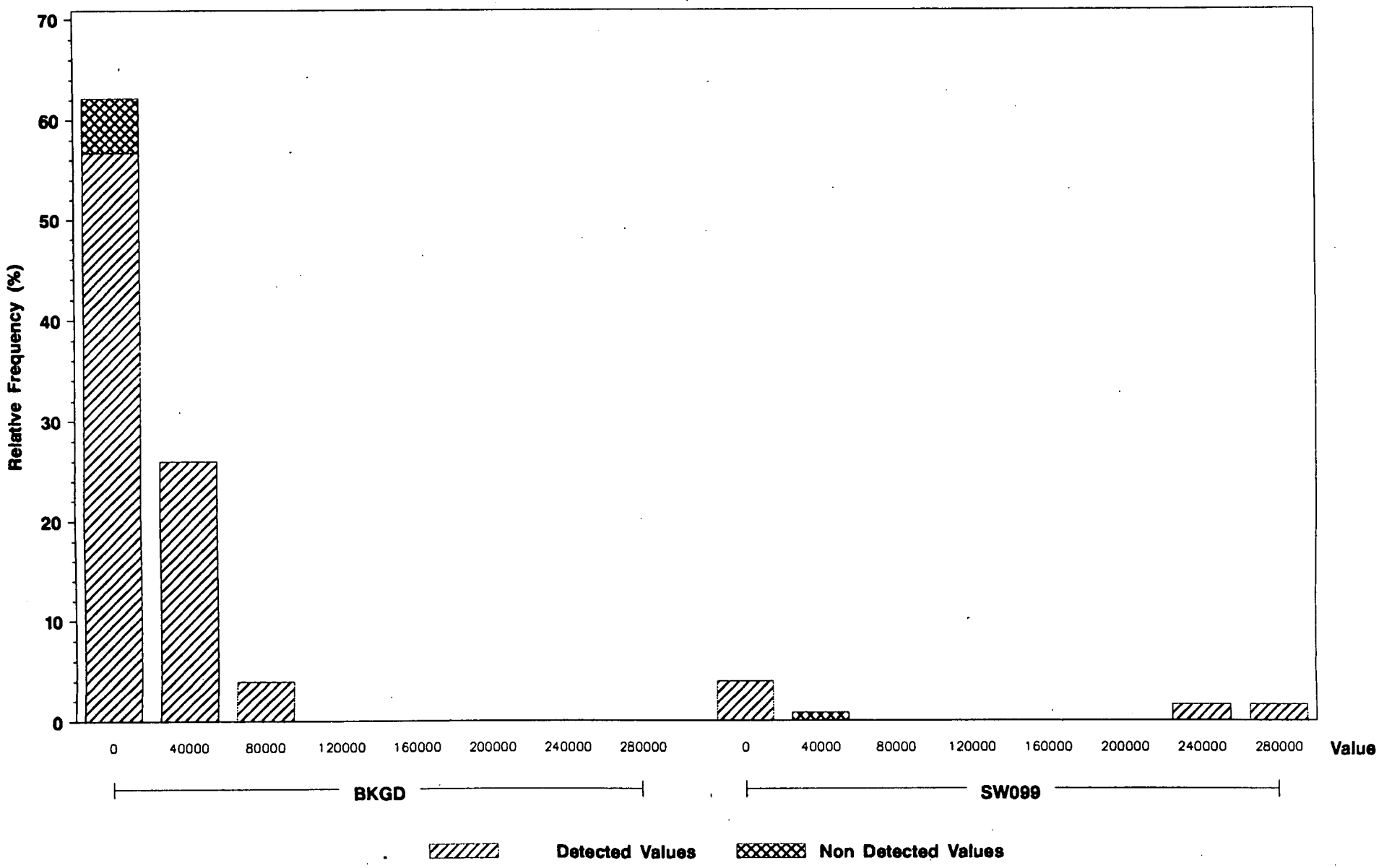
ANALYTE = CBOD5



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total CHLORIDE (ug/L) in Surface Water

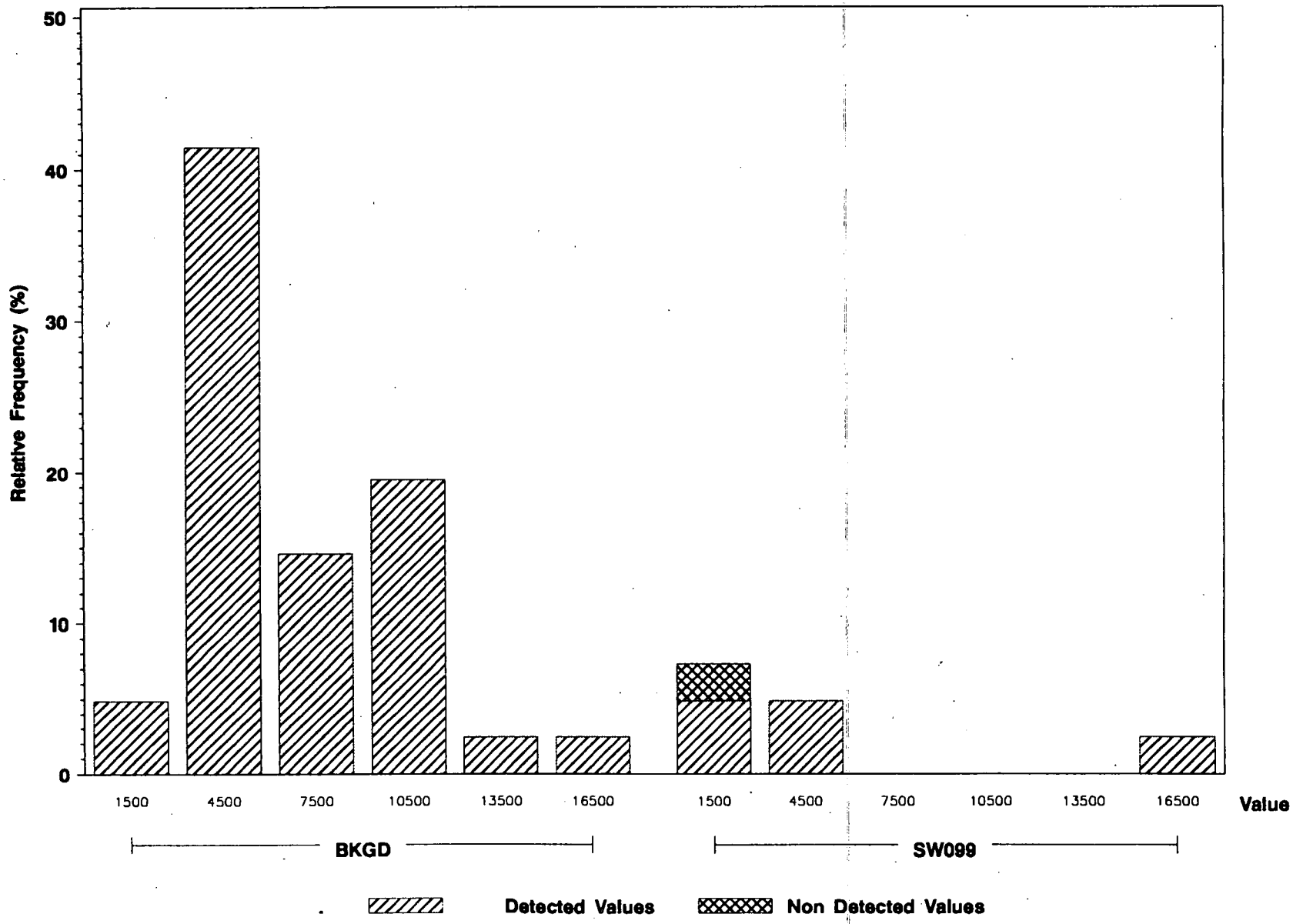
ANALYTE=CHLORIDE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total DISSOLVED ORGANIC CARBON (ug/L) in Surface Water

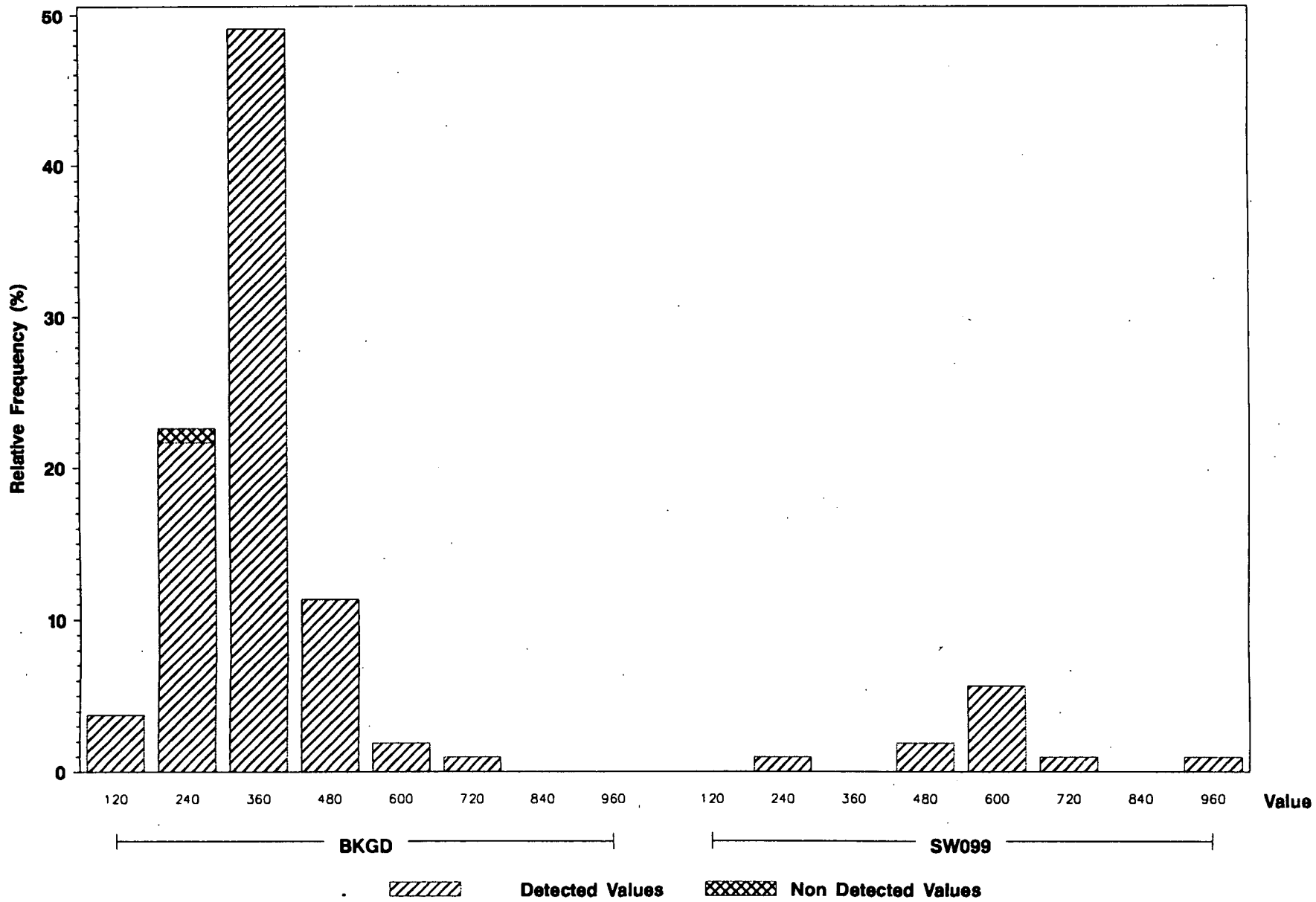
ANALYTE = DISSOLVED ORGANIC CARBON



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total FLUORIDE (ug/L) in Surface Water

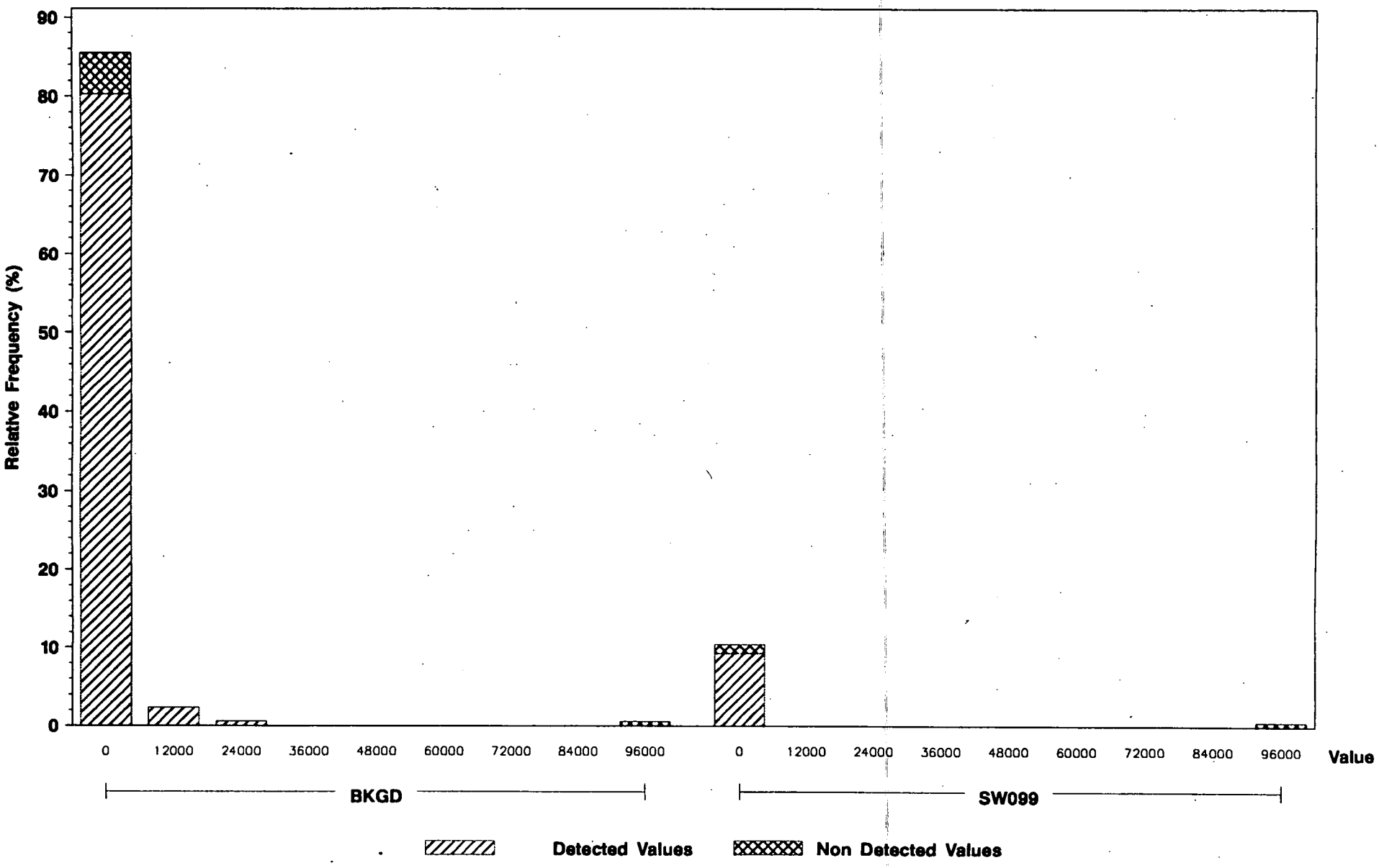
ANALYTE = FLUORIDE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total IRON (ug/L) in Surface Water

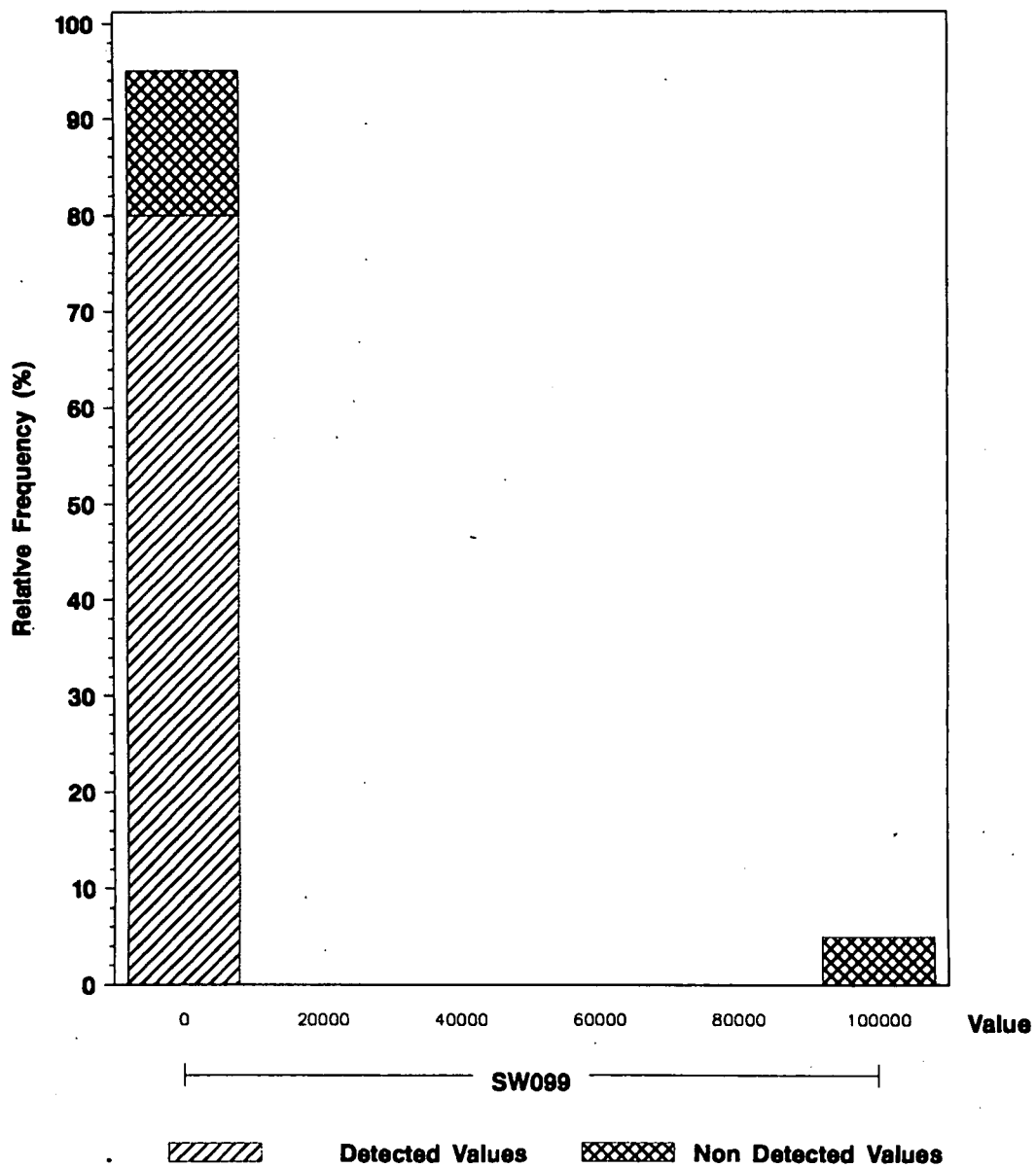
ANALYTE=IRON



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total LITHIUM (ug/L) in Surface Water

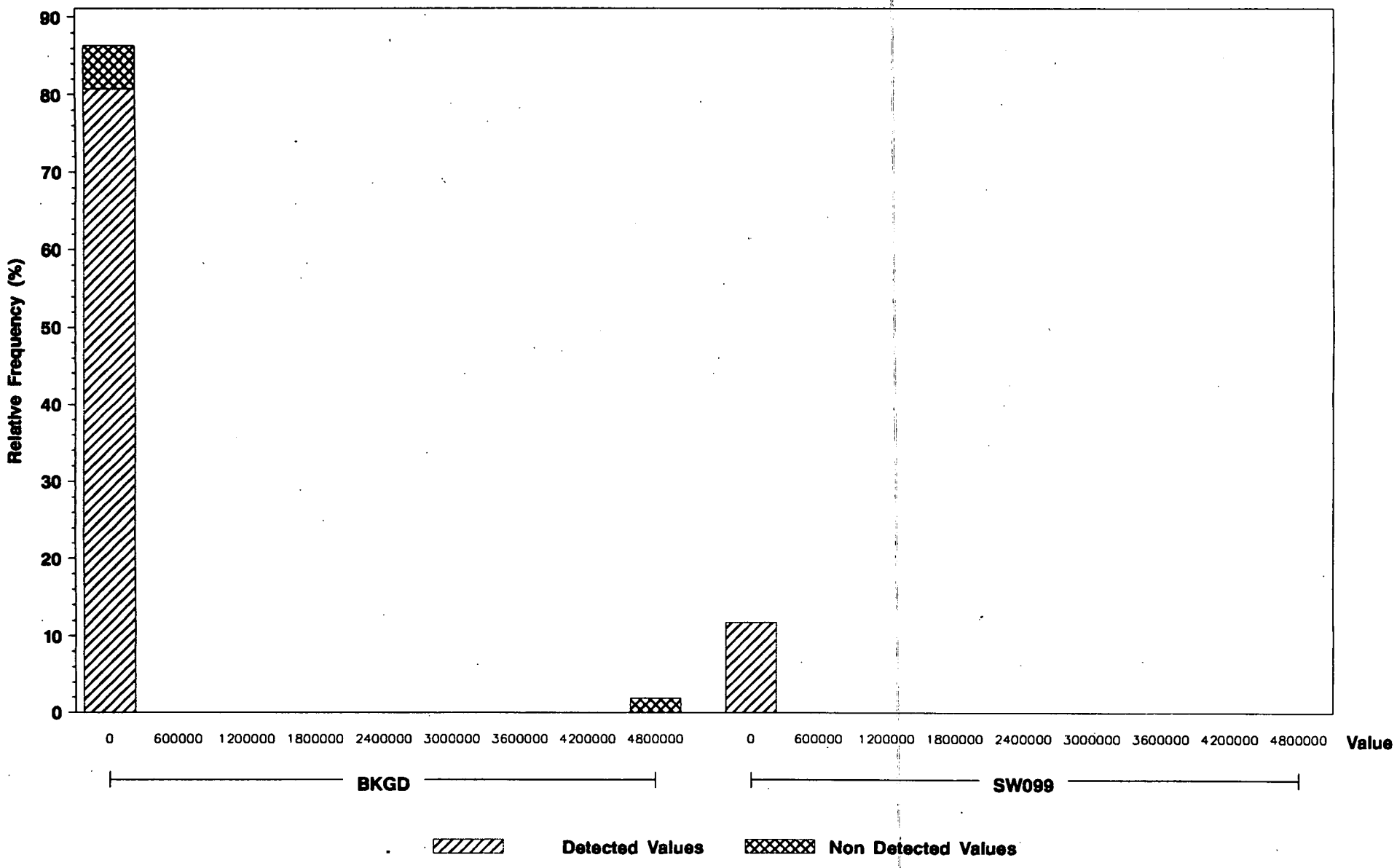
ANALYTE = LITHIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total MAGNESIUM (ug/L) in Surface Water

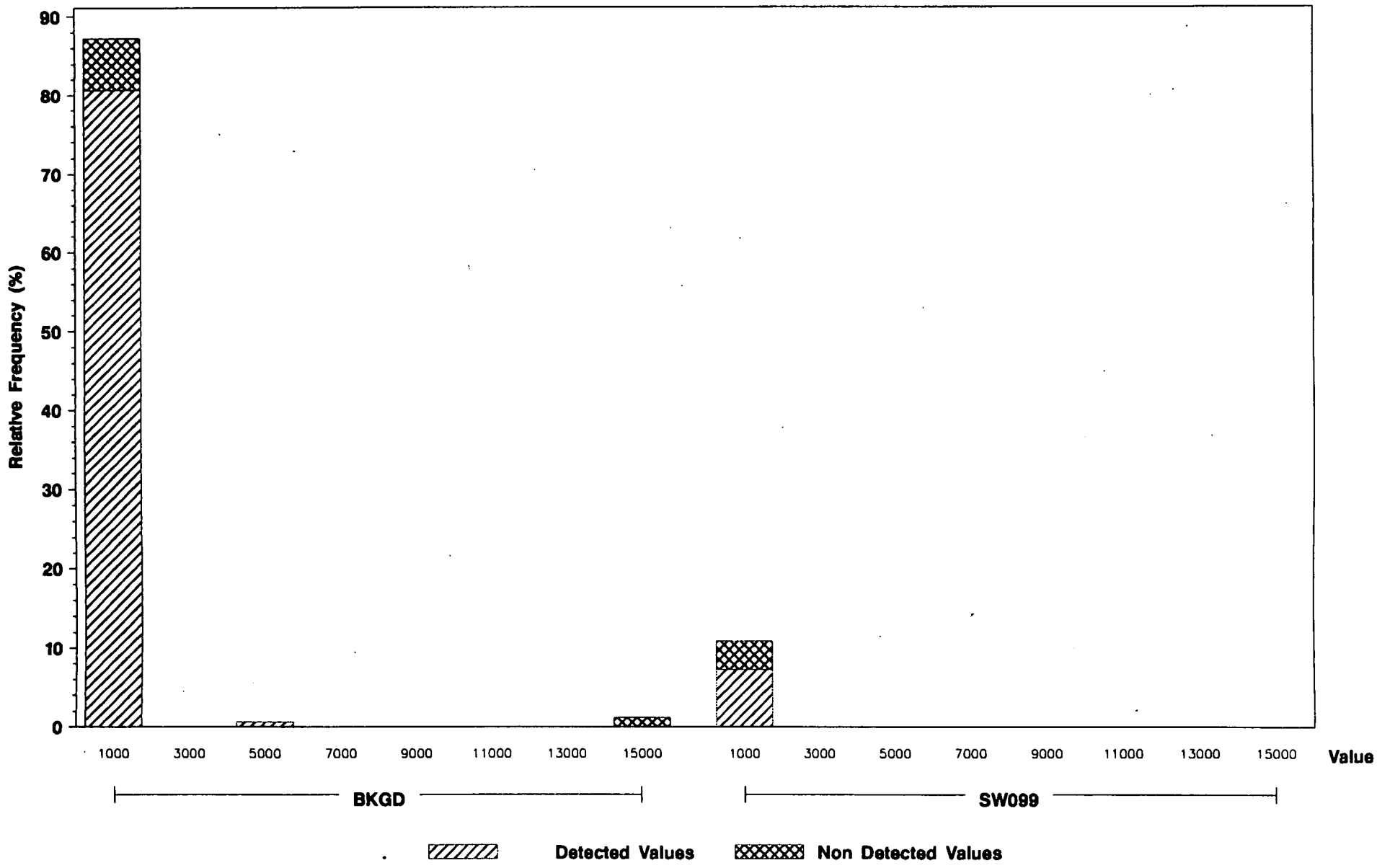
ANALYTE = MAGNESIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total MANGANESE (ug/L) in Surface Water

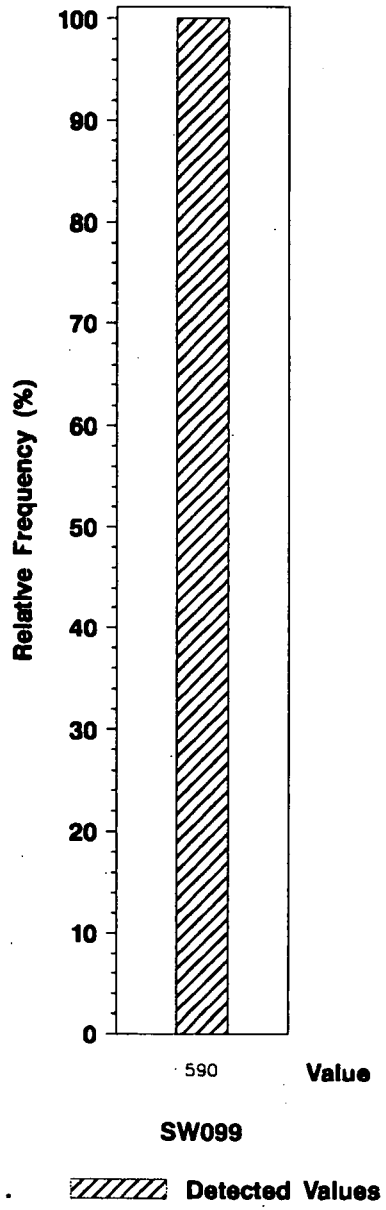
ANALYTE=MANGANESE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total NITRATE (ug/L) in Surface Water

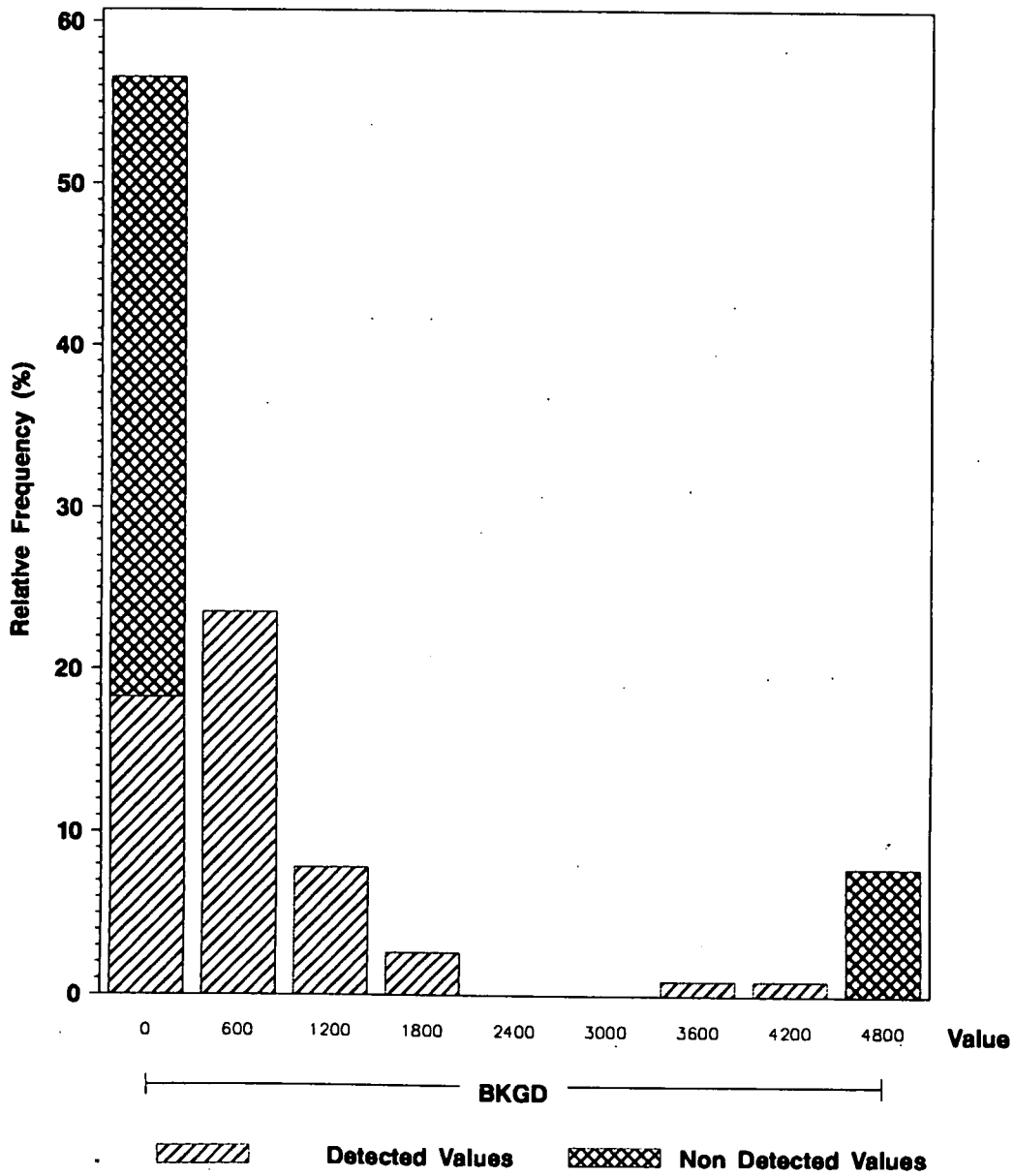
ANALYTE = NITRATE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Surface Water

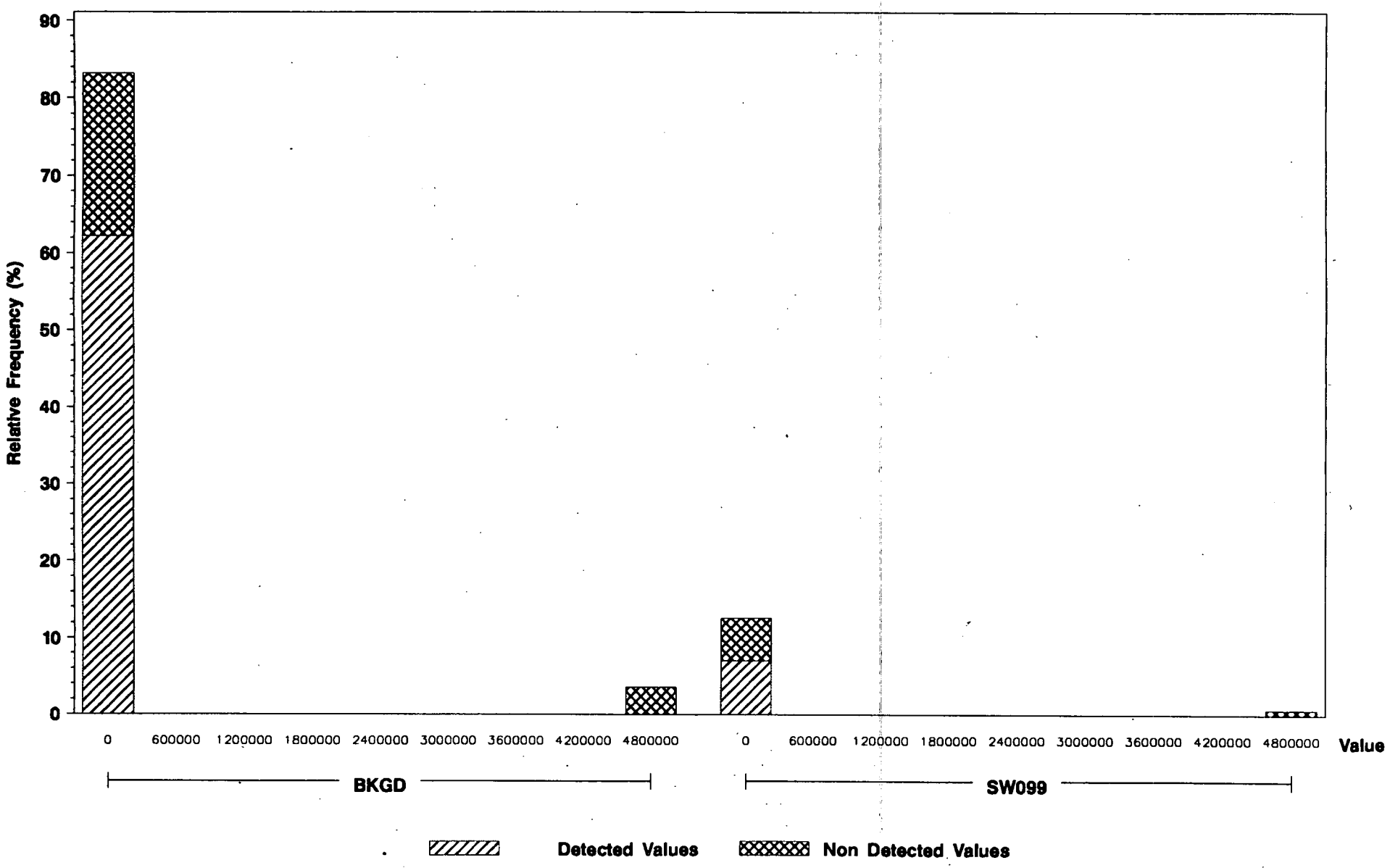
ANALYTE=NITRATE/NITRITE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total POTASSIUM (ug/L) in Surface Water

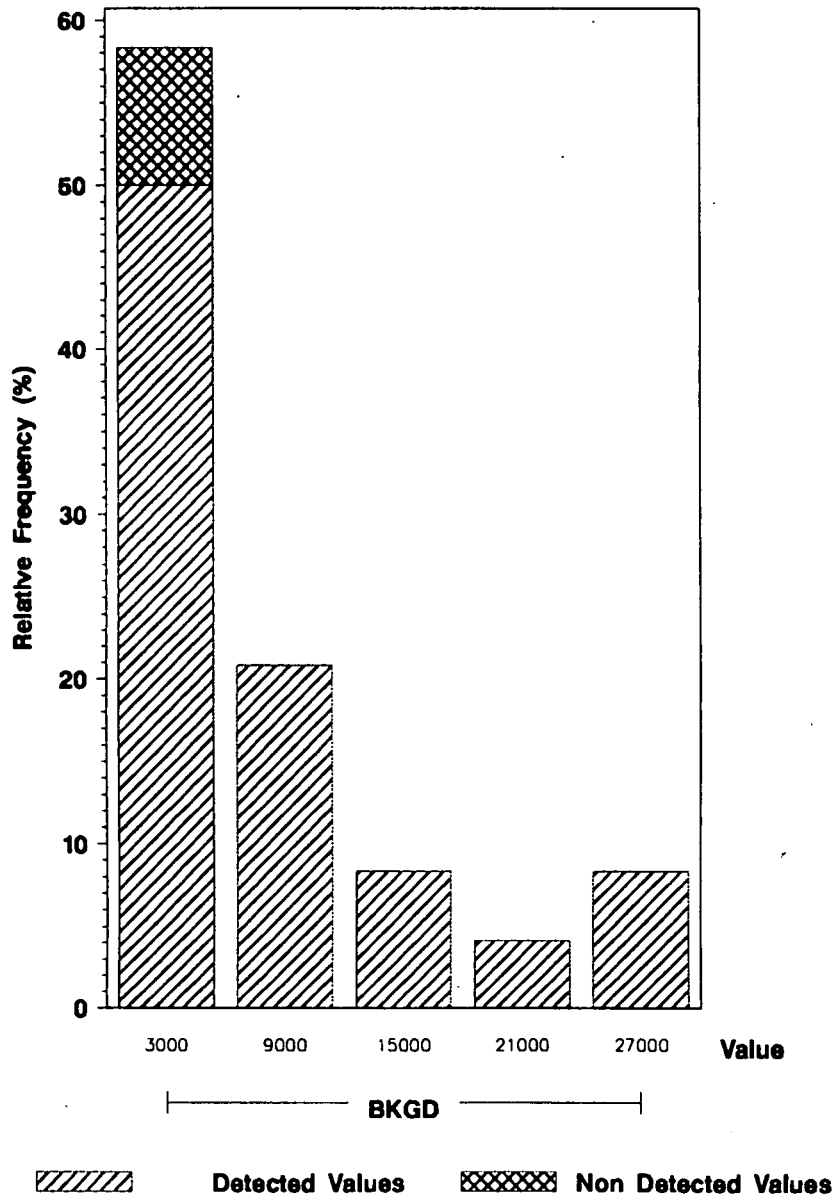
ANALYTE=POTASSIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total SILICA (ug/L) in Surface Water

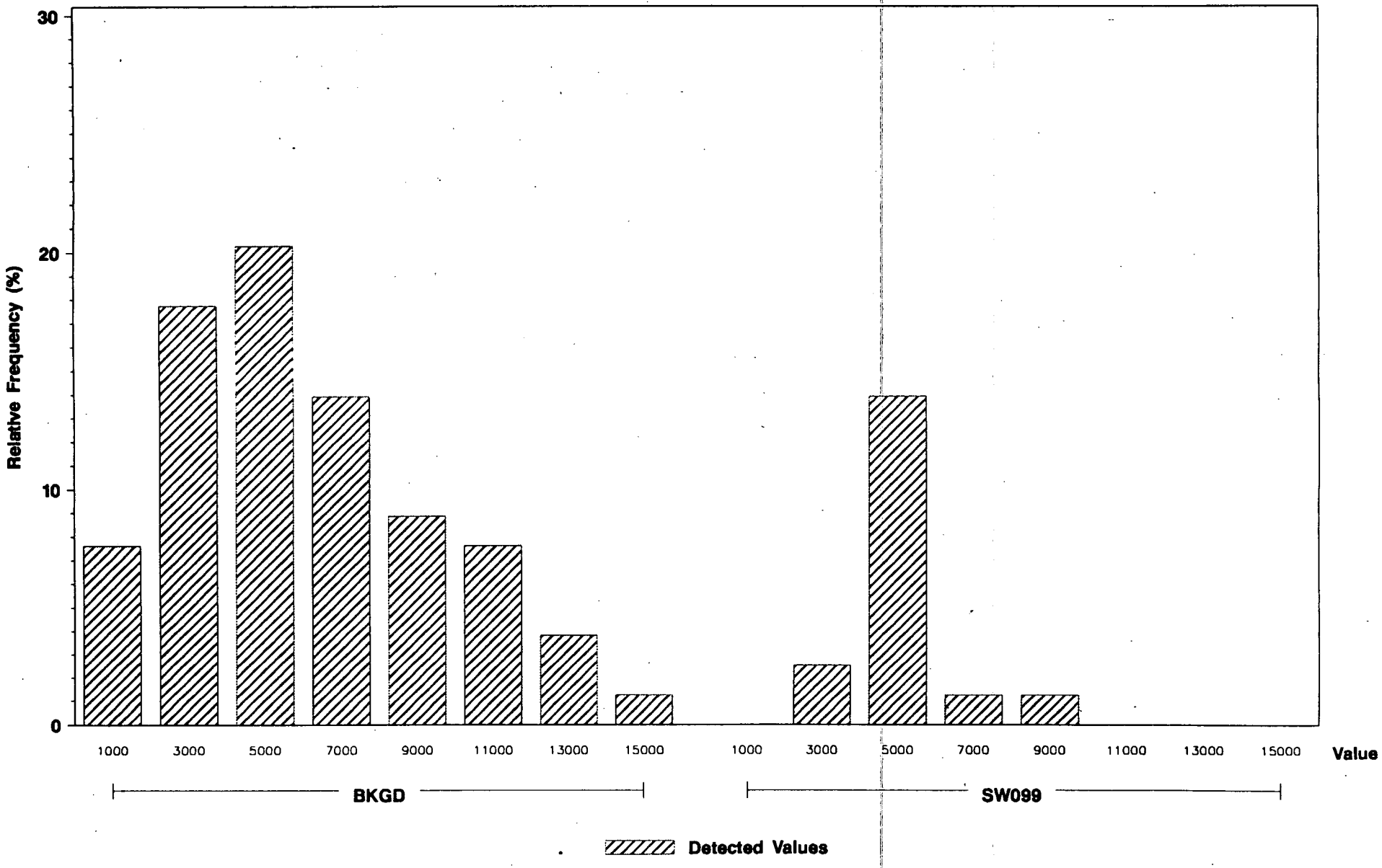
ANALYTE = SILICA



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total SILICON (ug/L) in Surface Water

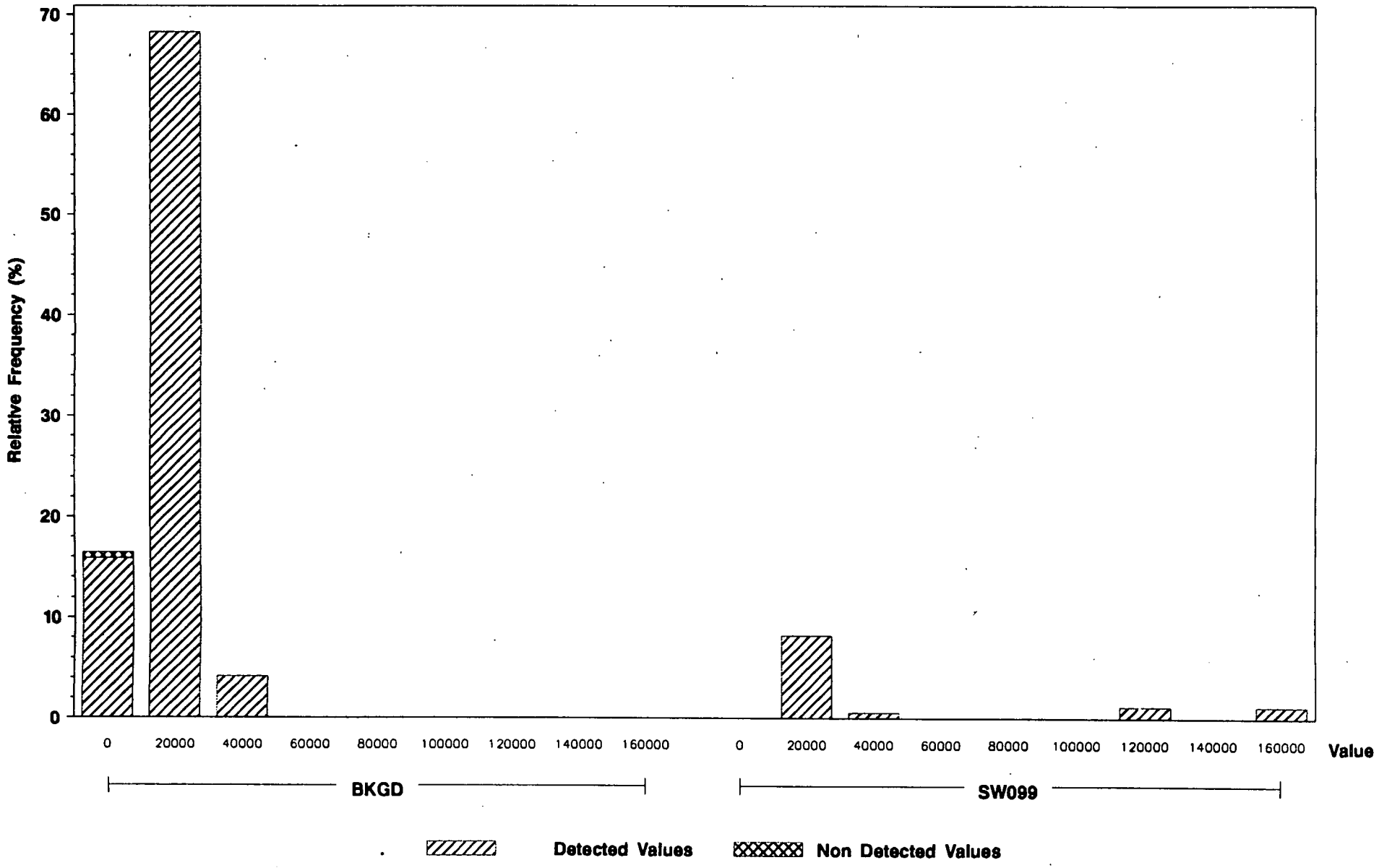
ANALYTE=SILICON



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total SODIUM (ug/L) in Surface Water

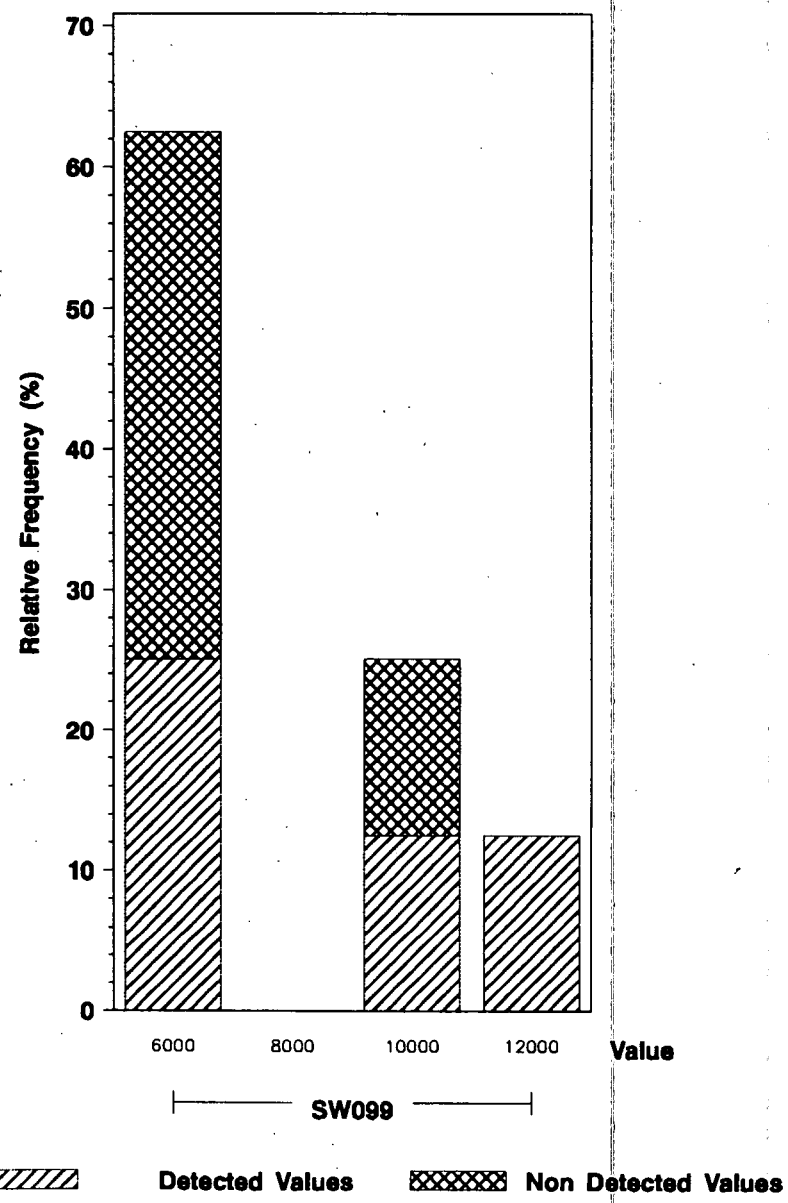
ANALYTE=SODIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total SOLIDS, NONVOLATILE SUSPENDED (ug/L) in Surface Water

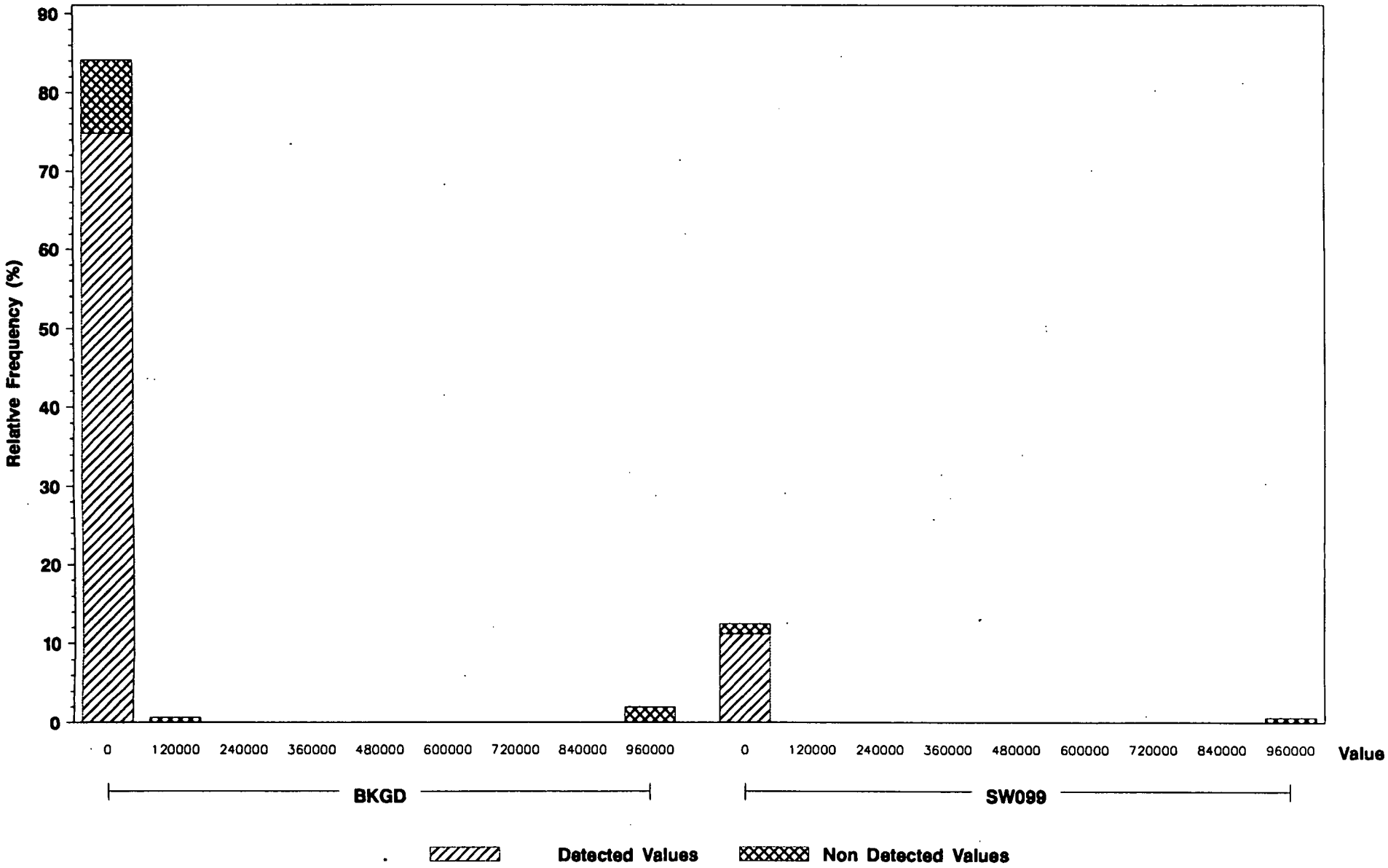
ANALYTE = SOLIDS, NONVOLATILE SUSPENDED



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total STRONTIUM (ug/L) in Surface Water

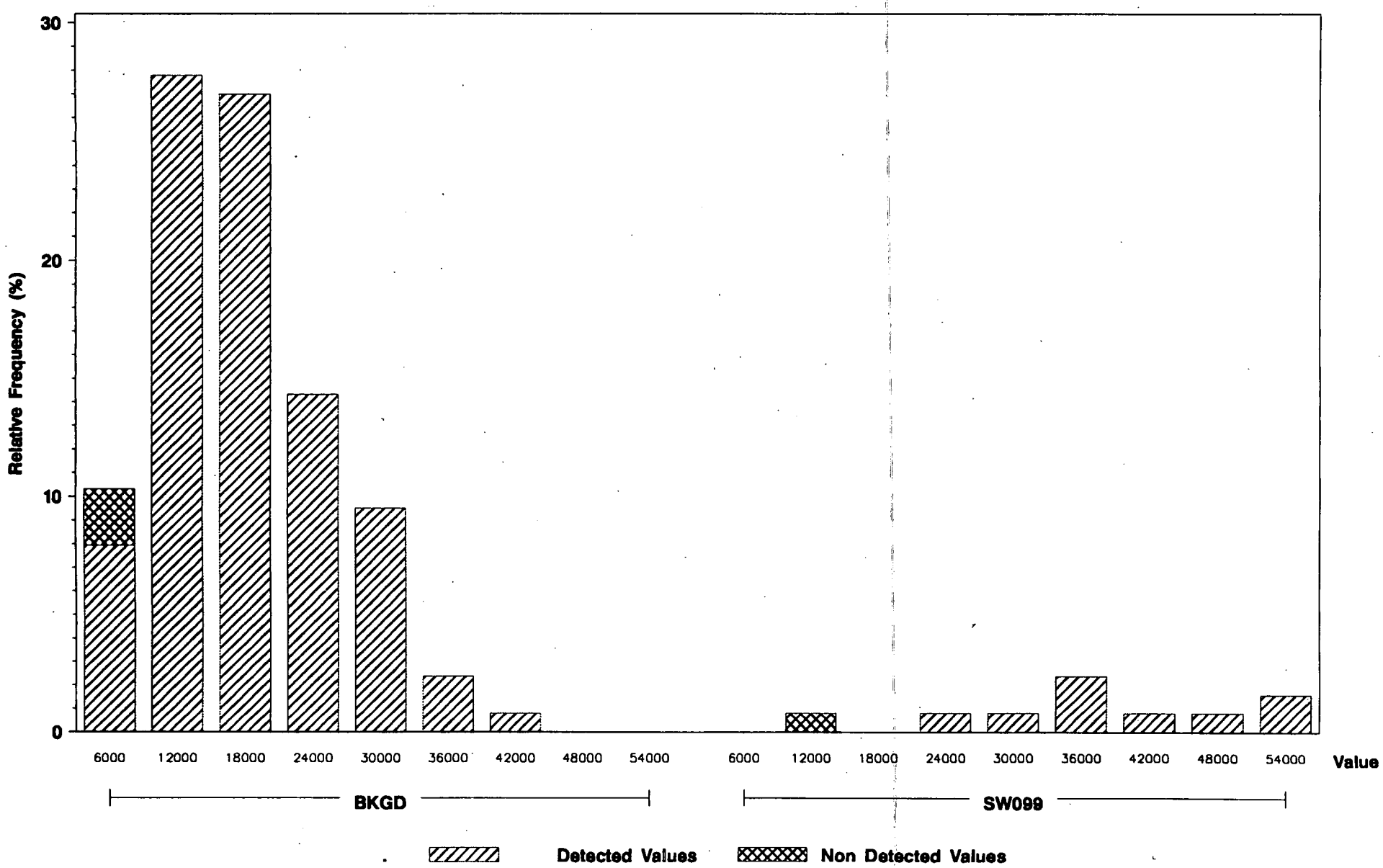
ANALYTE = STRONTIUM



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total SULFATE (ug/L) in Surface Water

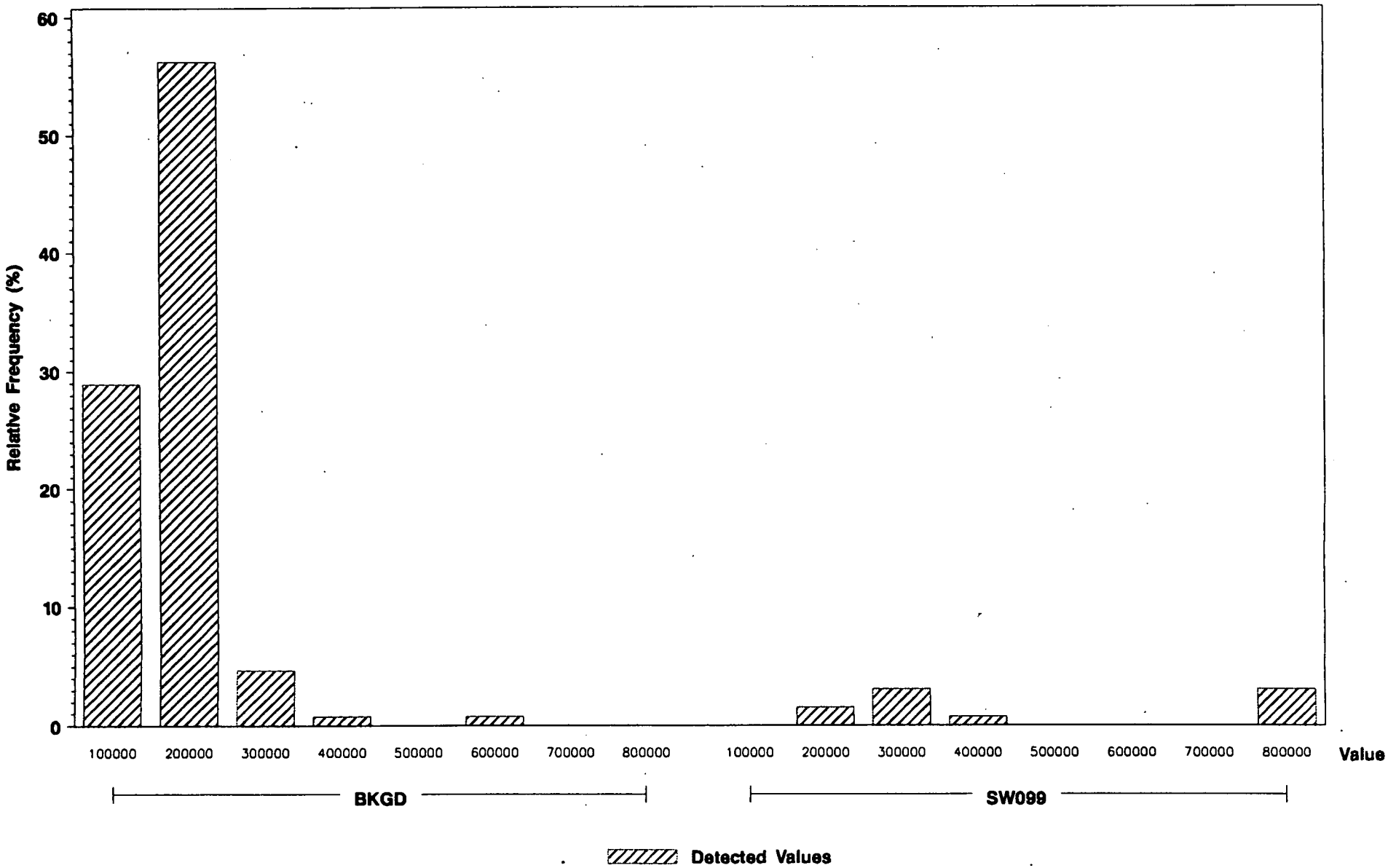
ANALYTE = SULFATE



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total TOTAL DISSOLVED SOLIDS (ug/L) in Surface Water

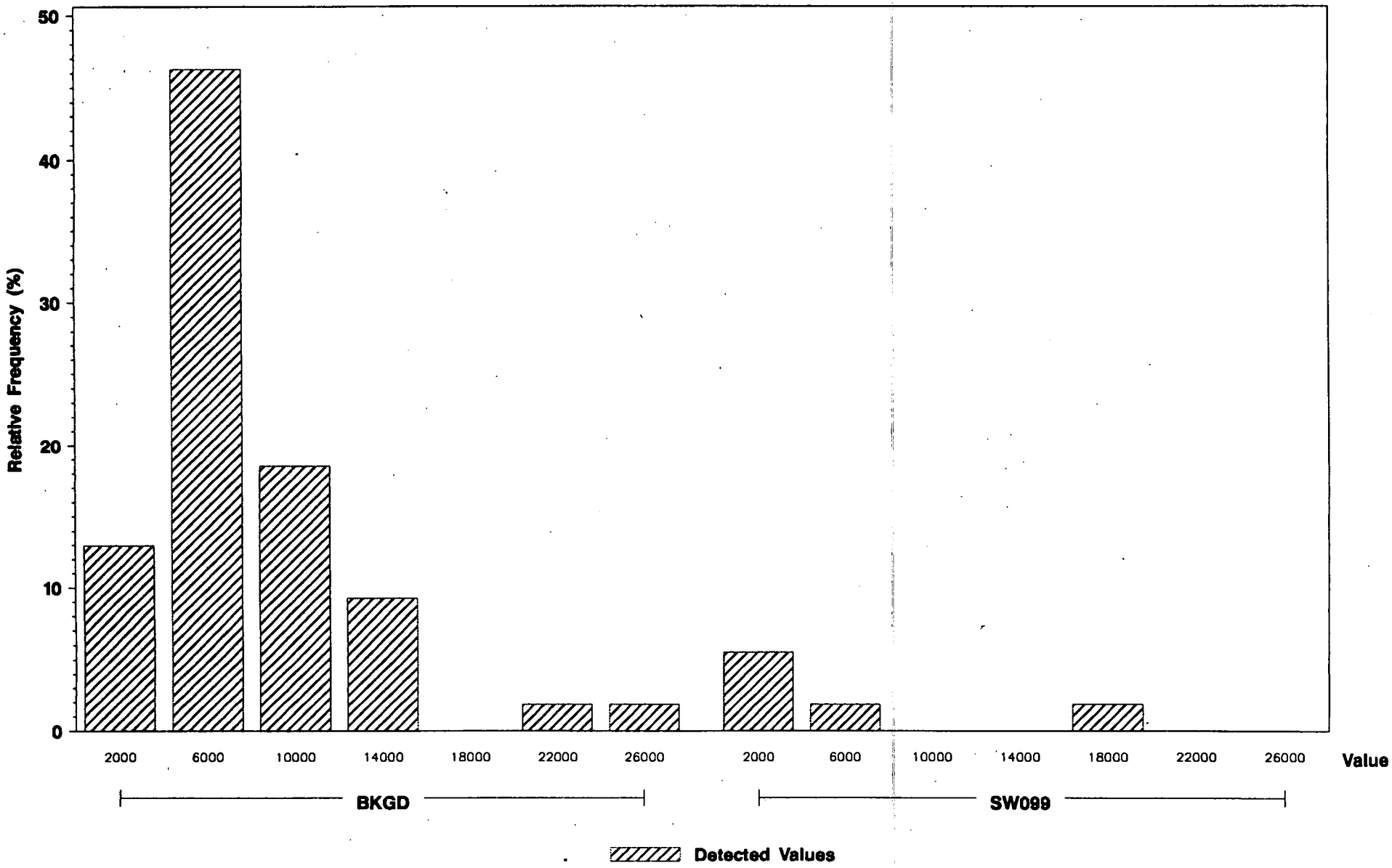
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total TOTAL ORGANIC CARBON (ug/L) in Surface Water

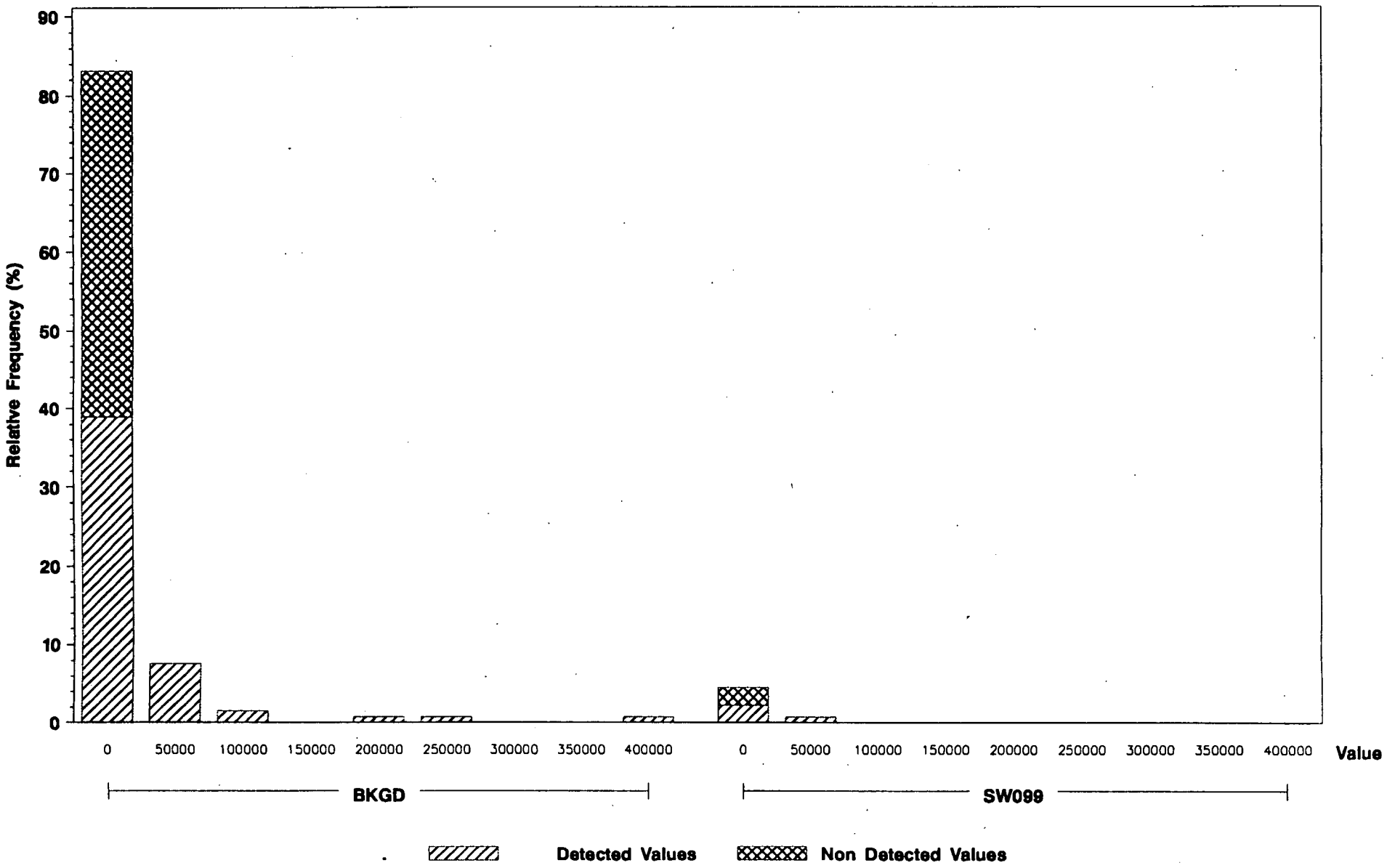
ANALYTE=TOTAL ORGANIC CARBON



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total TOTAL SUSPENDED SOLIDS (ug/L) in Surface Water

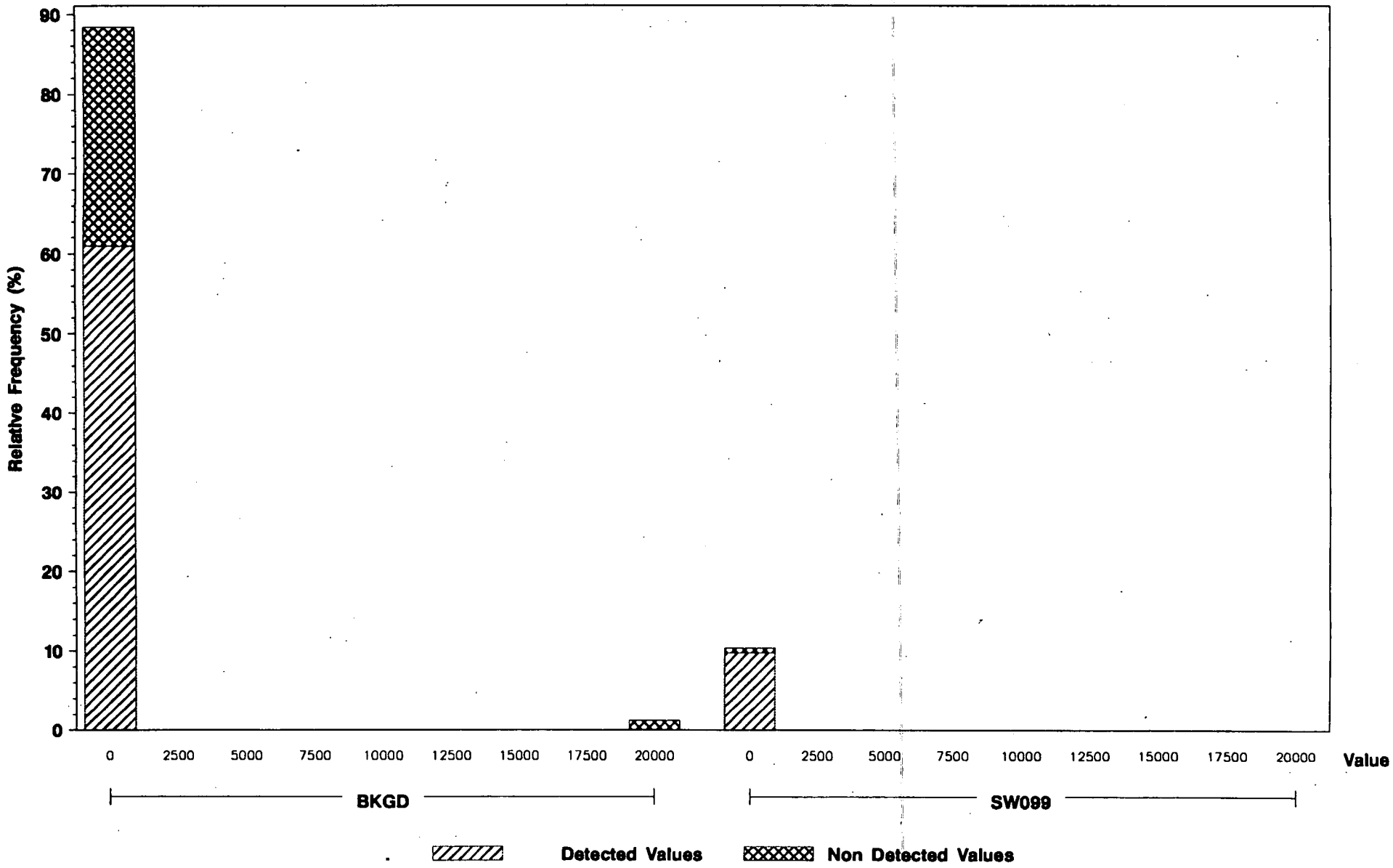
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total ZINC (ug/L) in Surface Water

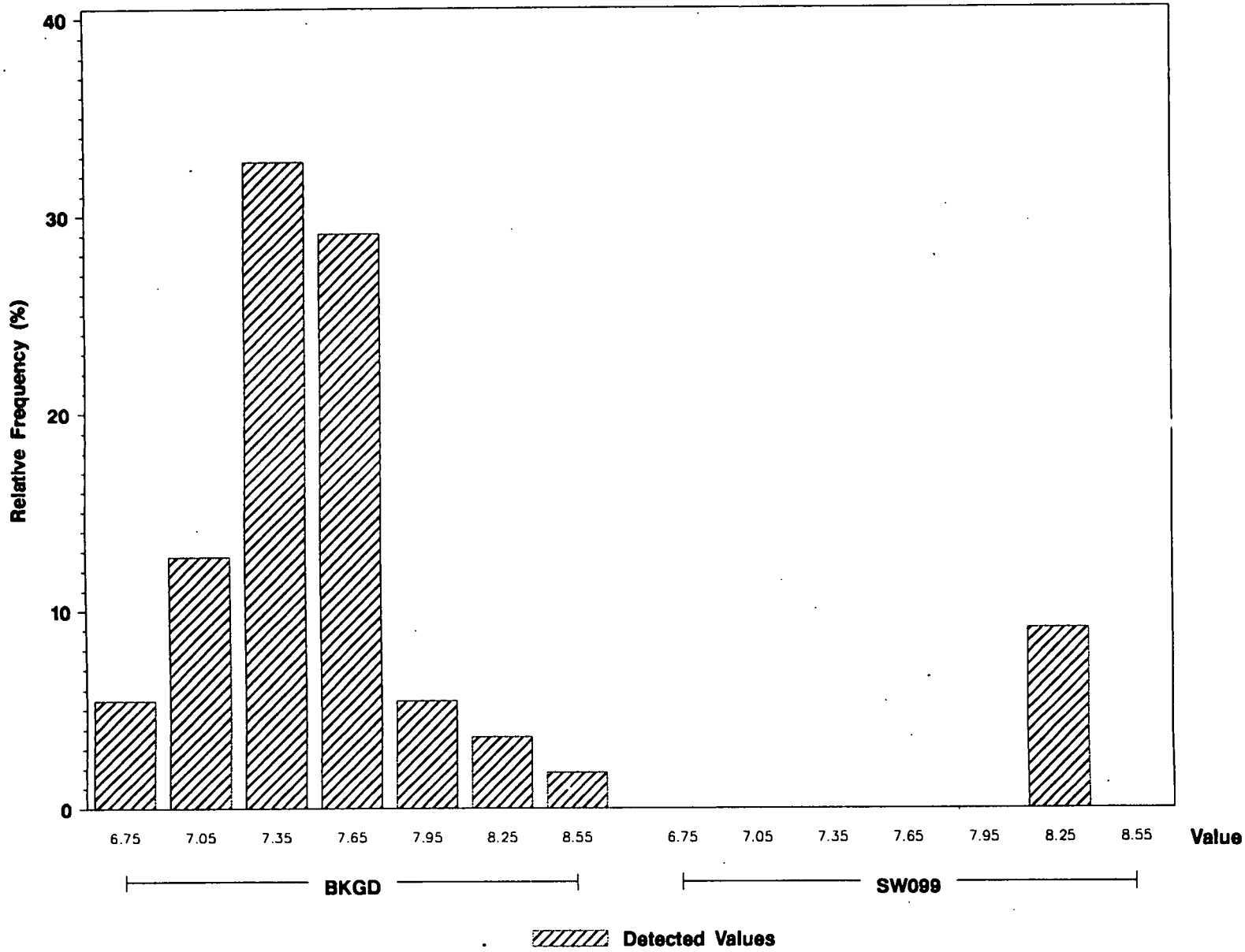
ANALYTE=ZINC



# Background vs OU7 Surface Water (SW099) Frequency Histogram

## Total pH (pCi/L) in Surface Water

ANALYTE = pH



# Surface Water

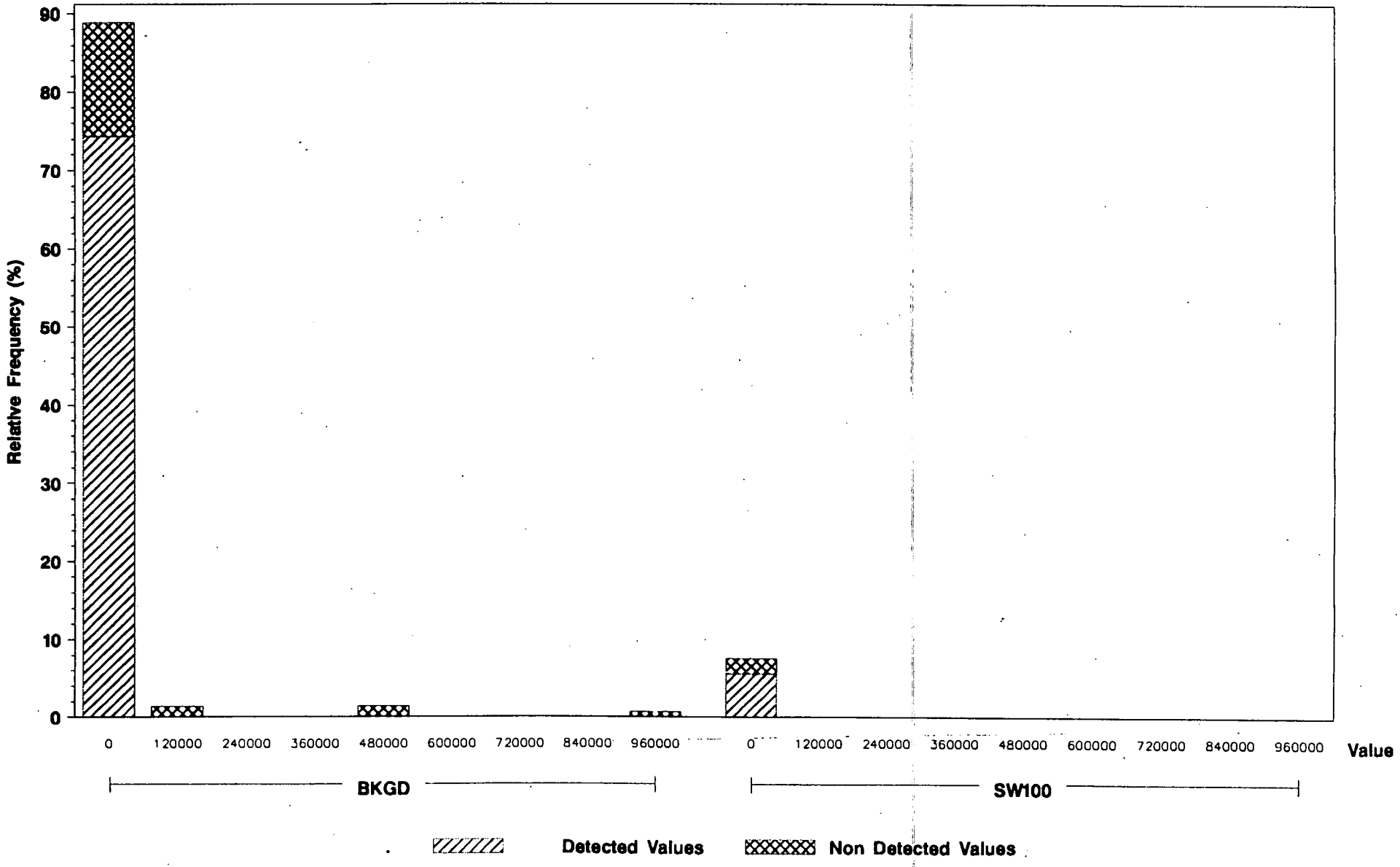
# (Dissolved)

# Background vs. OU 7 (SW100)

# Background vs OU7 Surface Water Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Surface Water

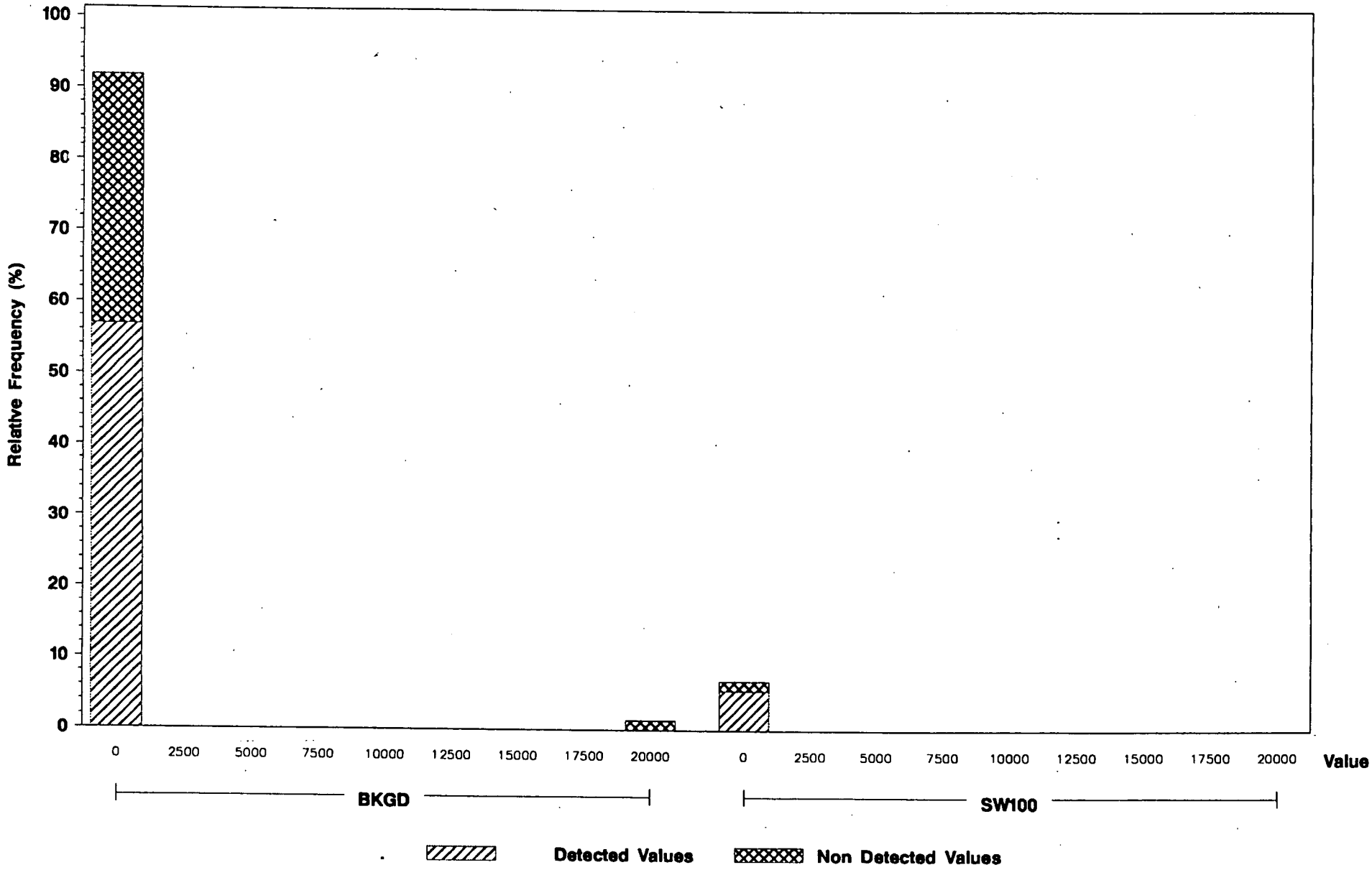
ANALYTE = STRONTIUM



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved ZINC (ug/L) in Surface Water

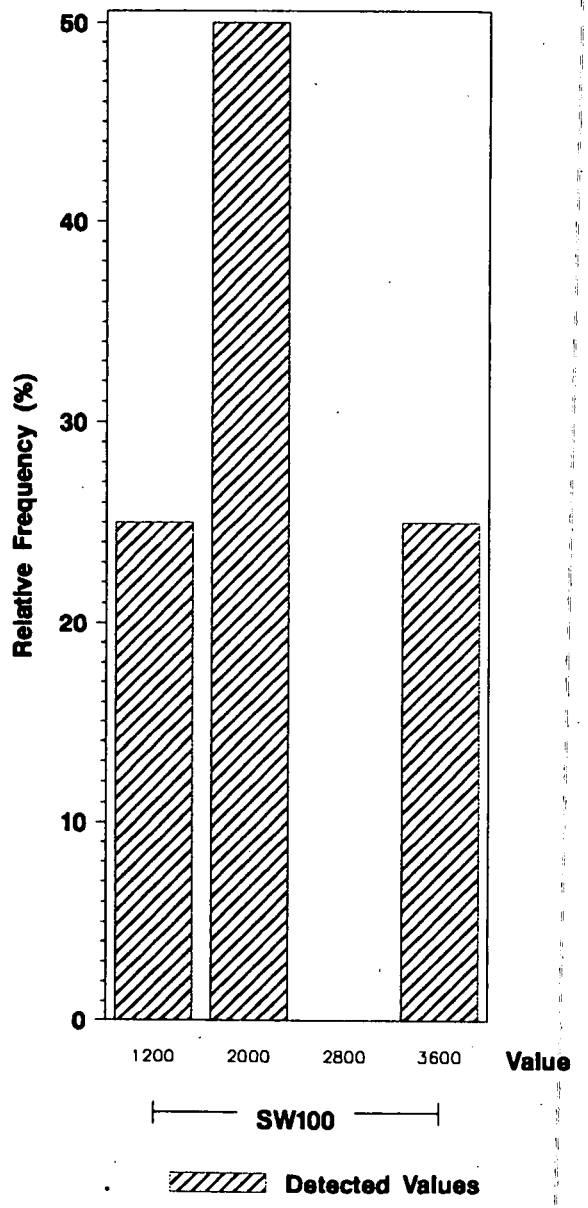
ANALYTE=ZINC



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved SILICON (ug/L) in Surface Water

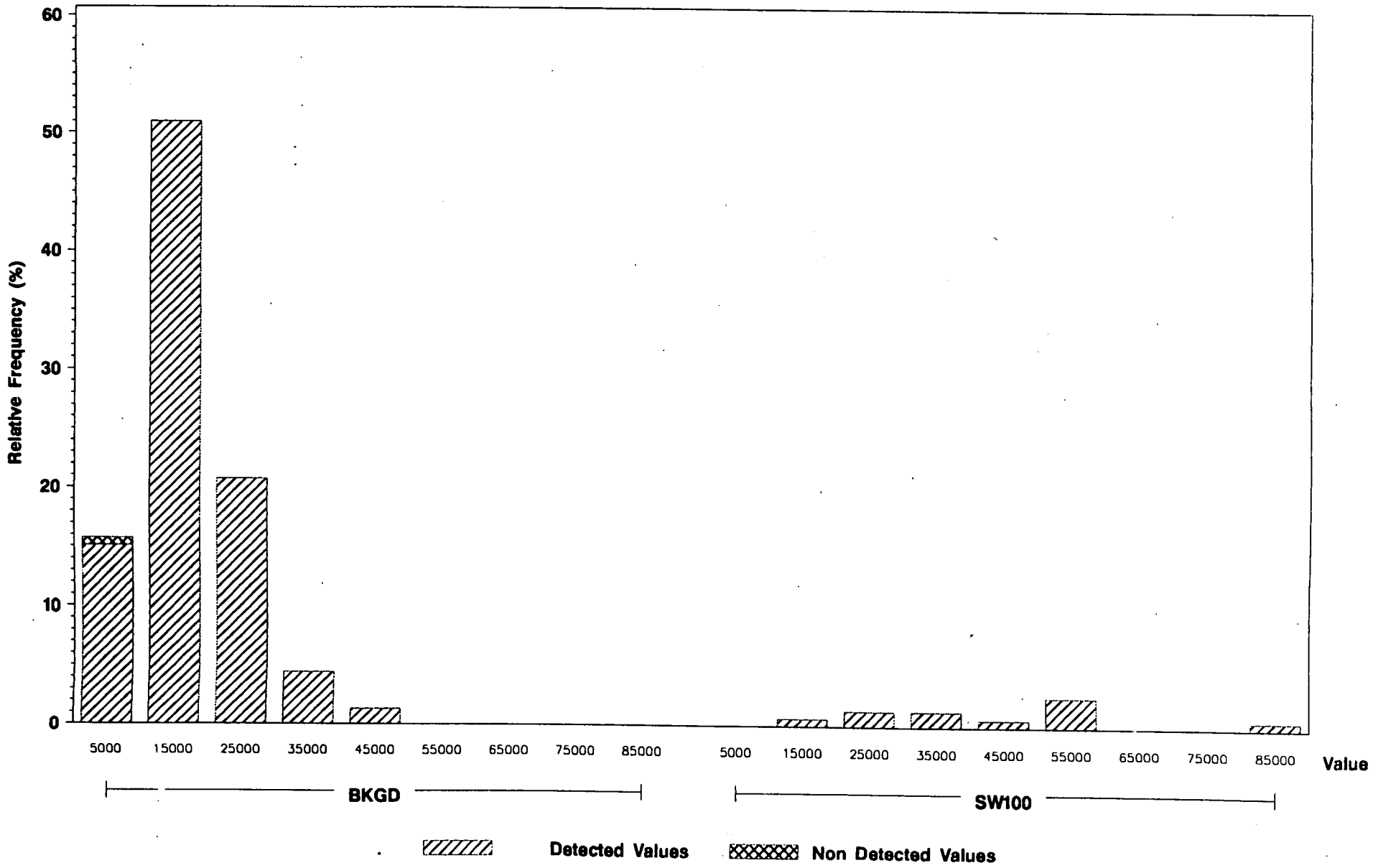
ANALYTE=SILICON



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved SODIUM (ug/L) in Surface Water

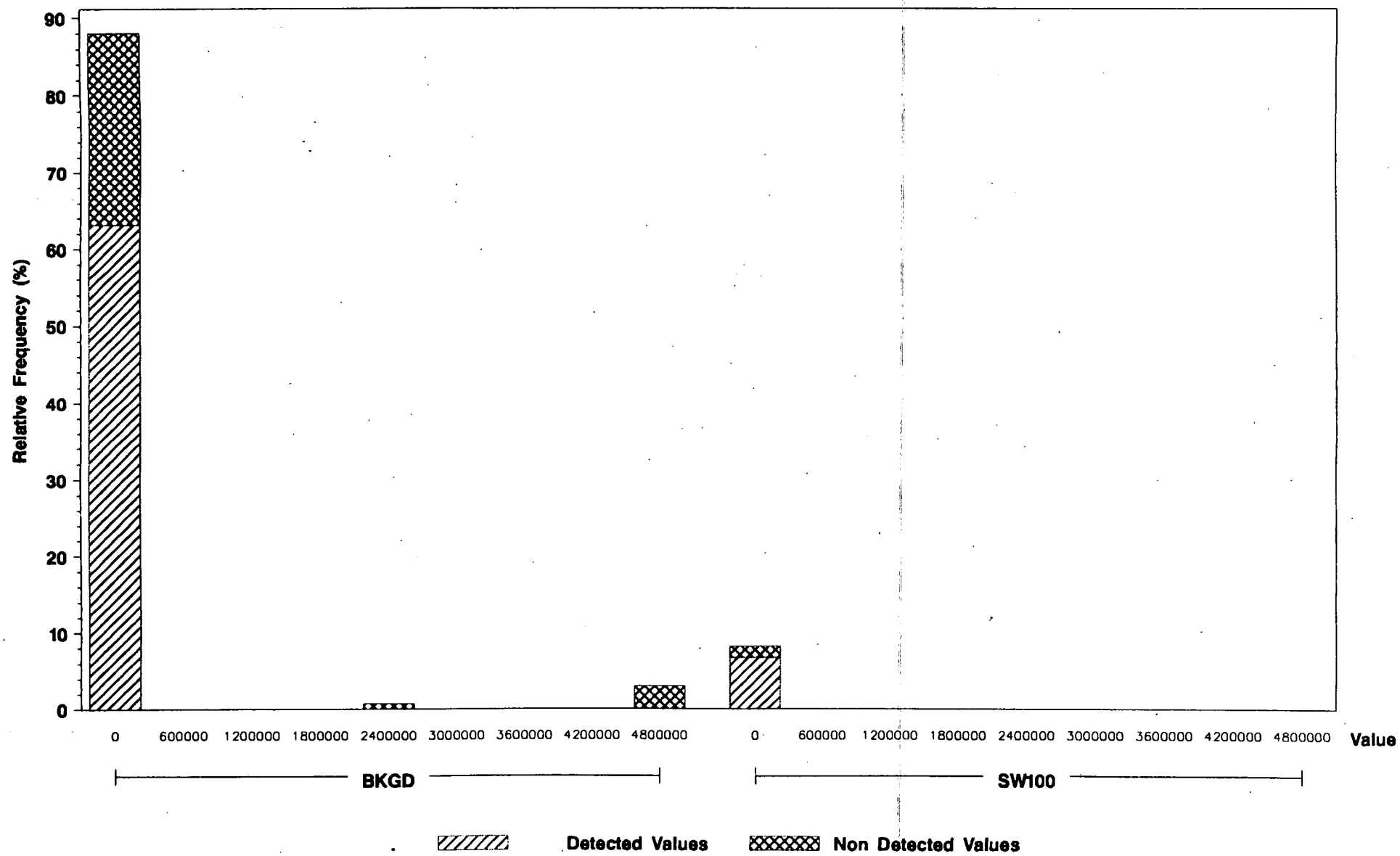
ANALYTE = SODIUM



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Surface Water

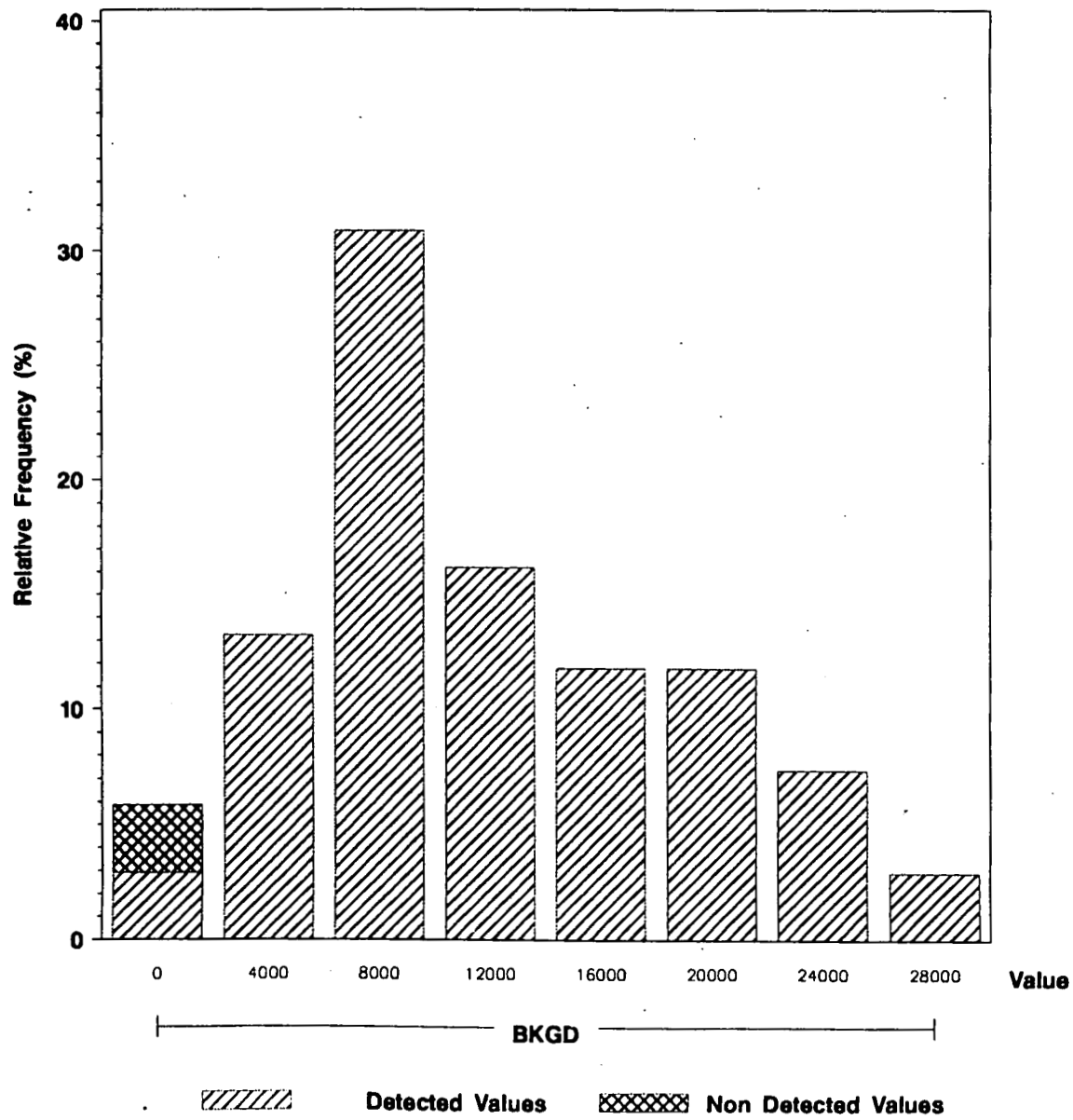
ANALYTE = POTASSIUM



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved SILICA (ug/L) in Surface Water

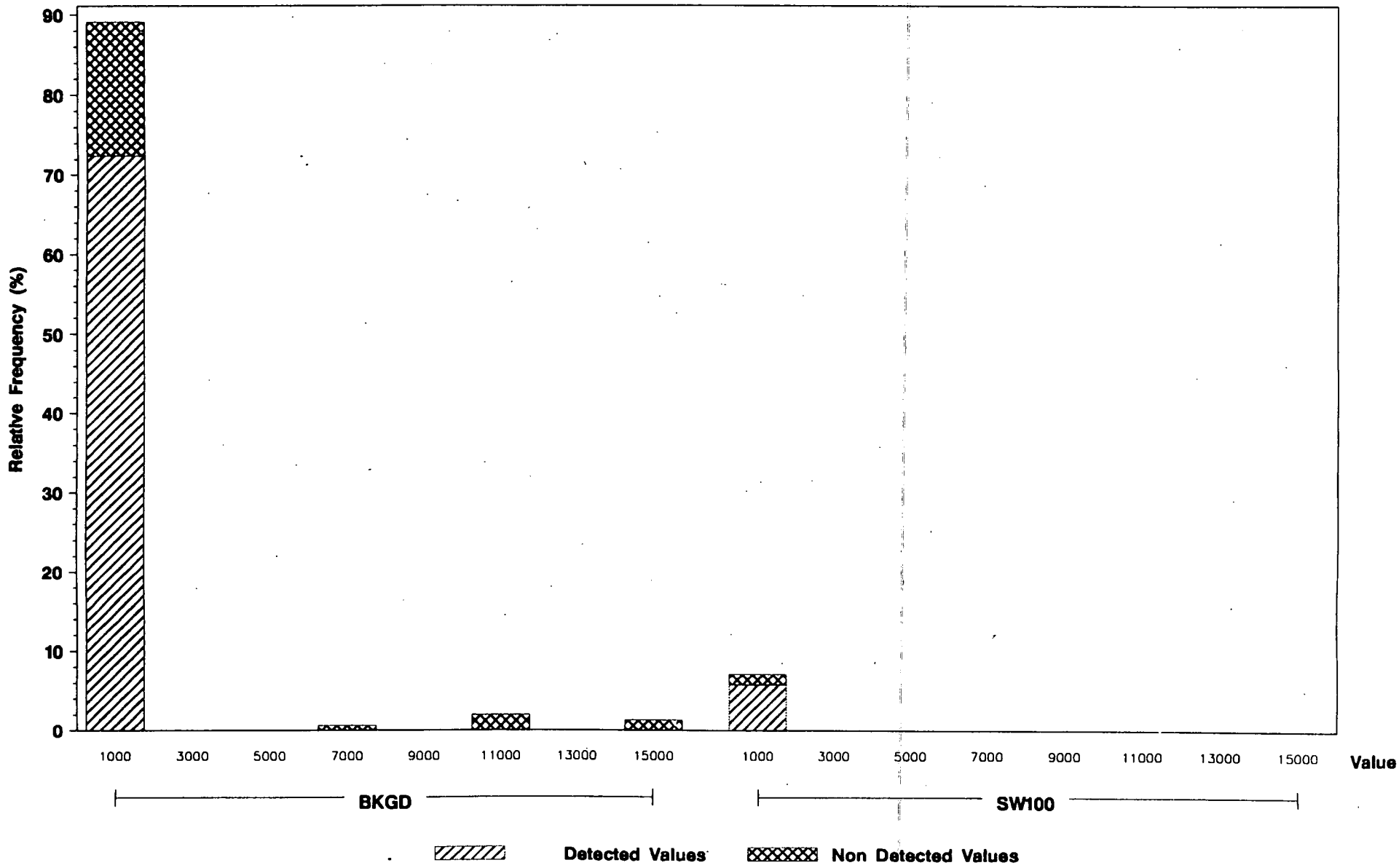
ANALYTE = SILICA



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved MANGANESE (ug/L) in Surface Water

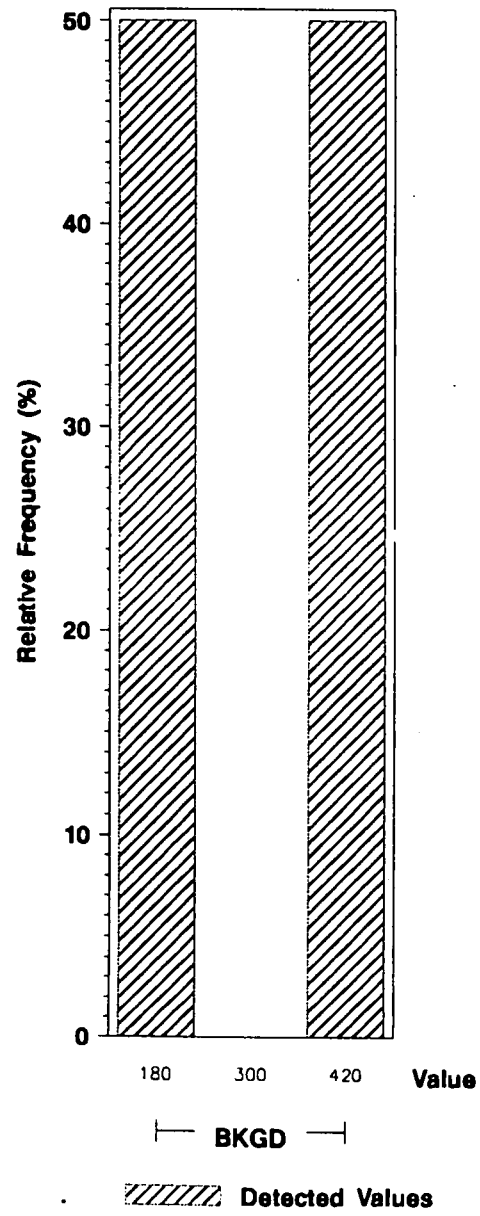
ANALYTE=MANGANESE



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved PHOSPHORUS (ug/L) in Surface Water

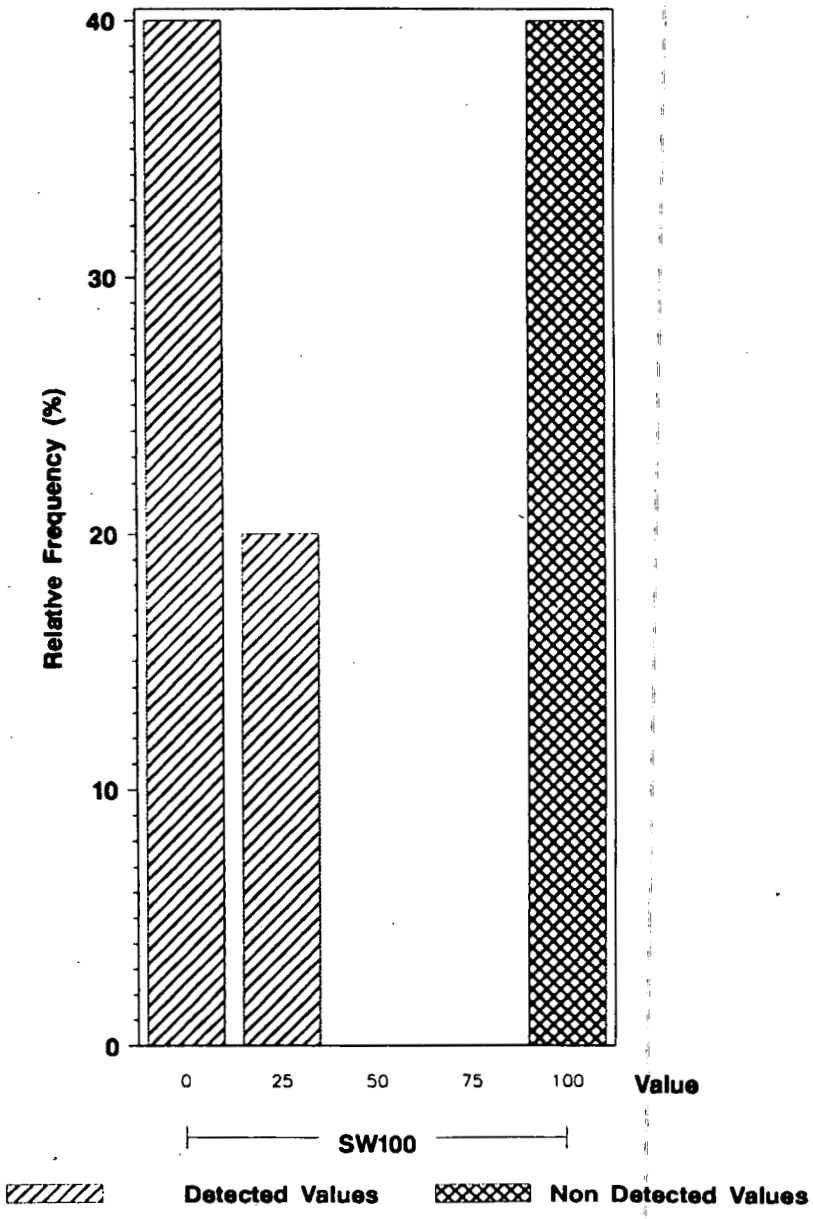
ANALYTE = PHOSPHORUS



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved LITHIUM (ug/L) in Surface Water

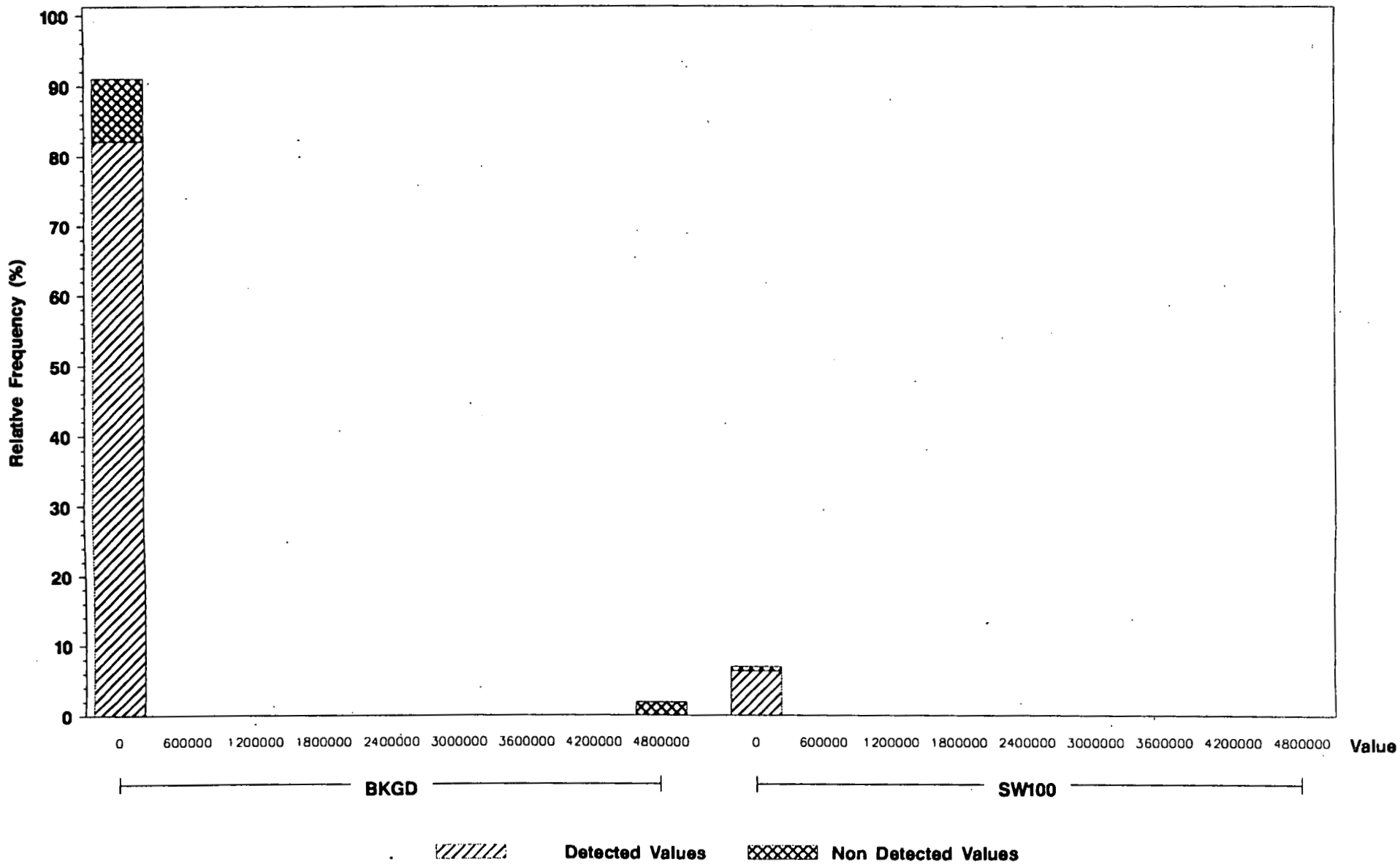
ANALYTE = LITHIUM



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Surface Water

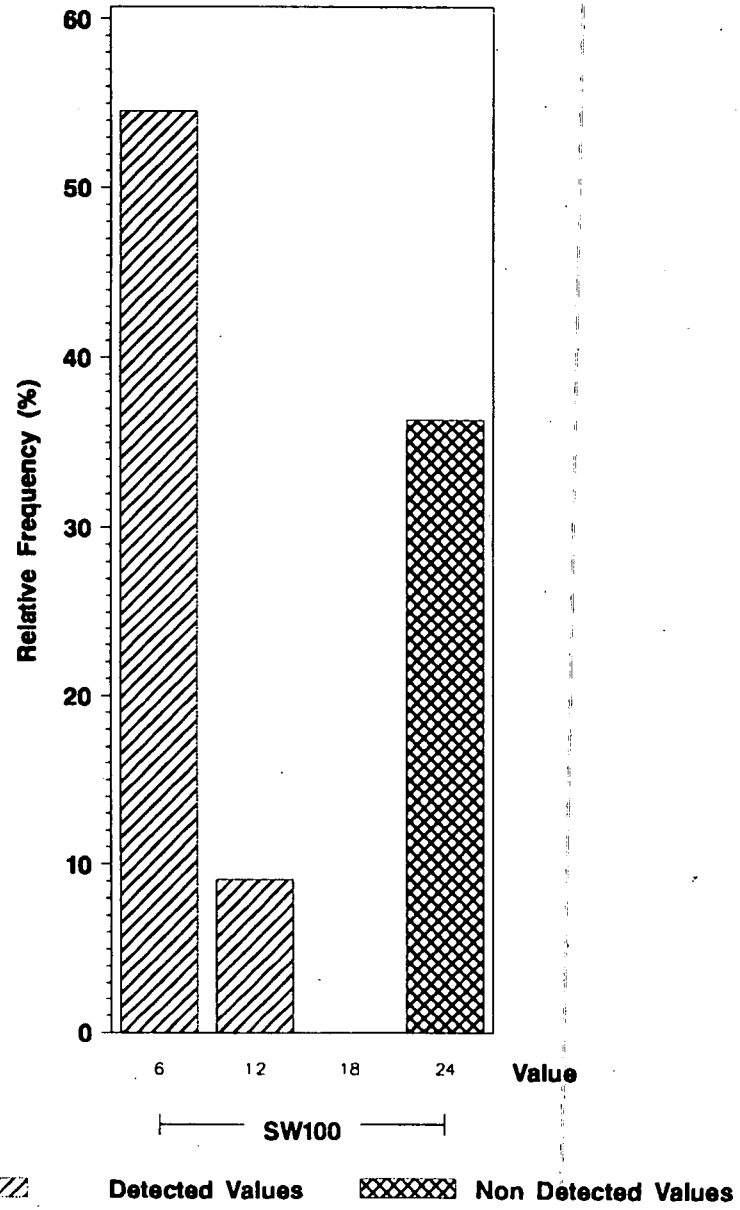
ANALYTE = MAGNESIUM



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved COPPER (ug/L) in Surface Water

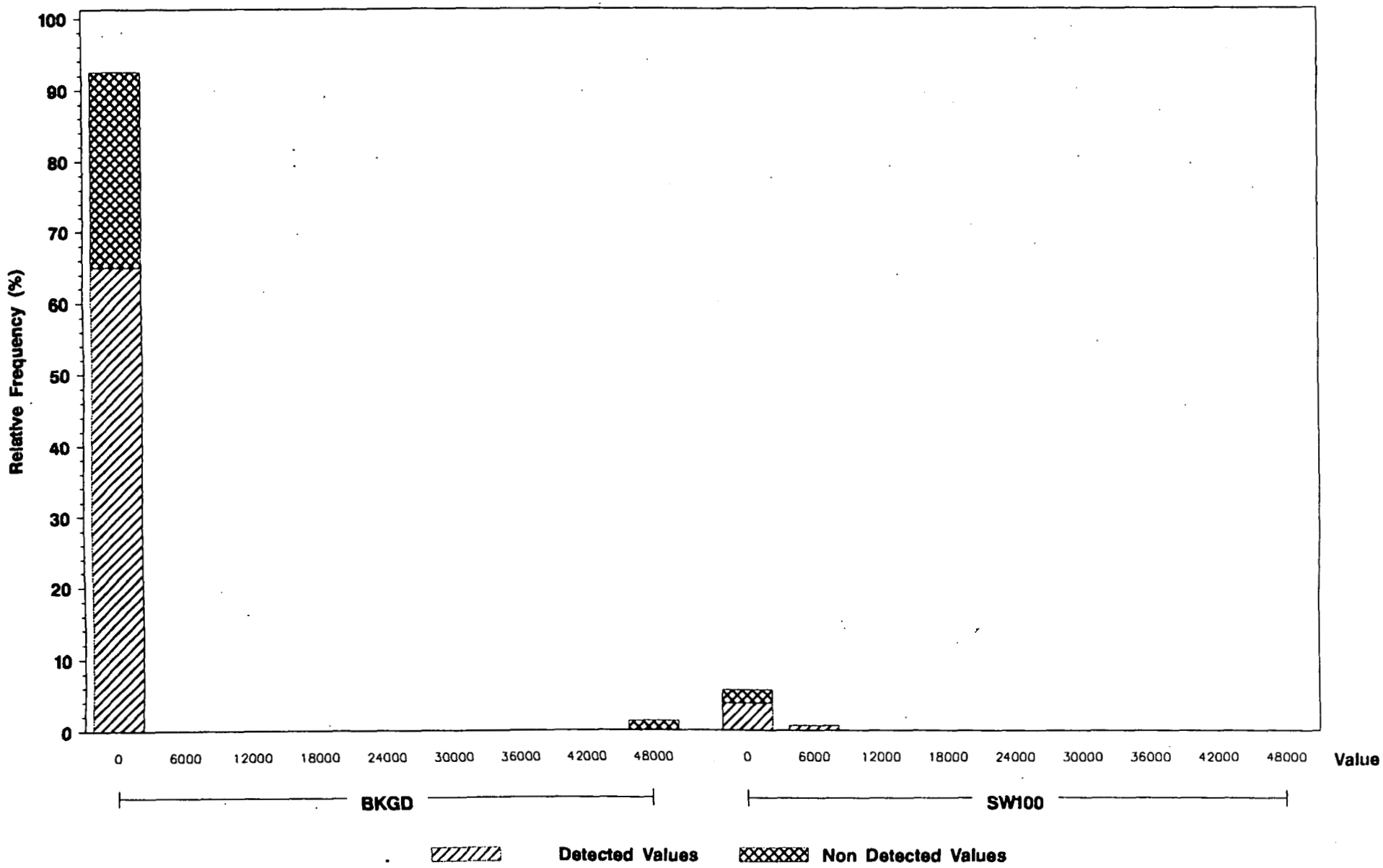
ANALYTE = COPPER



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved IRON (ug/L) in Surface Water

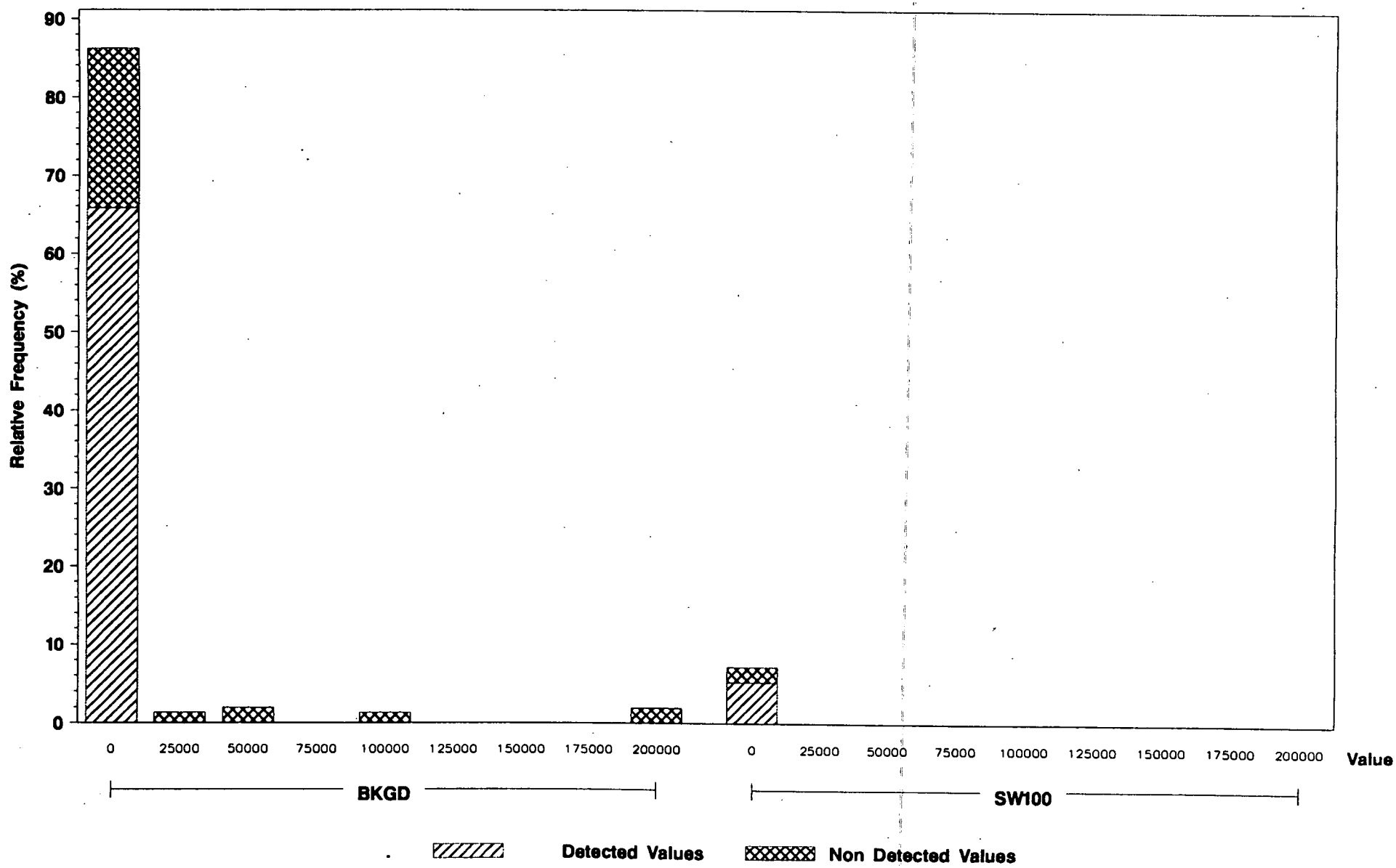
ANALYTE=IRON



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved BARIUM (ug/L) in Surface Water

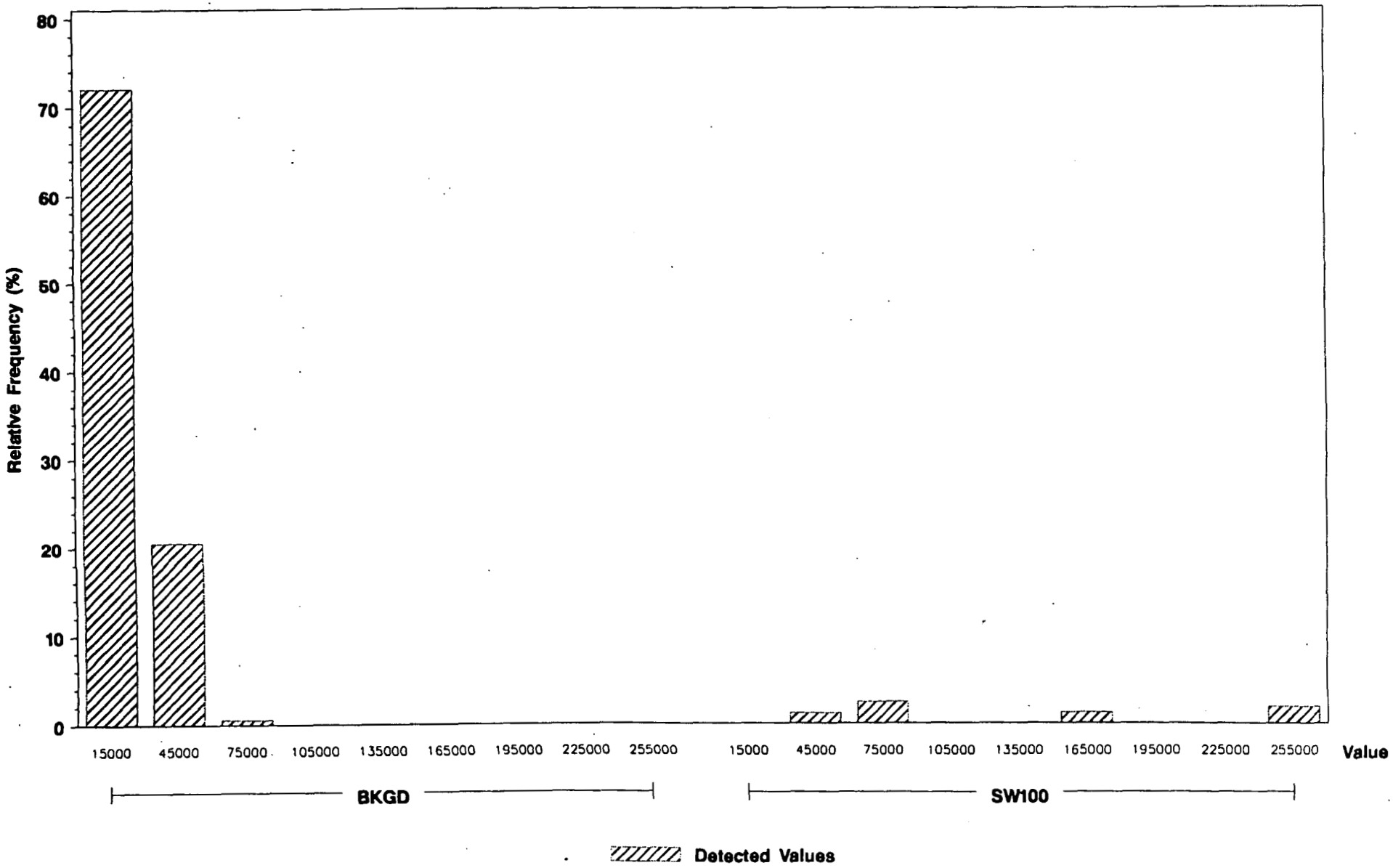
ANALYTE = BARIUM



# Background vs OU7 Surface Water Frequency Histogram

## Dissolved CALCIUM (ug/L) in Surface Water

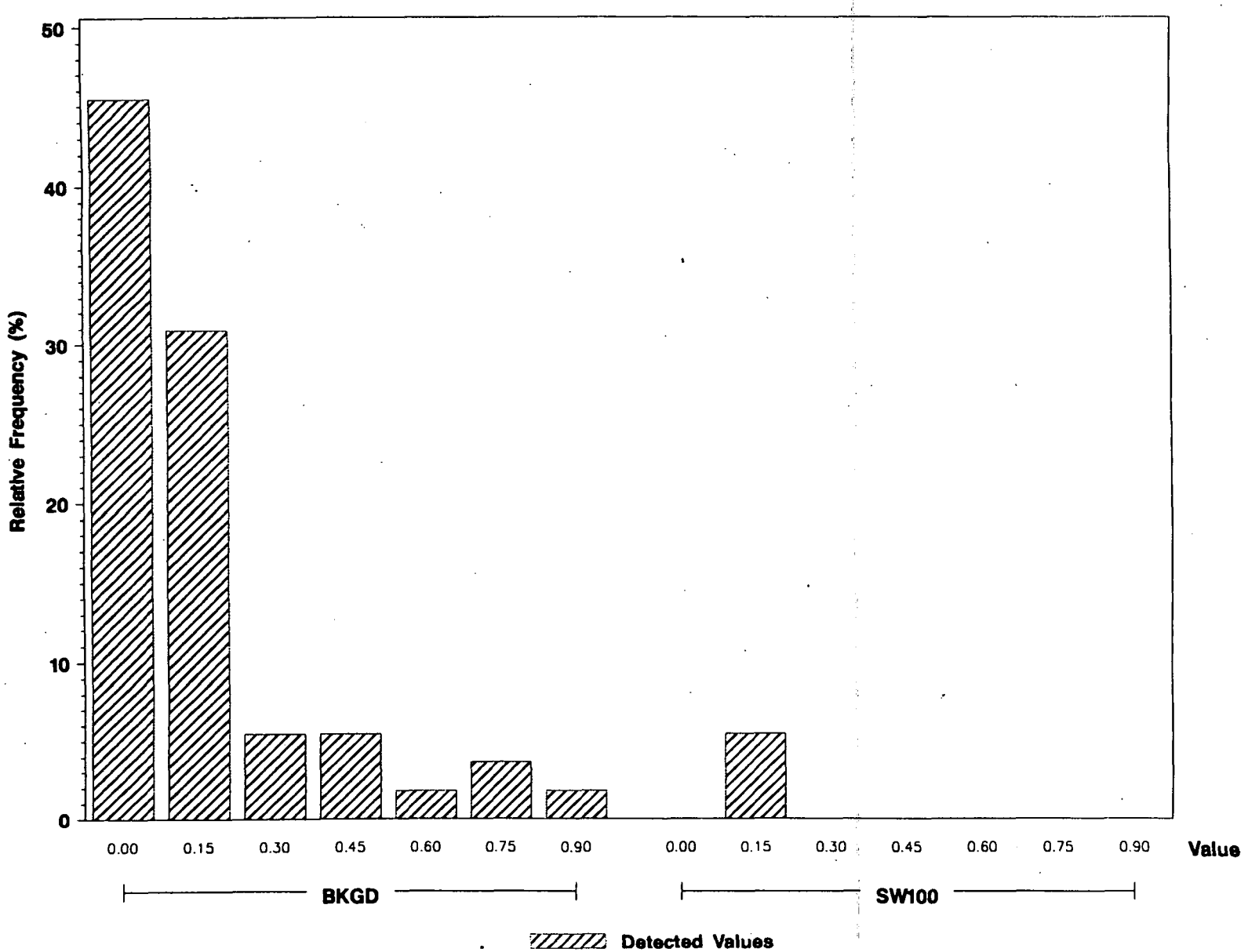
ANALYTE = CALCIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved URANIUM-235 (pCi/L) in Surface Water

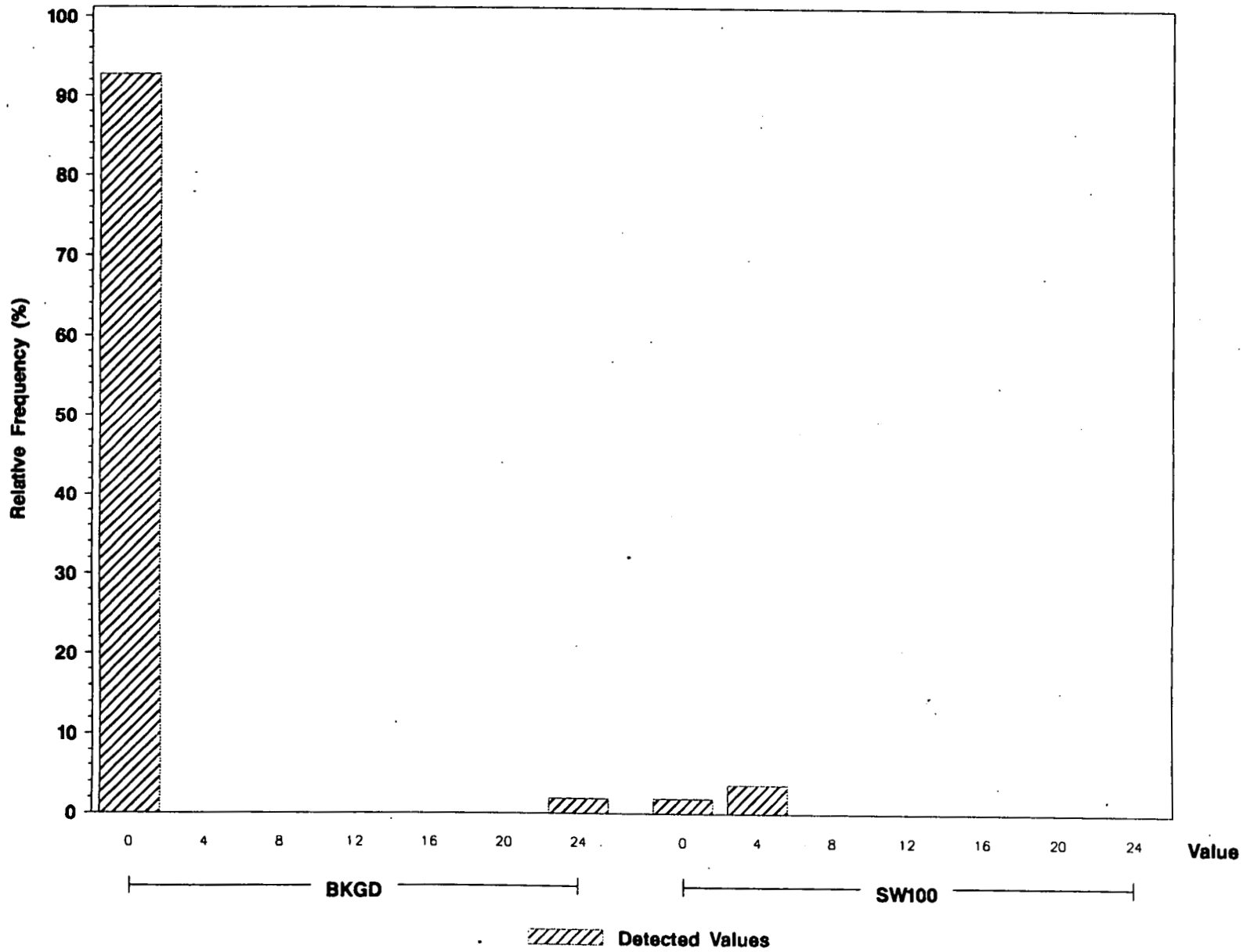
ANALYTE=URANIUM-235



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved URANIUM-238 (pCi/L) in Surface Water

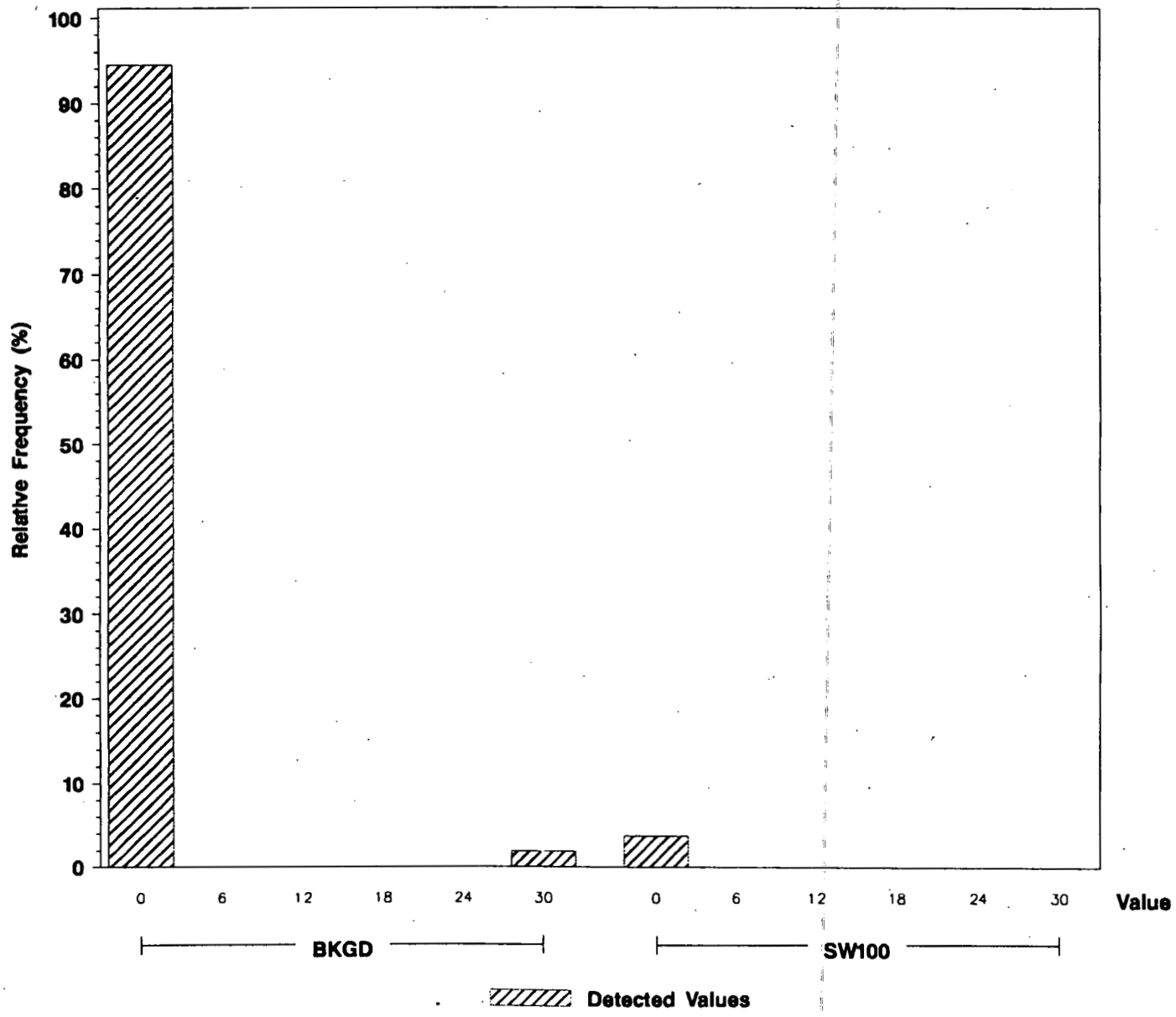
ANALYTE=URANIUM-238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Surface Water

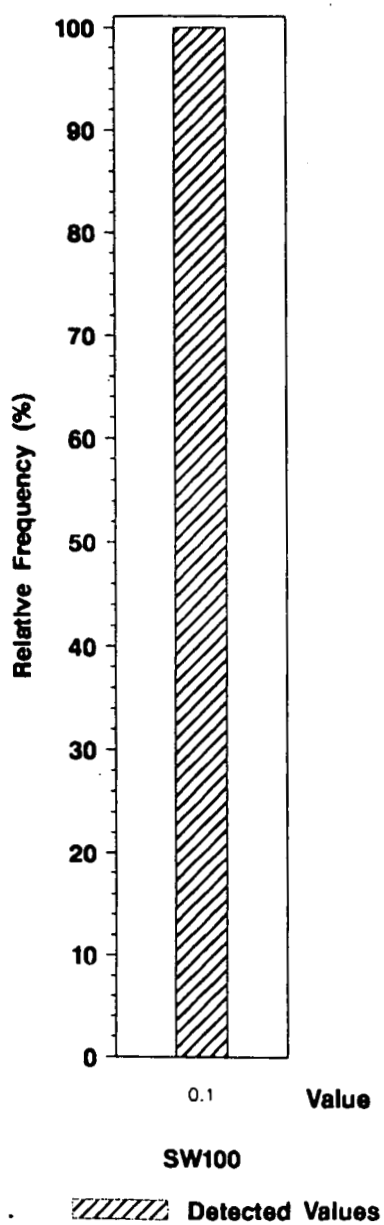
ANALYTE = URANIUM-233,-234



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved URANIUM – 234 (pCi/L) in Surface Water

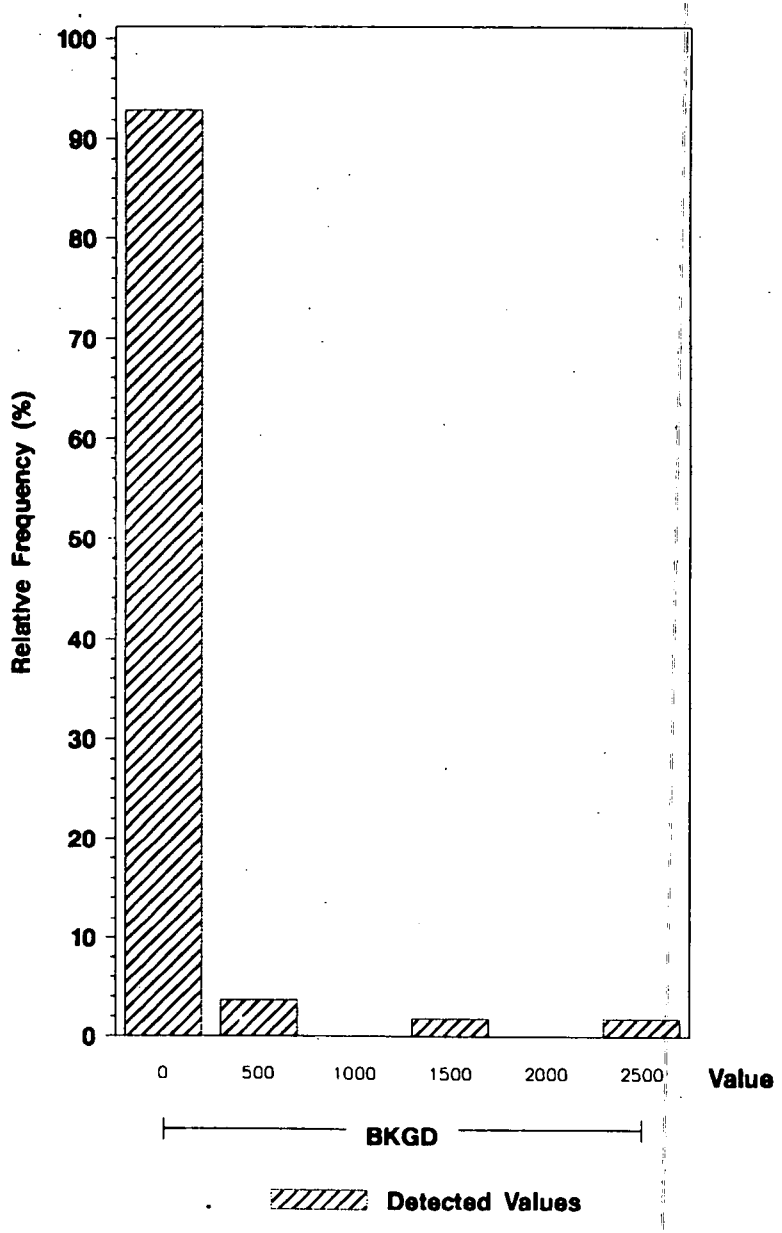
ANALYTE = URANIUM – 234



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Surface Water

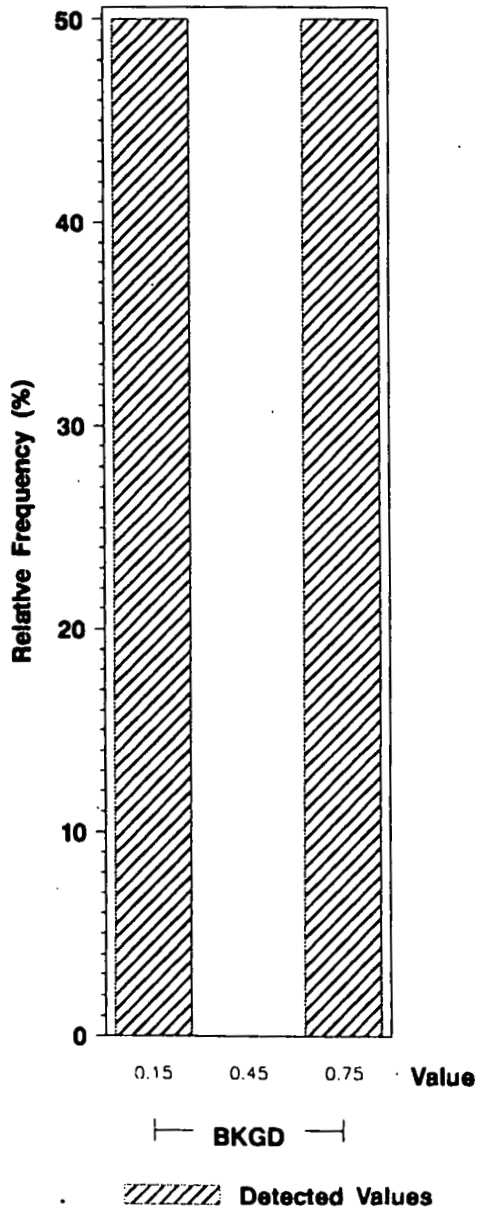
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved URANIUM, TOTAL (pCi/L) in Surface Water

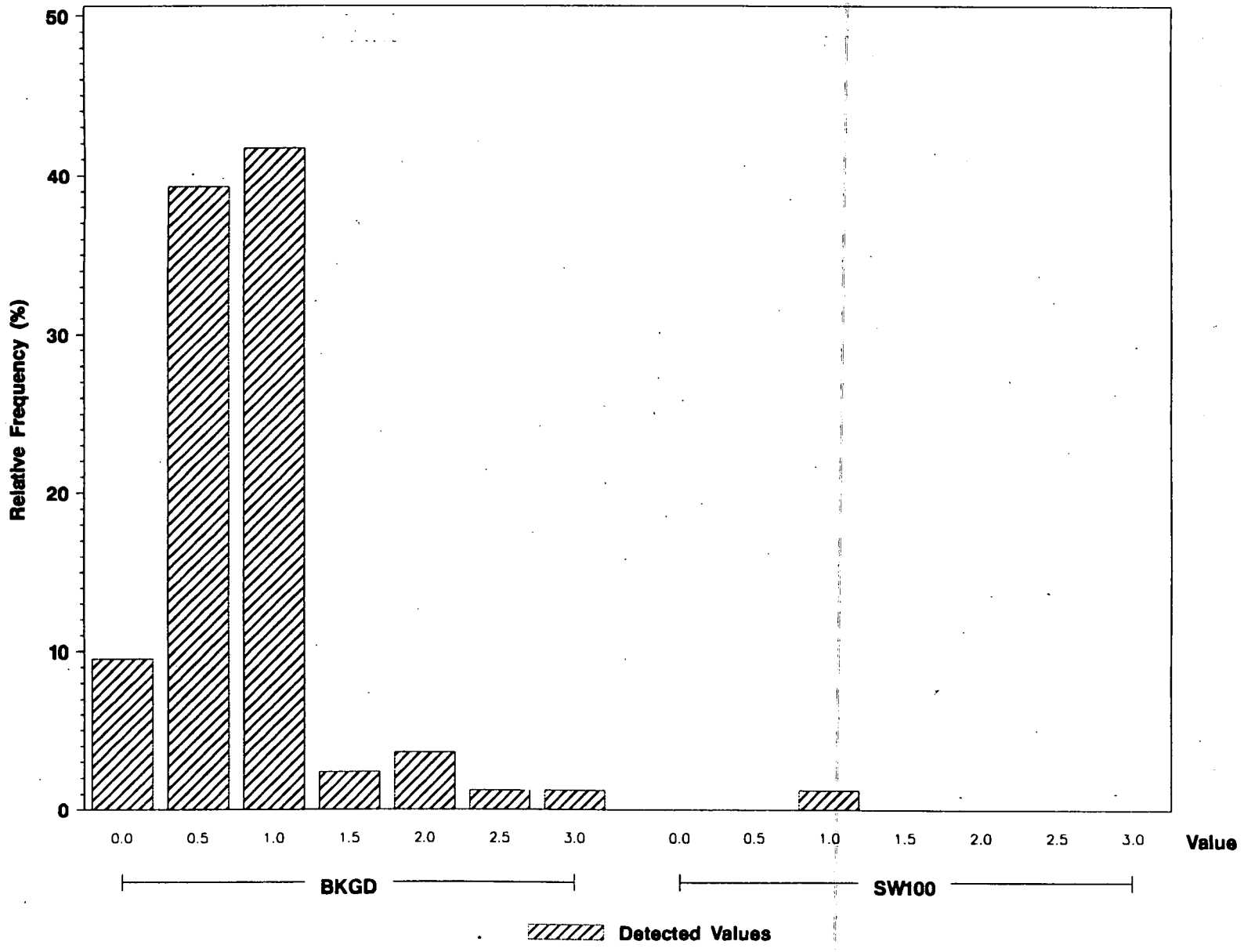
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Surface Water

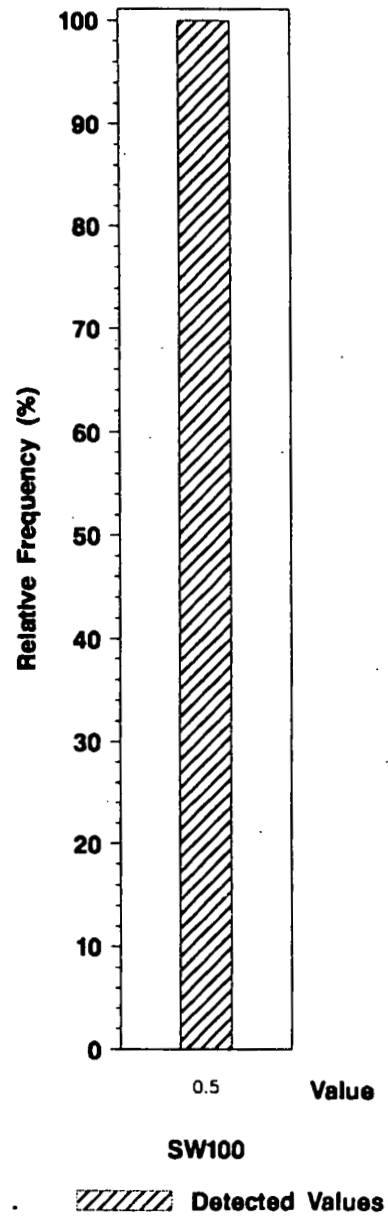
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved STRONTIUM – 90 (pCi/L) in Surface Water

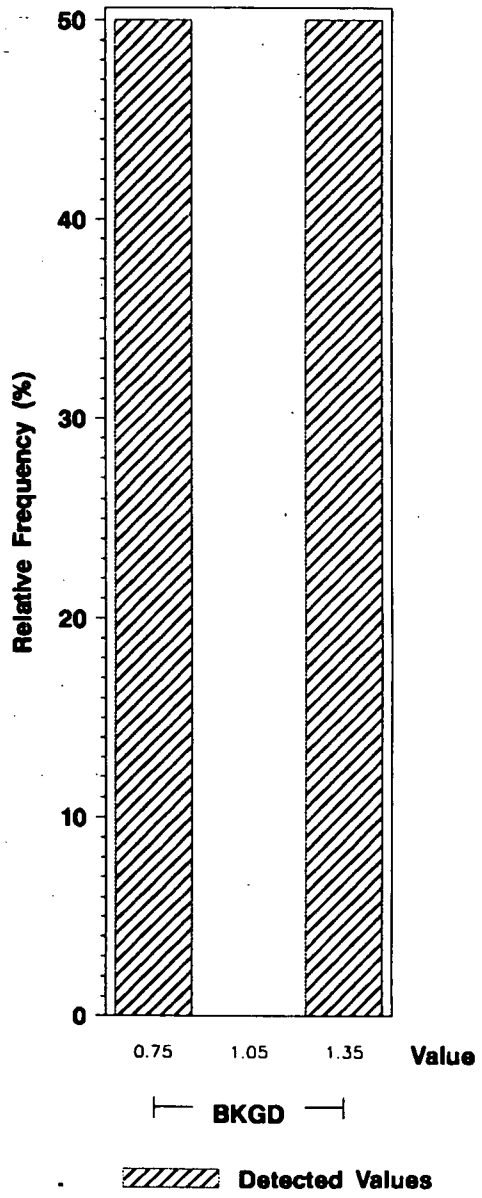
ANALYTE = STRONTIUM – 90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved RADIUM – 228 (pCi/L) in Surface Water

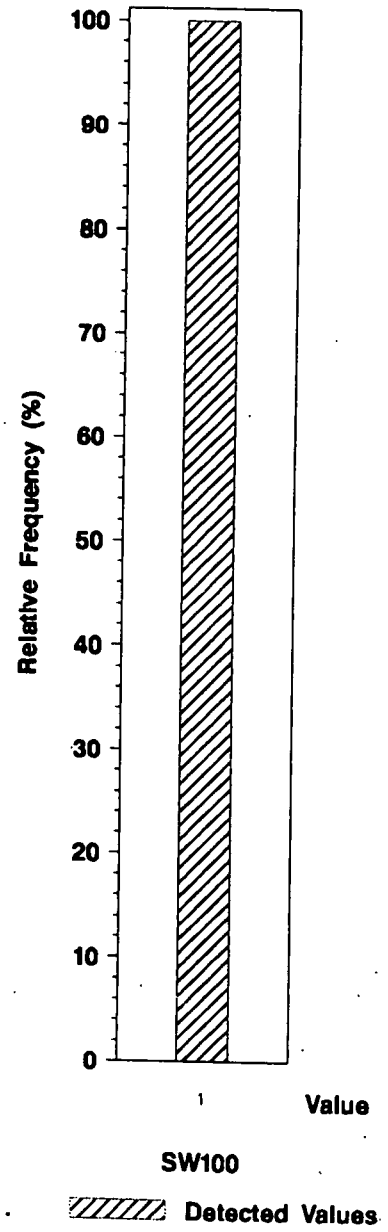
ANALYTE = RADIUM – 228



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved STRONTIUM – 89 (pCi/L) in Surface Water

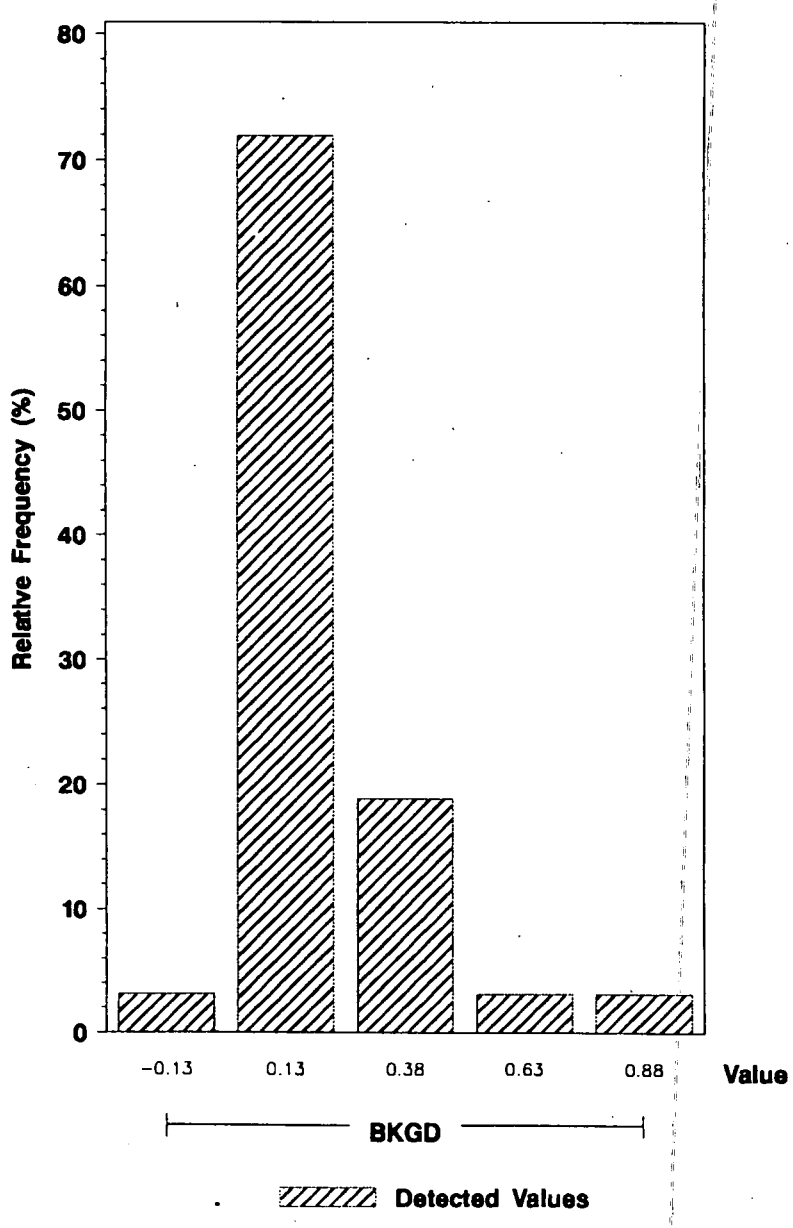
ANALYTE = STRONTIUM – 89



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved PLUTONIUM – 239/240 (pCi/L) in Surface Water

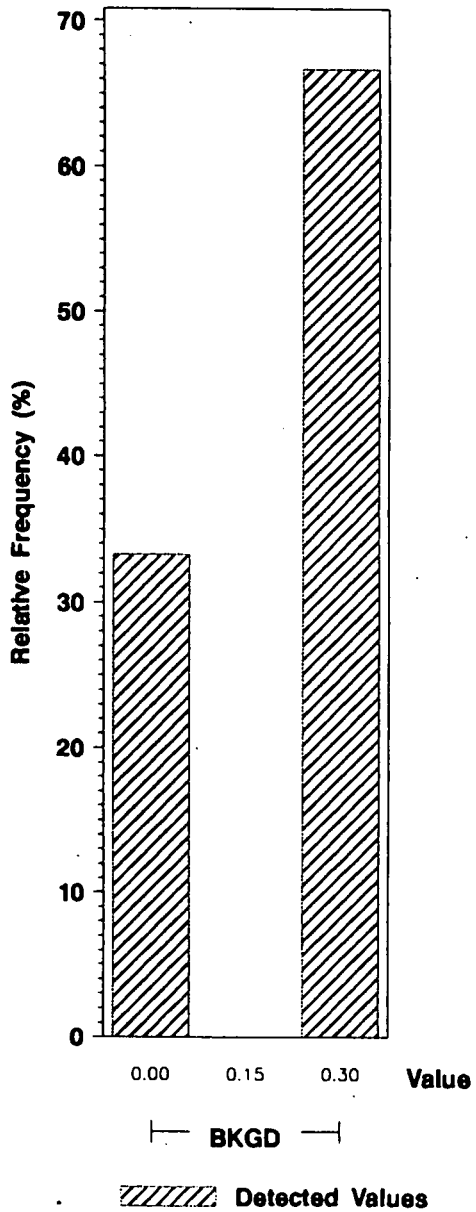
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved RADIUM – 226 (pCi/L) in Surface Water

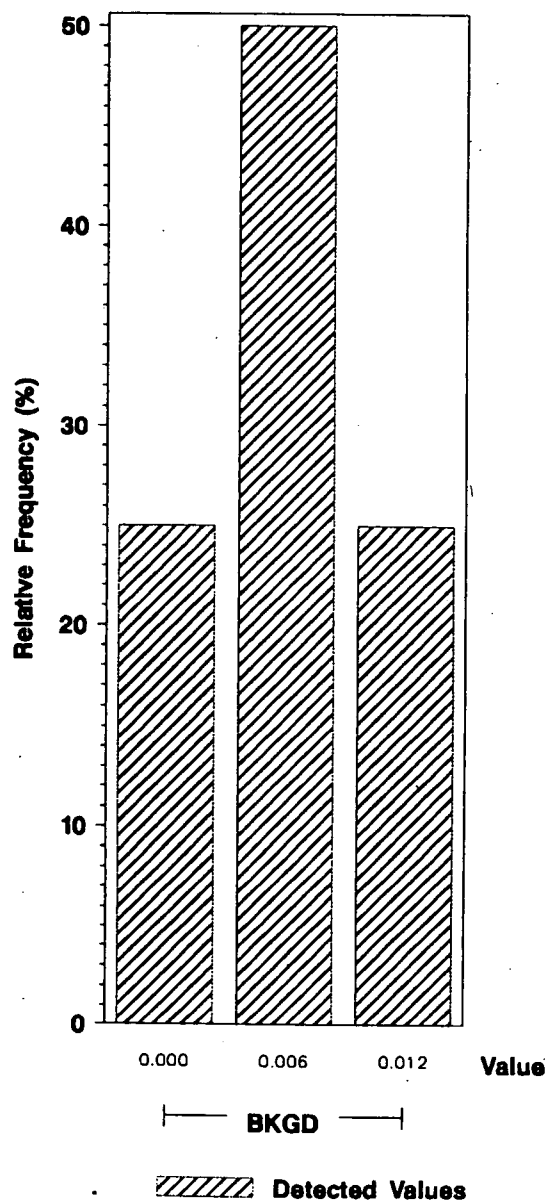
ANALYTE = RADIUM – 226



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved PLUTONIUM – 238 (pCi/L) in Surface Water

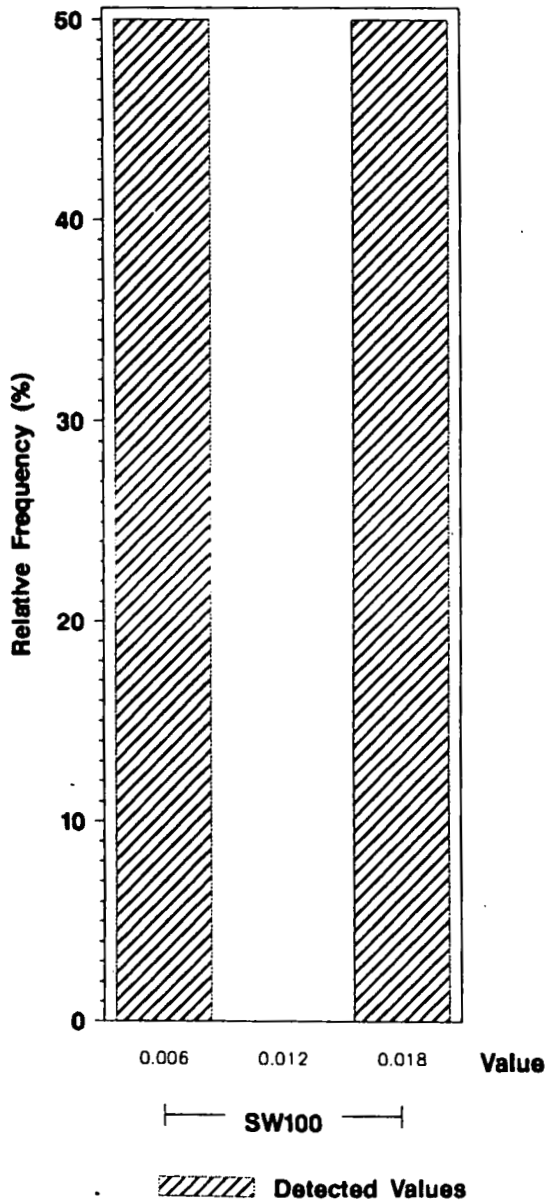
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved PLUTONIUM-239 (pCi/L) in Surface Water

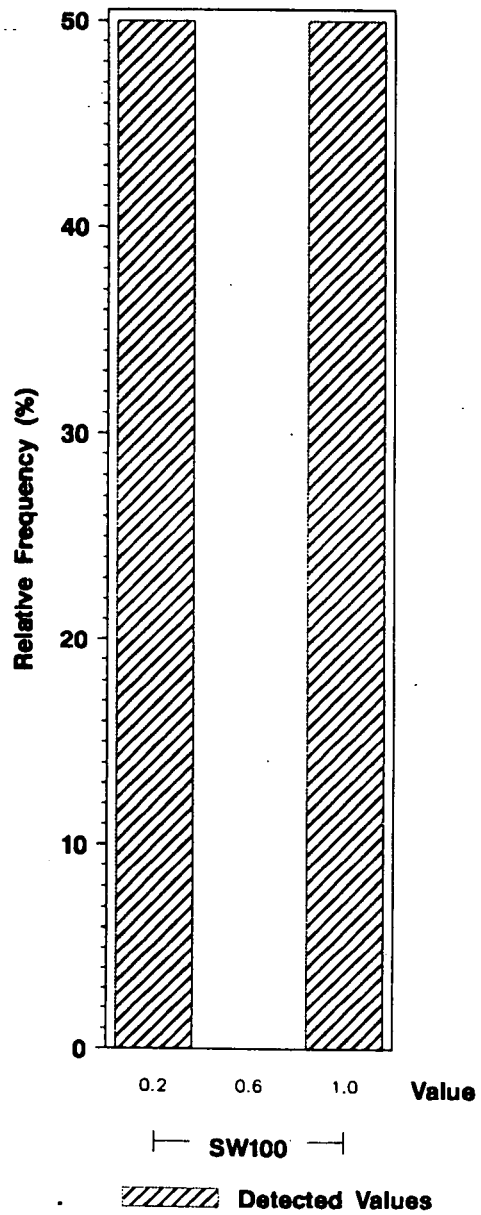
ANALYTE = PLUTONIUM-239



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved NEPTUNIUM – 237 (pCi/L) in Surface Water

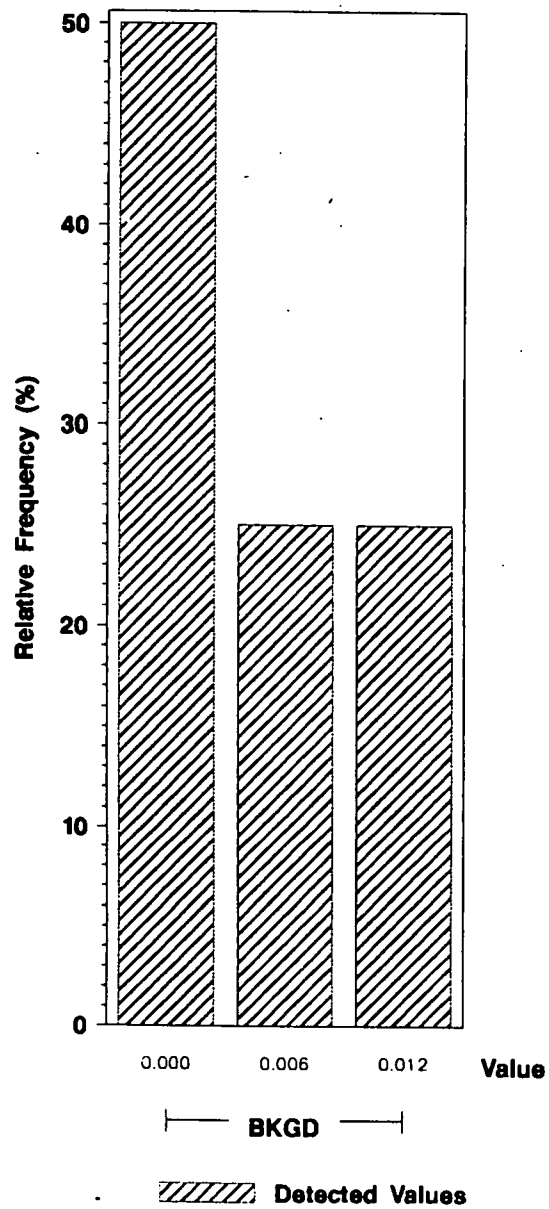
ANALYTE = NEPTUNIUM – 237



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved PLUTONIUM – 236 (pCi/L) in Surface Water

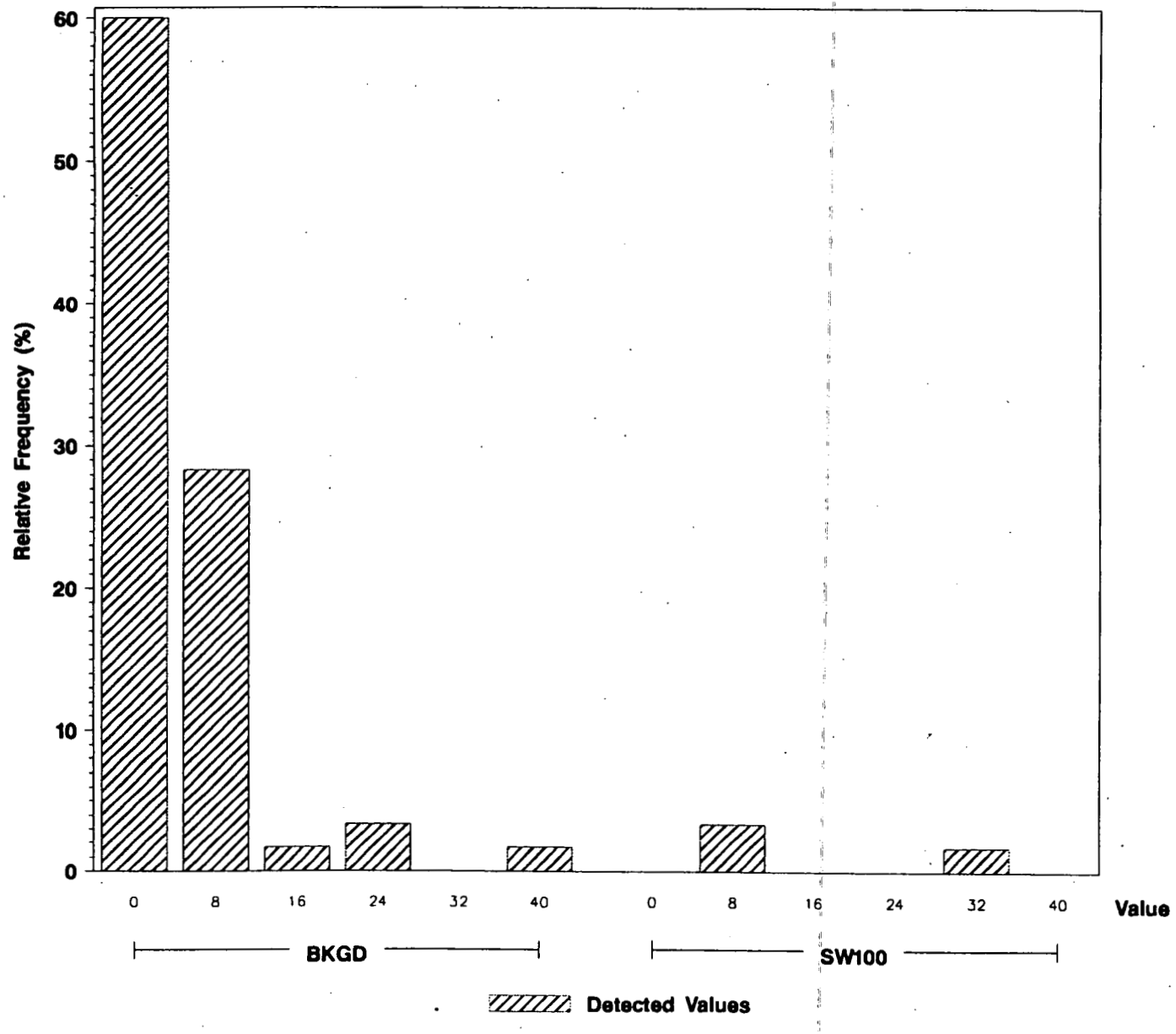
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Surface Water

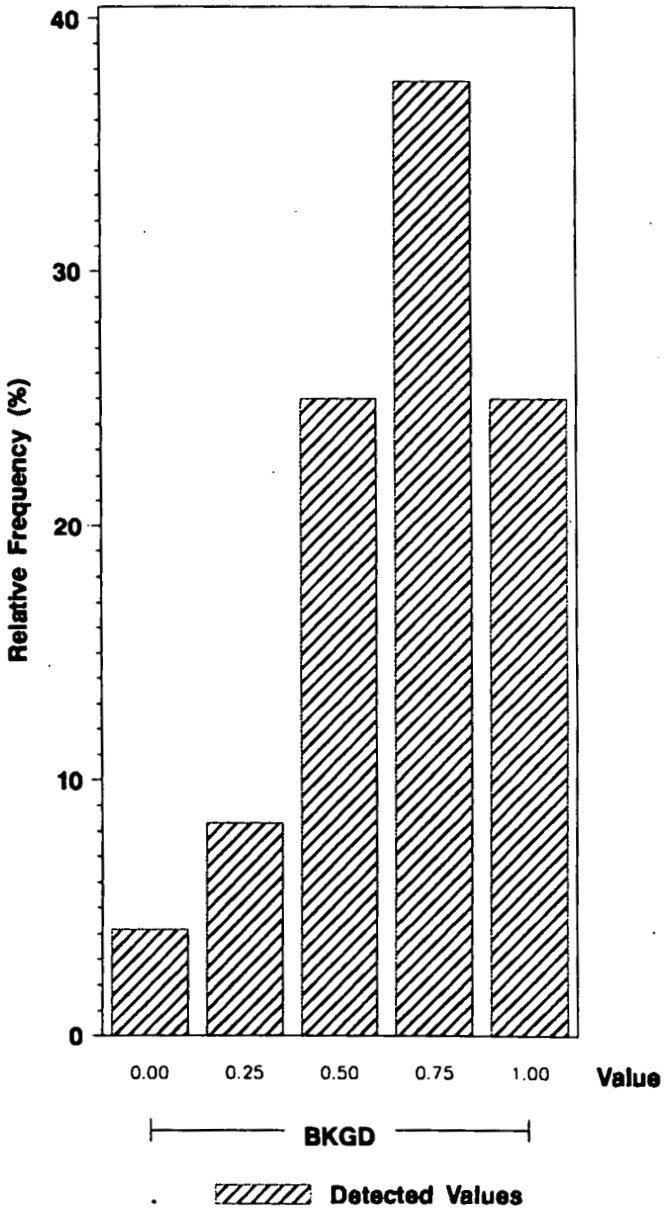
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved GROSS GAMMA (pCi/L) in Surface Water

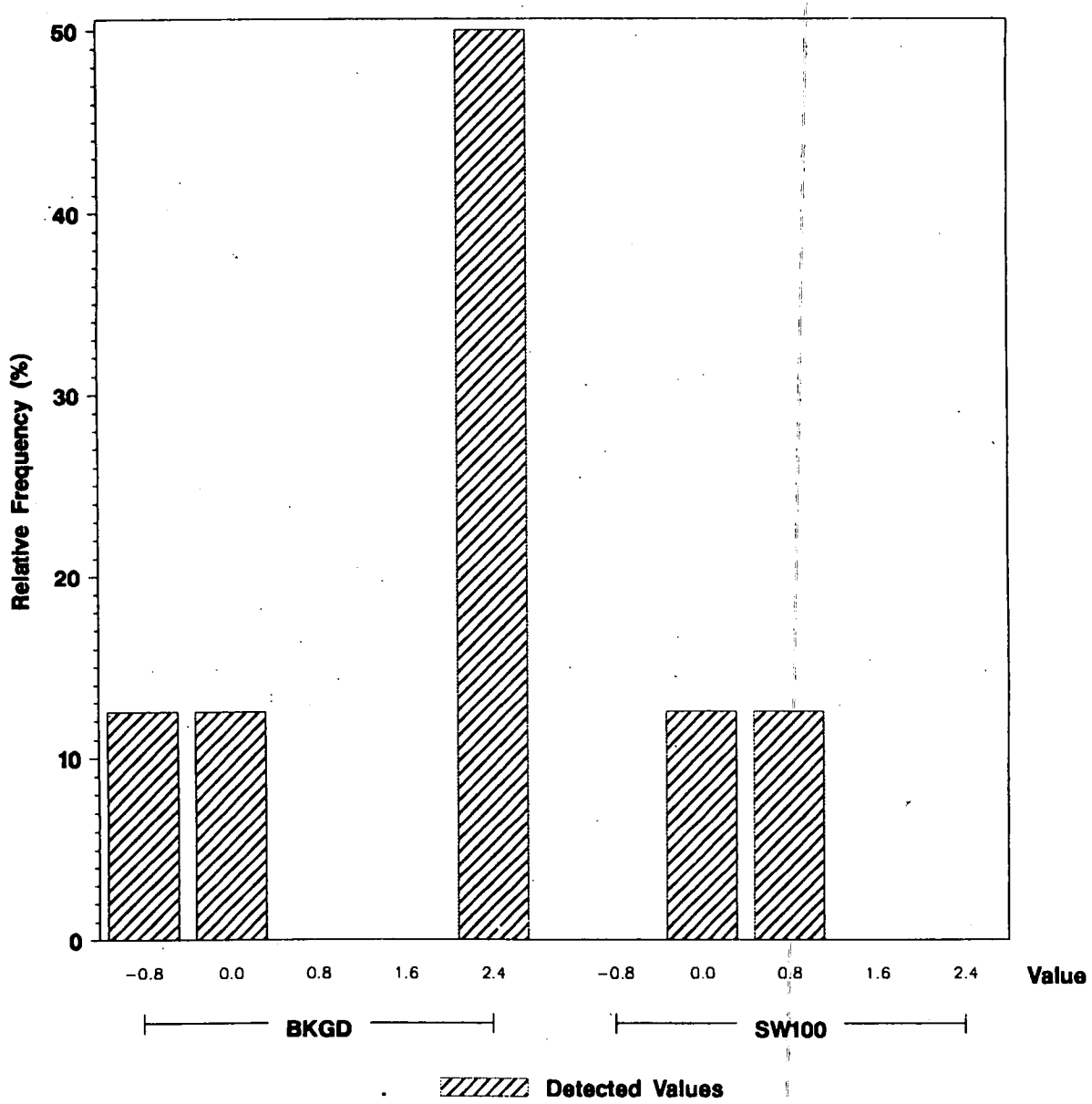
ANALYTE = GROSS GAMMA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Surface Water

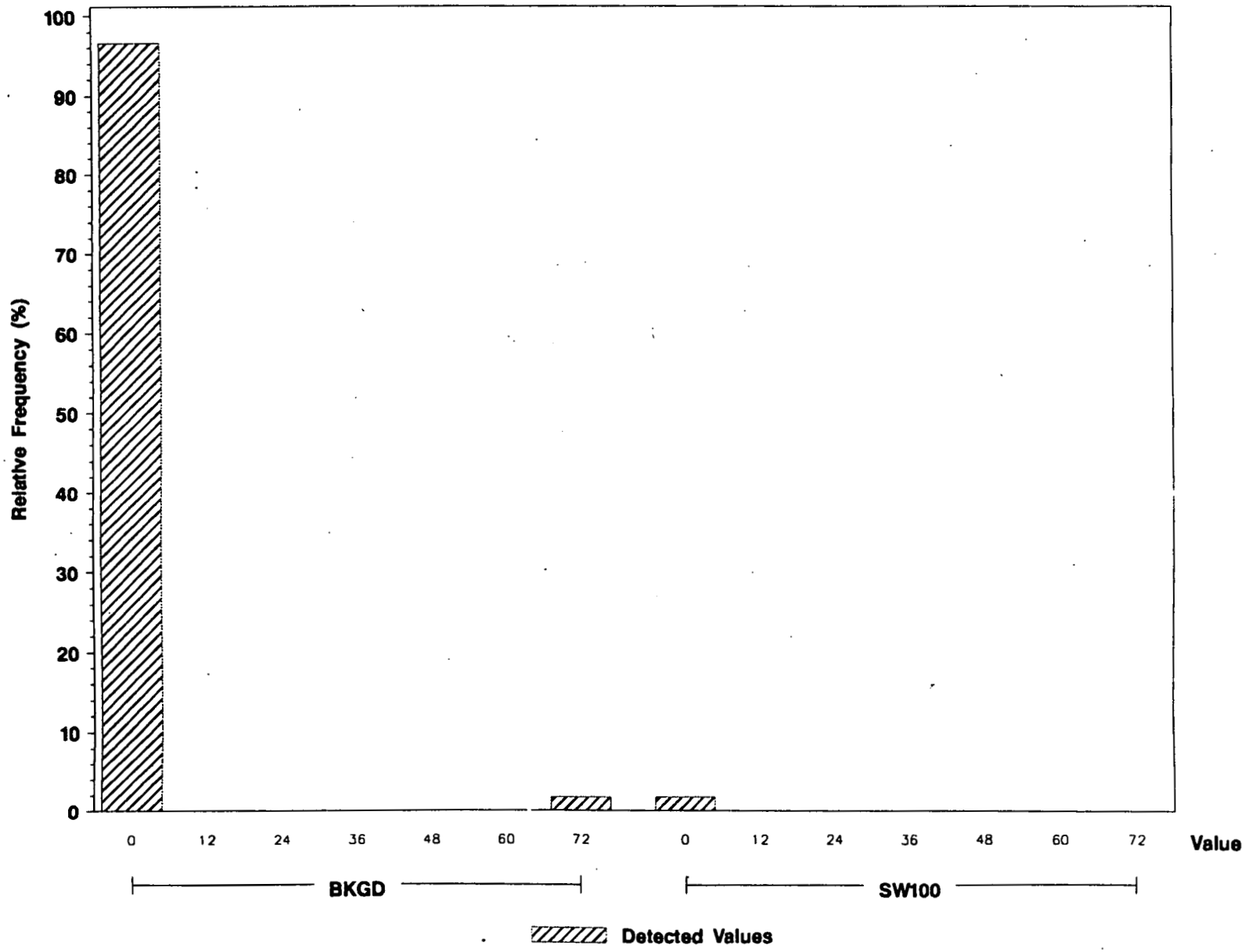
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Surface Water

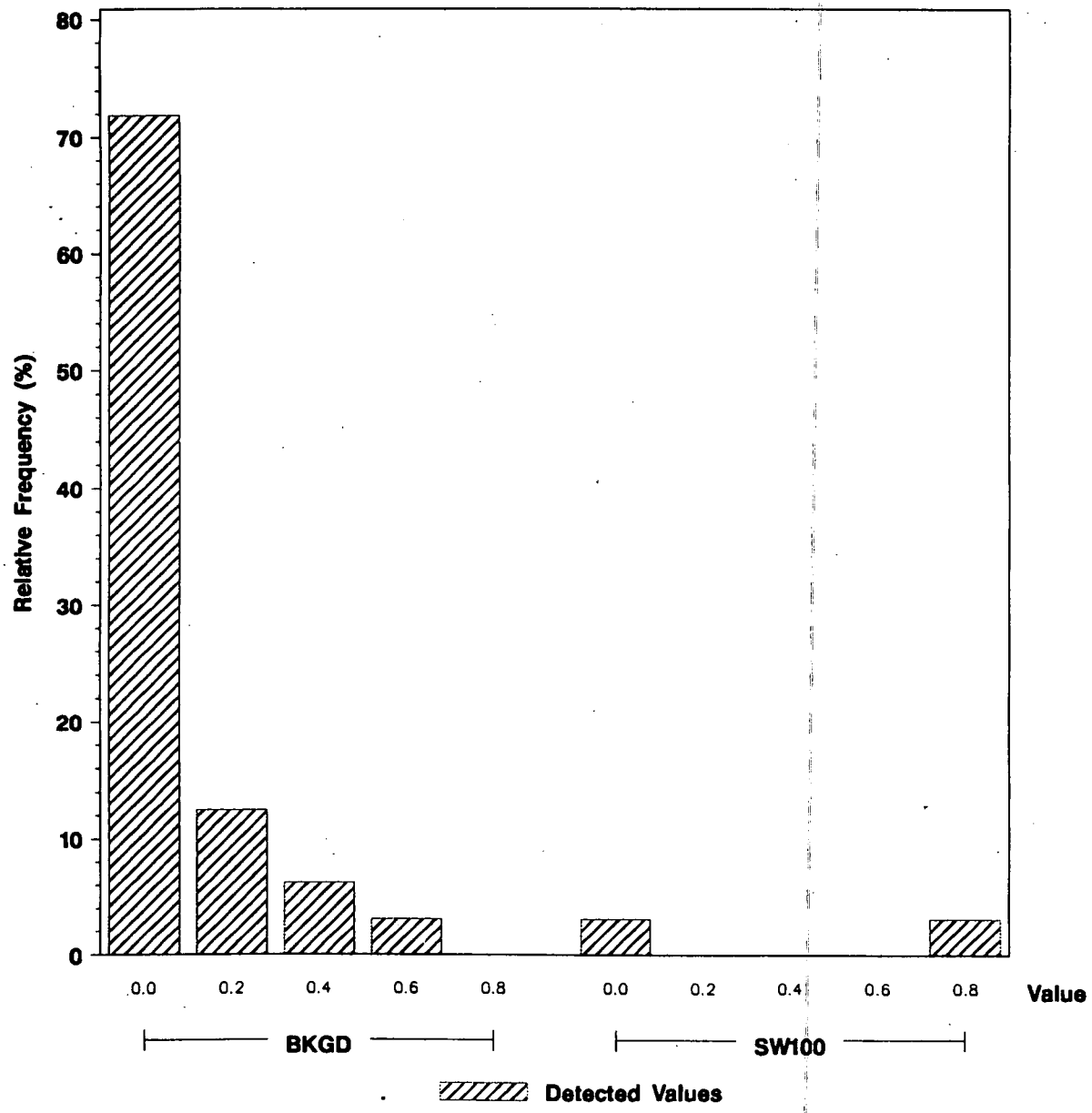
ANALYTE=GROSS ALPHA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Surface Water

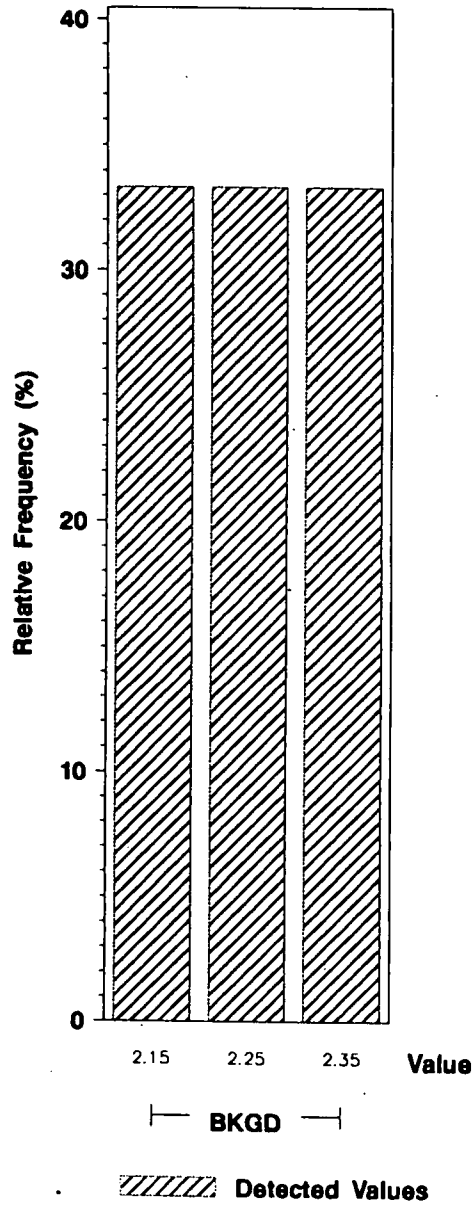
ANALYTE = AMERICIUM – 241



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Surface Water

ANALYTE = CESIUM – 134



# Surface Water

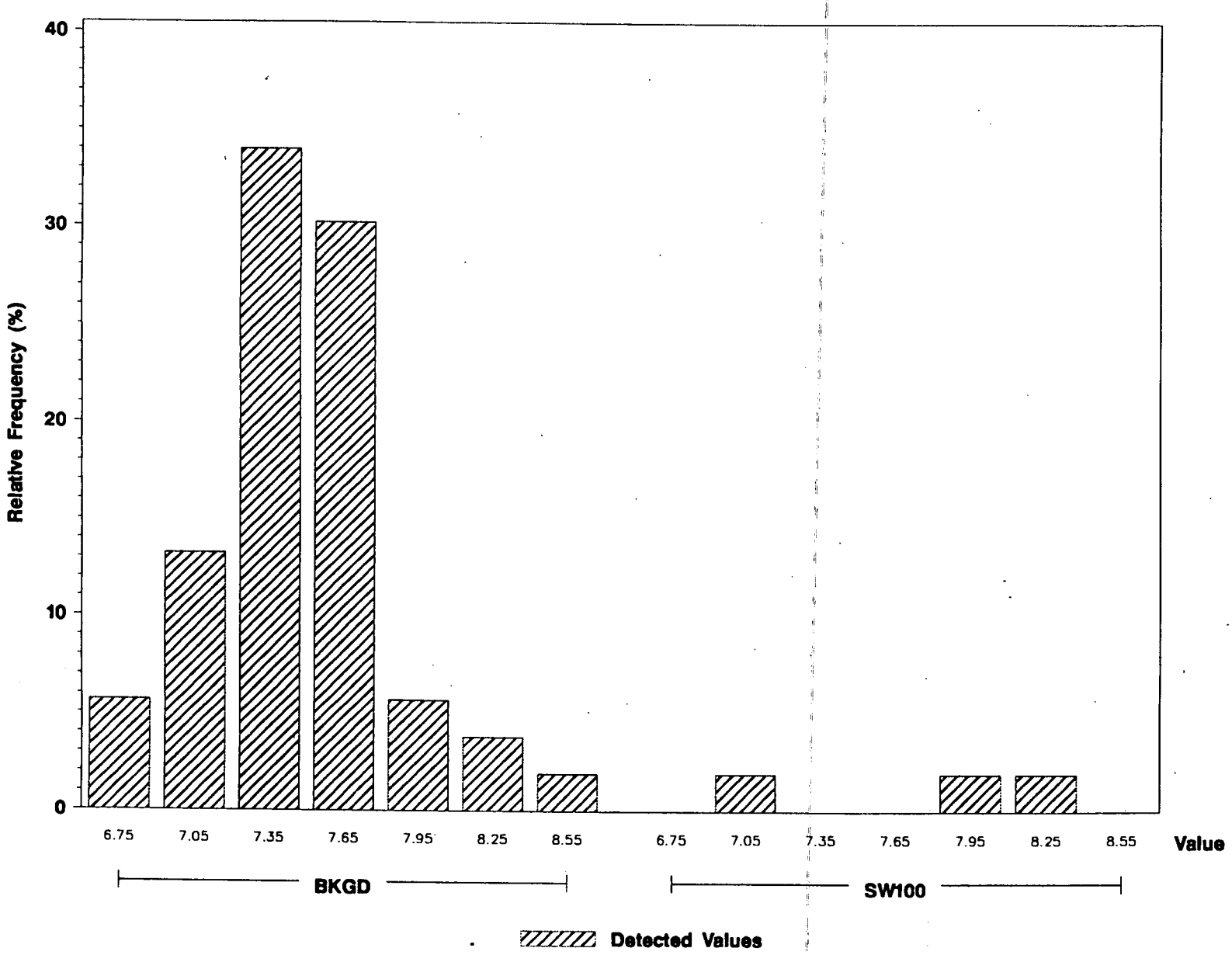
# (Total)

# Background vs. OU 7 (SW100)

# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total pH in Surface Water

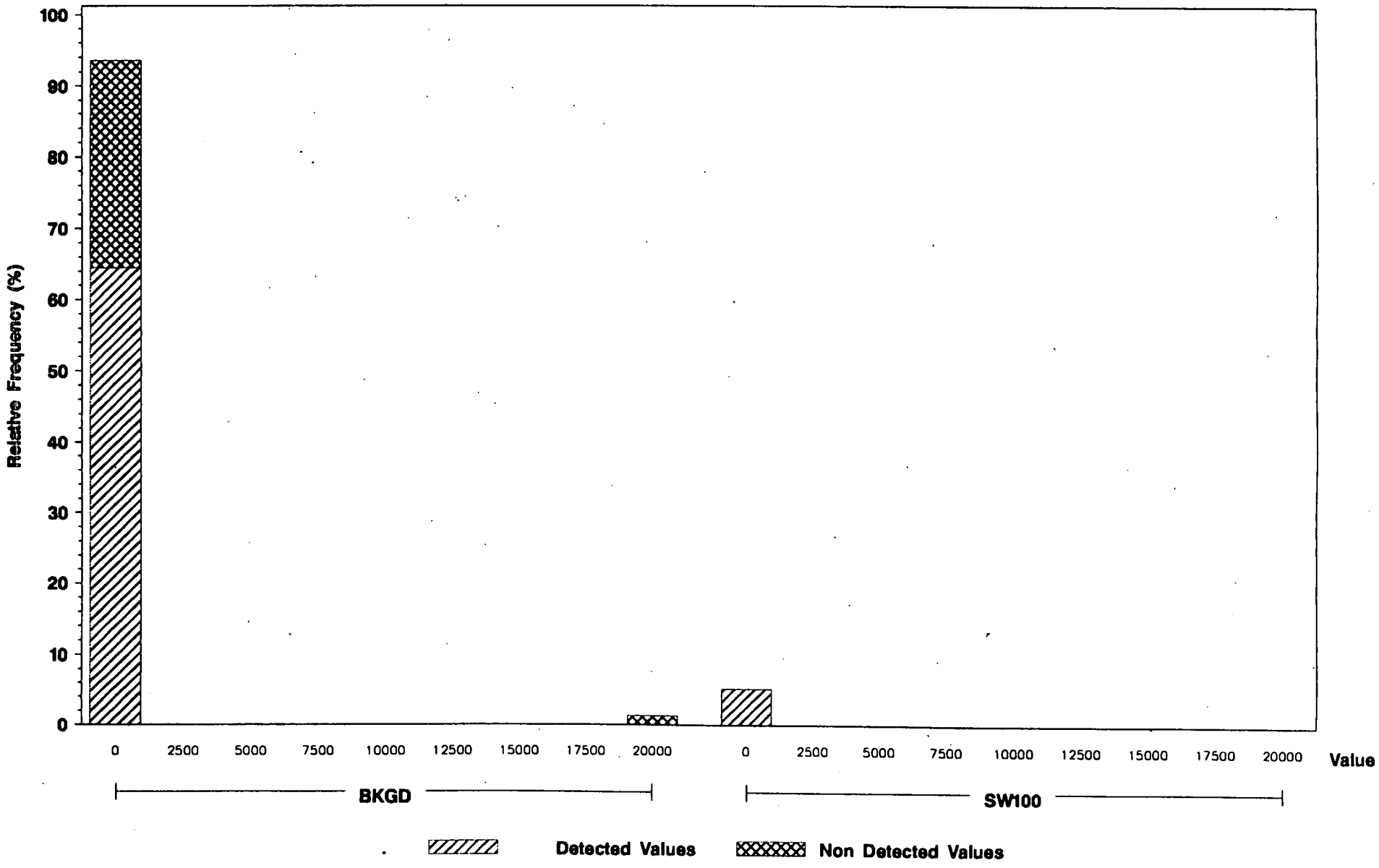
ANALYTE = pH



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total ZINC (ug/L) in Surface Water

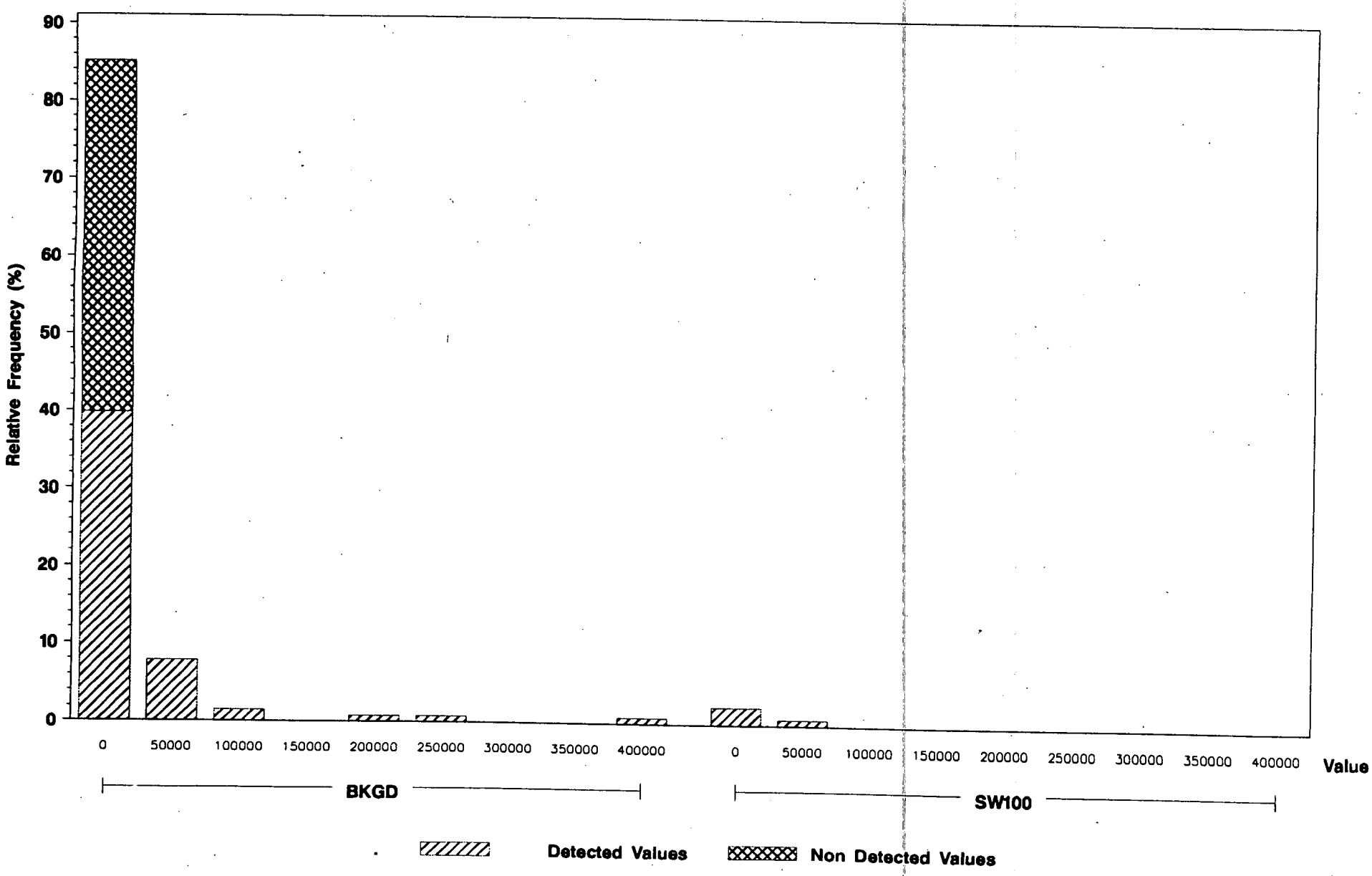
ANALYTE=ZINC



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TOTAL SUSPENDED SOLIDS (ug/L) in Surface Water

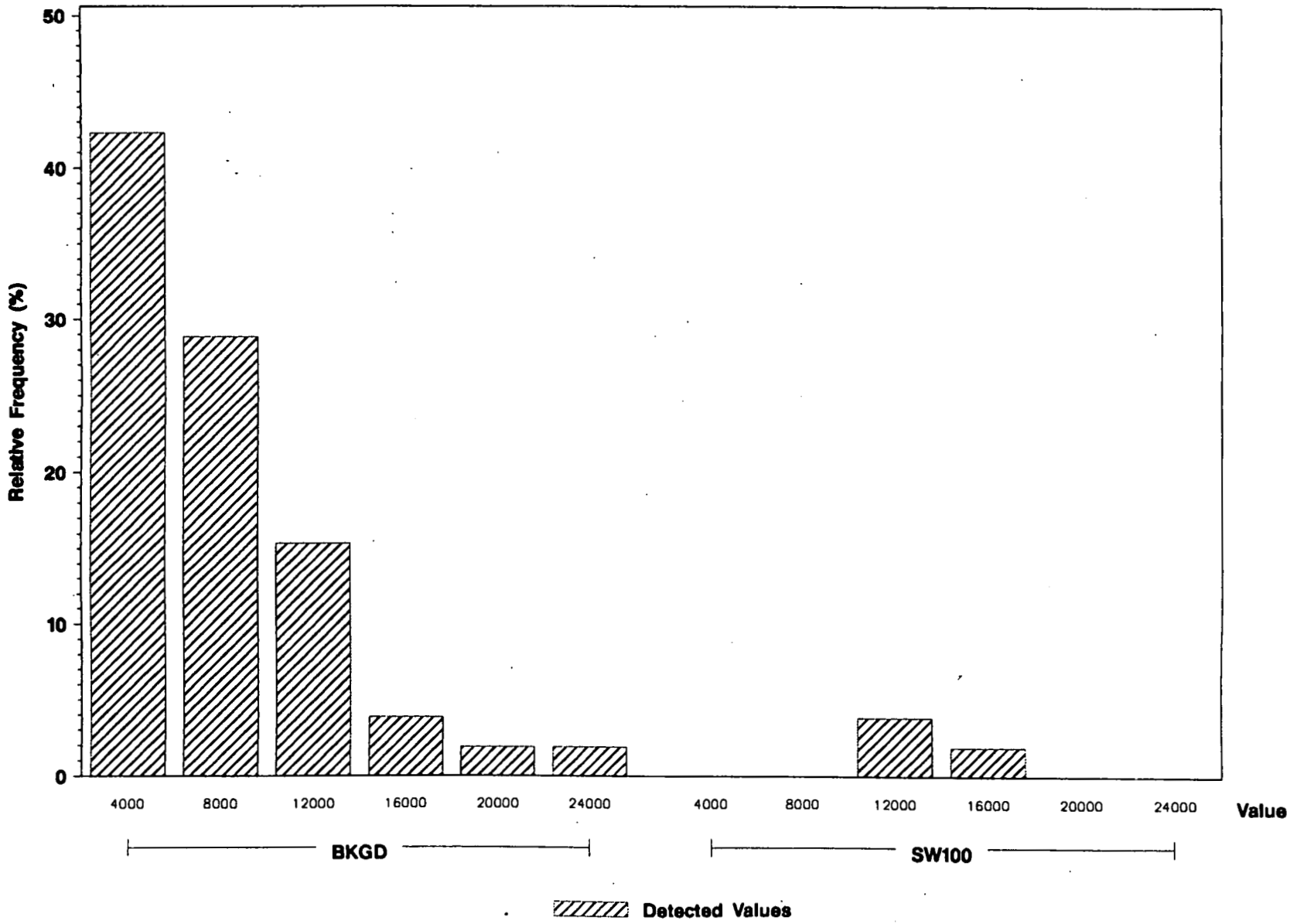
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TOTAL ORGANIC CARBON (ug/L) in Surface Water

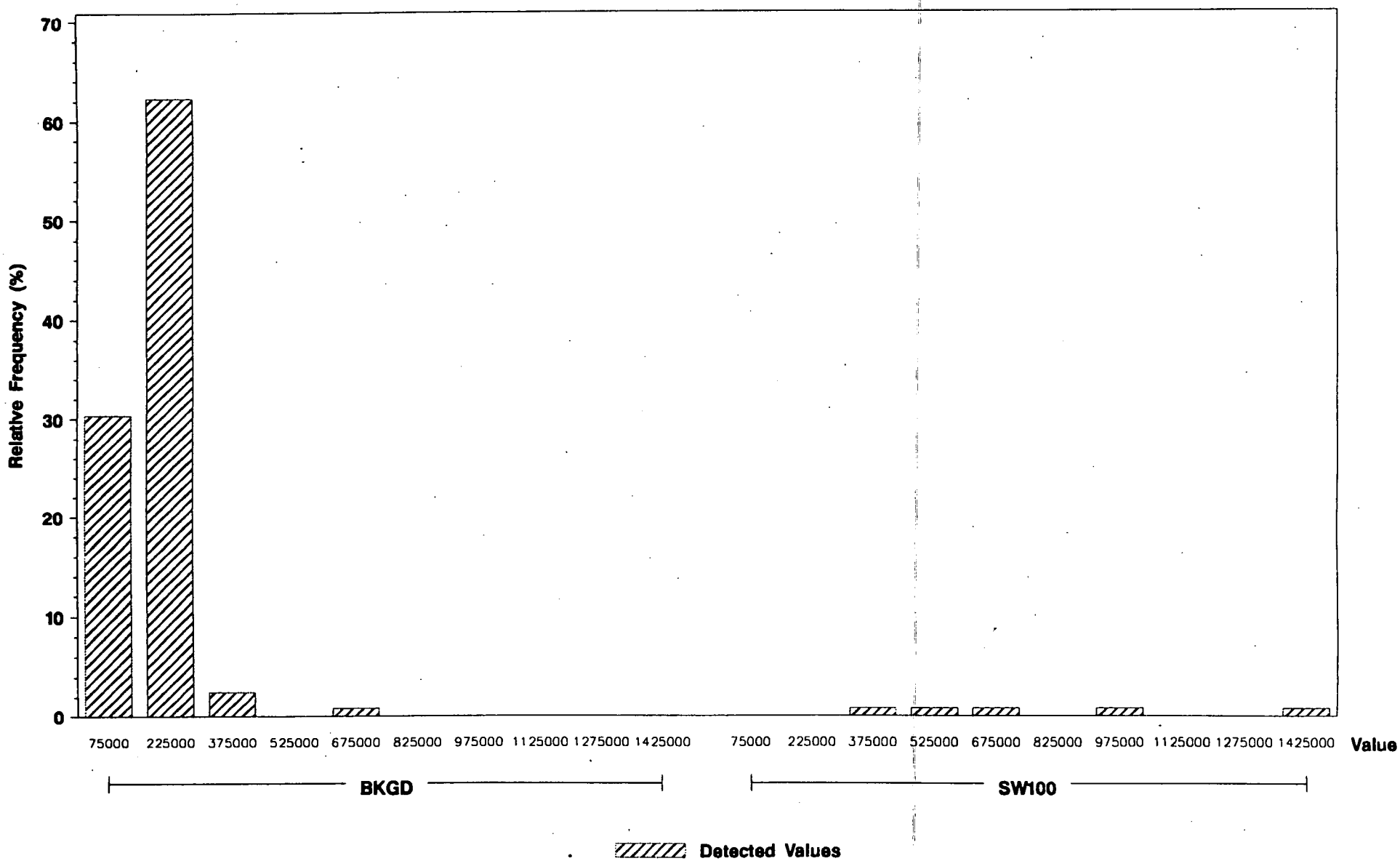
ANALYTE = TOTAL ORGANIC CARBON



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TOTAL DISSOLVED SOLIDS (ug/L) in Surface Water

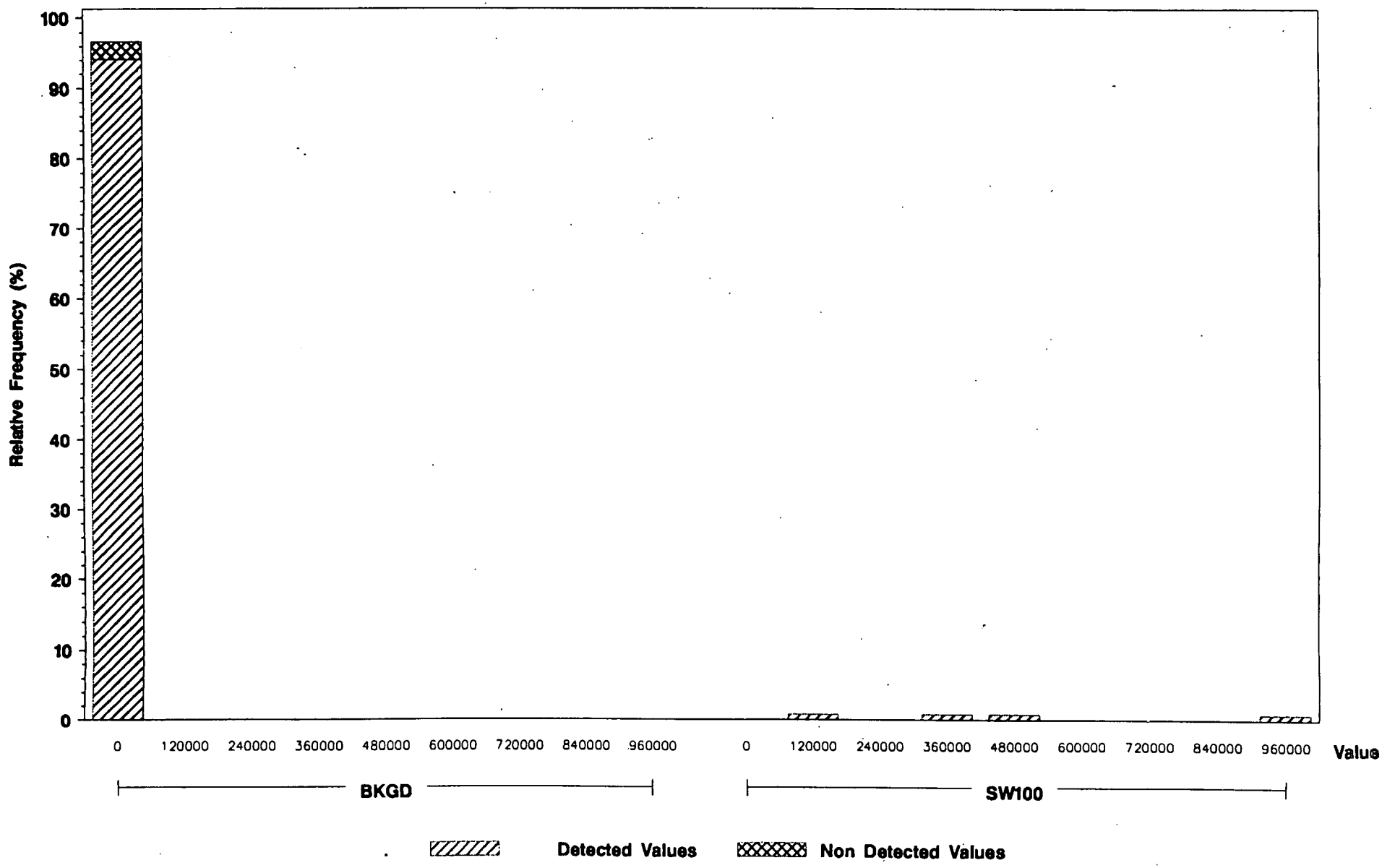
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total SULFATE (ug/L) in Surface Water

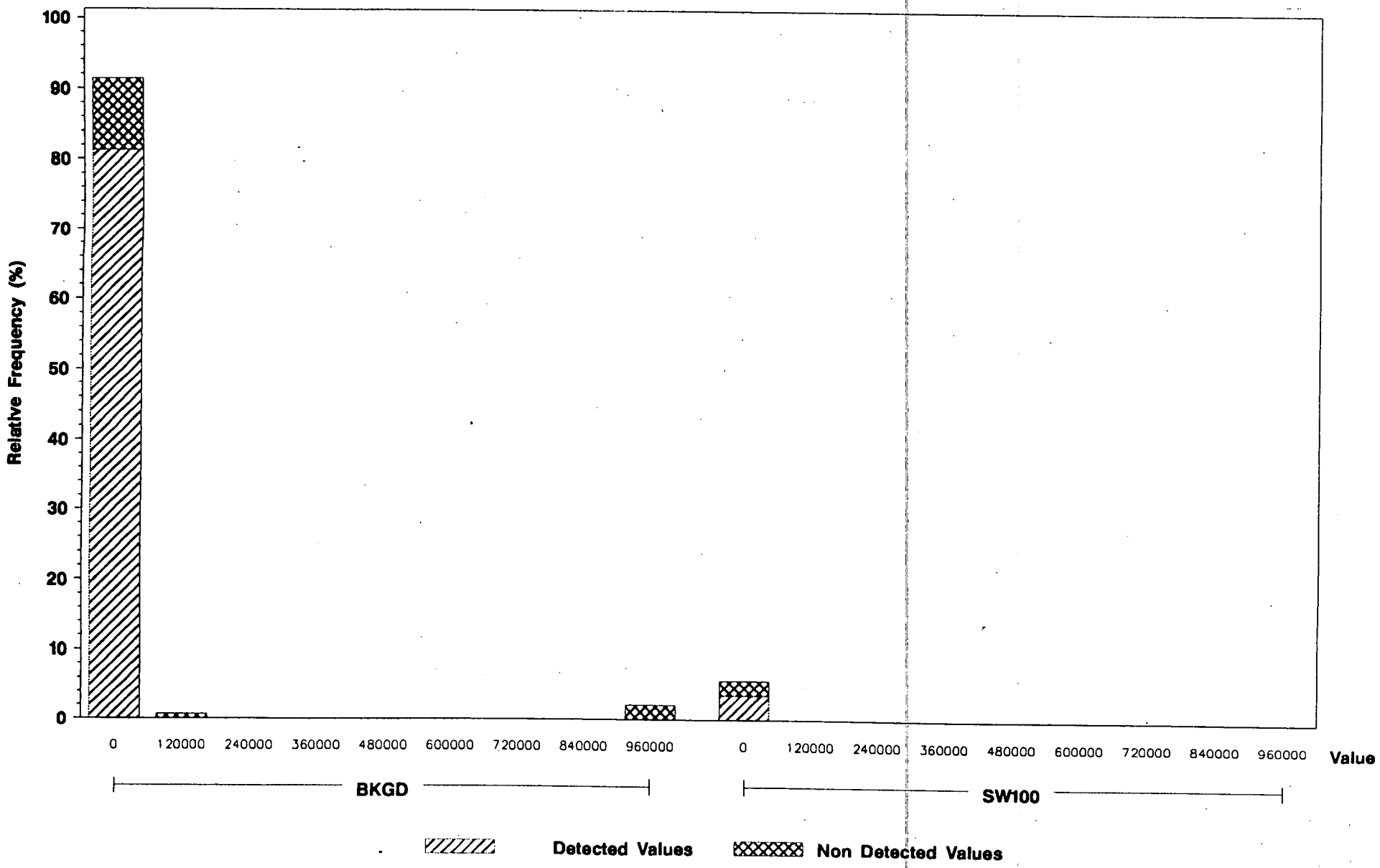
ANALYTE = SULFATE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM (ug/L) in Surface Water

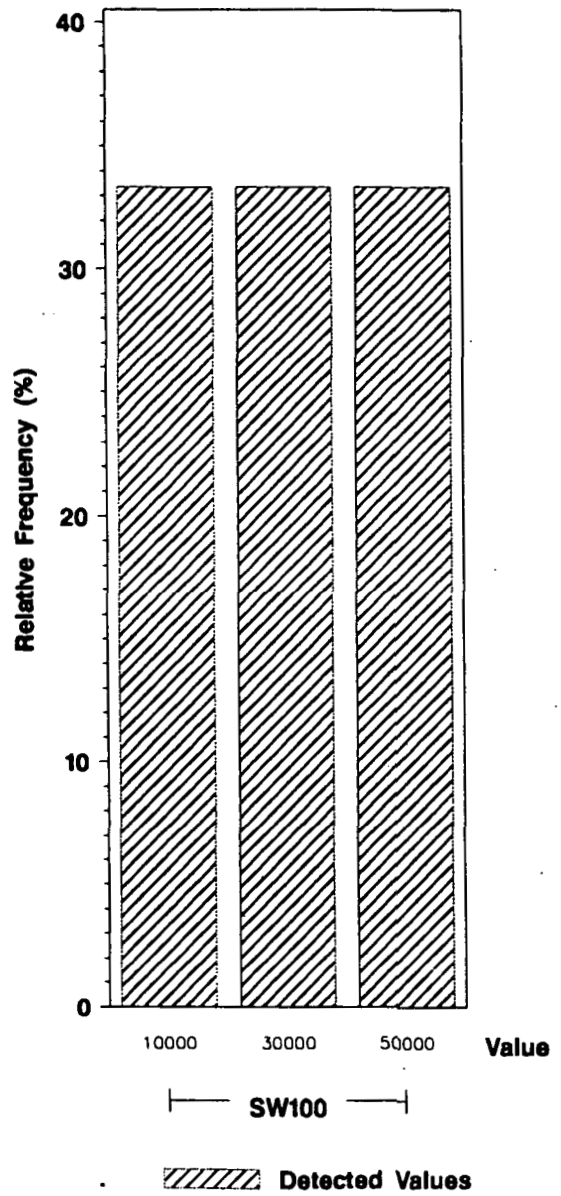
ANALYTE = STRONTIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total SOLIDS, NONVOLATILE SUSPENDED (ug/L) in Surface Water

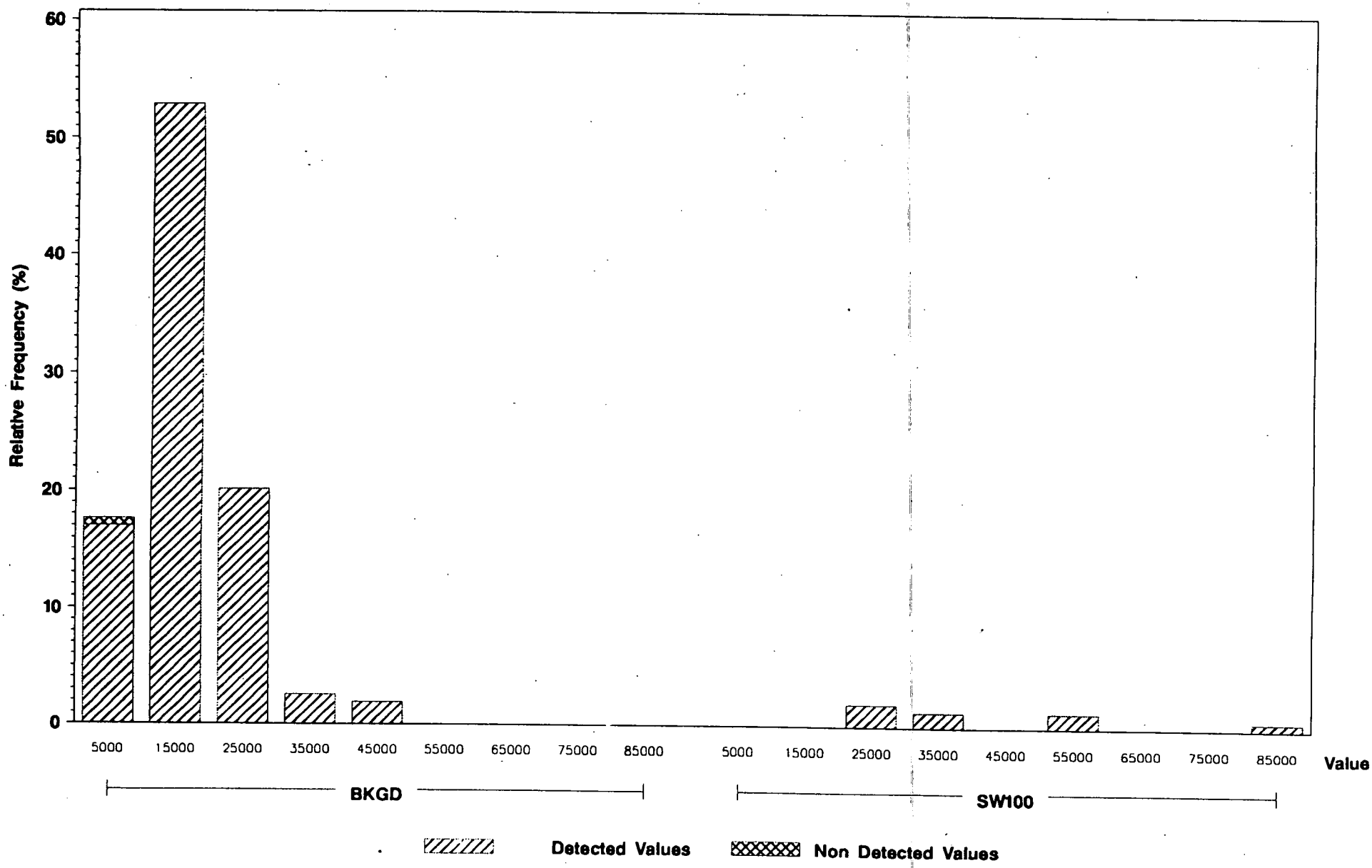
ANALYTE = SOLIDS, NONVOLATILE SUSPENDED



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total SODIUM (ug/L) in Surface Water

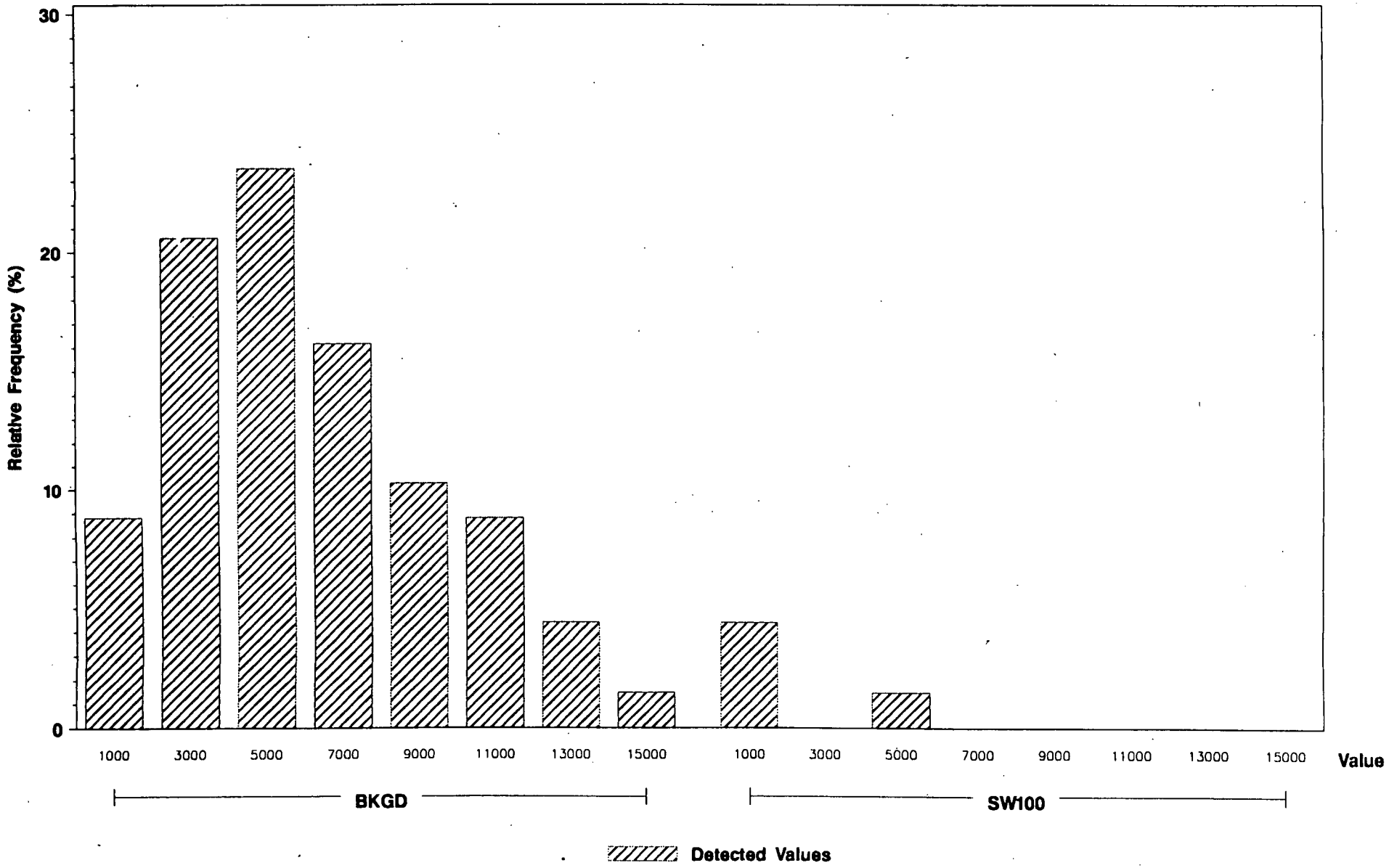
ANALYTE = SODIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total SILICON (ug/L) in Surface Water

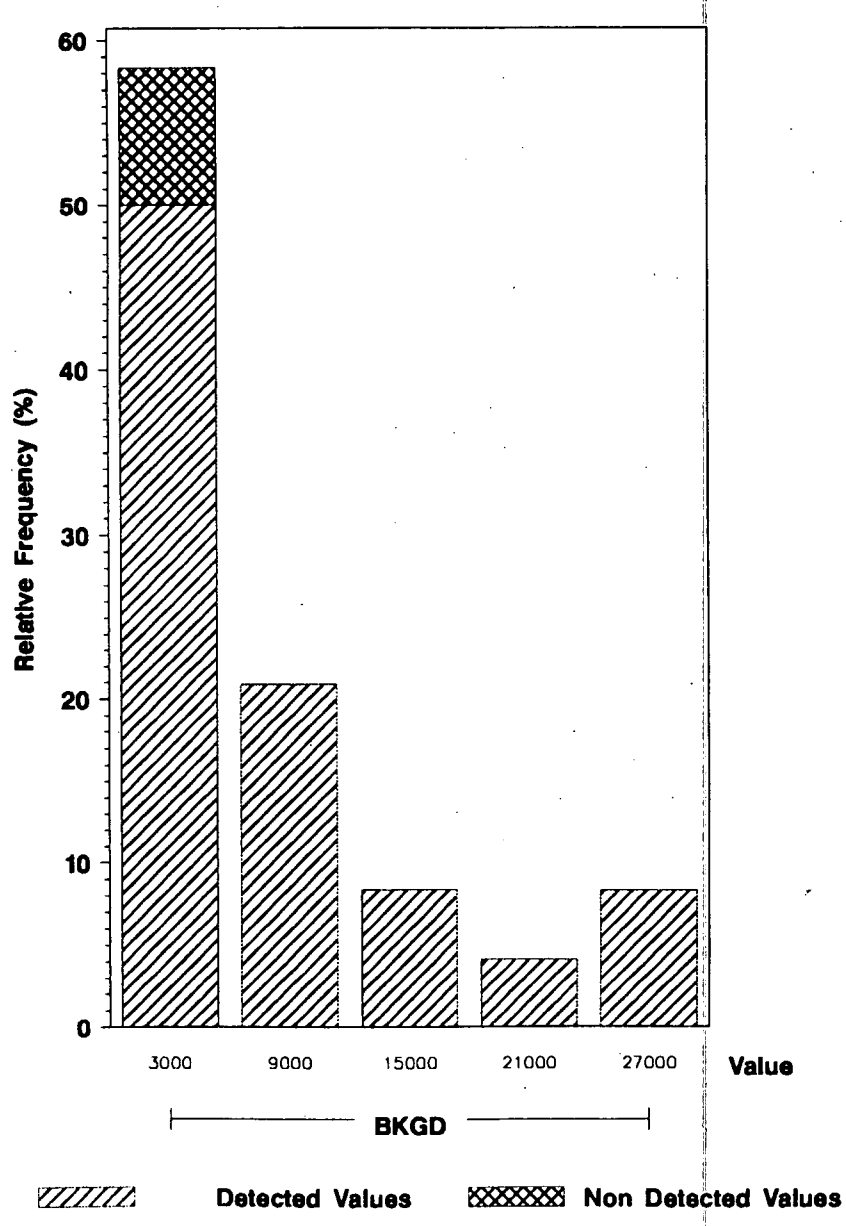
ANALYTE=SILICON



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total SILICA (ug/L) in Surface Water

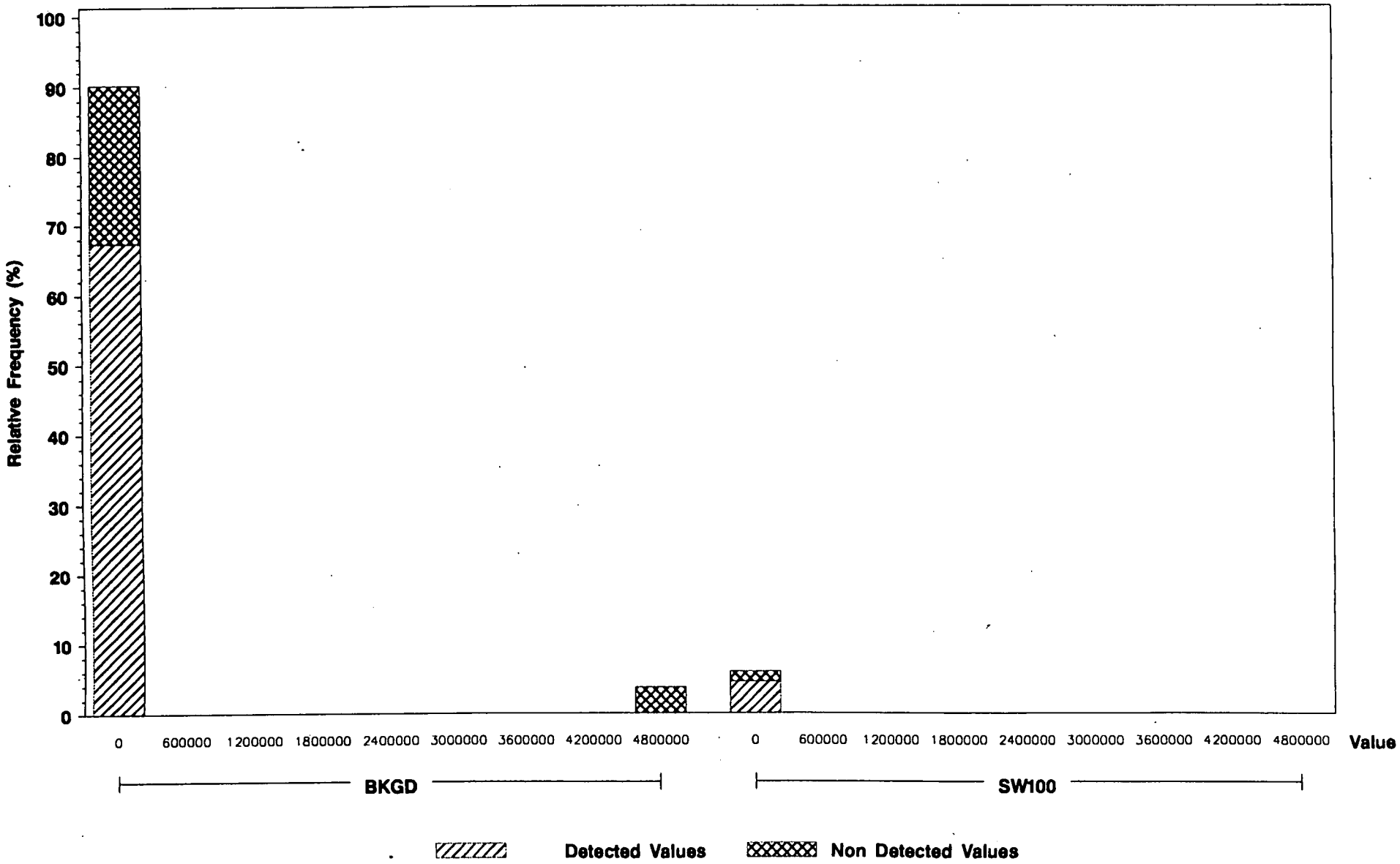
ANALYTE = SILICA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total POTASSIUM (ug/L) in Surface Water

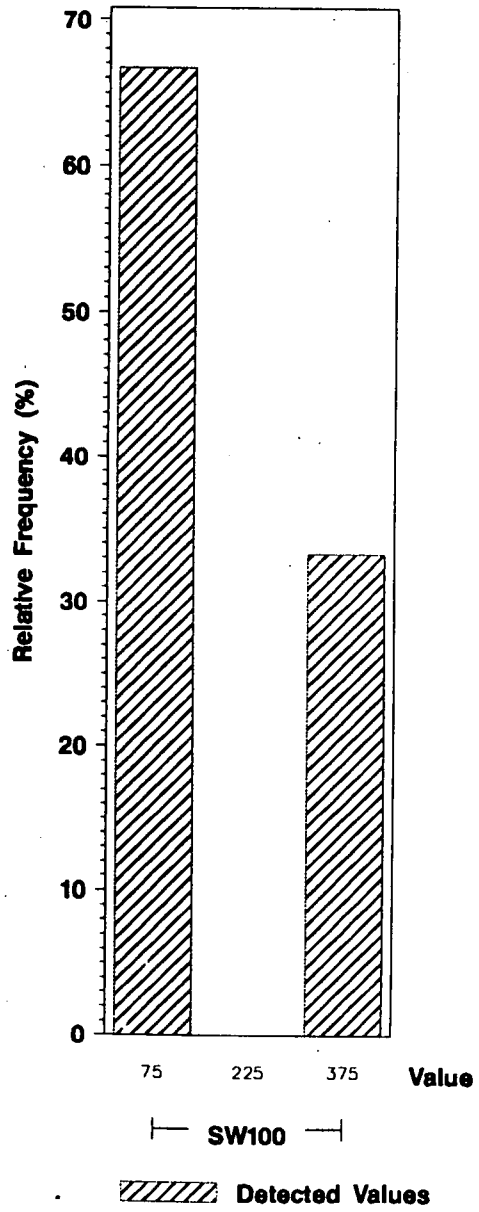
ANALYTE = POTASSIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PHOSPHORUS (ug/L) in Surface Water

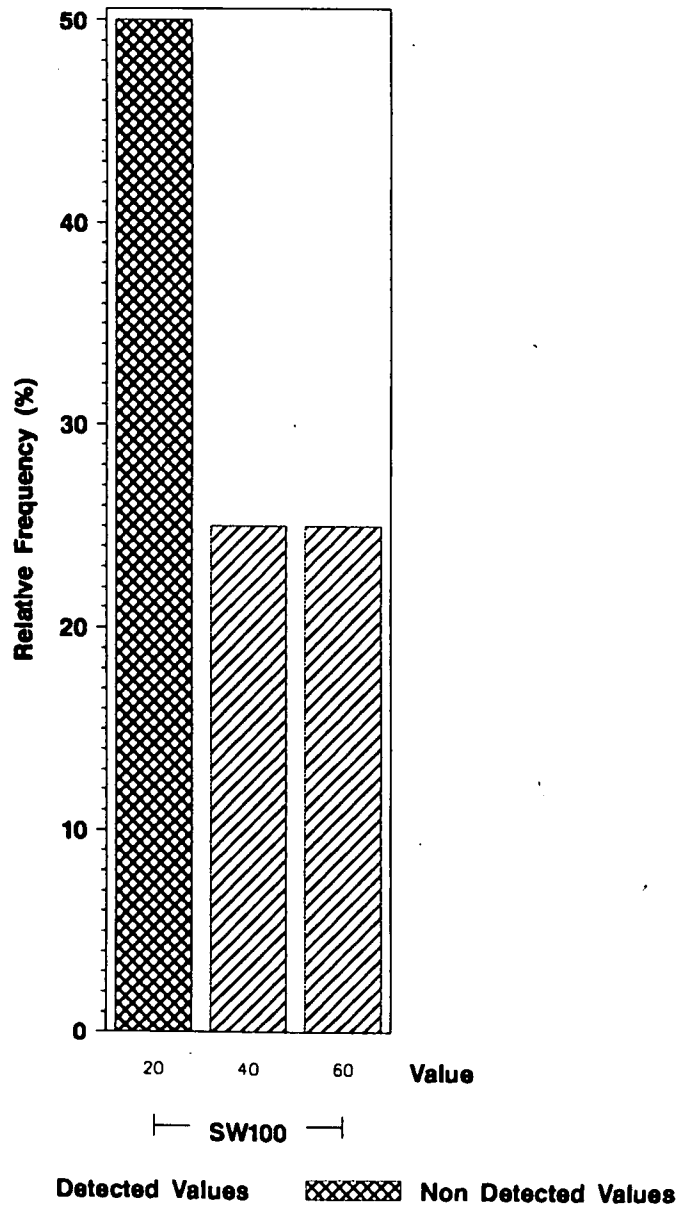
ANALYTE = PHOSPHORUS



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total NITRITE (ug/L) in Surface Water

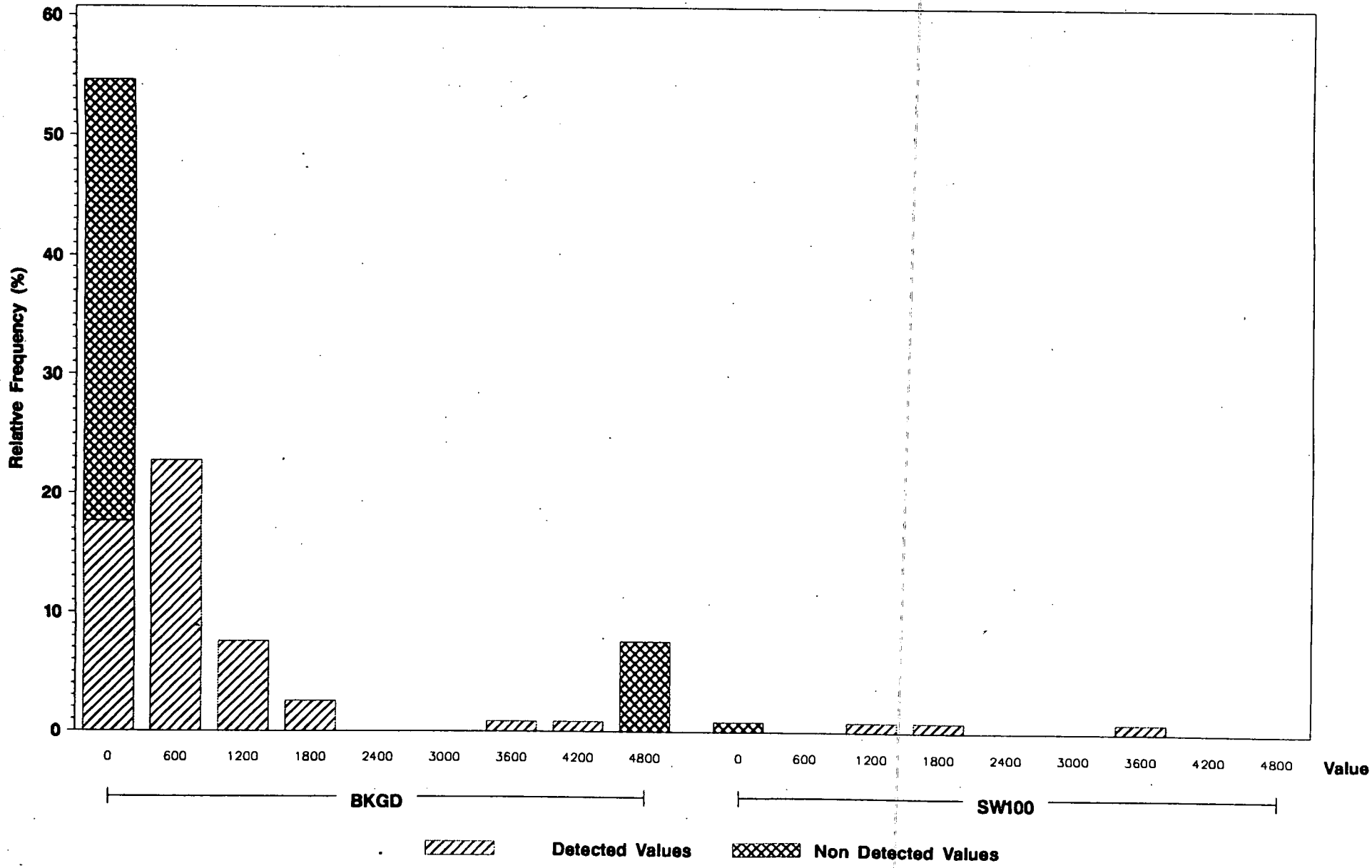
ANALYTE = NITRITE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Surface Water

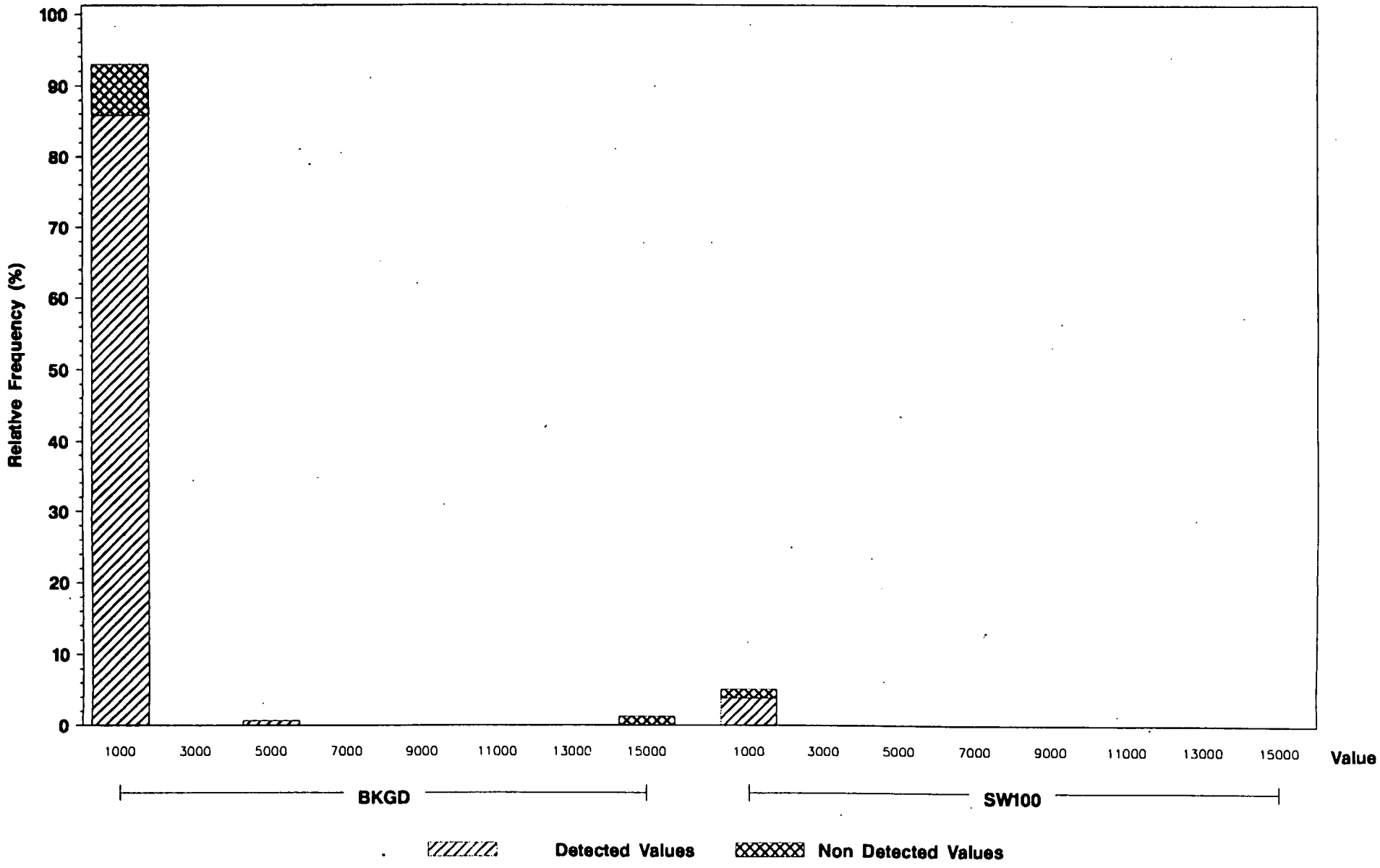
ANALYTE = NITRATE/NITRITE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total MANGANESE (ug/L) in Surface Water

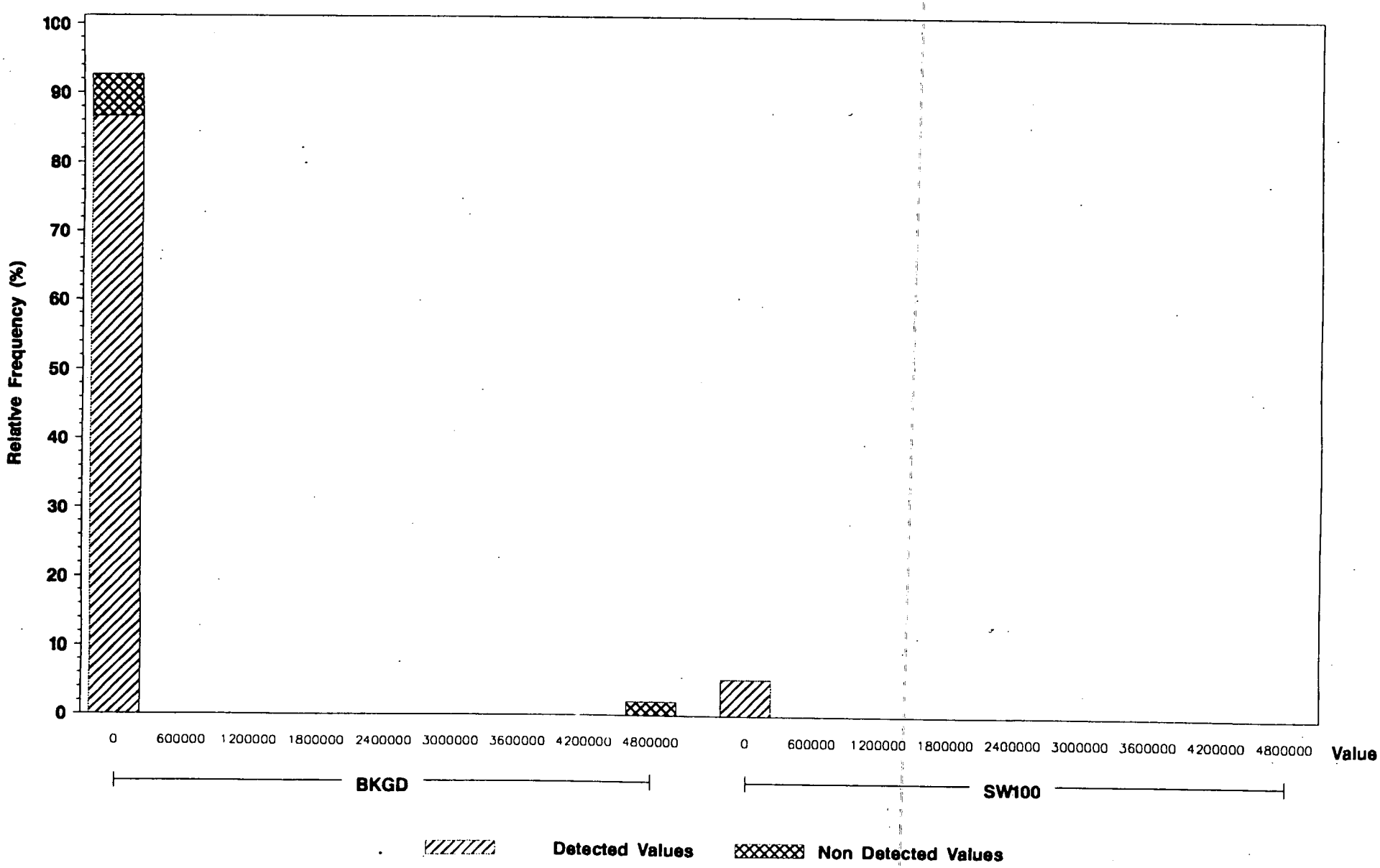
ANALYTE = MANGANESE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total MAGNESIUM (ug/L) in Surface Water

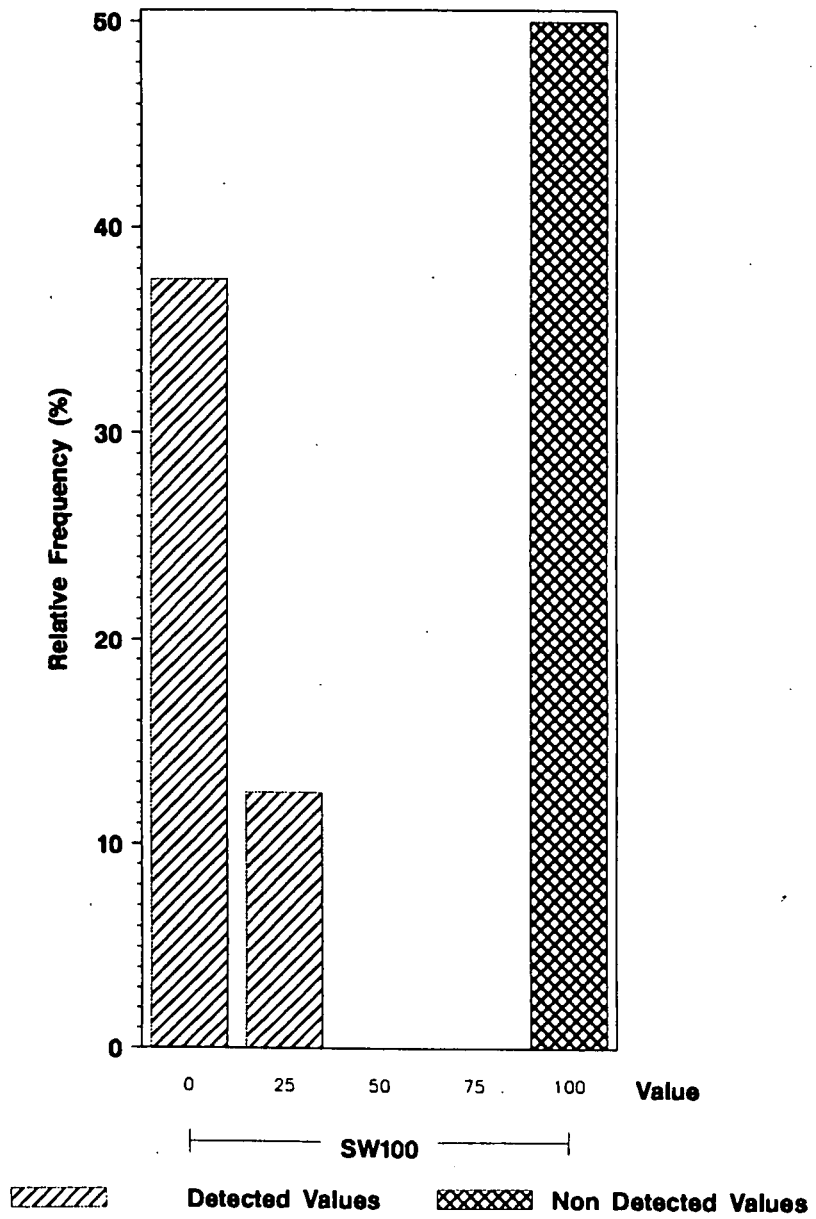
ANALYTE = MAGNESIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total LITHIUM (ug/L) in Surface Water

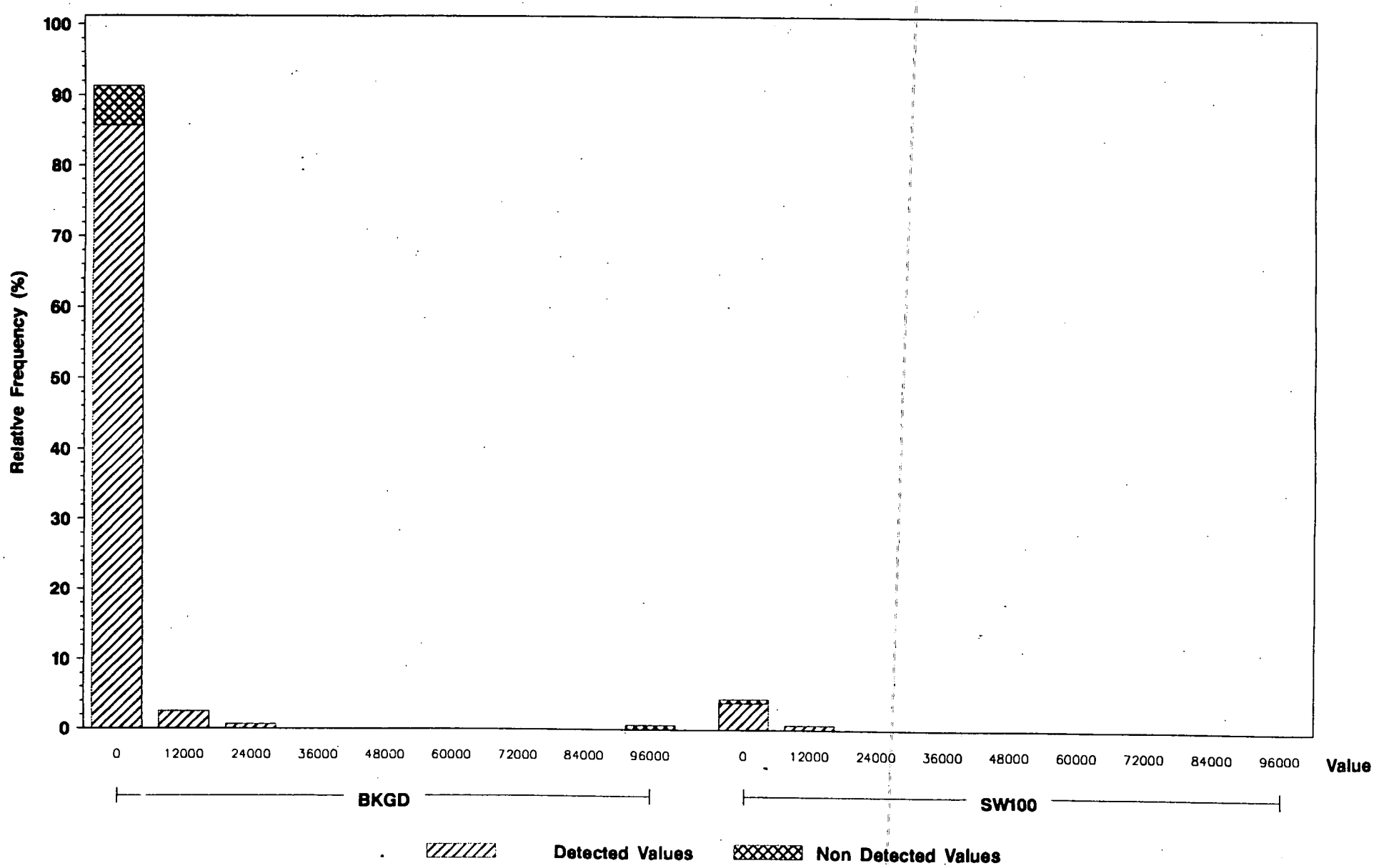
ANALYTE = LITHIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total IRON (ug/L) in Surface Water

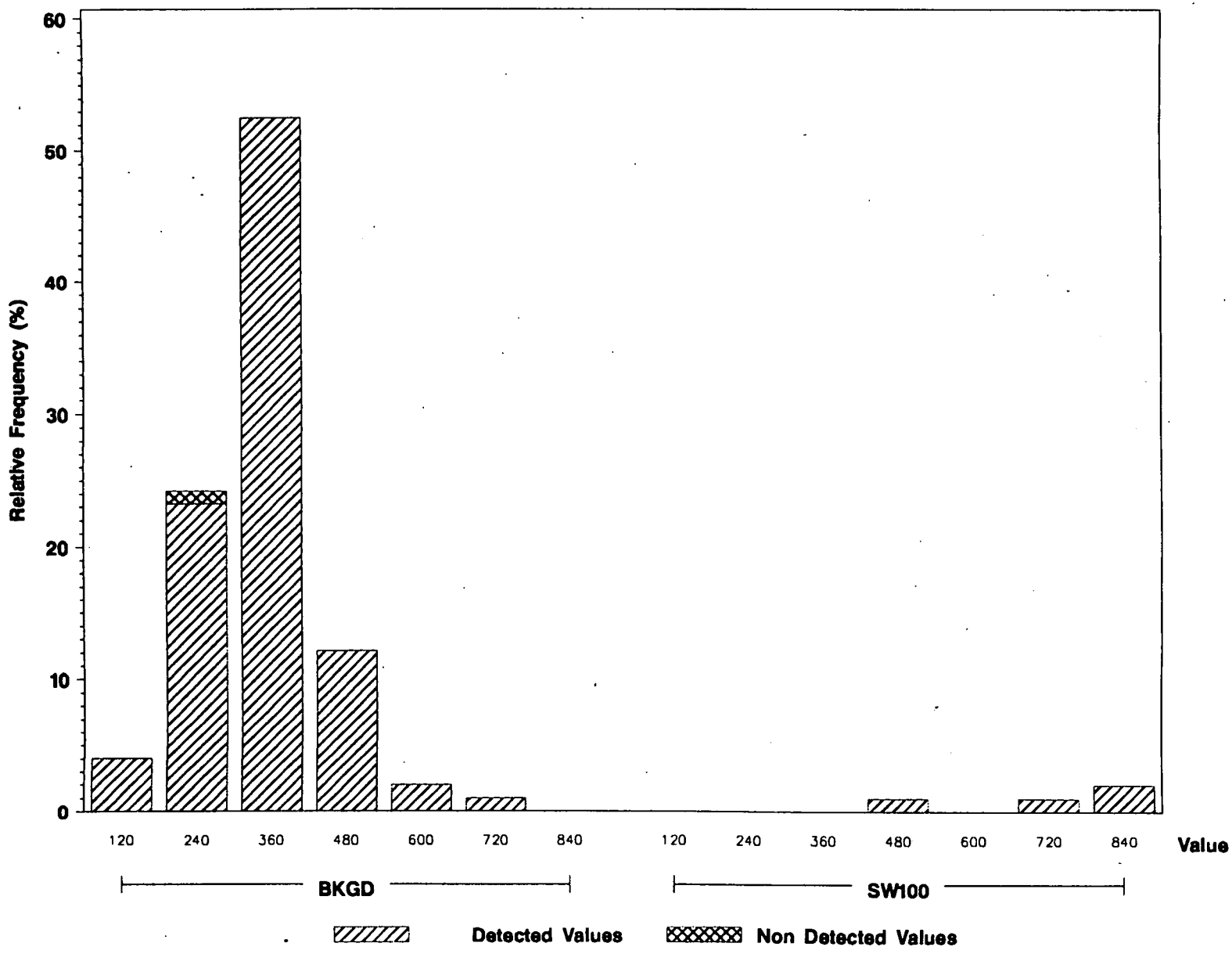
ANALYTE = IRON



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total FLUORIDE (ug/L) in Surface Water

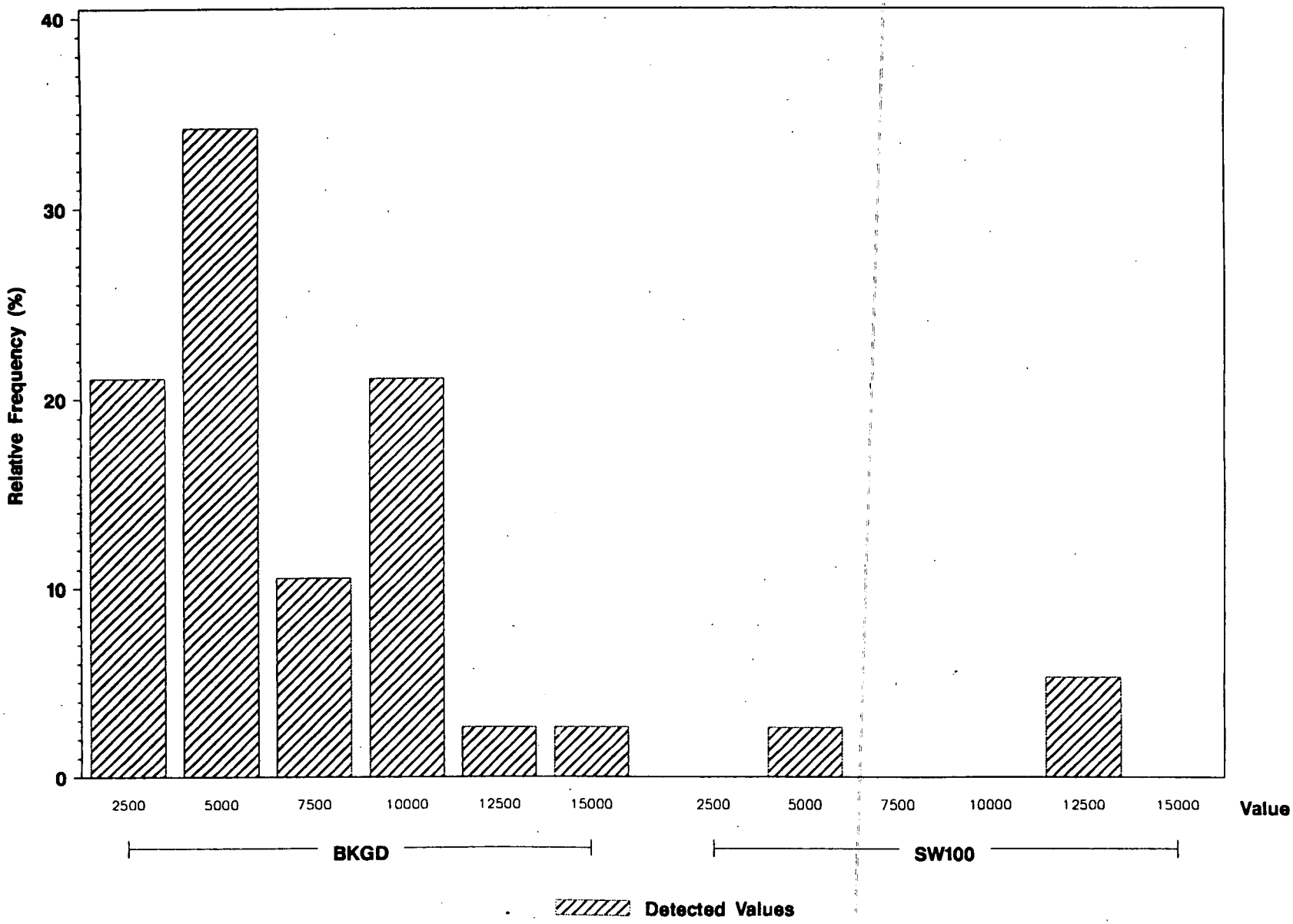
ANALYTE = FLUORIDE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total DISSOLVED ORGANIC CARBON (ug/L) in Surface Water

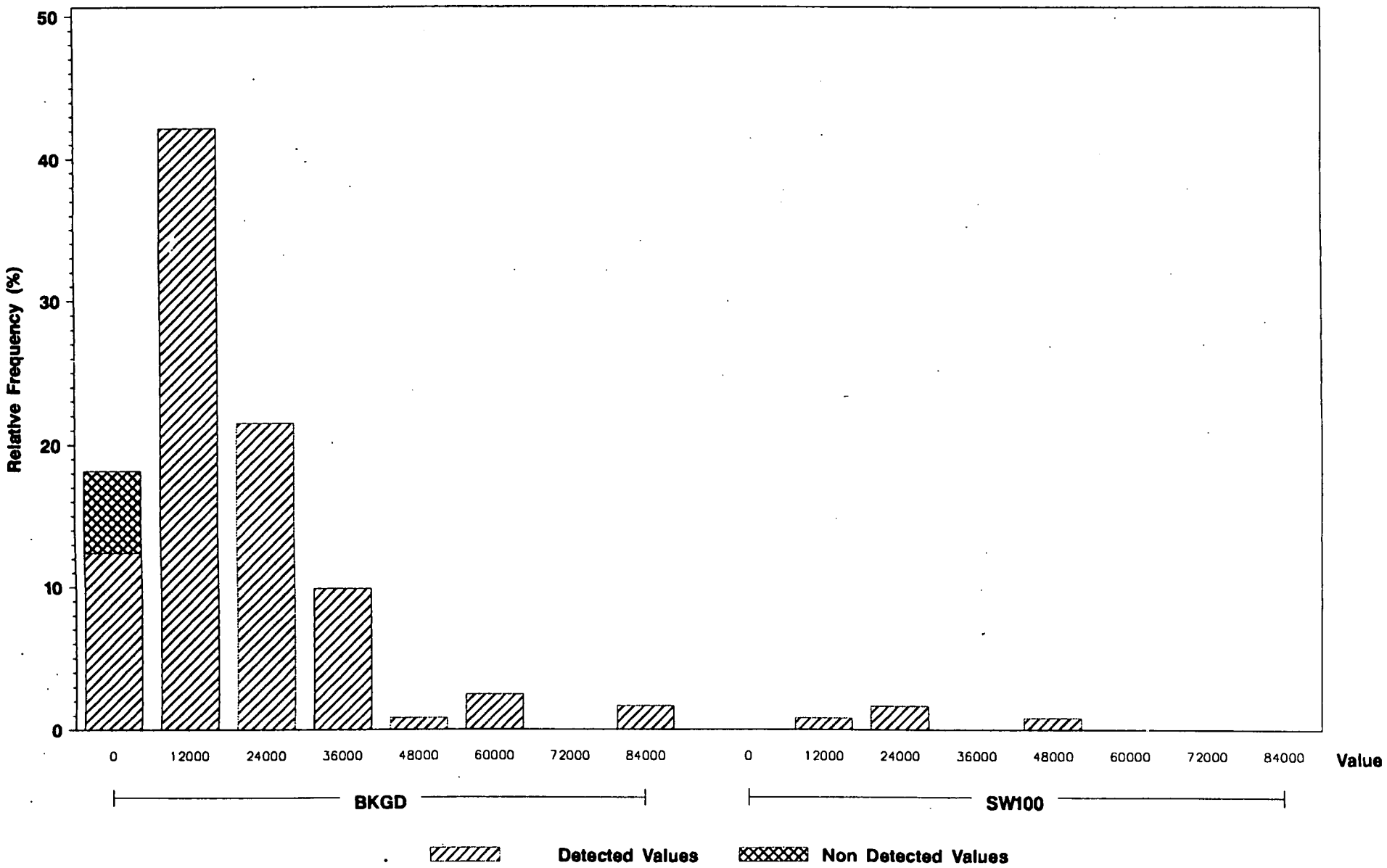
ANALYTE=DISSOLVED ORGANIC CARBON



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CHLORIDE (ug/L) in Surface Water

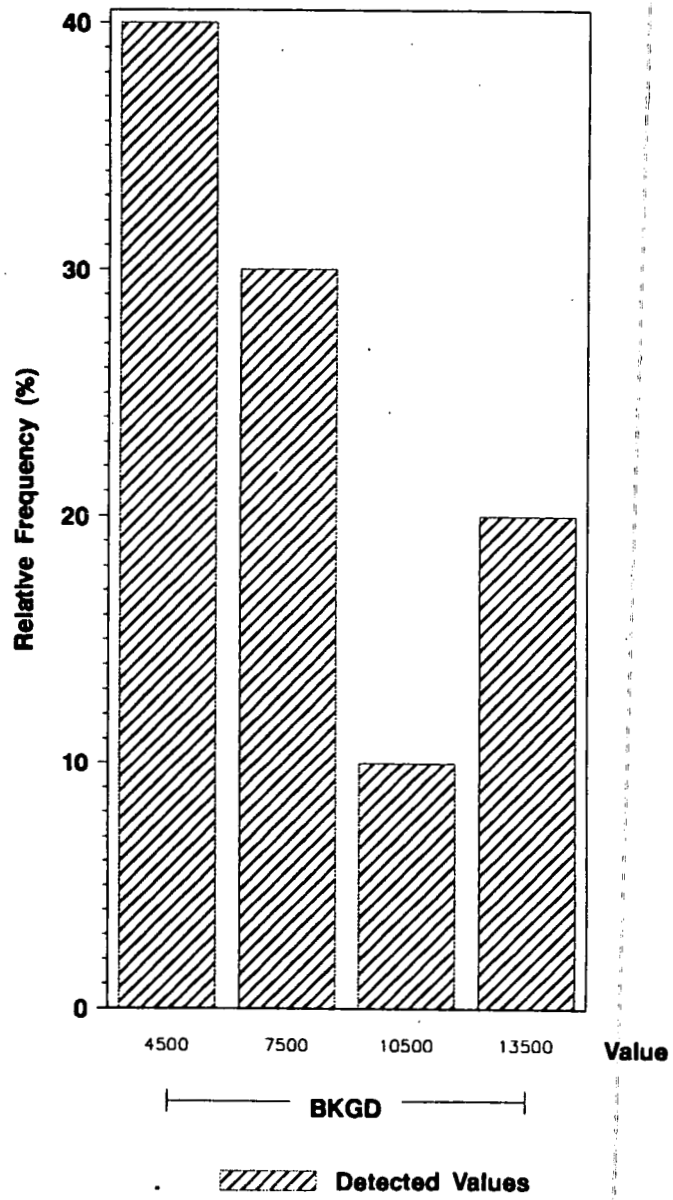
ANALYTE = CHLORIDE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CBOD5 (ug/L) in Surface Water

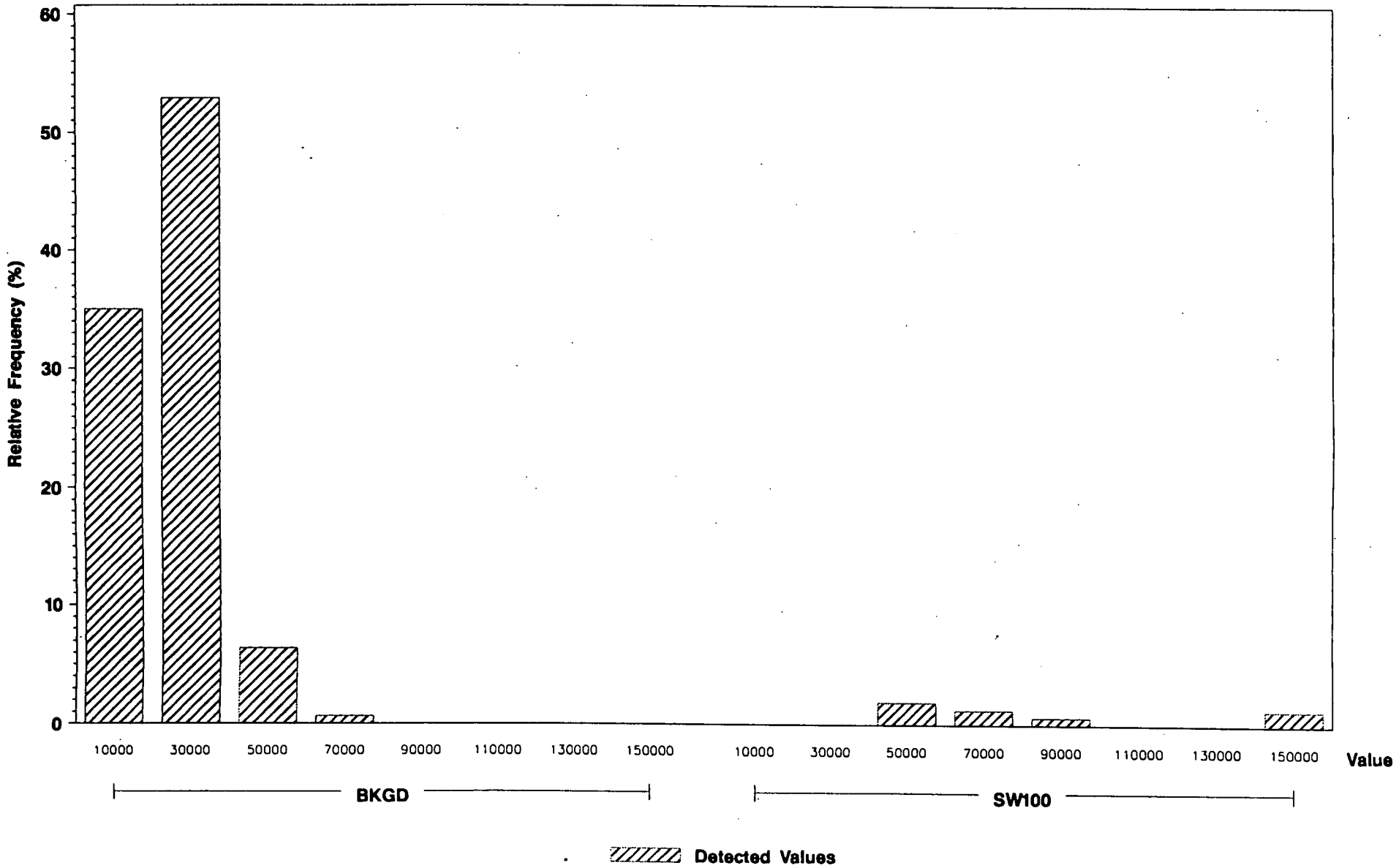
ANALYTE = CBOD5



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CALCIUM (ug/L) in Surface Water

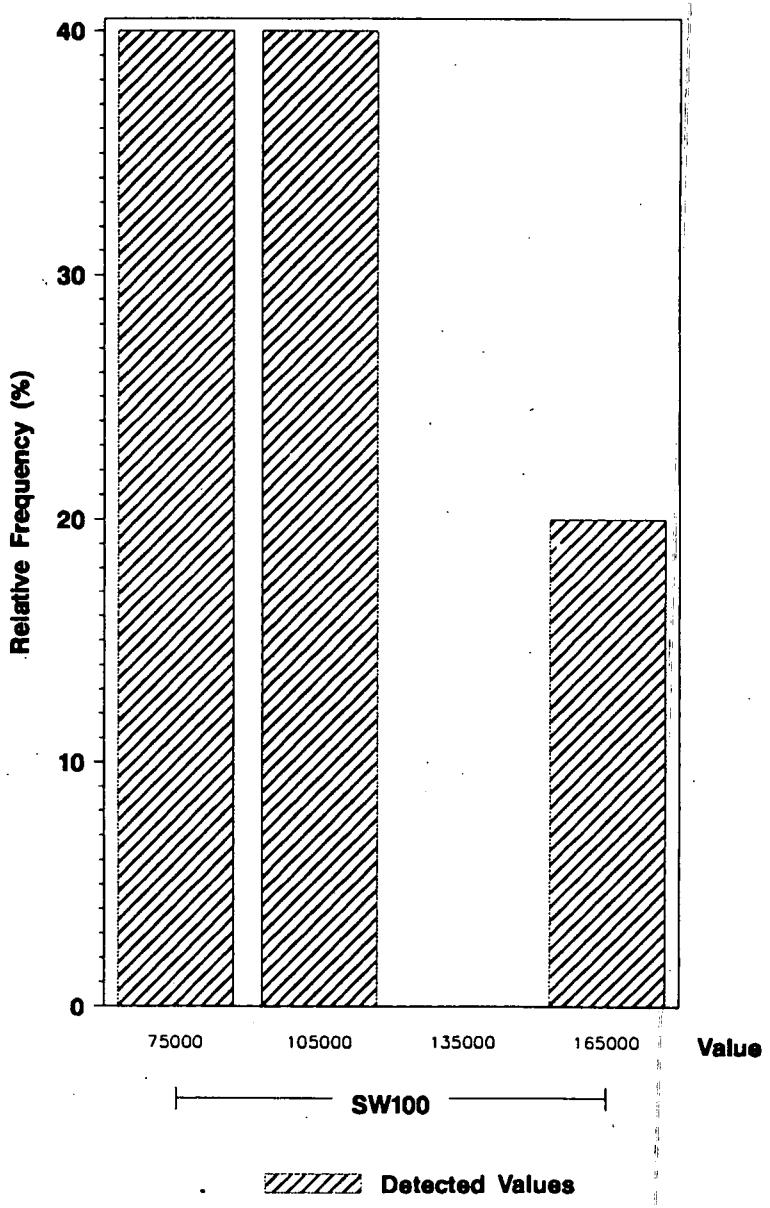
ANALYTE = CALCIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Surface Water

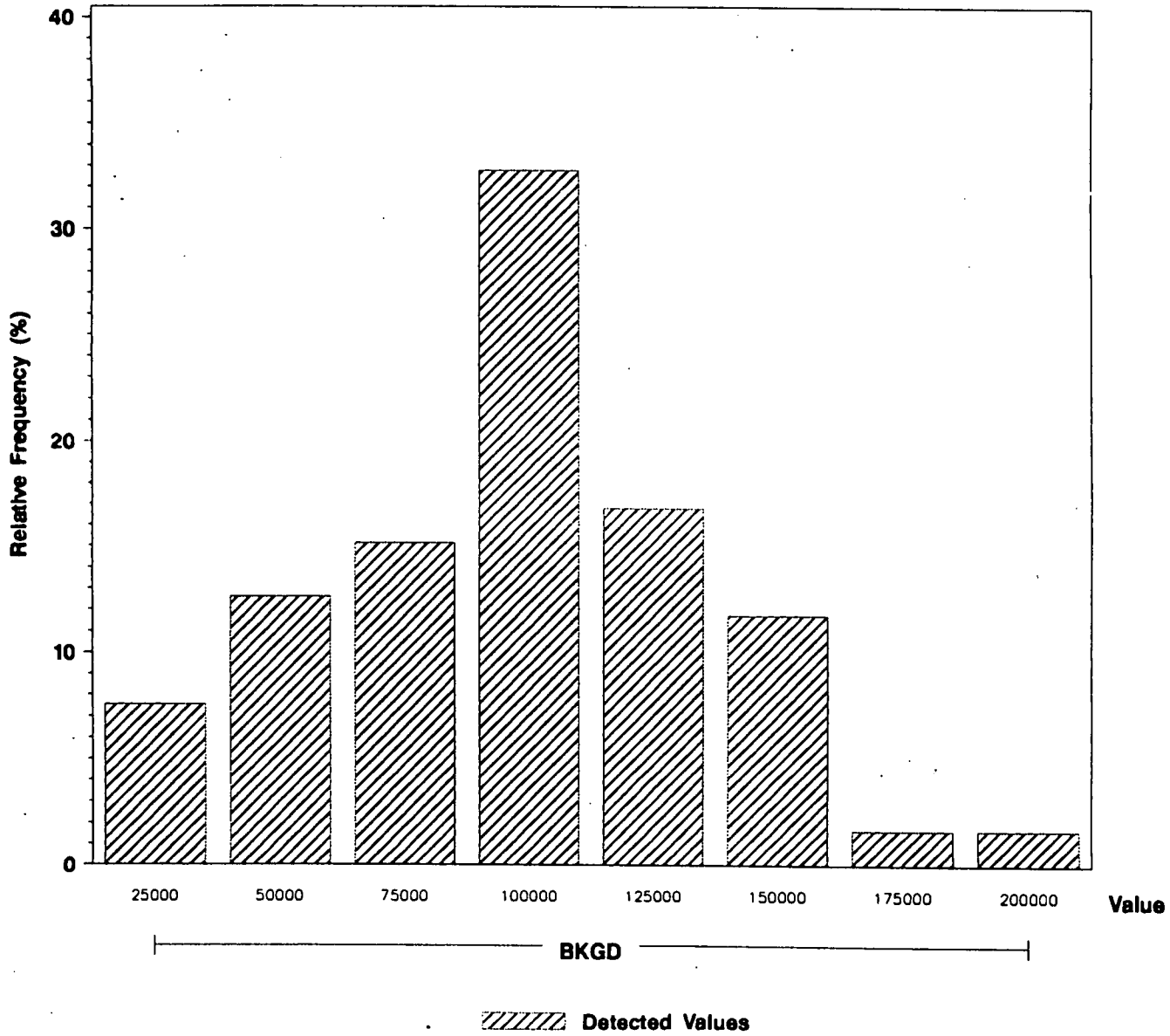
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total BICARBONATE (ug/L) in Surface Water

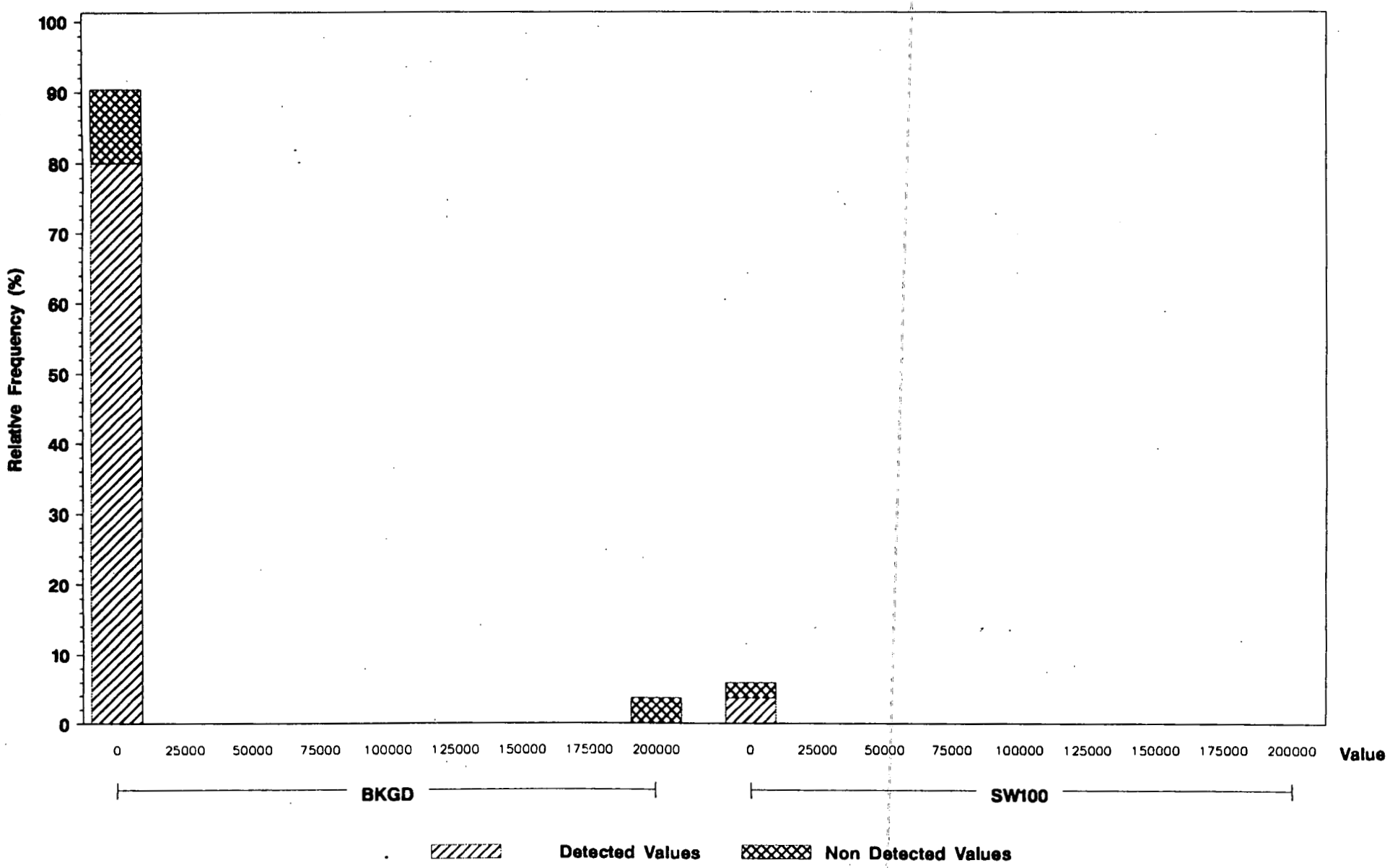
ANALYTE = BICARBONATE



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total BARIUM (ug/L) in Surface Water

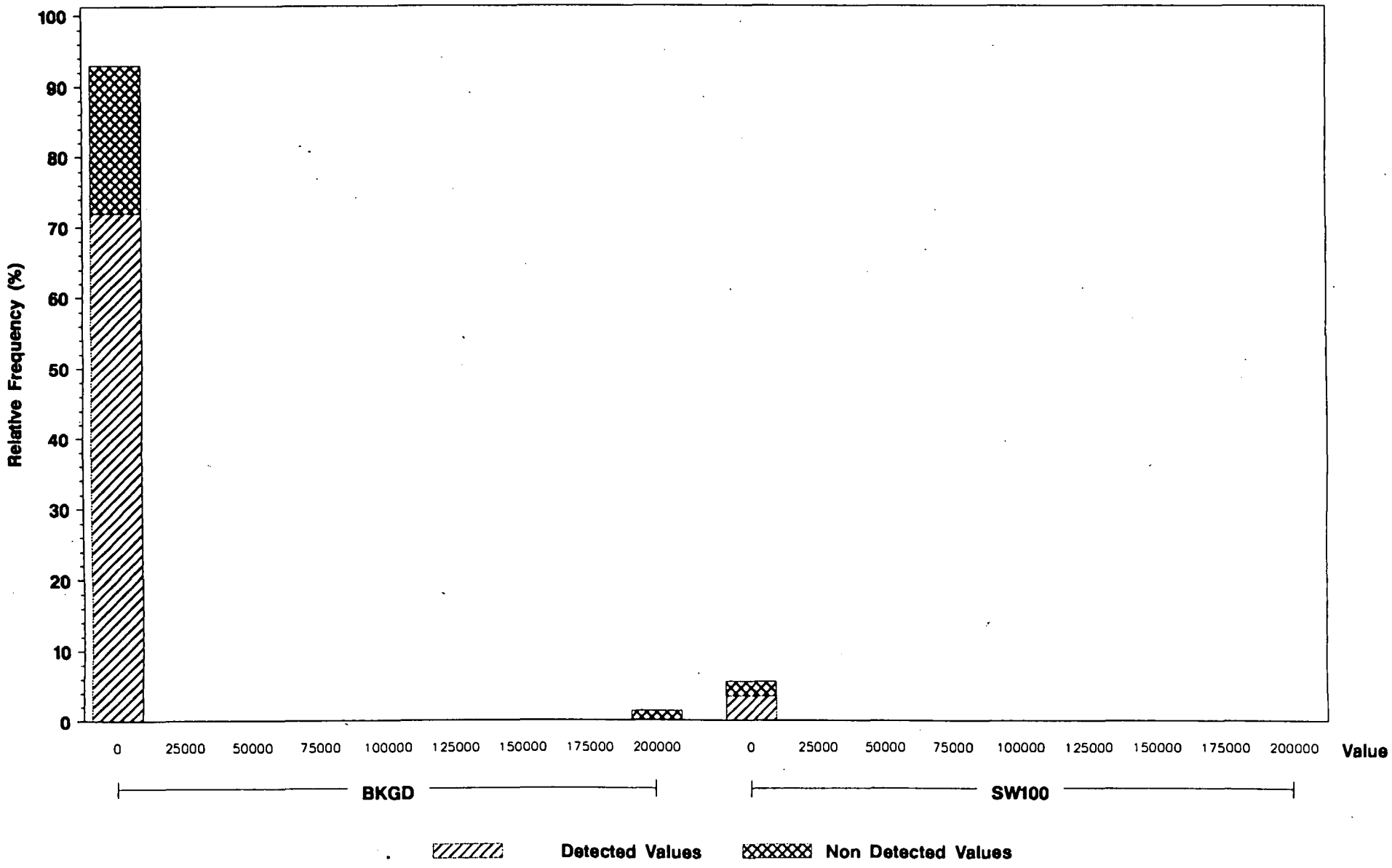
ANALYTE = BARIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total ALUMINUM (ug/L) in Surface Water

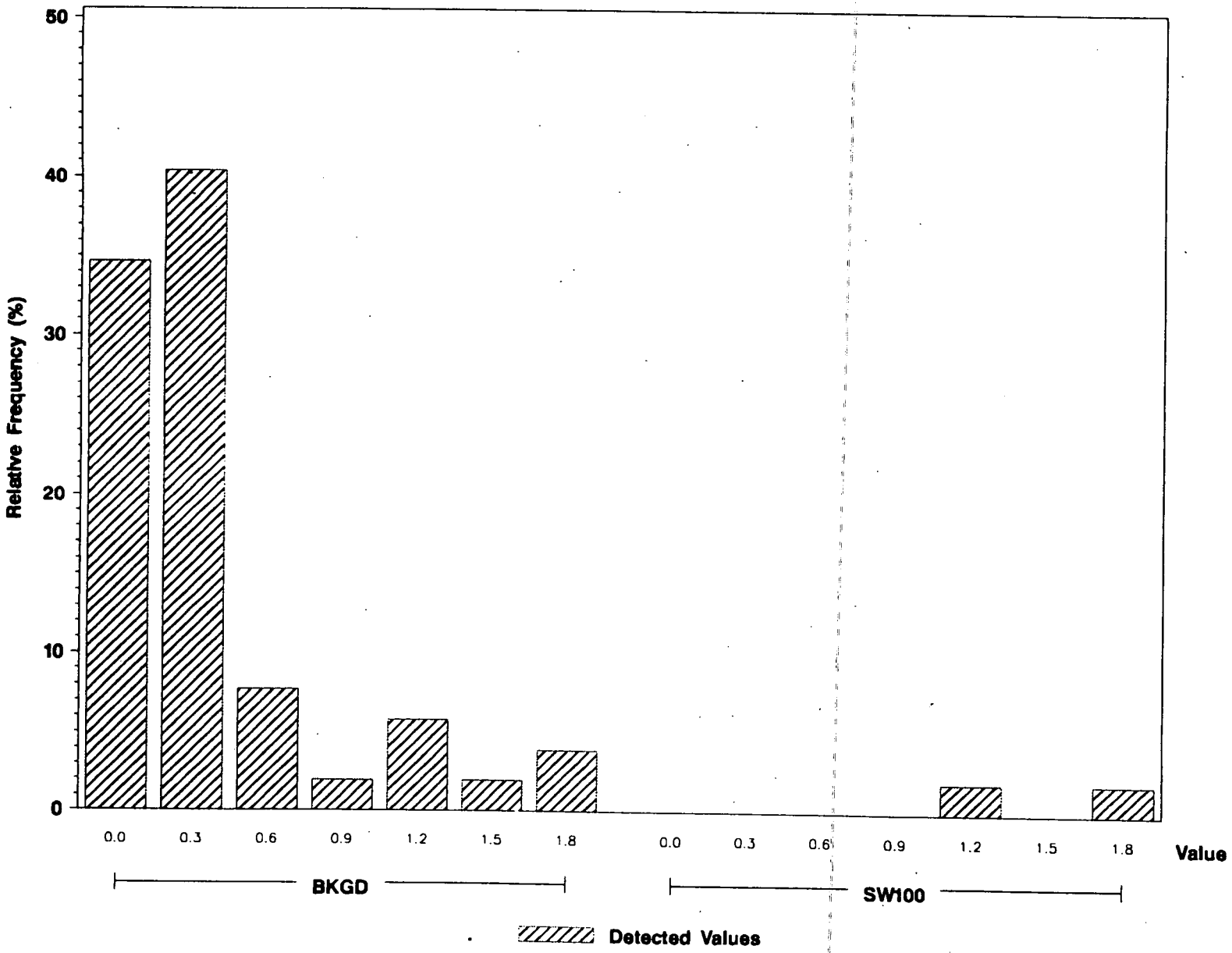
ANALYTE = ALUMINUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Surface Water

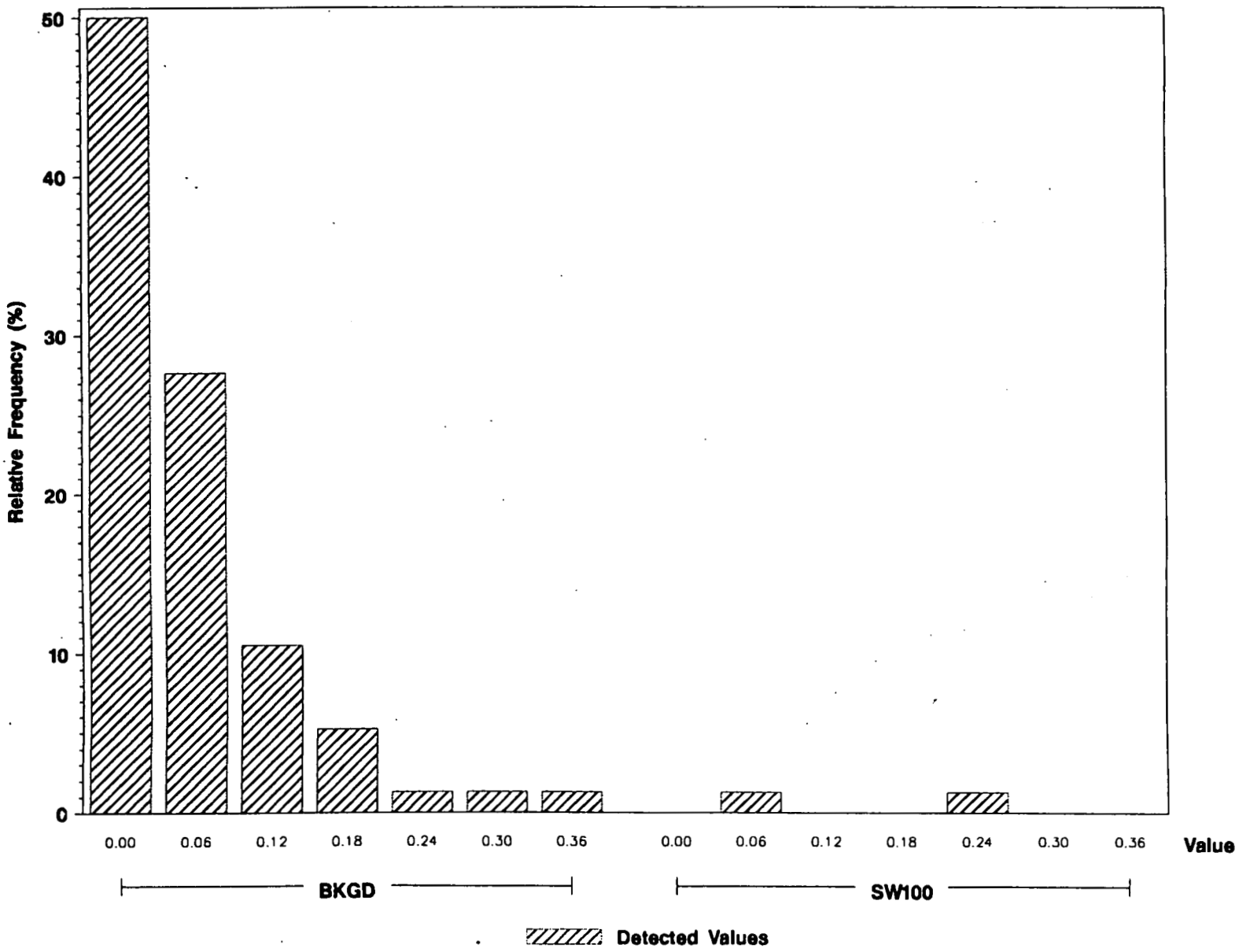
ANALYTE = URANIUM-238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM-235 (pCi/L) in Surface Water

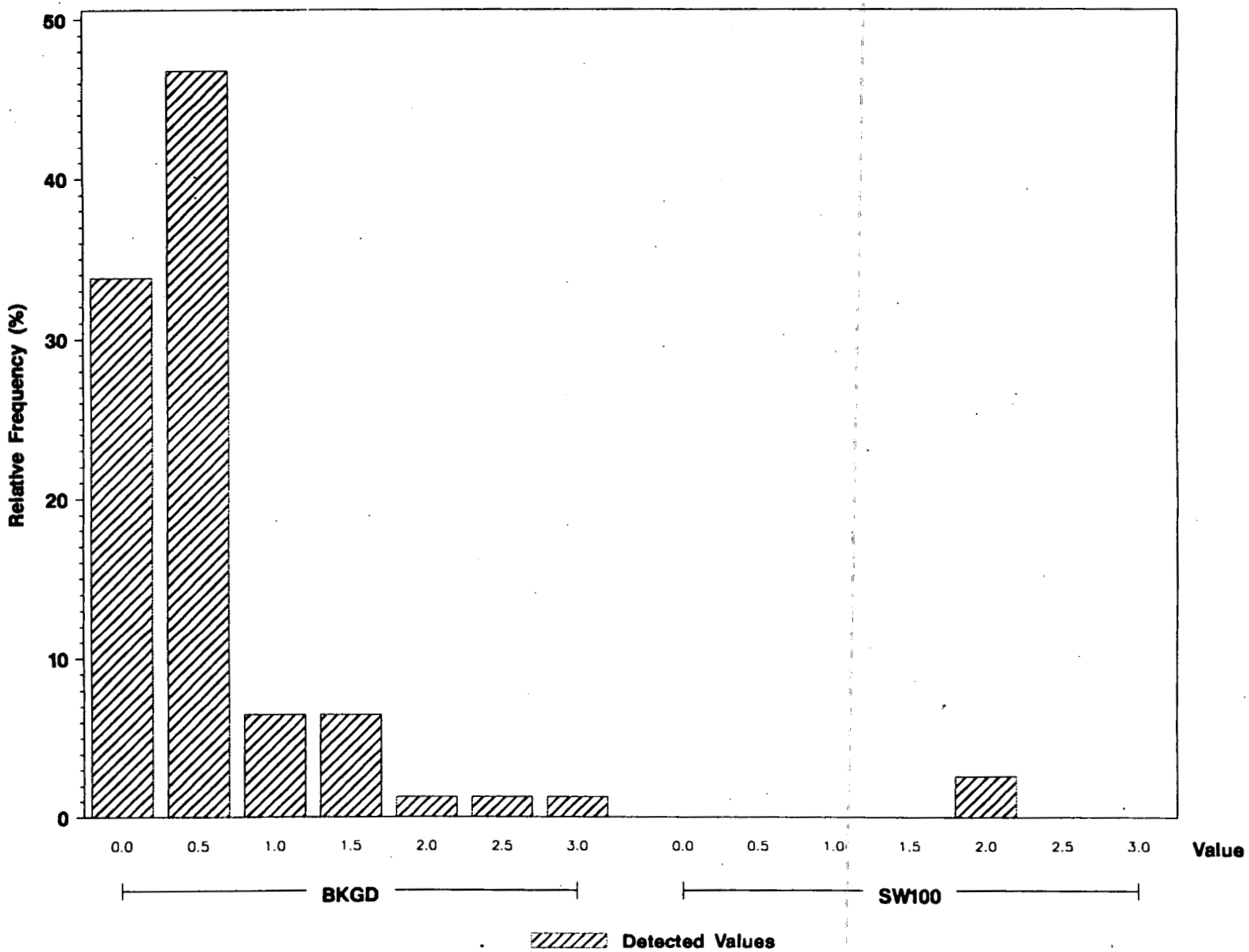
ANALYTE=URANIUM-235



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Surface Water

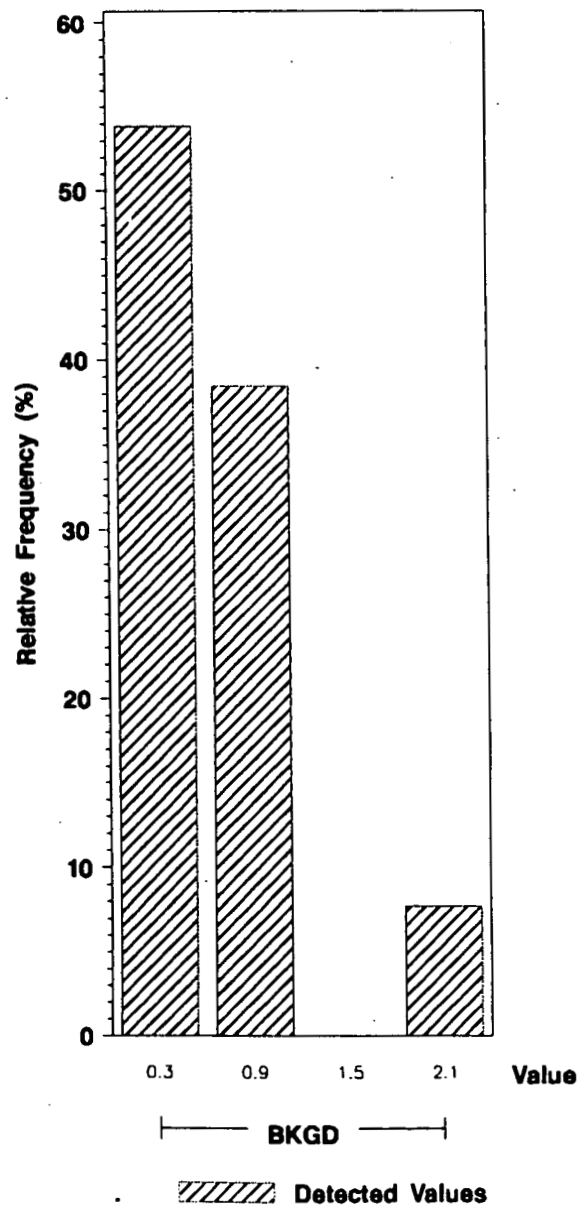
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Surface Water

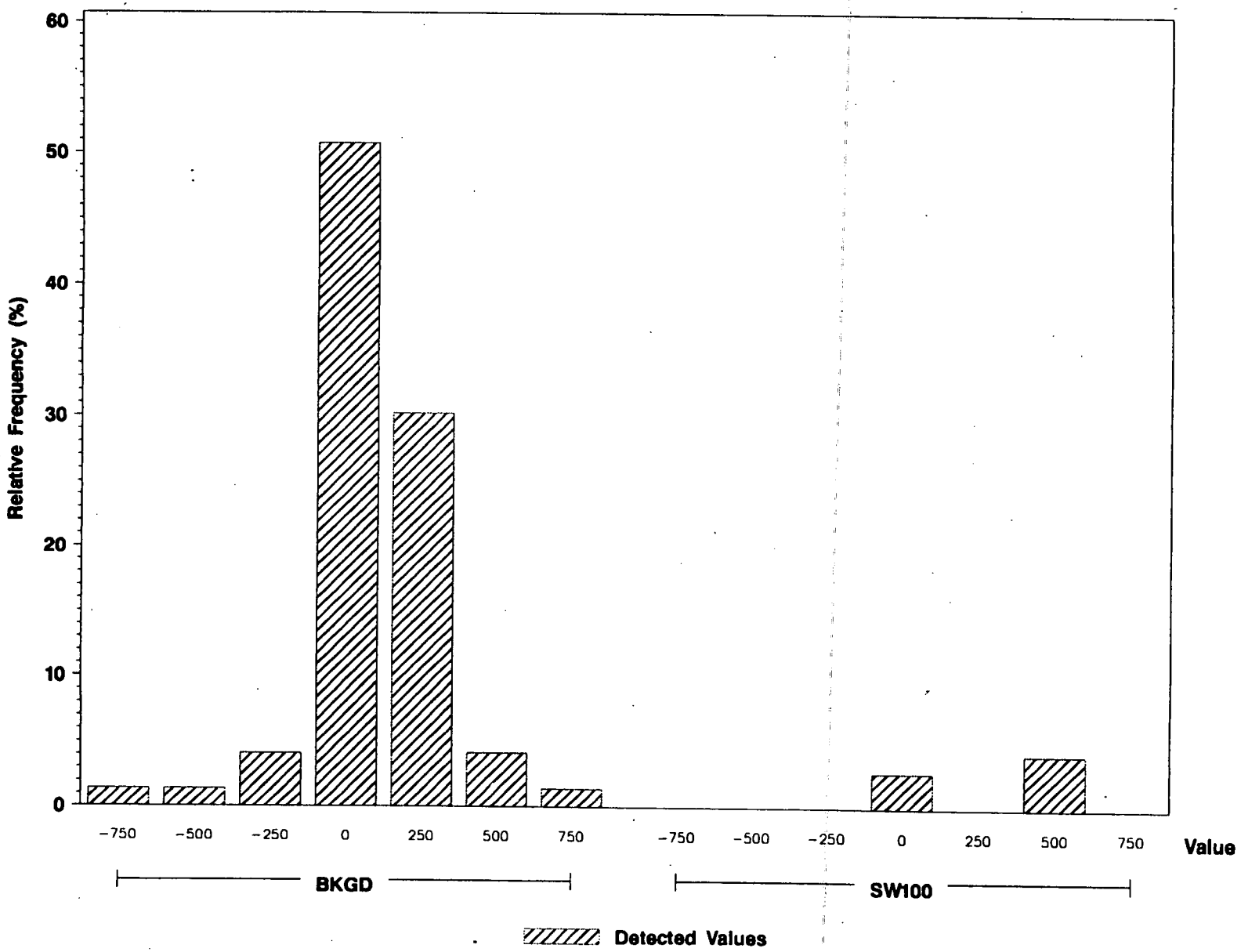
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TRITIUM (pCi/L) in Surface Water

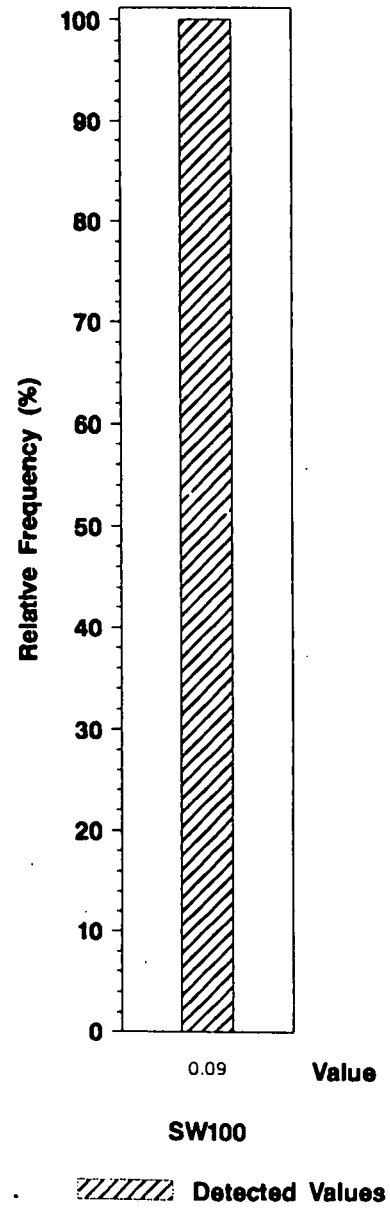
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Surface Water

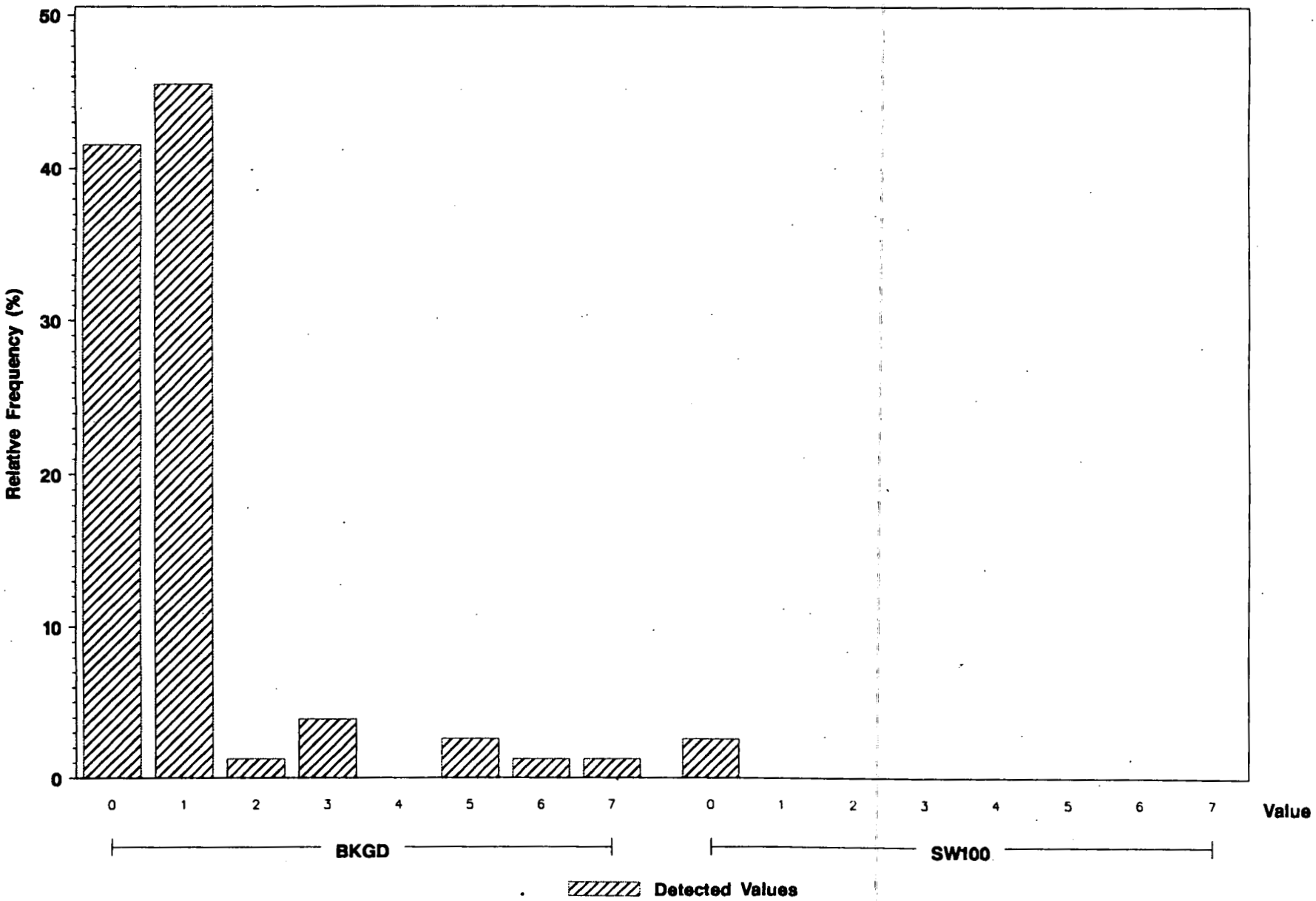
ANALYTE=STRONTIUM-90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Surface Water

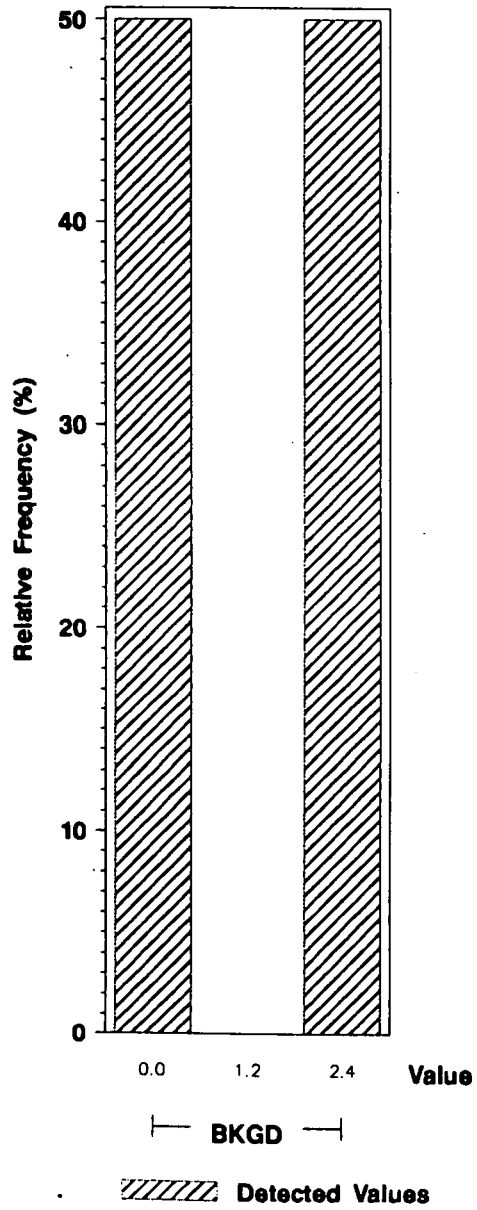
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total RADIUM-226 (pCi/L) in Surface Water

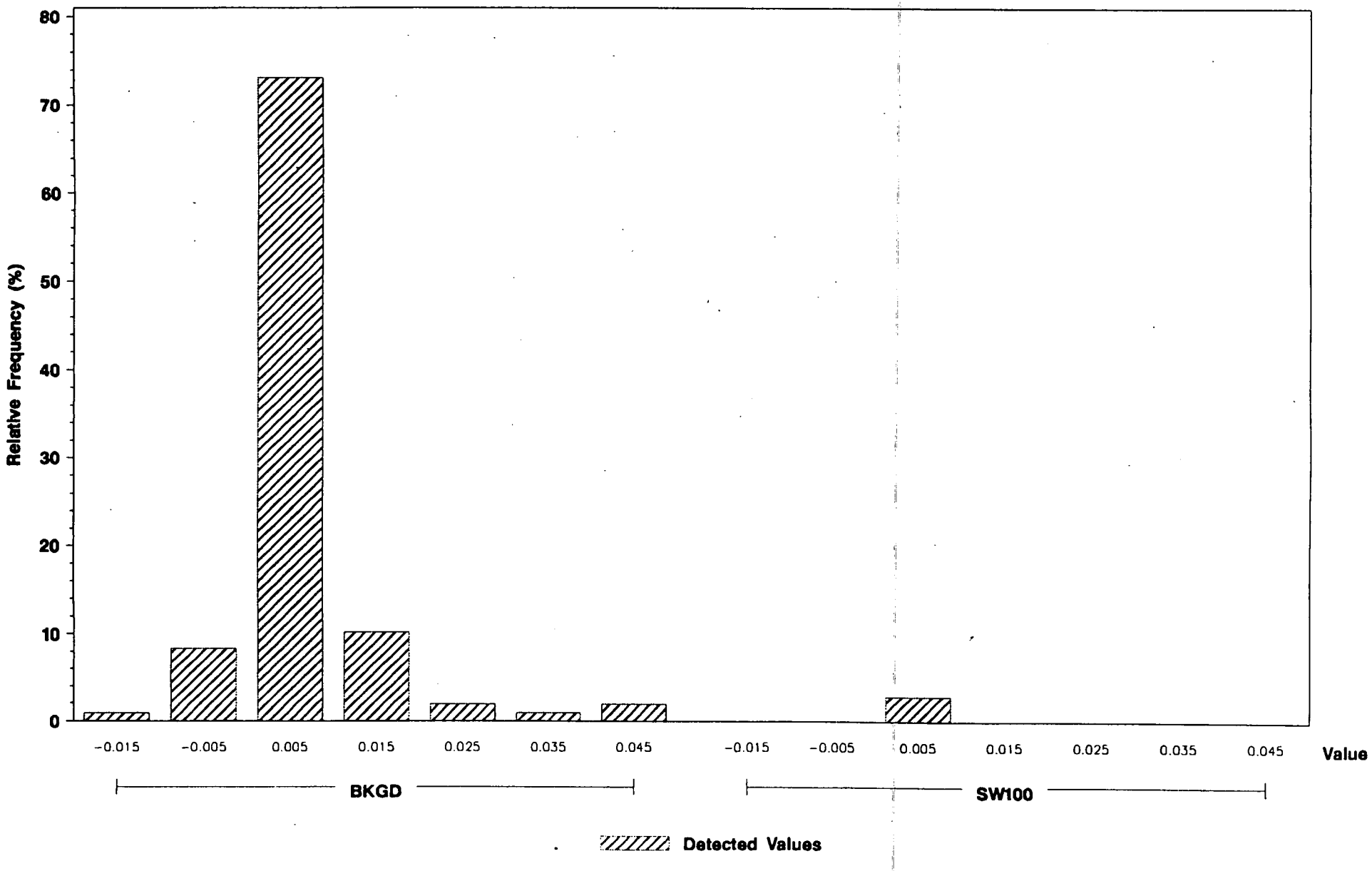
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM-239/240 (pCi/L) in Surface Water

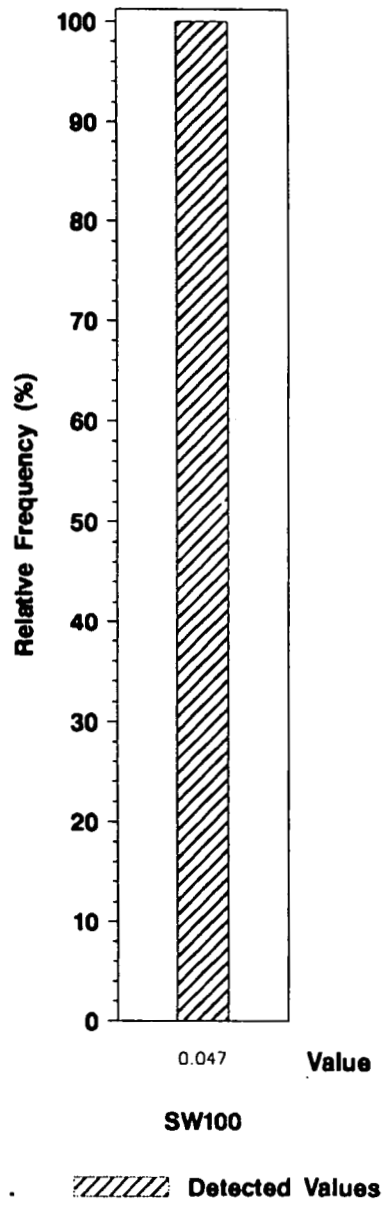
ANALYTE = PLUTONIUM-239/240



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 239 (pCi/L) in Surface Water

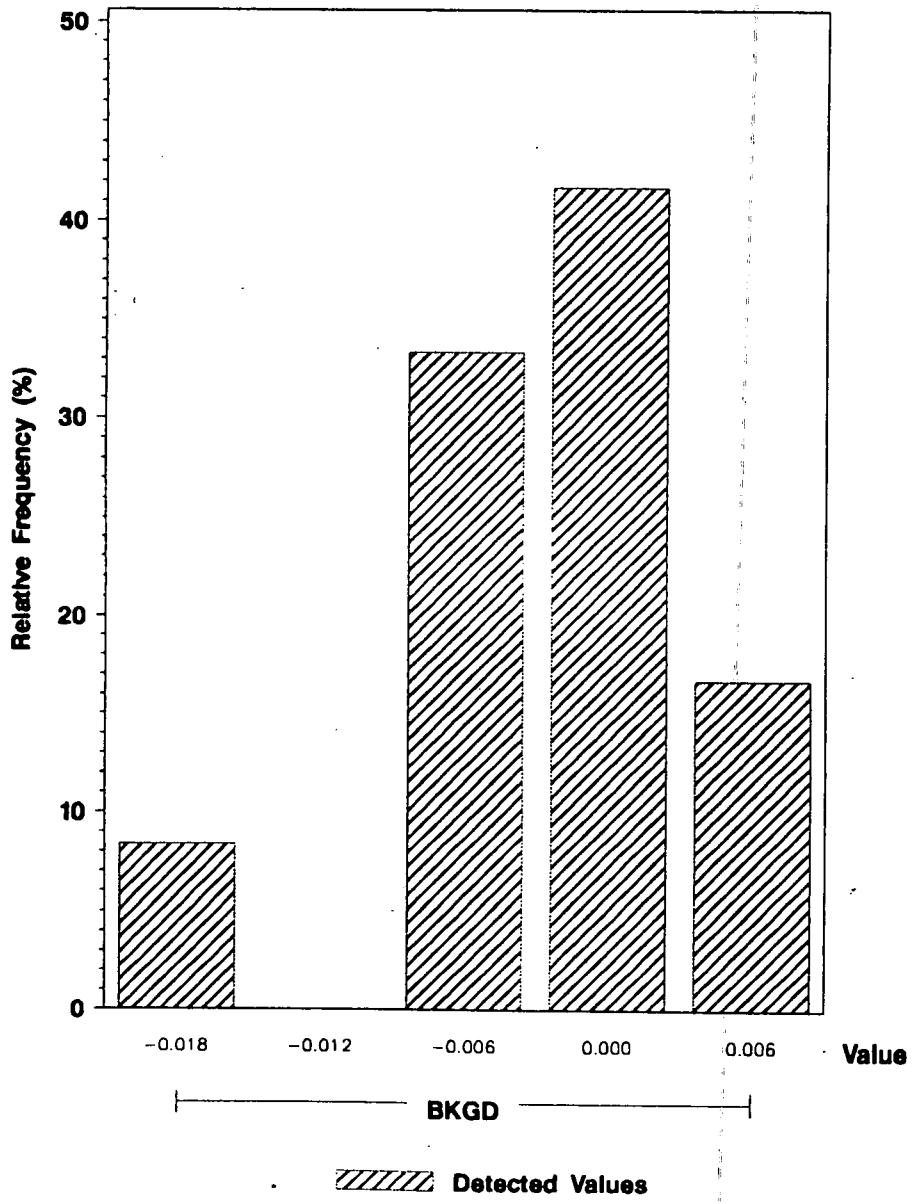
ANALYTE = PLUTONIUM – 239



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 238 (pCi/L) in Surface Water

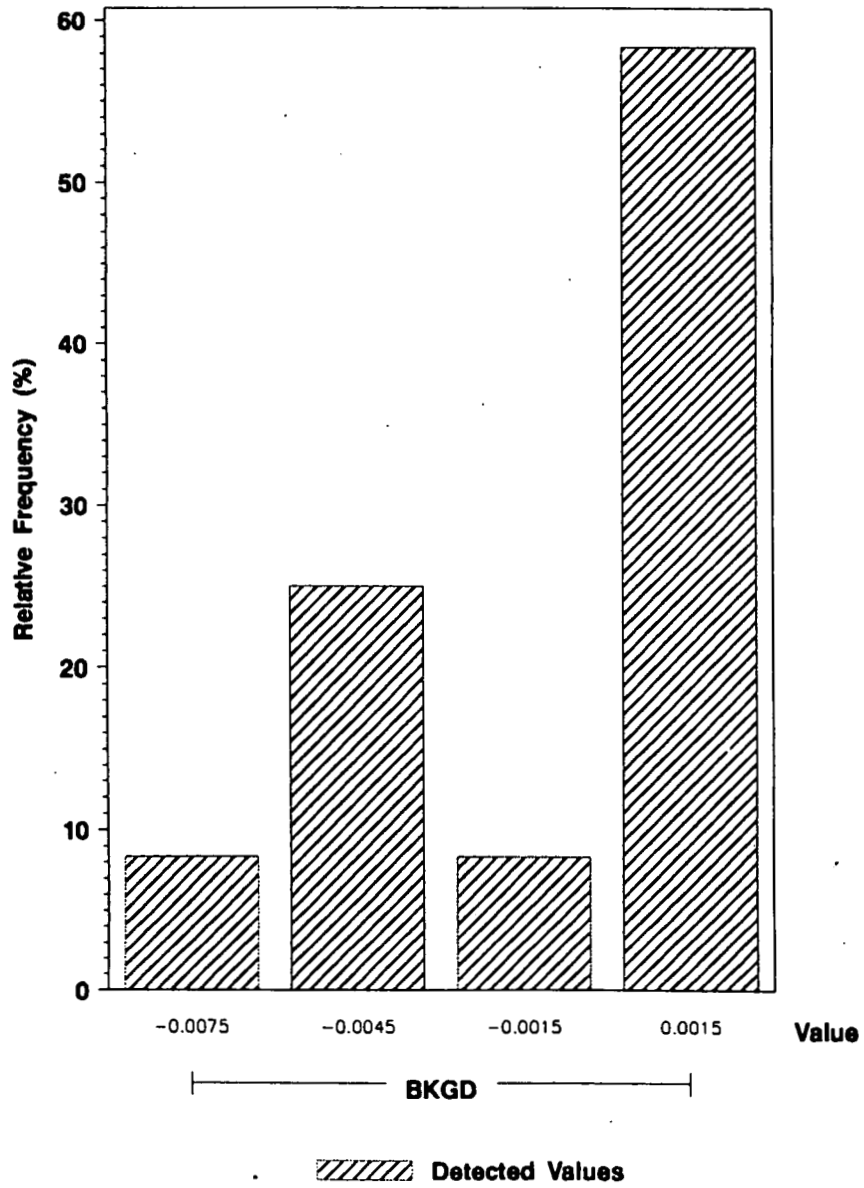
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 236 (pCi/L) in Surface Water

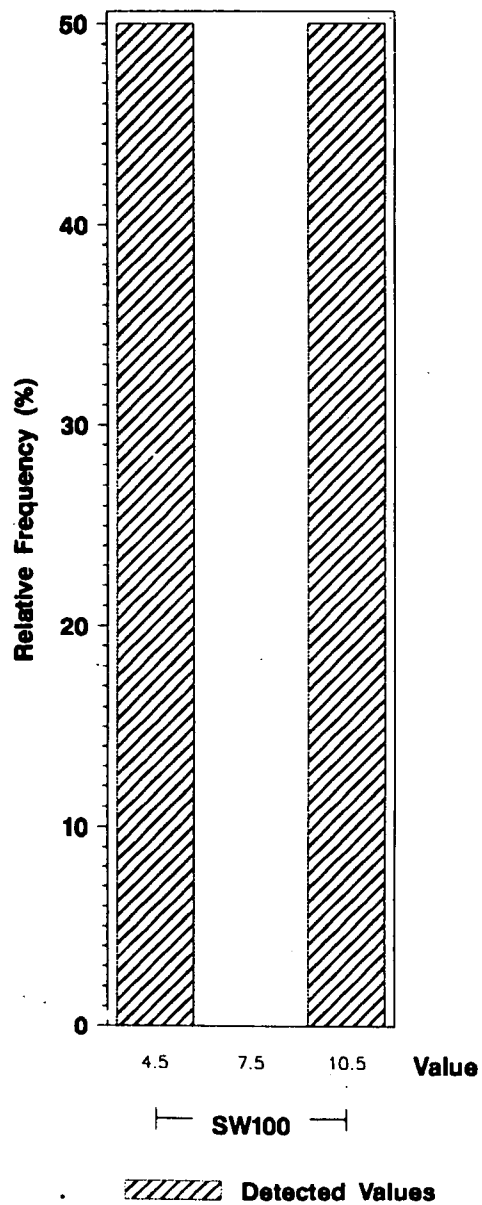
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS BETA – DISSOLVED (pCi/L) in Surface Water

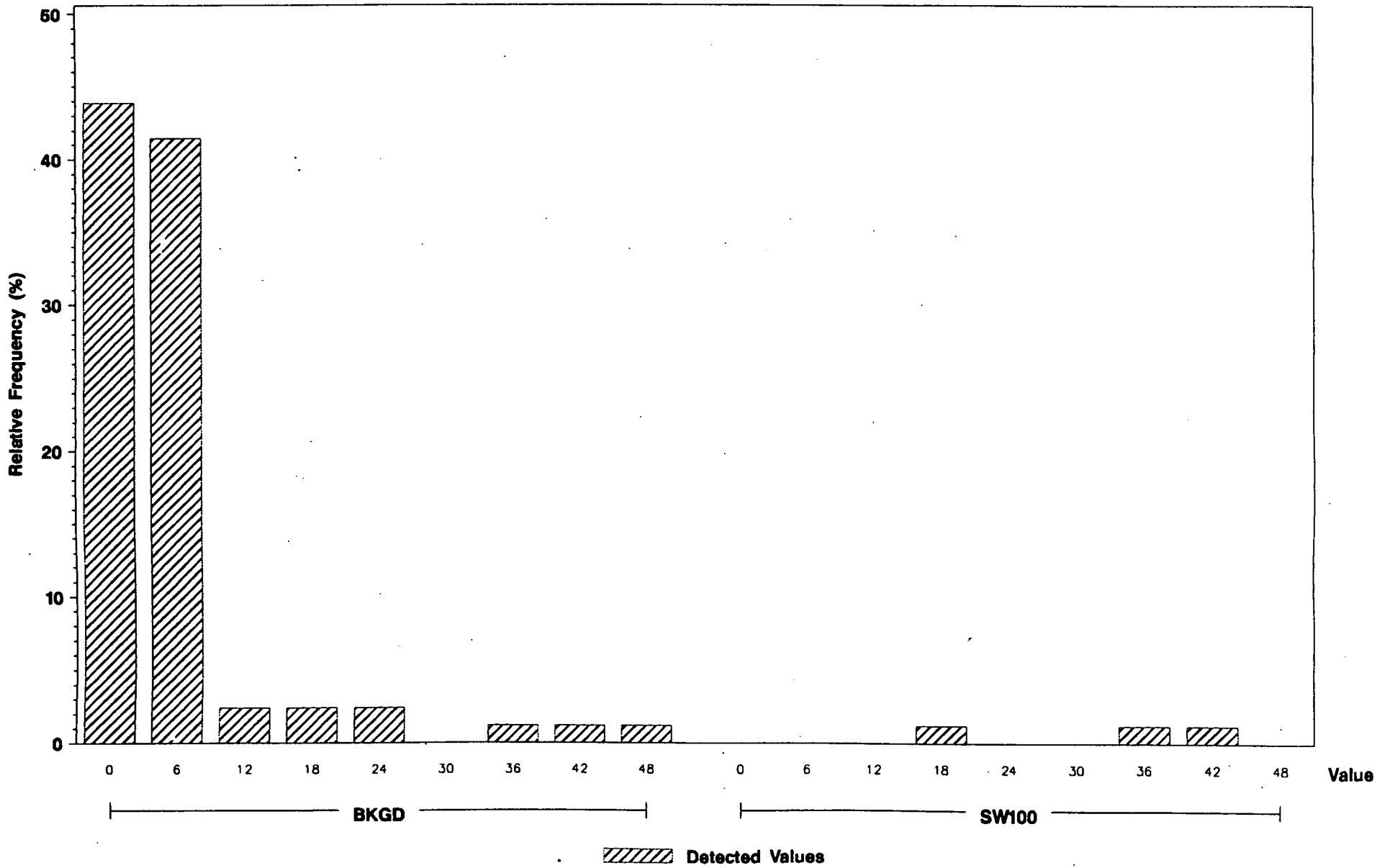
ANALYTE=GROSS BETA – DISSOLVED



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS BETA (pCi/L) in Surface Water

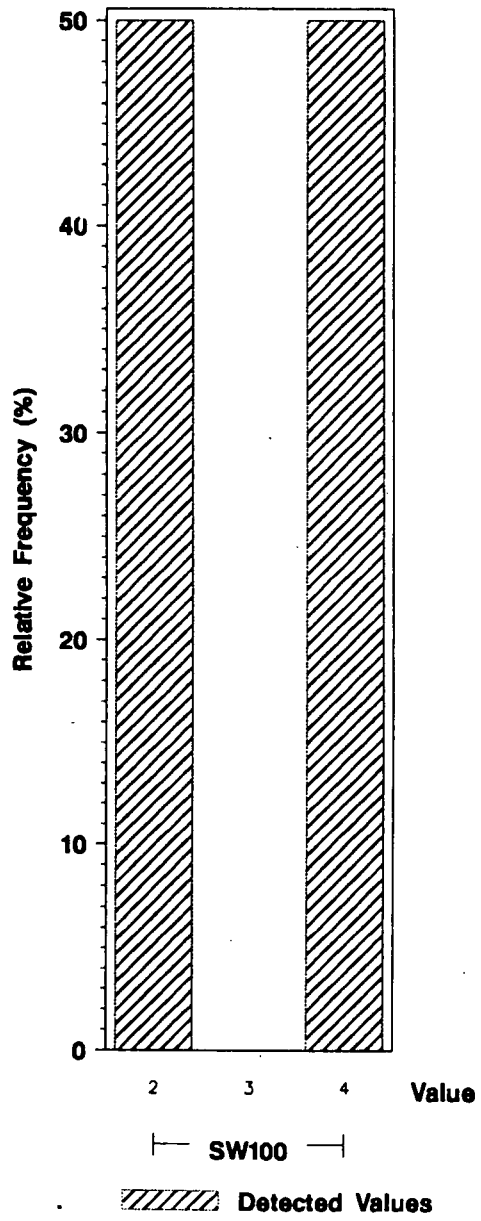
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS ALPHA – DISSOLVED (pCi/L) in Surface Water

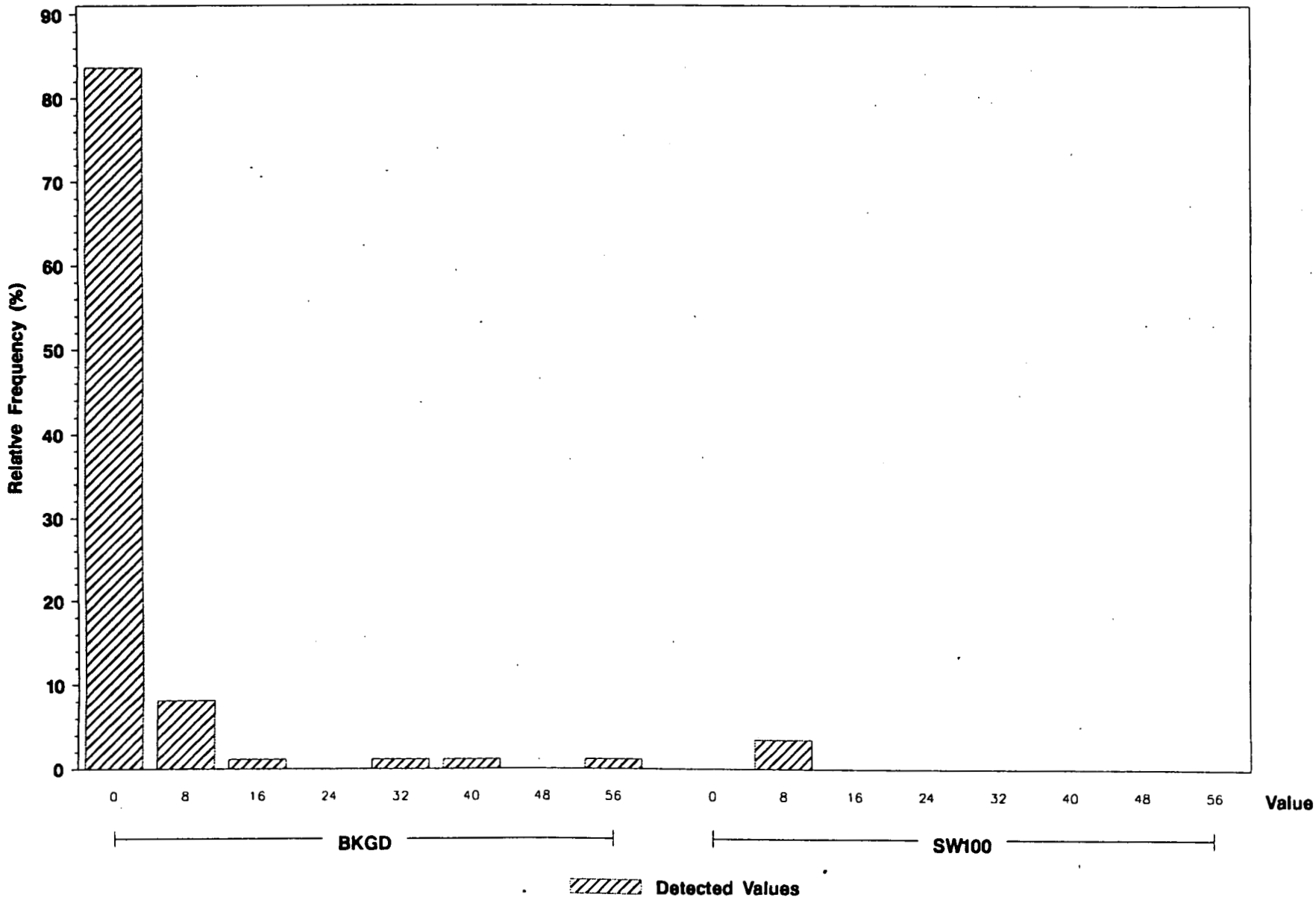
ANALYTE=GROSS ALPHA – DISSOLVED



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Surface Water

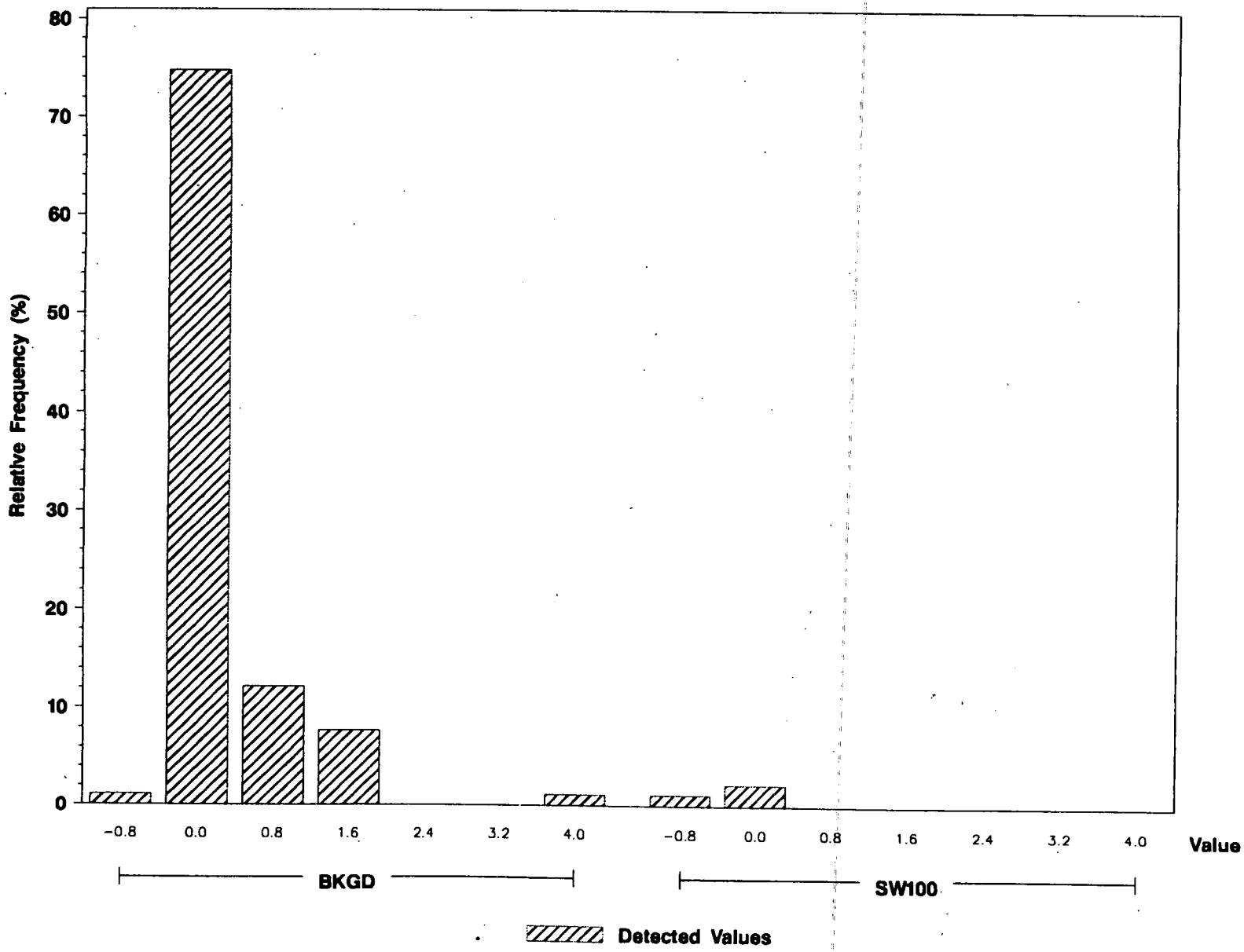
ANALYTE=GROSS ALPHA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Surface Water

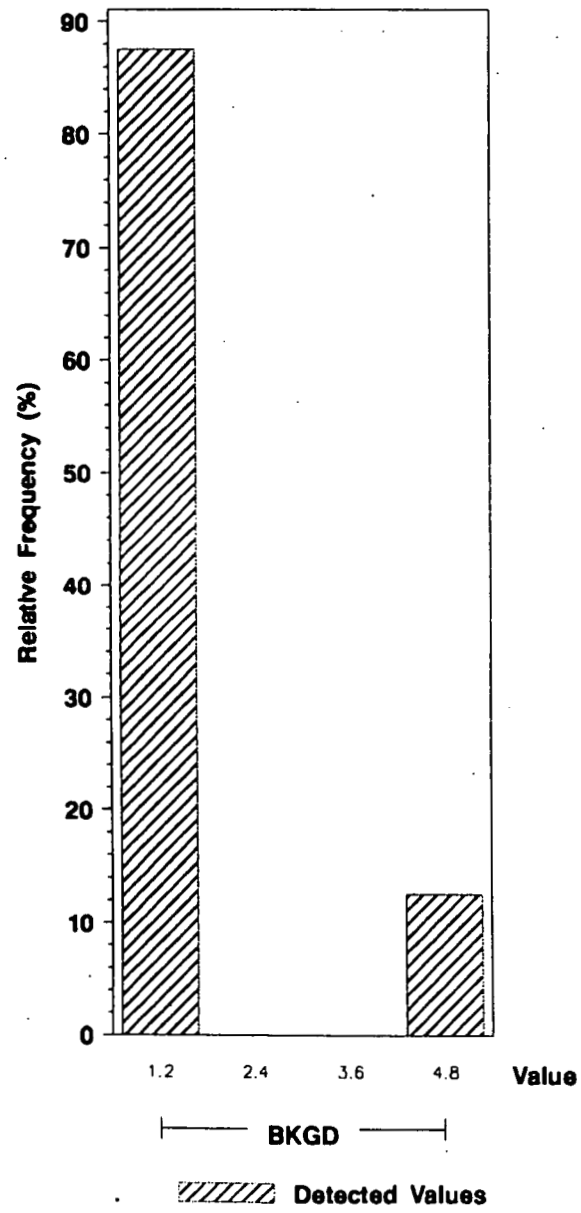
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Surface Water

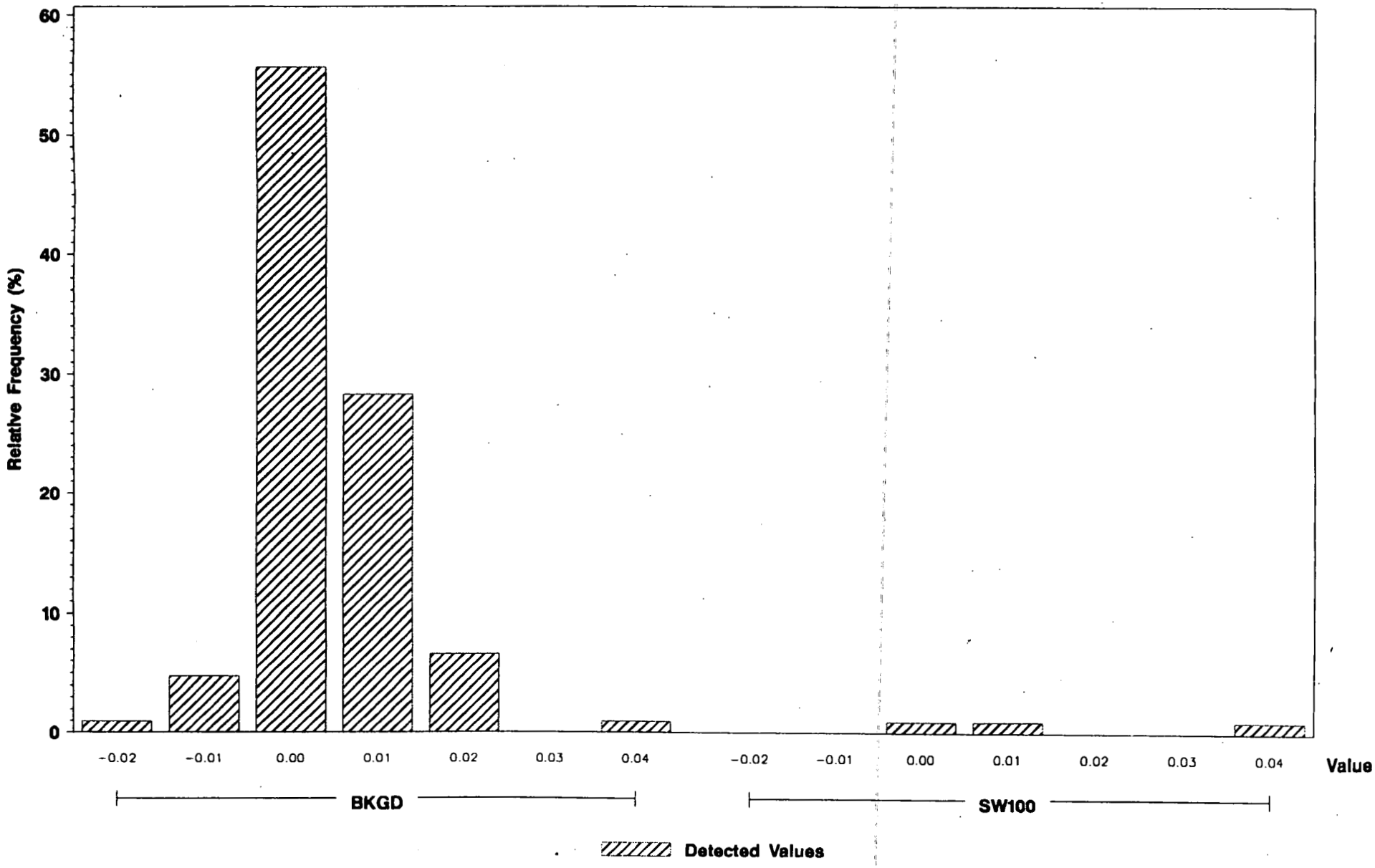
ANALYTE = CESIUM-134



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Surface Water

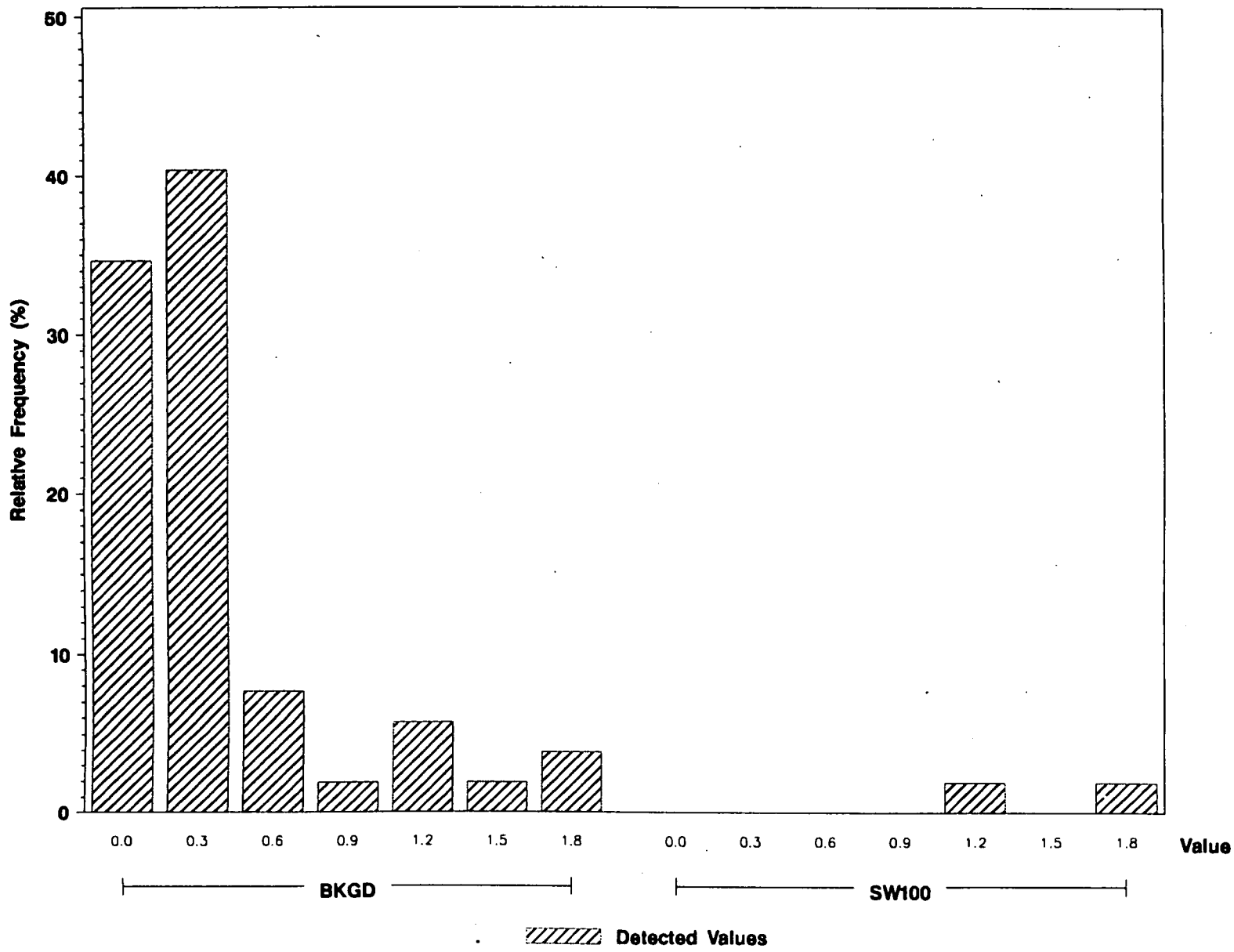
ANALYTE=AMERICIUM-241



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Surface Water

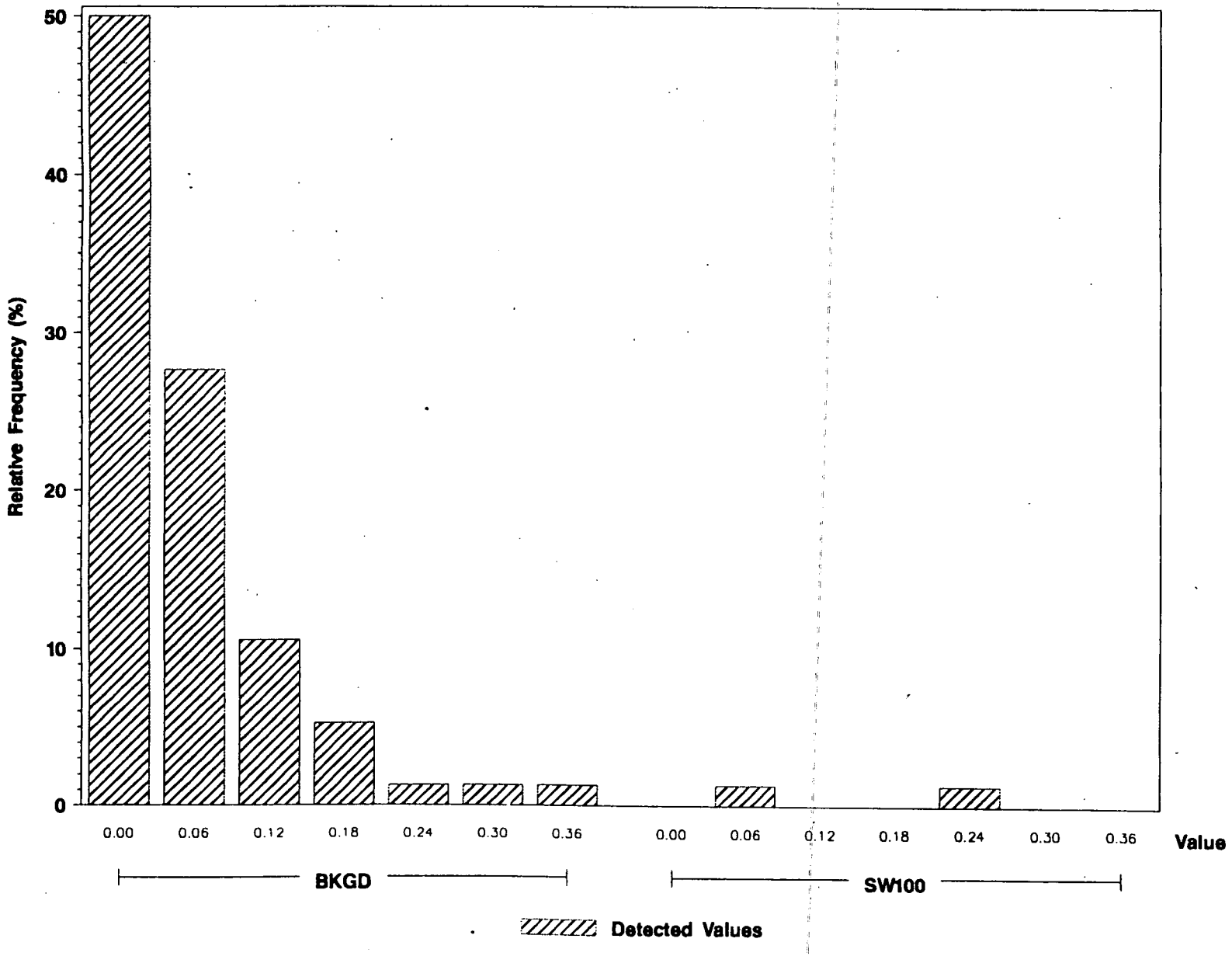
ANALYTE=URANIUM-238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM-235 (pCi/L) in Surface Water

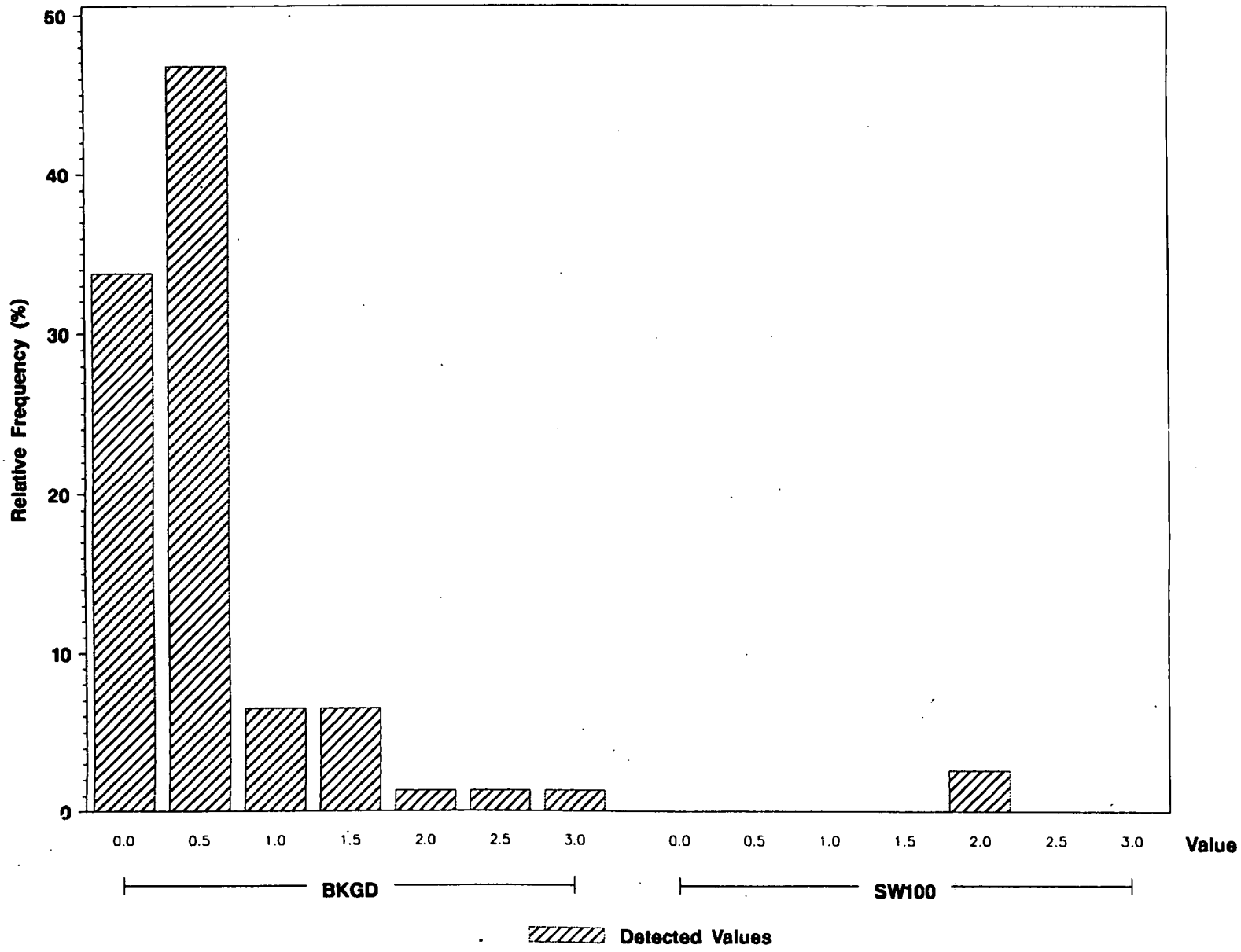
ANALYTE=URANIUM-235



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Surface Water

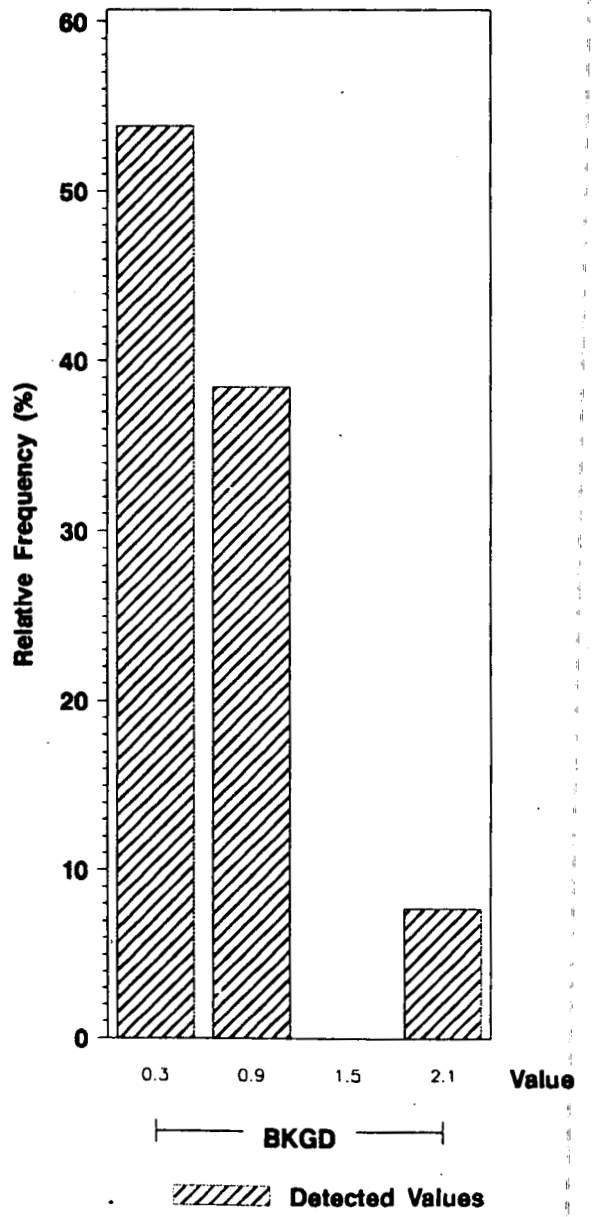
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Surface Water

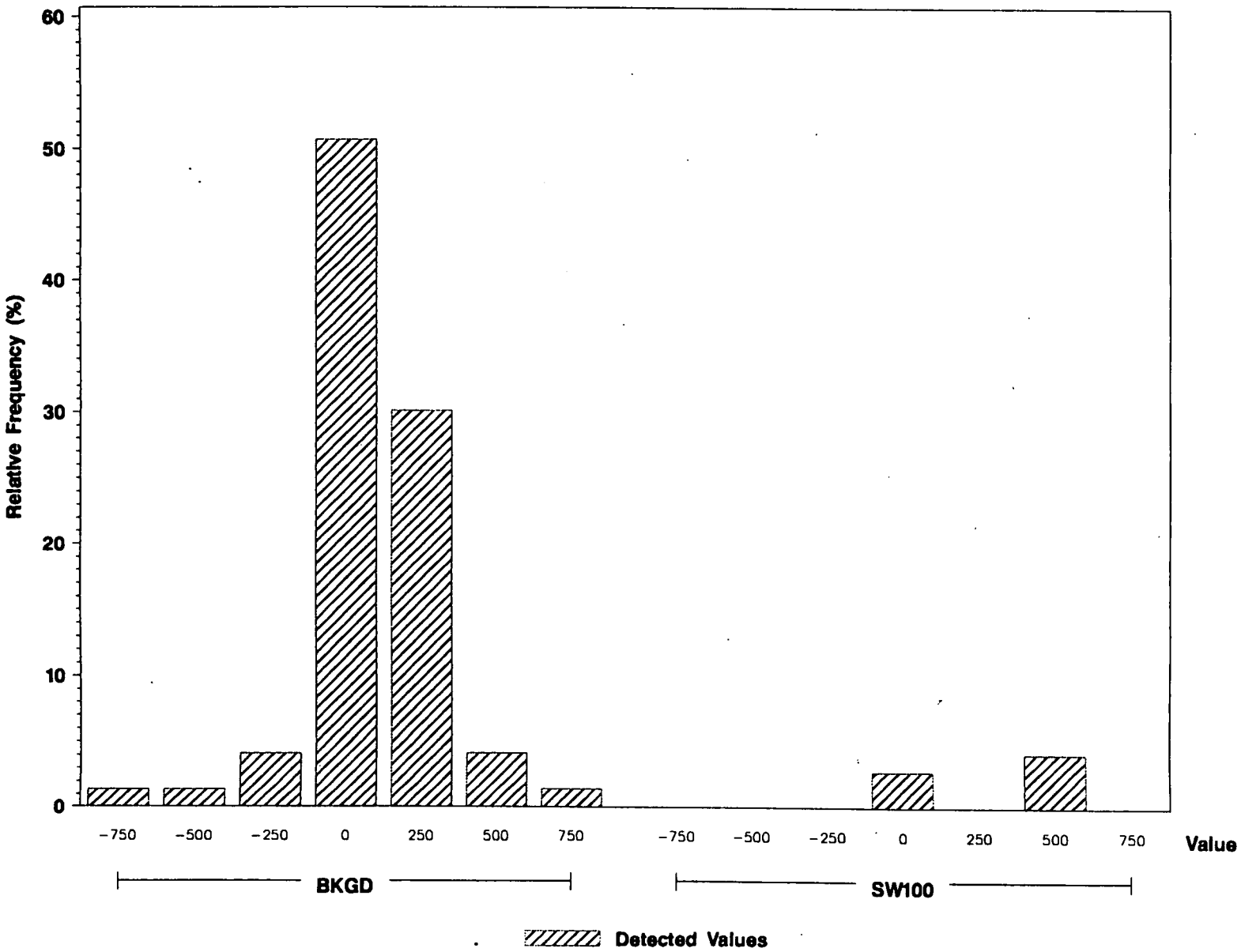
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TRITIUM (pCi/L) in Surface Water

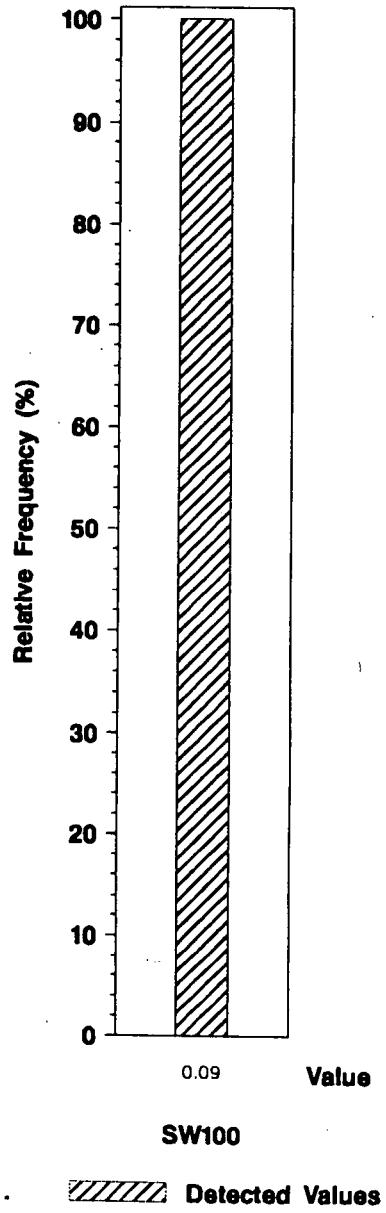
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Surface Water

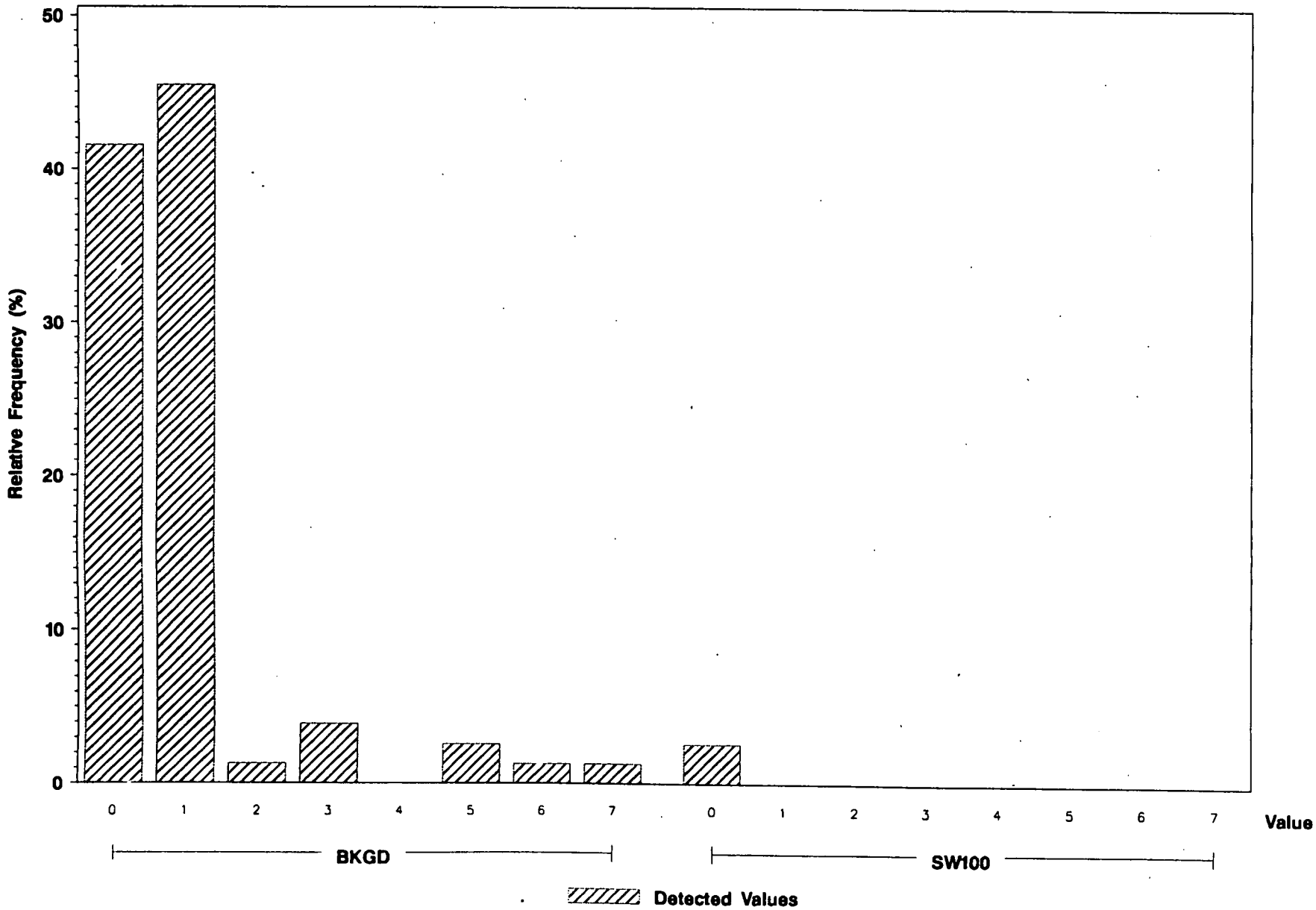
ANALYTE = STRONTIUM-90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Surface Water

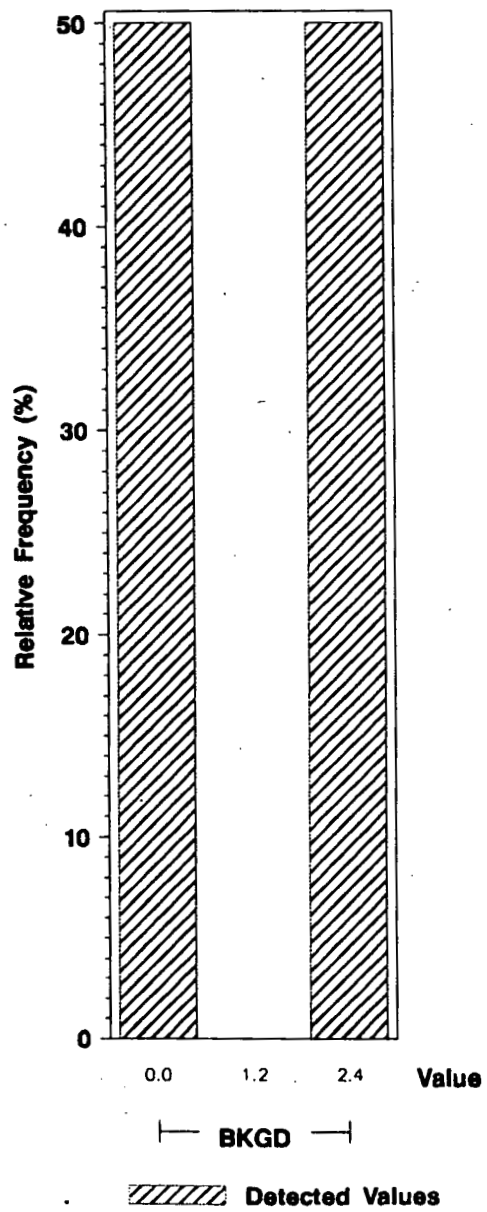
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total RADIUM-226 (pCi/L) in Surface Water

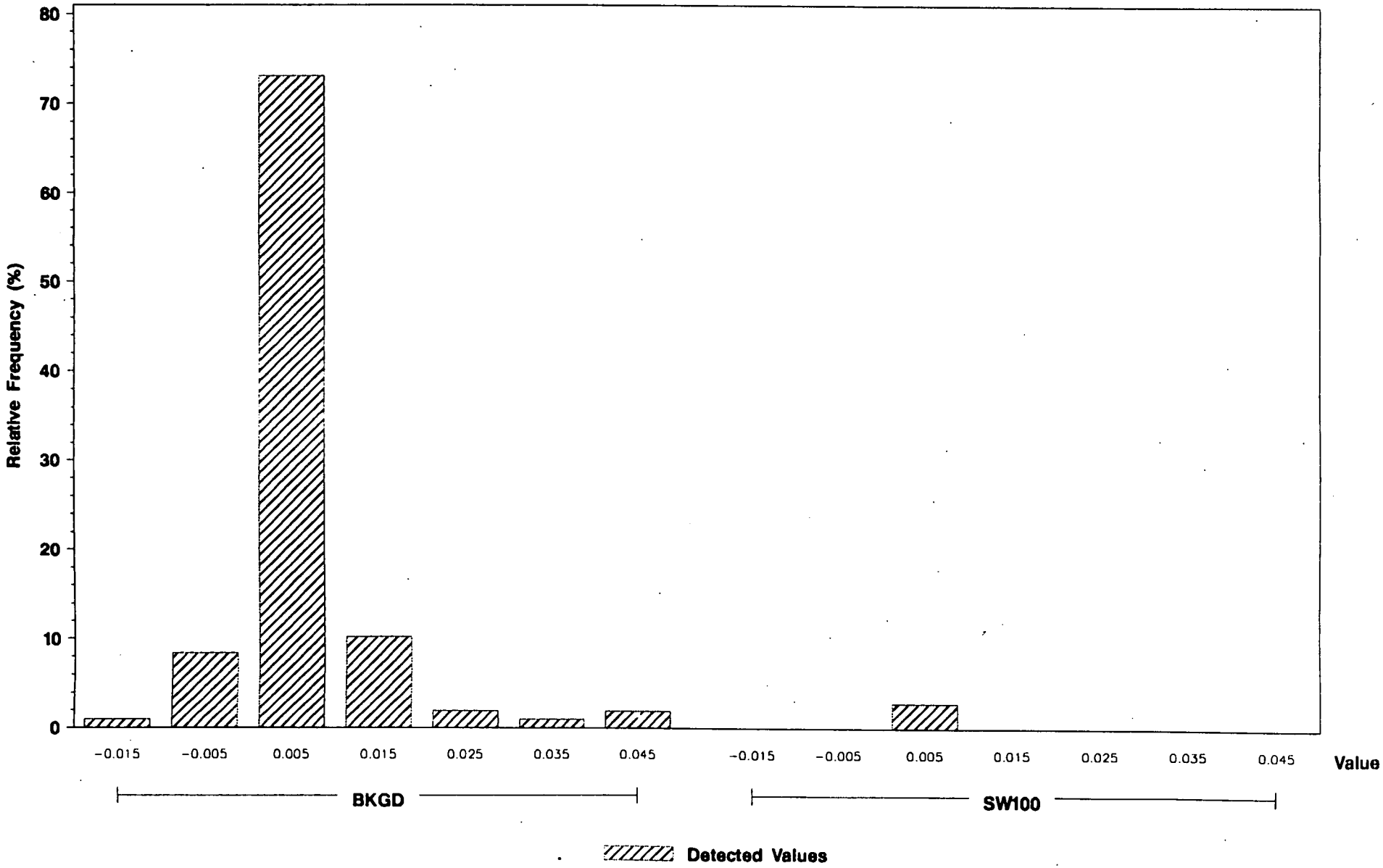
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM-239/240 (pCi/L) in Surface Water

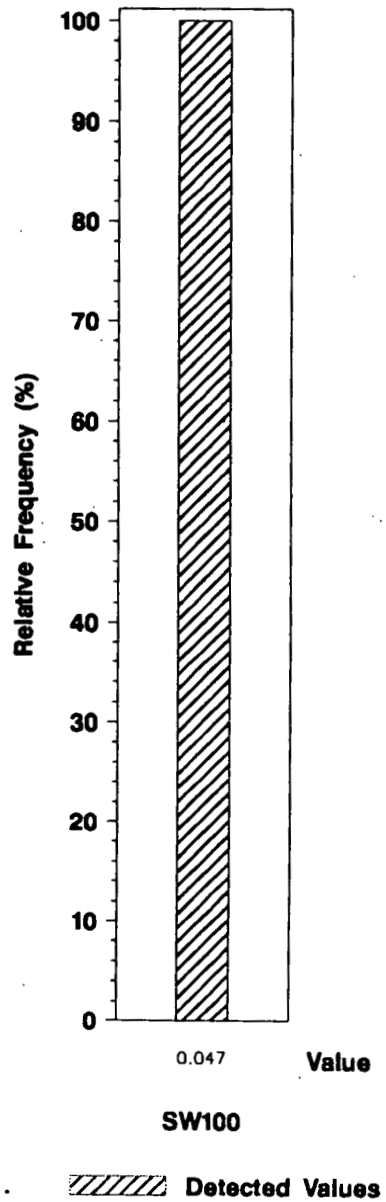
ANALYTE = PLUTONIUM-239/240



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 239 (pCi/L) in Surface Water

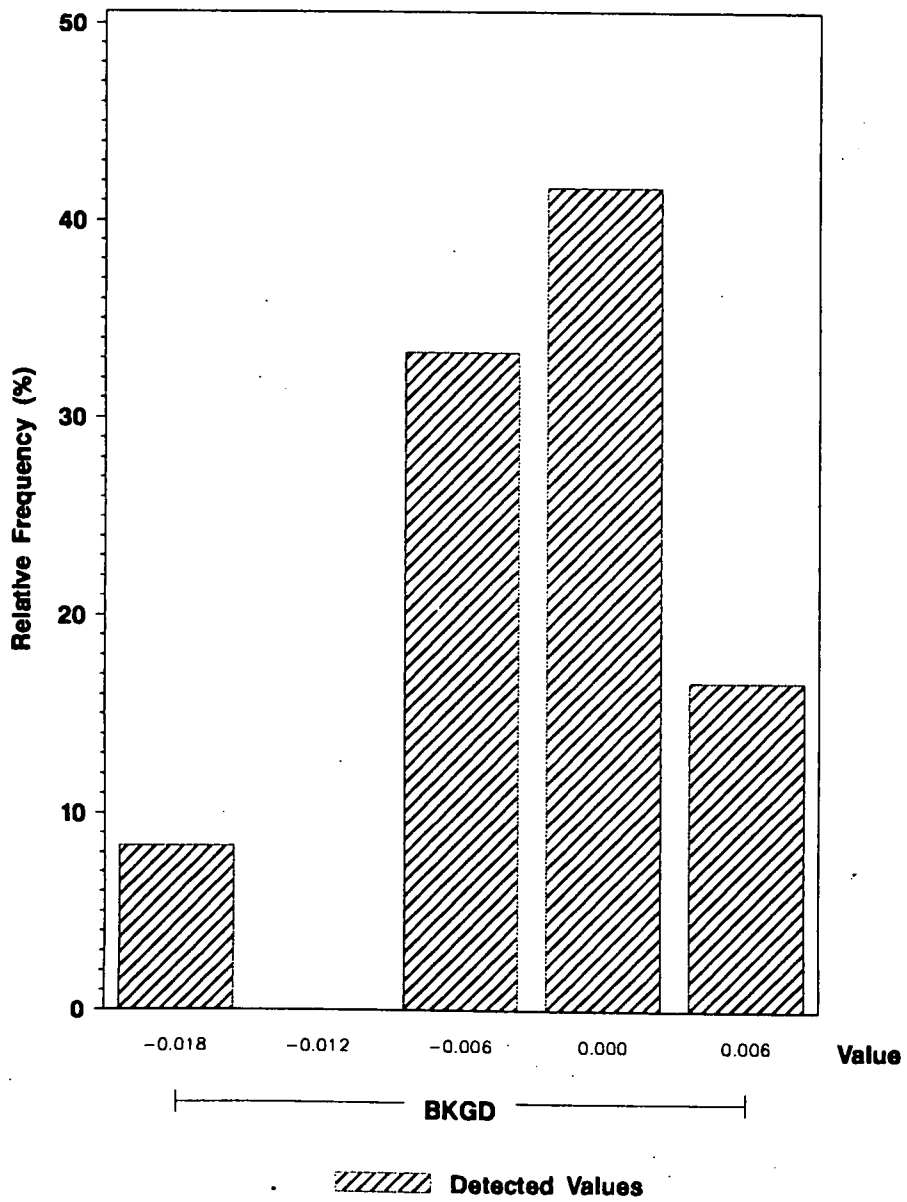
ANALYTE = PLUTONIUM – 239



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM-238 (pCi/L) in Surface Water

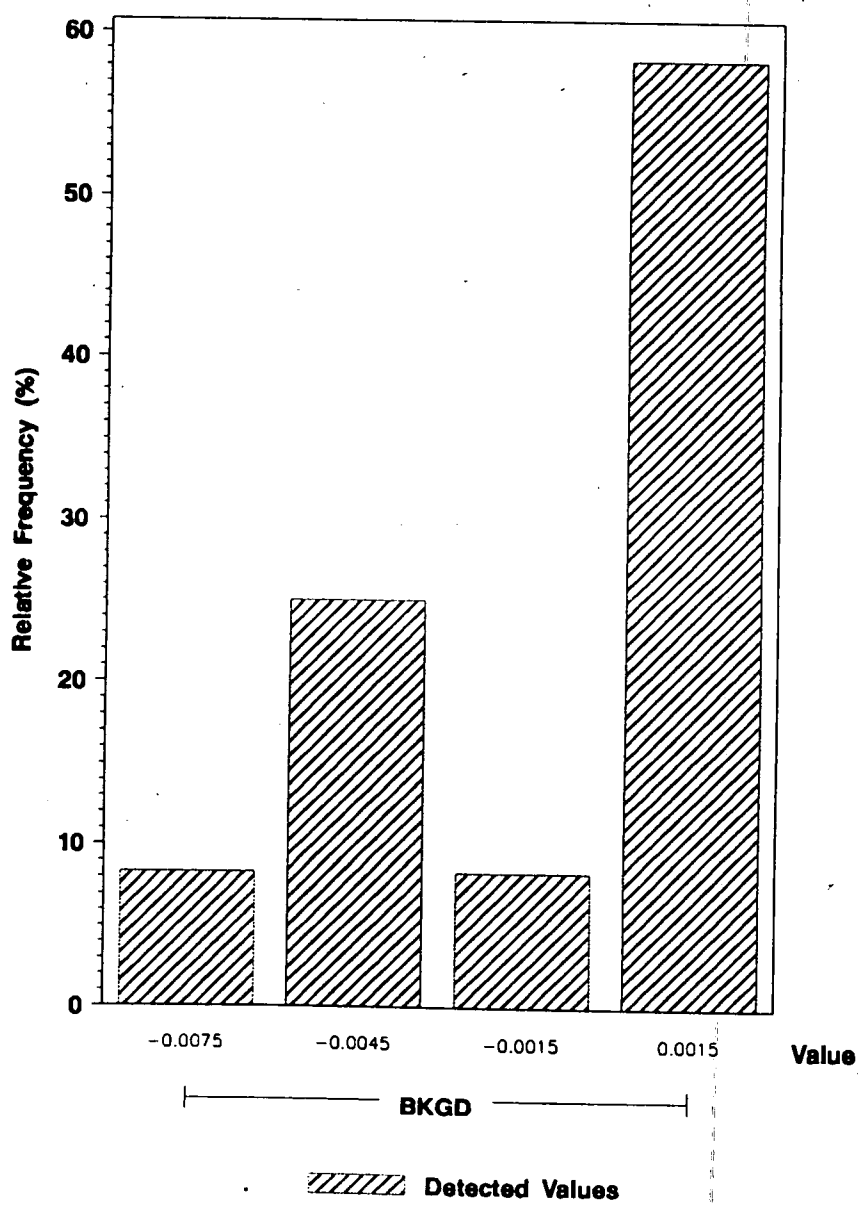
ANALYTE = PLUTONIUM-238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM-236 (pCi/L) in Surface Water

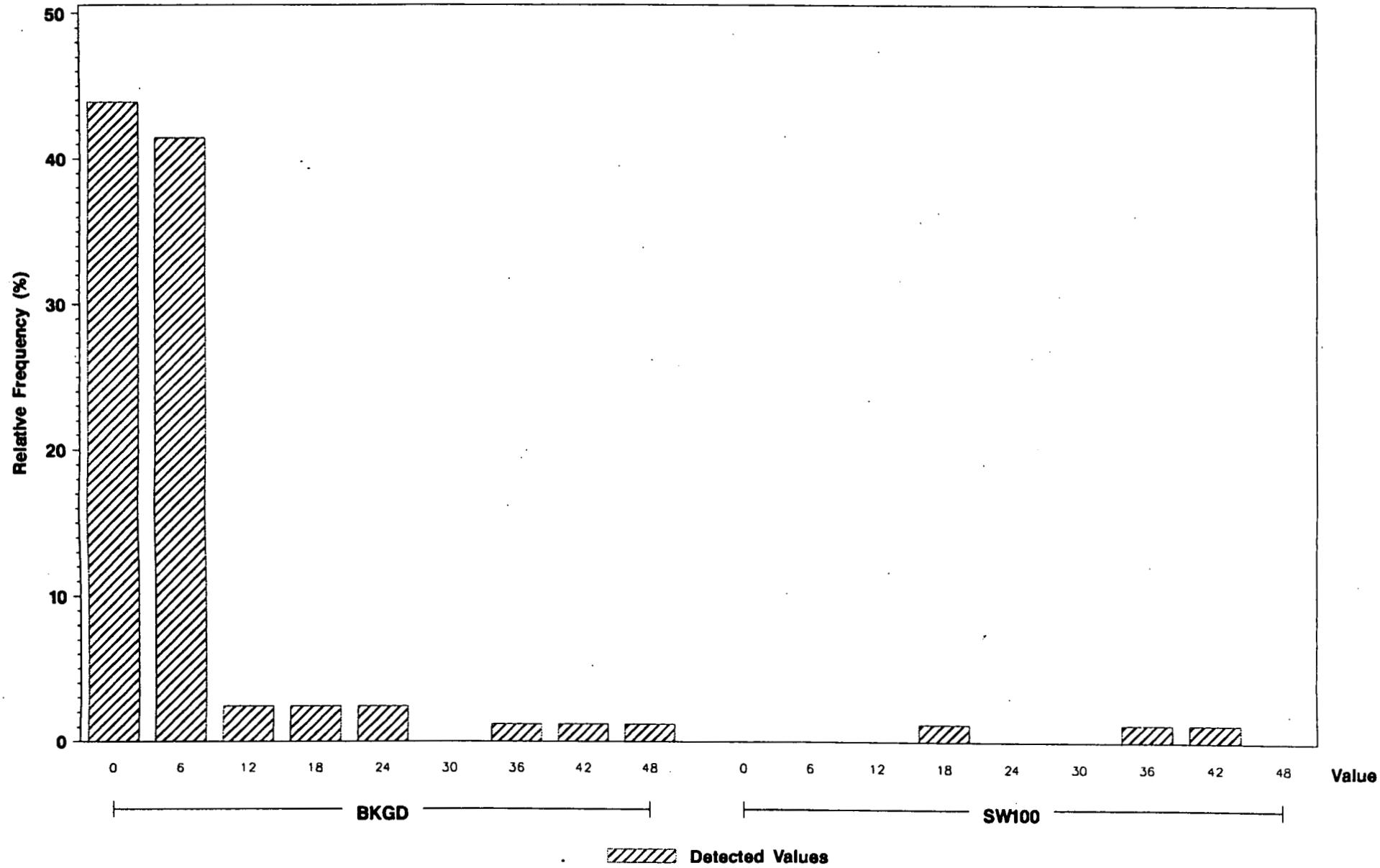
ANALYTE = PLUTONIUM-236



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS BETA (pCi/L) in Surface Water

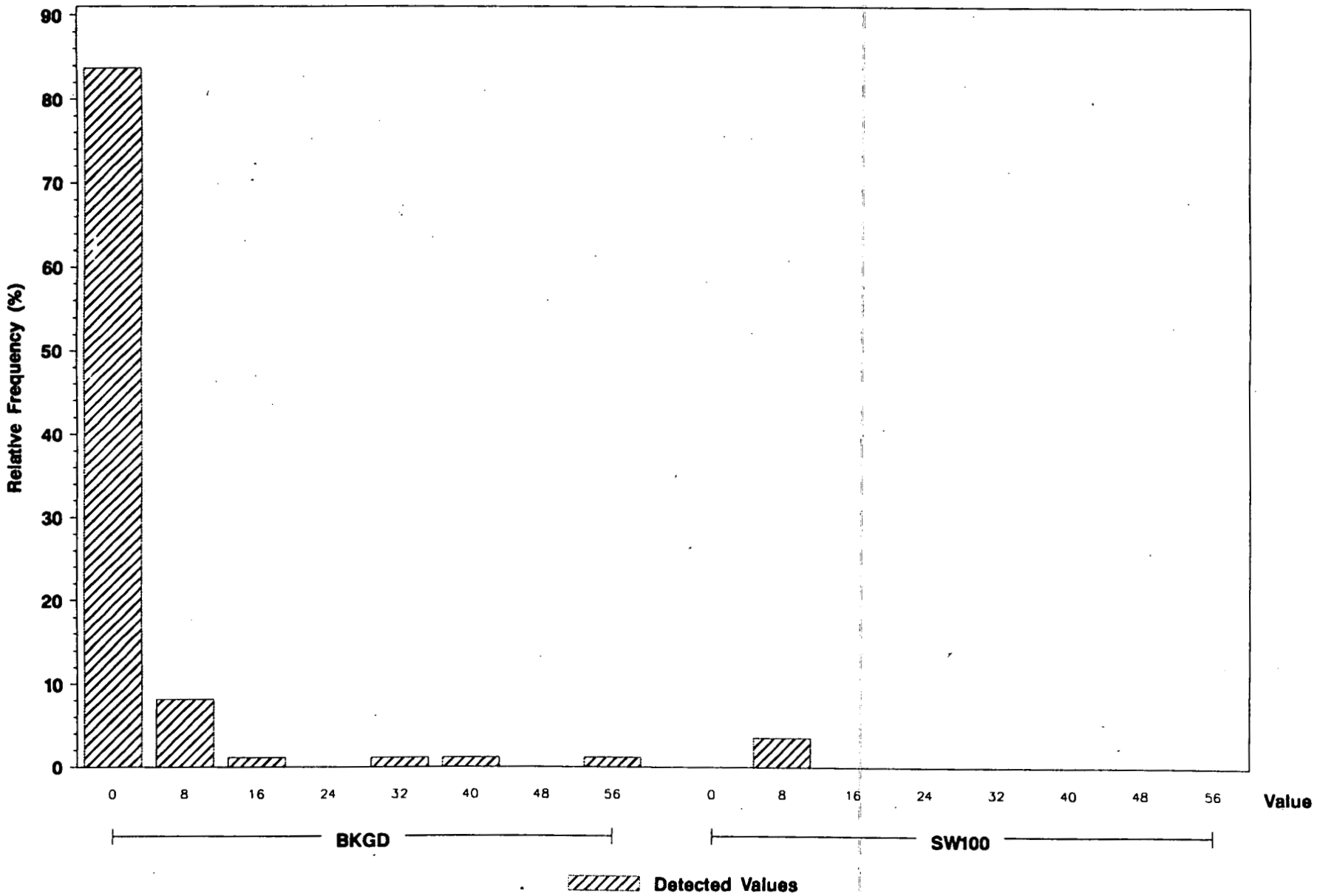
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Surface Water

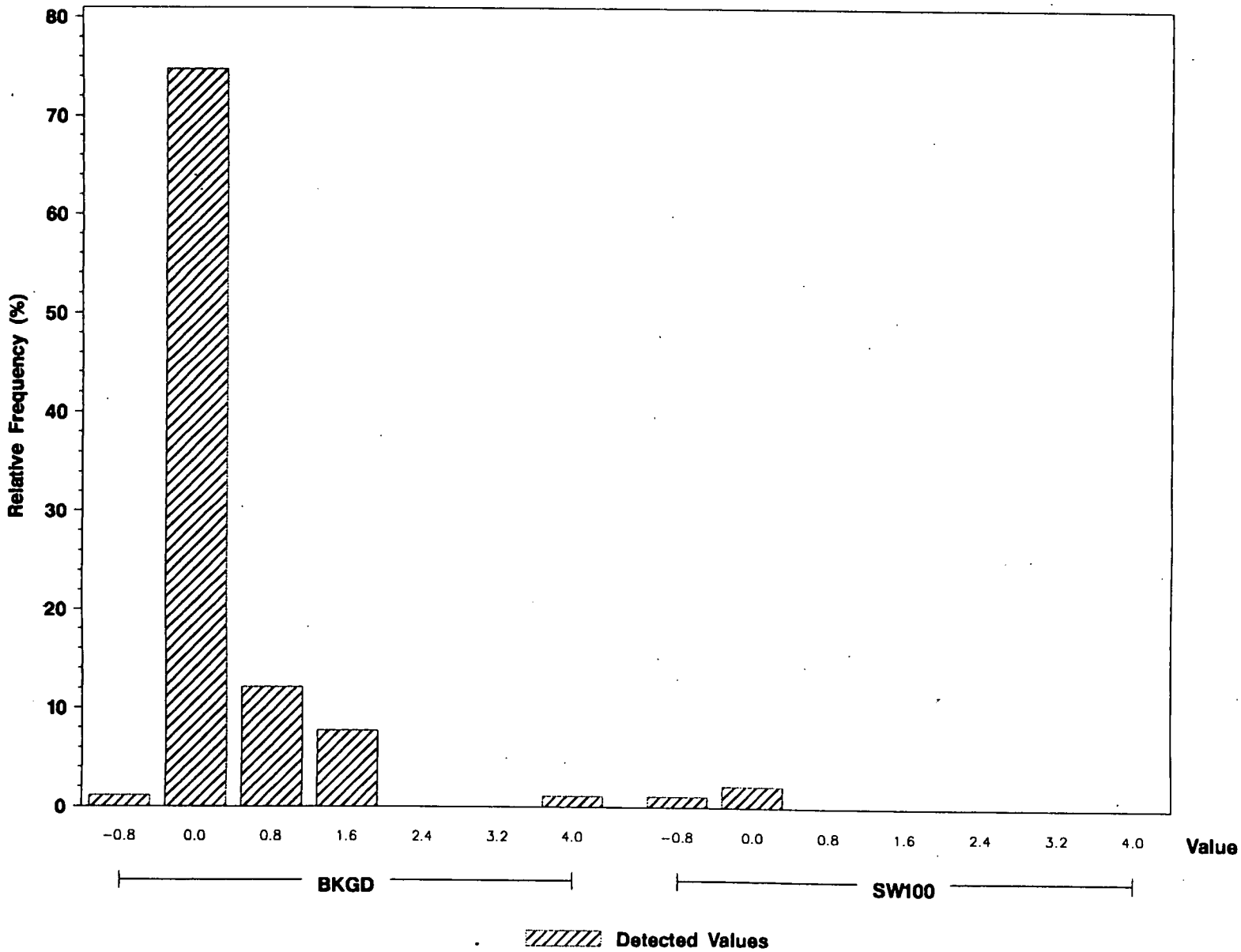
ANALYTE=GROSS ALPHA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Surface Water

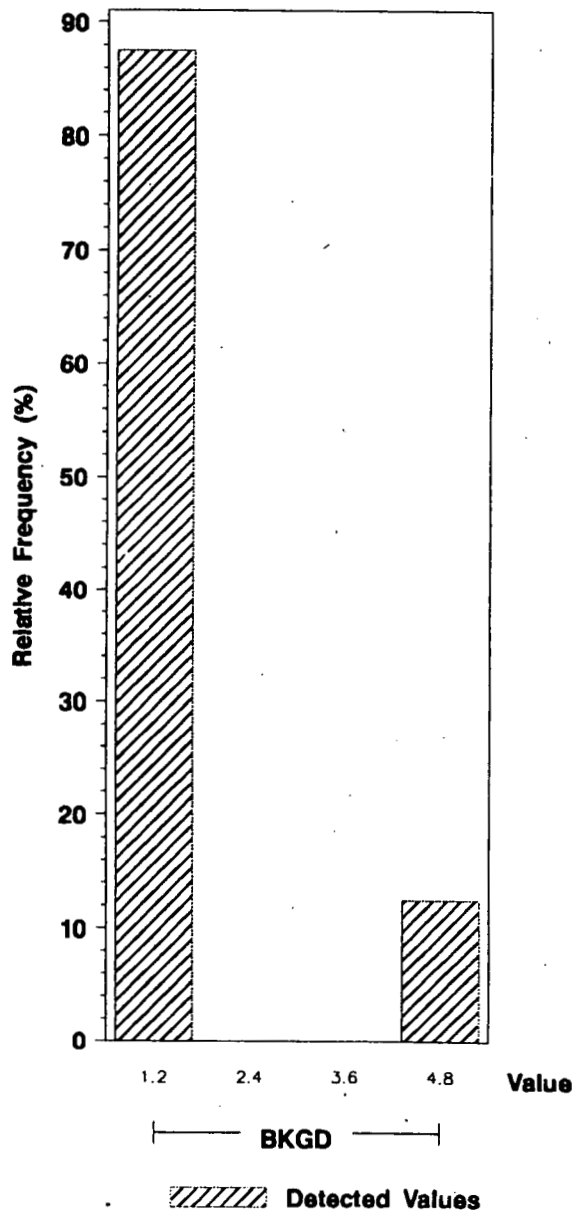
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Surface Water

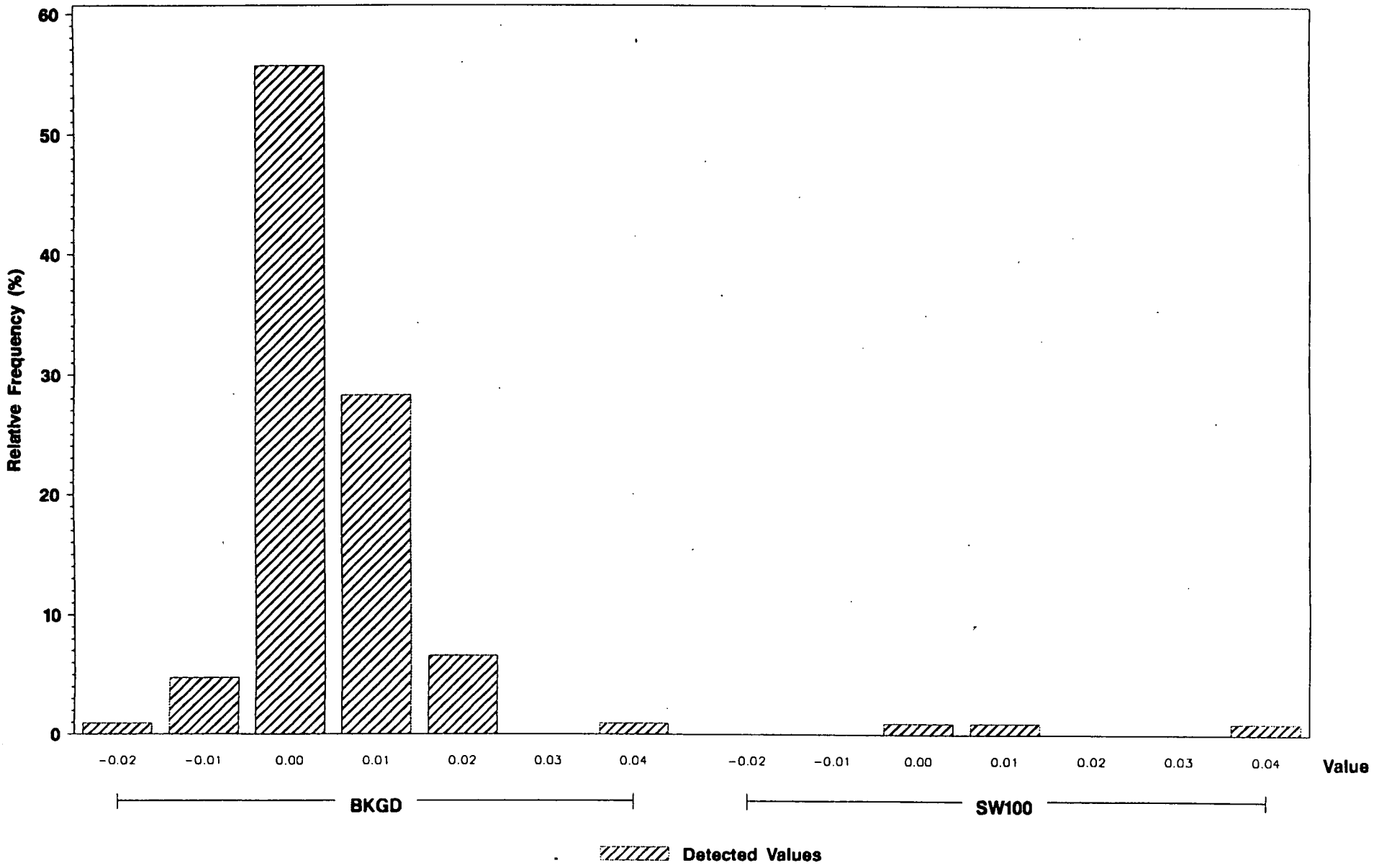
ANALYTE = CESIUM-134



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Surface Water

ANALYTE = AMERICIUM-241



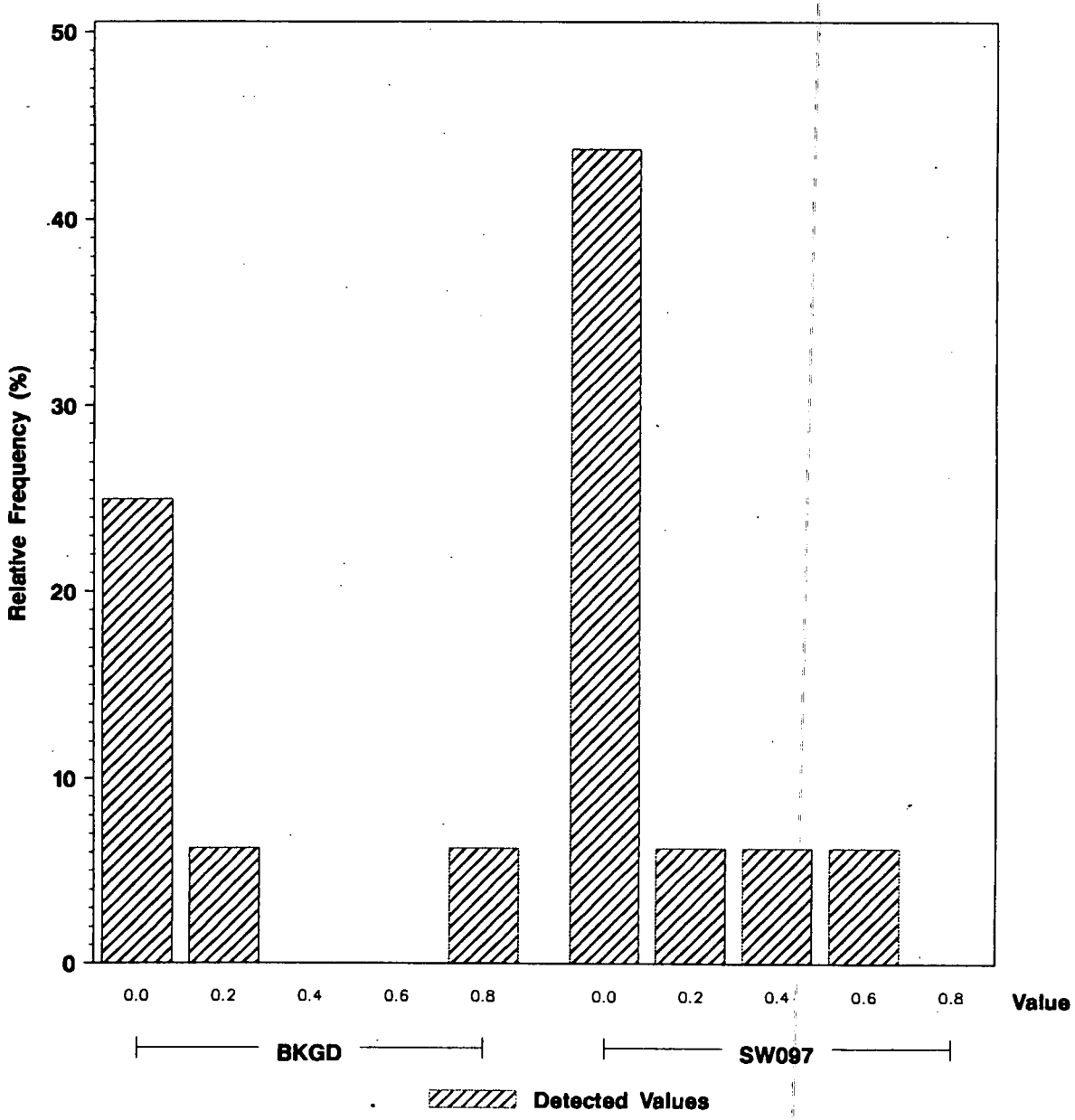
# Seep Water

# Background vs. OU 7

# Background vs OU7 Seep Water Frequency Histogram

## Total AMERICIUM – 241 (pCi/L) in Seep Water

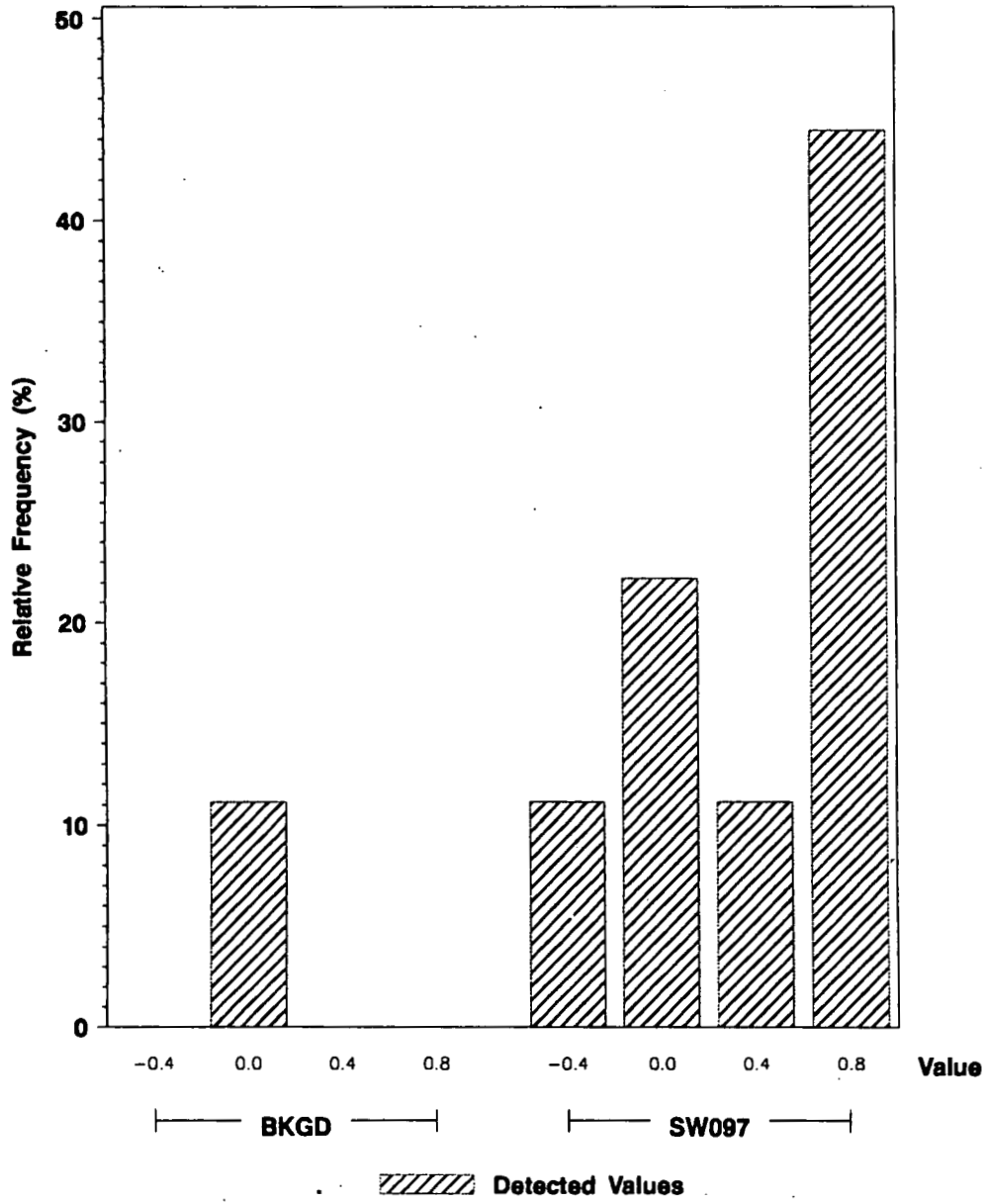
ANALYTE = AMERICIUM – 241



# Background vs OU7 Seep Water Frequency Histogram

## Total CESIUM-137 (pCi/L) in Seep Water

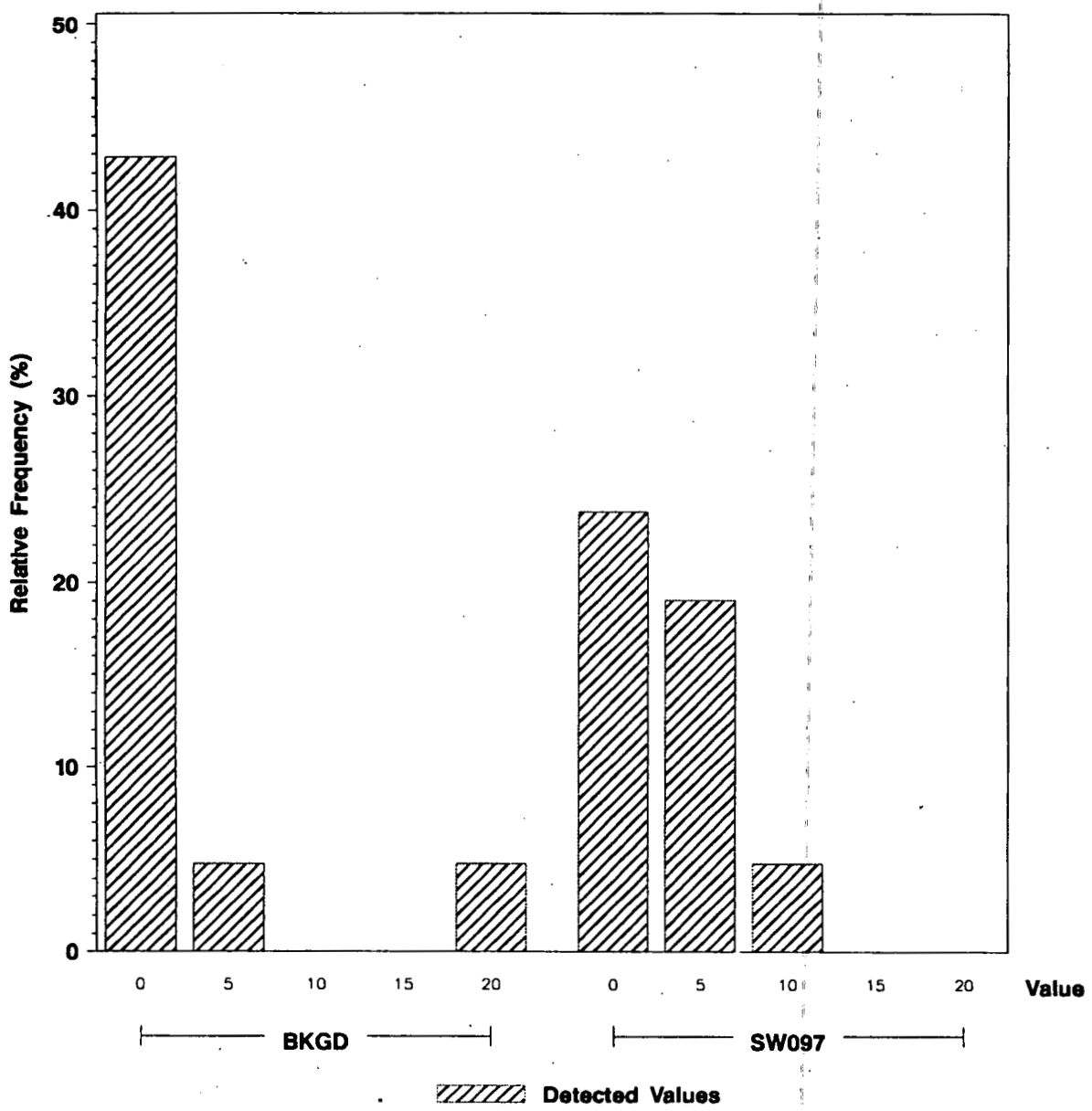
ANALYTE = CESIUM-137



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Seep Water

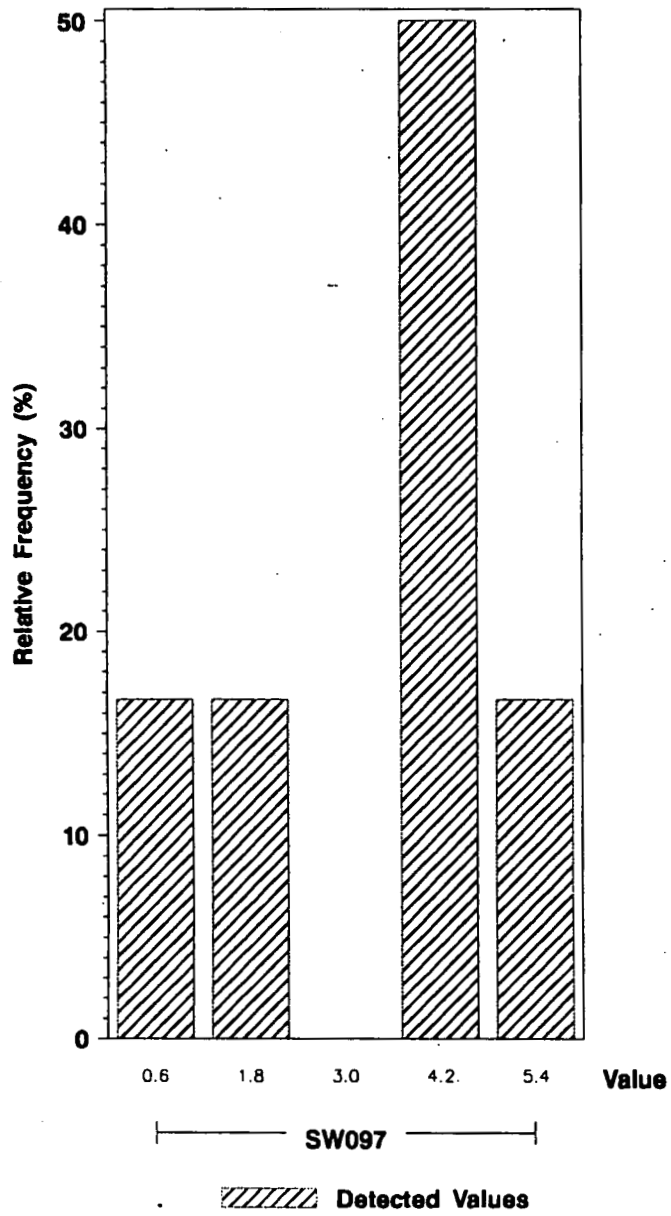
ANALYTE=GROSS ALPHA



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS ALPHA – SUSPENDED (pCi/L) in Seep Water

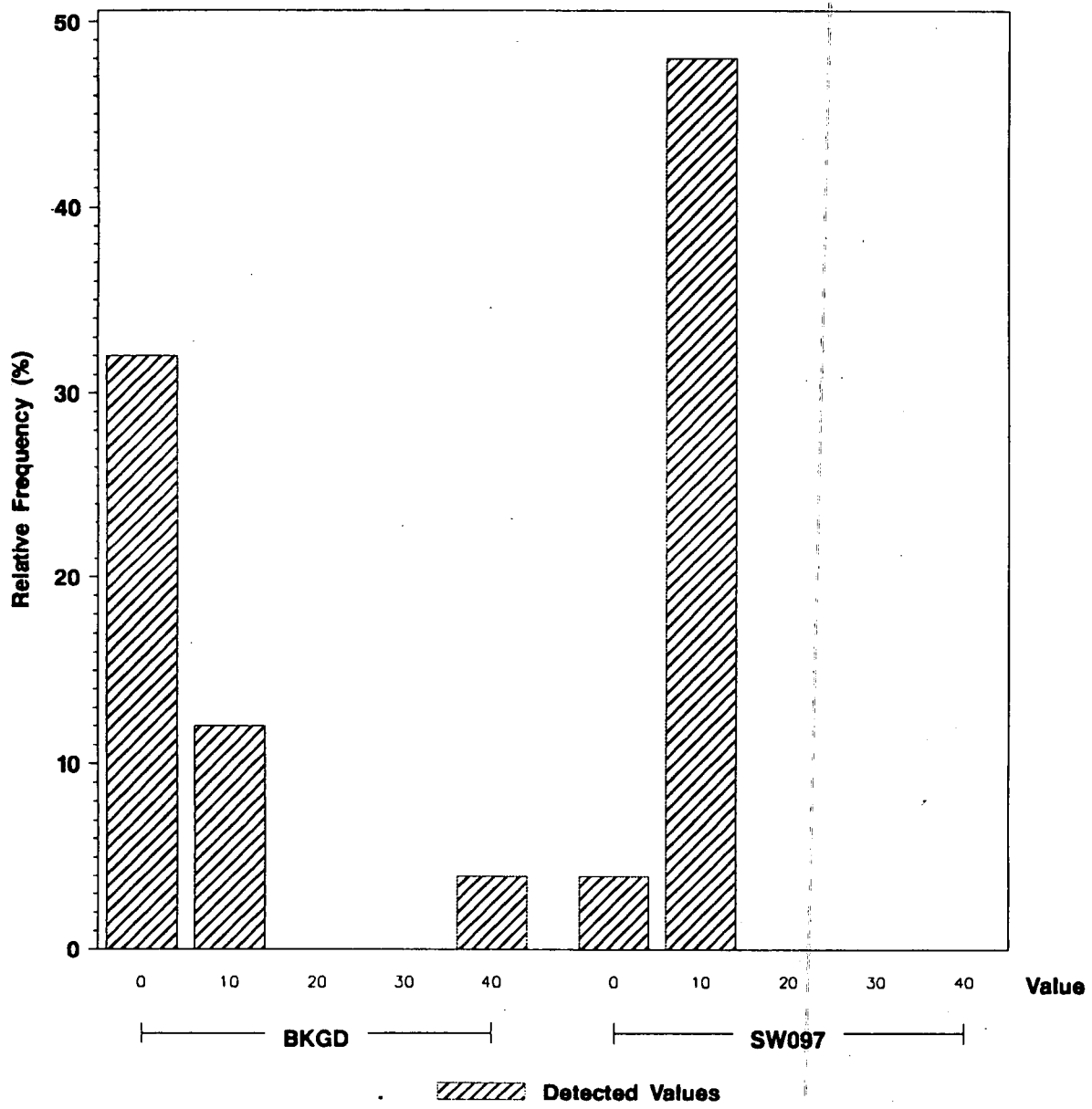
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS BETA (pCi/L) in Seep Water

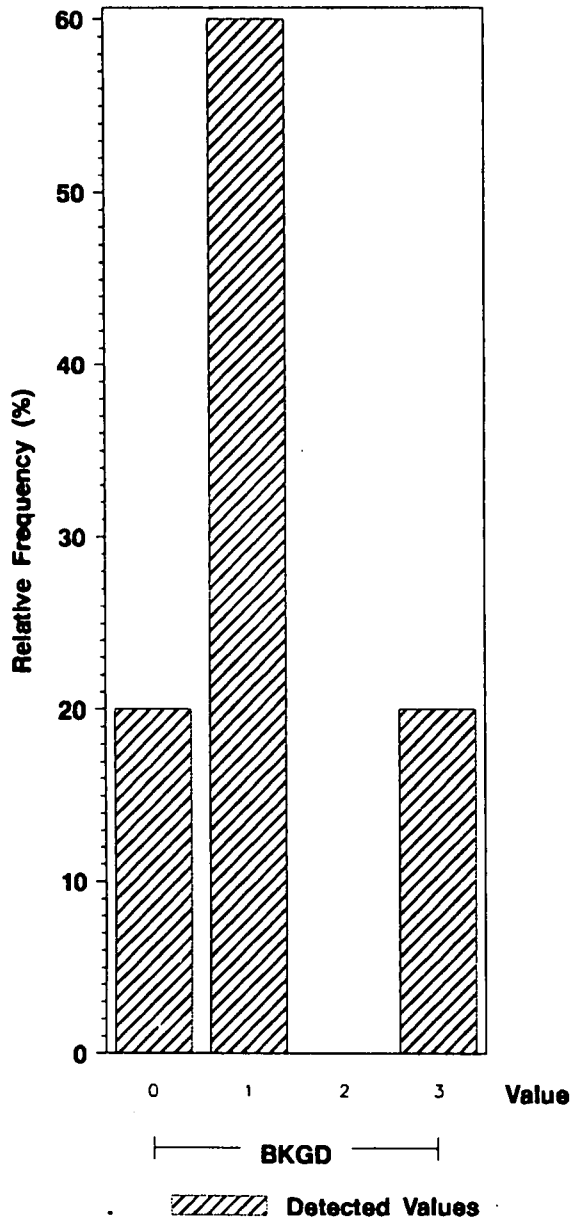
ANALYTE=GROSS BETA



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS GAMMA (pCi/L) in Seep Water

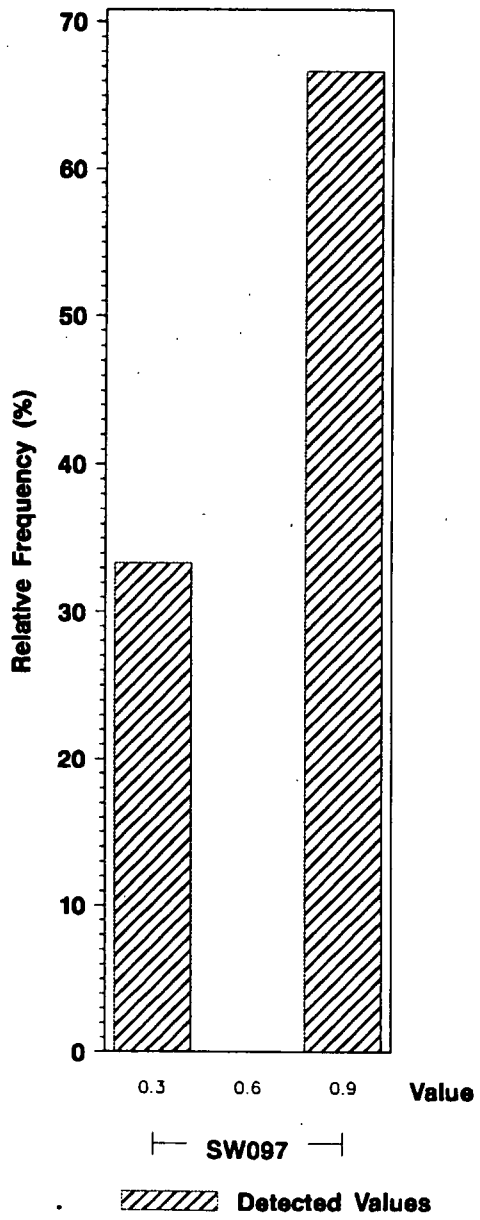
ANALYTE=GROSS GAMMA



# Background vs OU7 Seep Water Frequency Histogram

## Total NEPTUNIUM – 237 (pCi/L) in Seep Water

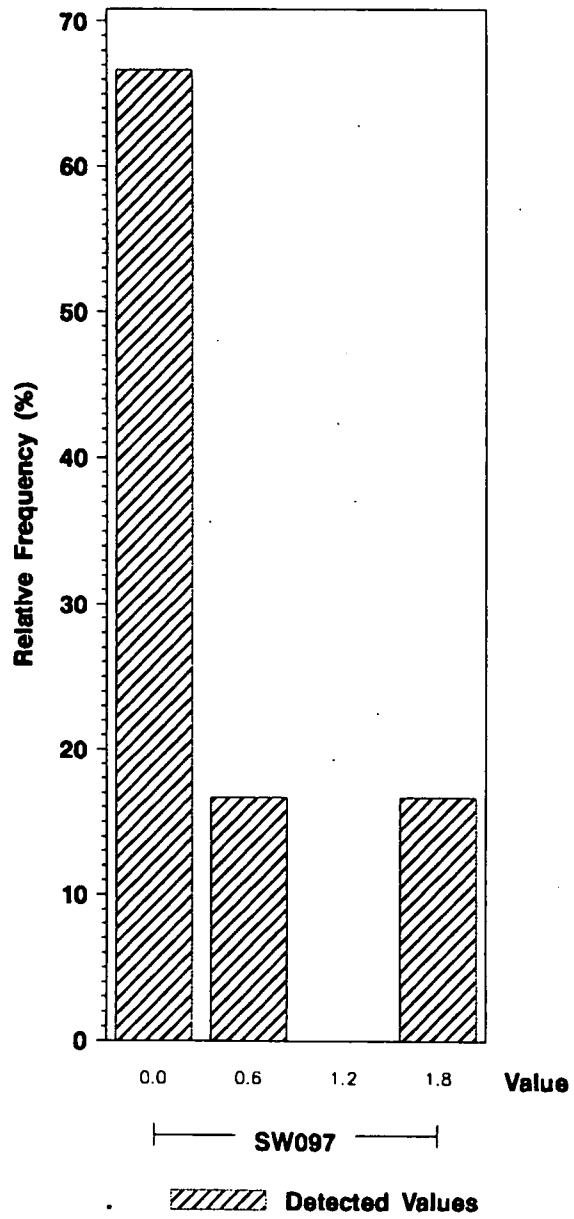
ANALYTE = NEPTUNIUM – 237



# Background vs OU7 Seep Water Frequency Histogram

## Total PLUTONIUM-239 (pCi/L) in Seep Water

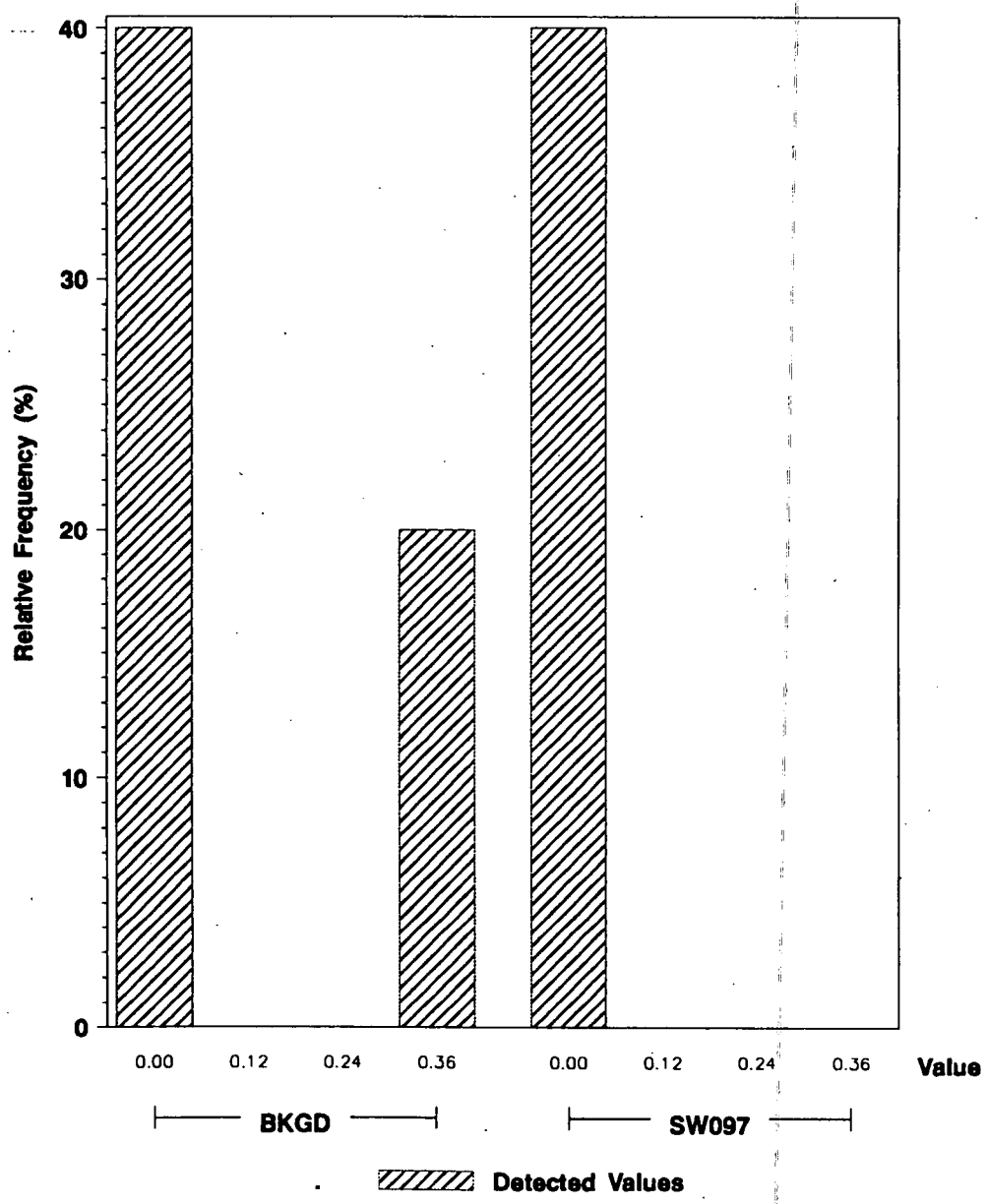
ANALYTE = PLUTONIUM-239



# Background vs OU7 Seep Water Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Seep Water

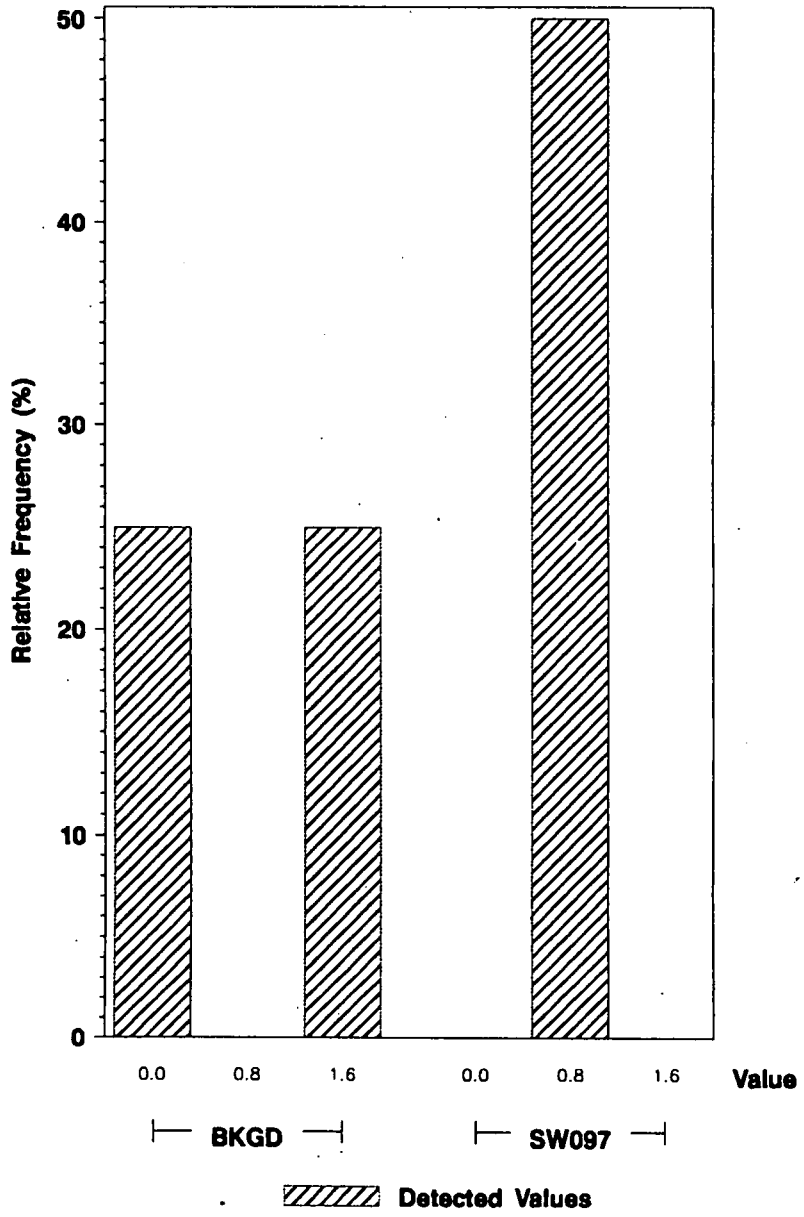
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Seep Water Frequency Histogram

## Total RADIUM-226 (pCi/L) in Seep Water

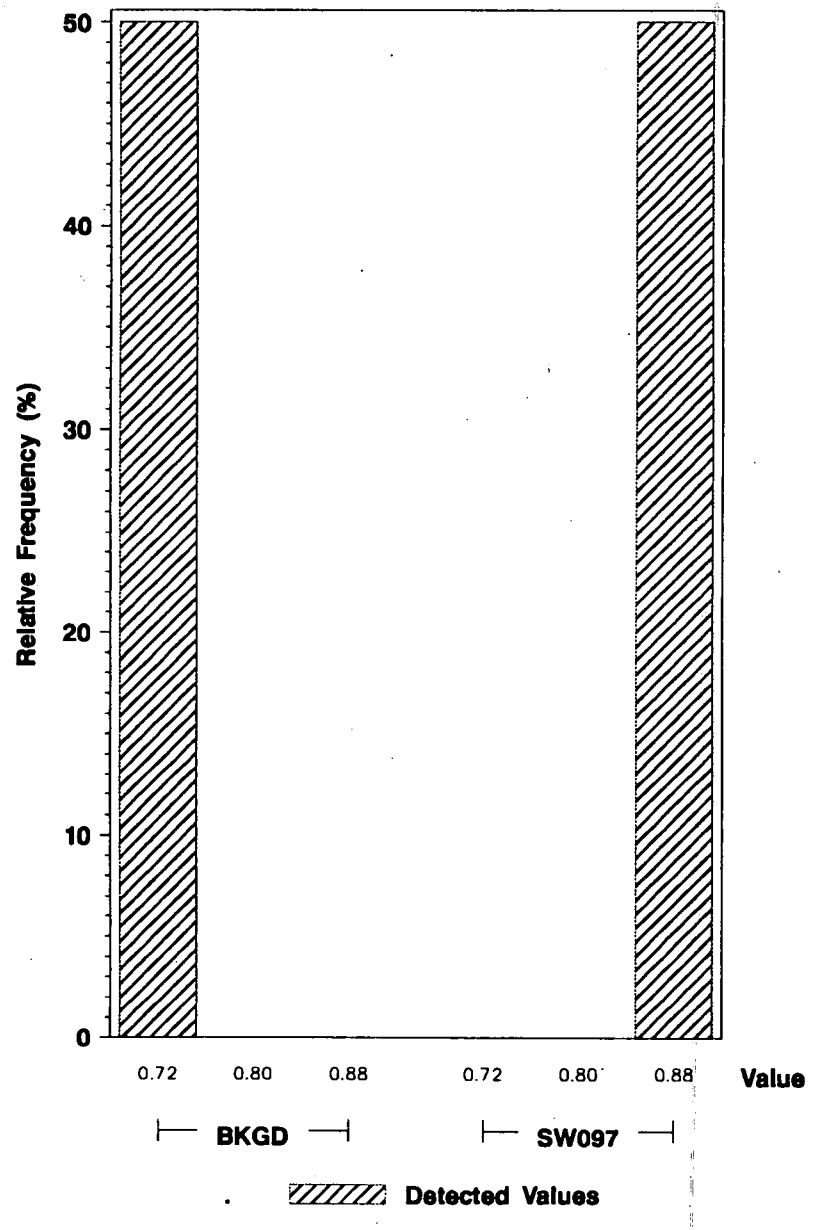
ANALYTE = RADIUM-226



# Background vs OU7 Seep Water Frequency Histogram

## Total RADIUM-228 (pCi/L) in Seep Water

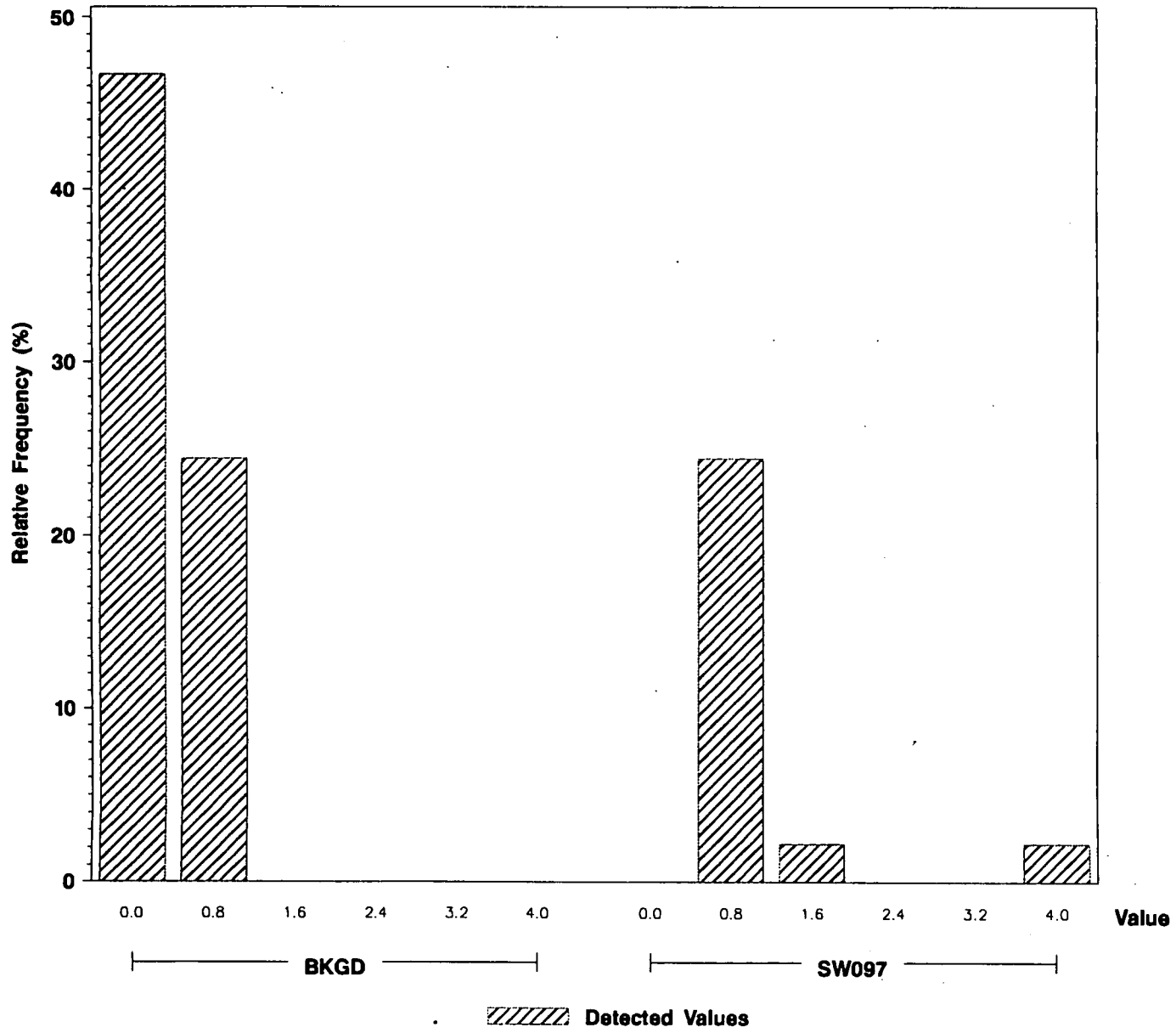
ANALYTE = RADIUM-228



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Seep Water

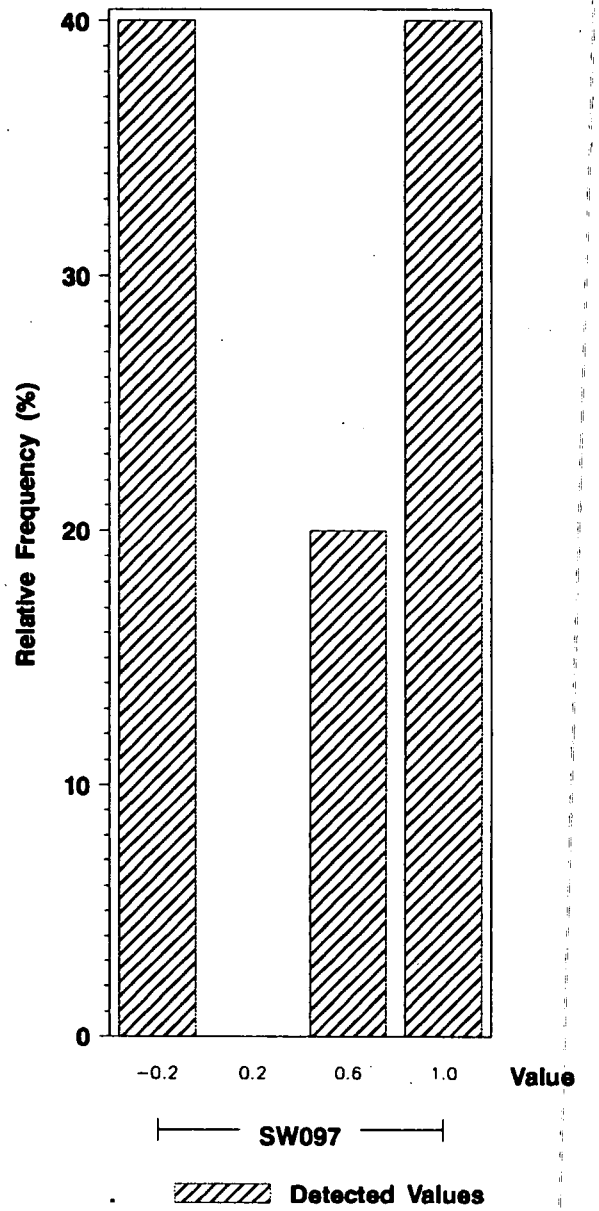
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM-89 (pCi/L) in Seep Water

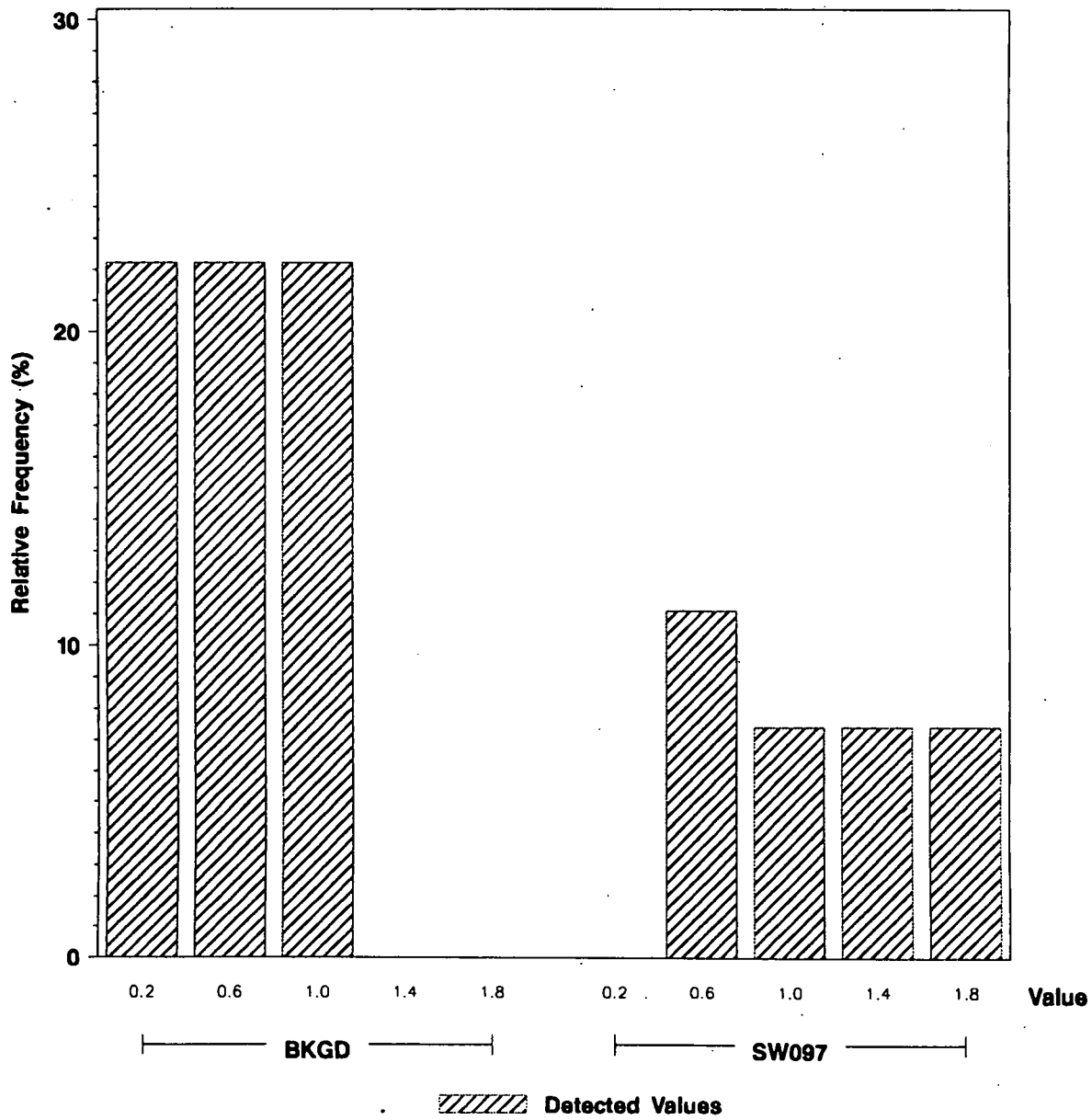
ANALYTE=STRONTIUM-89



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Seep Water

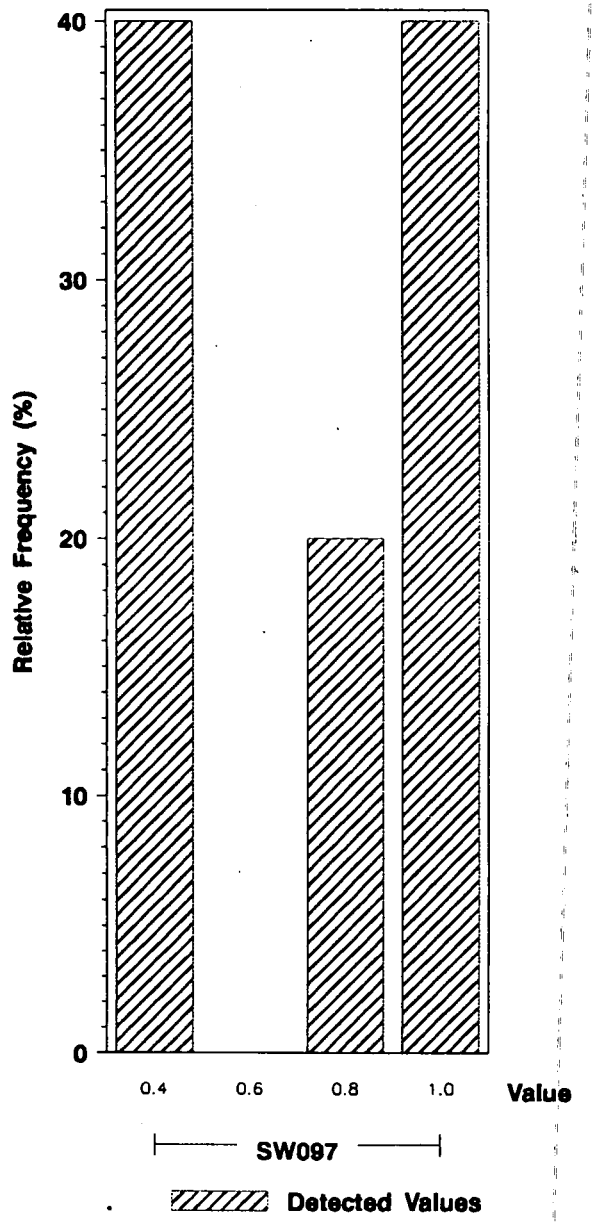
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Seep Water

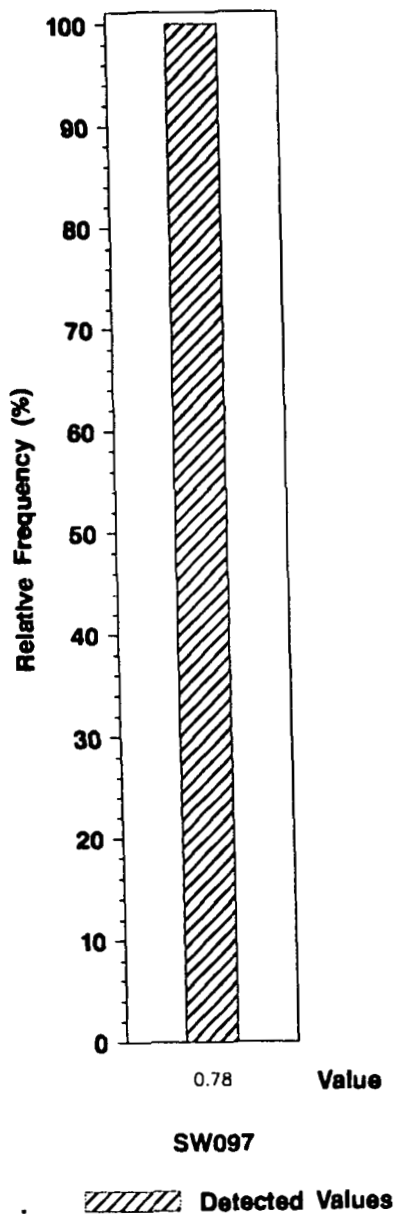
ANALYTE=STRONTIUM-90



# Background vs OU7 Seep Water Frequency Histogram

## Total TOTAL RADIOCESIUM (pCi/L) in Seep Water

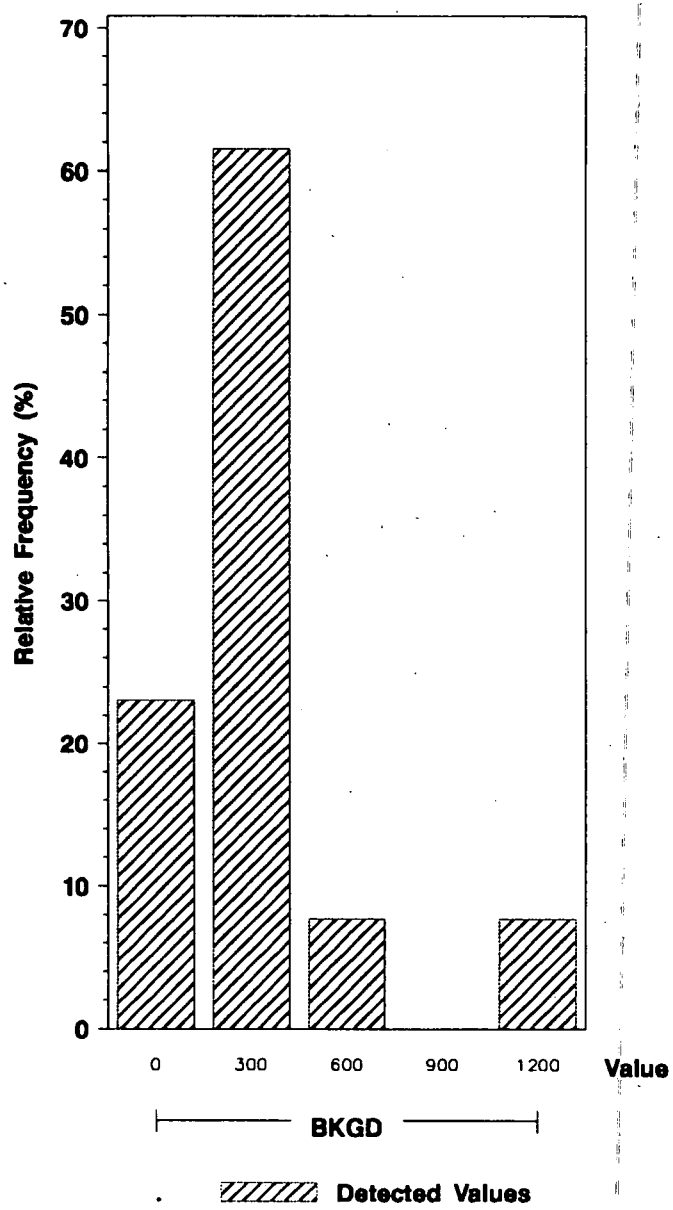
ANALYTE=TOTAL RADIOCESIUM



# Background vs OU7 Seep Water Frequency Histogram

## Total TRITIUM (pCi/L) in Seep Water

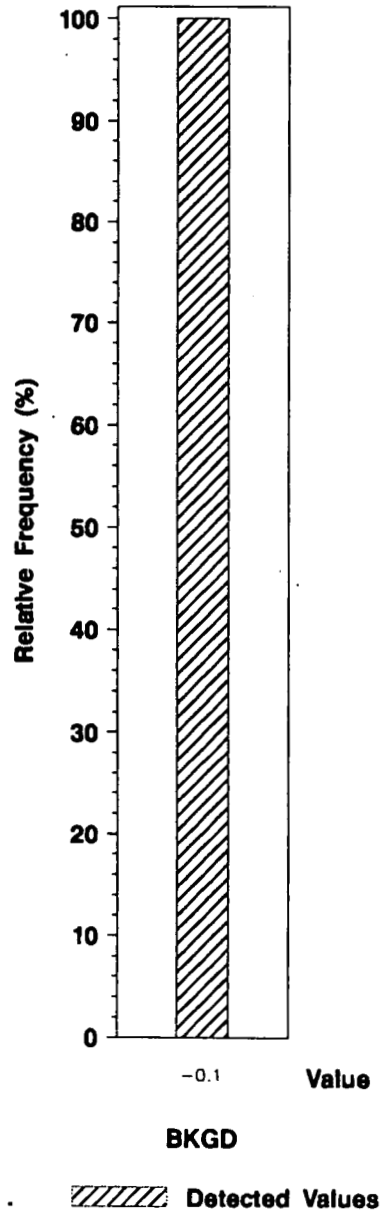
ANALYTE = TRITIUM



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Seep Water

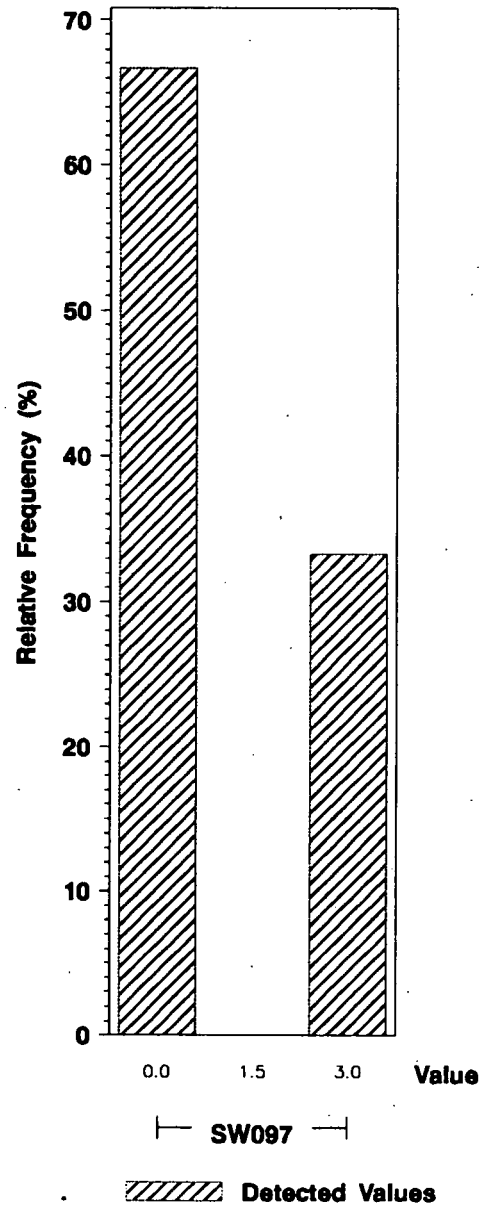
ANALYTE=URANIUM, TOTAL



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM – 234 (pCi/L) in Seep Water

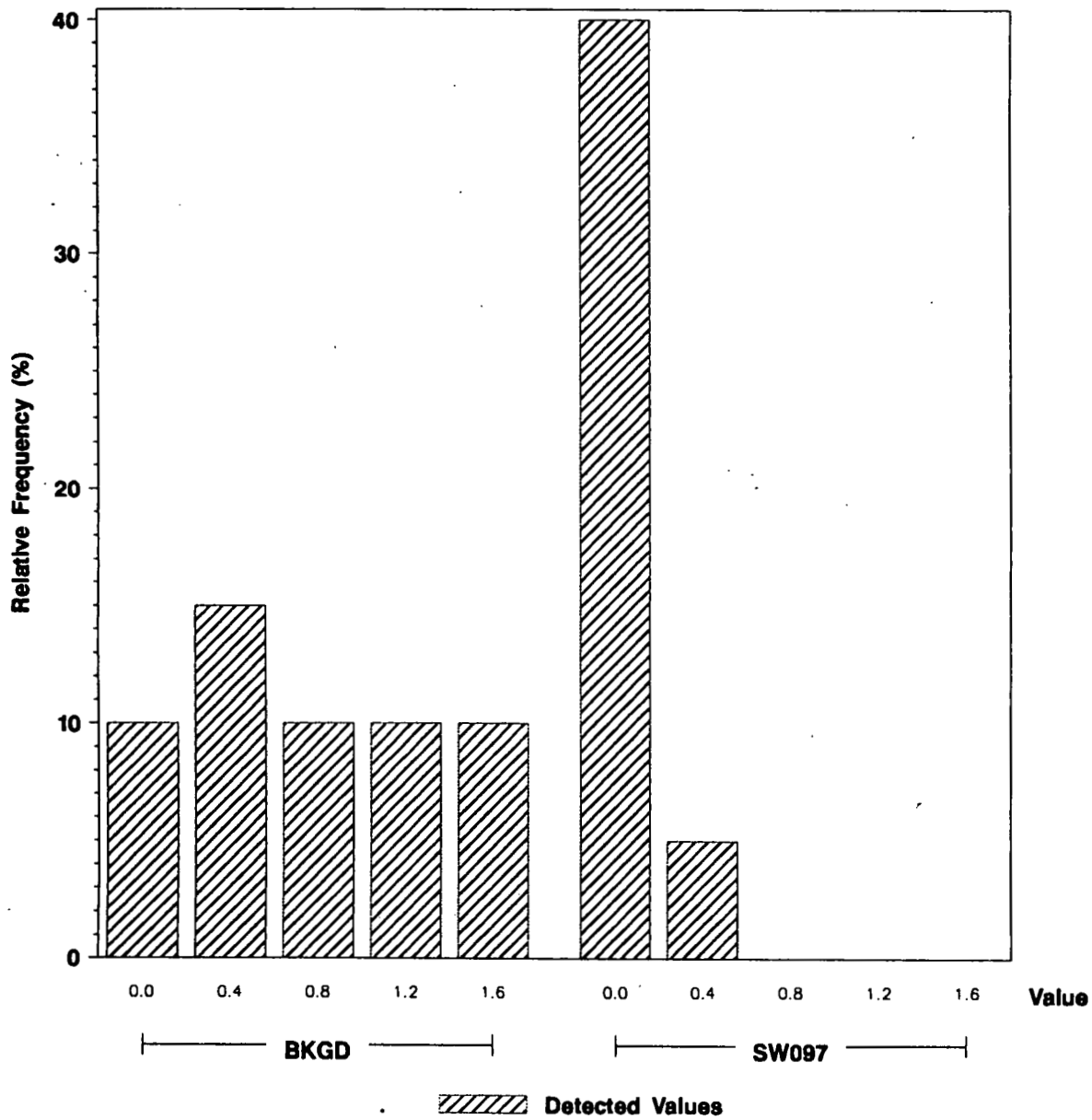
ANALYTE = URANIUM – 234



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Seep Water

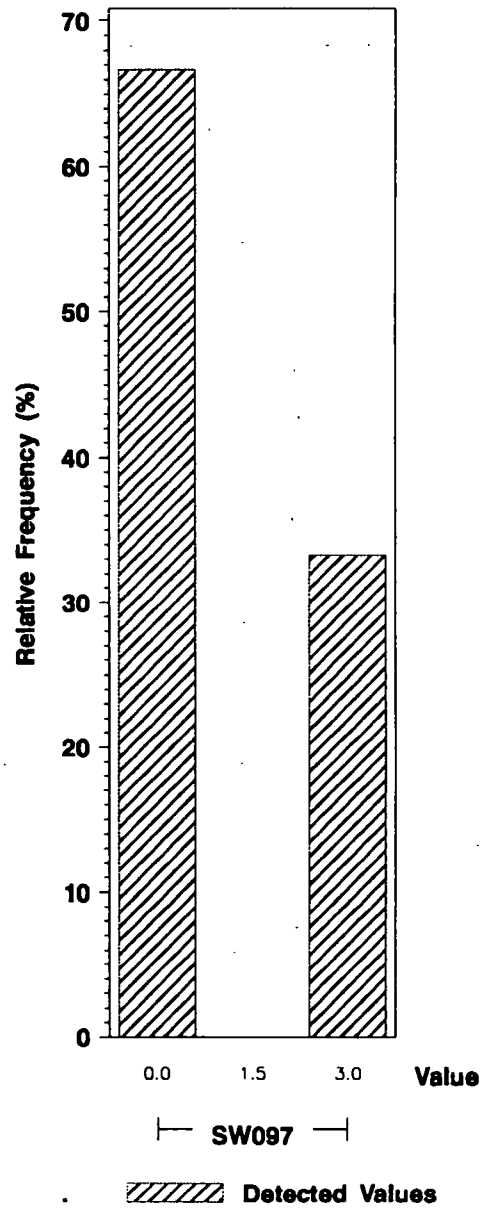
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-234 (pCi/L) in Seep Water

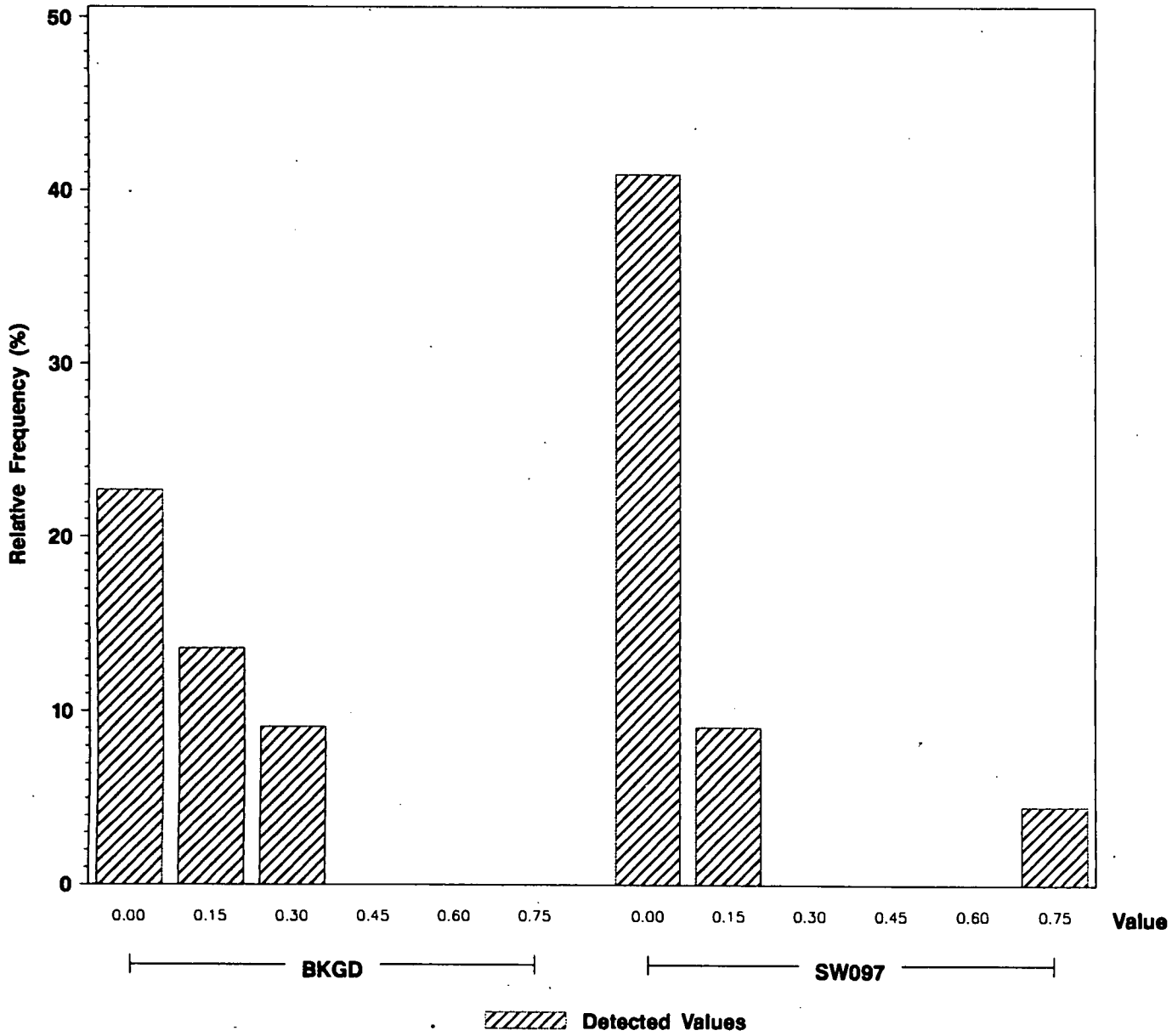
ANALYTE = URANIUM-234



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-235 (pCi/L) in Seep Water

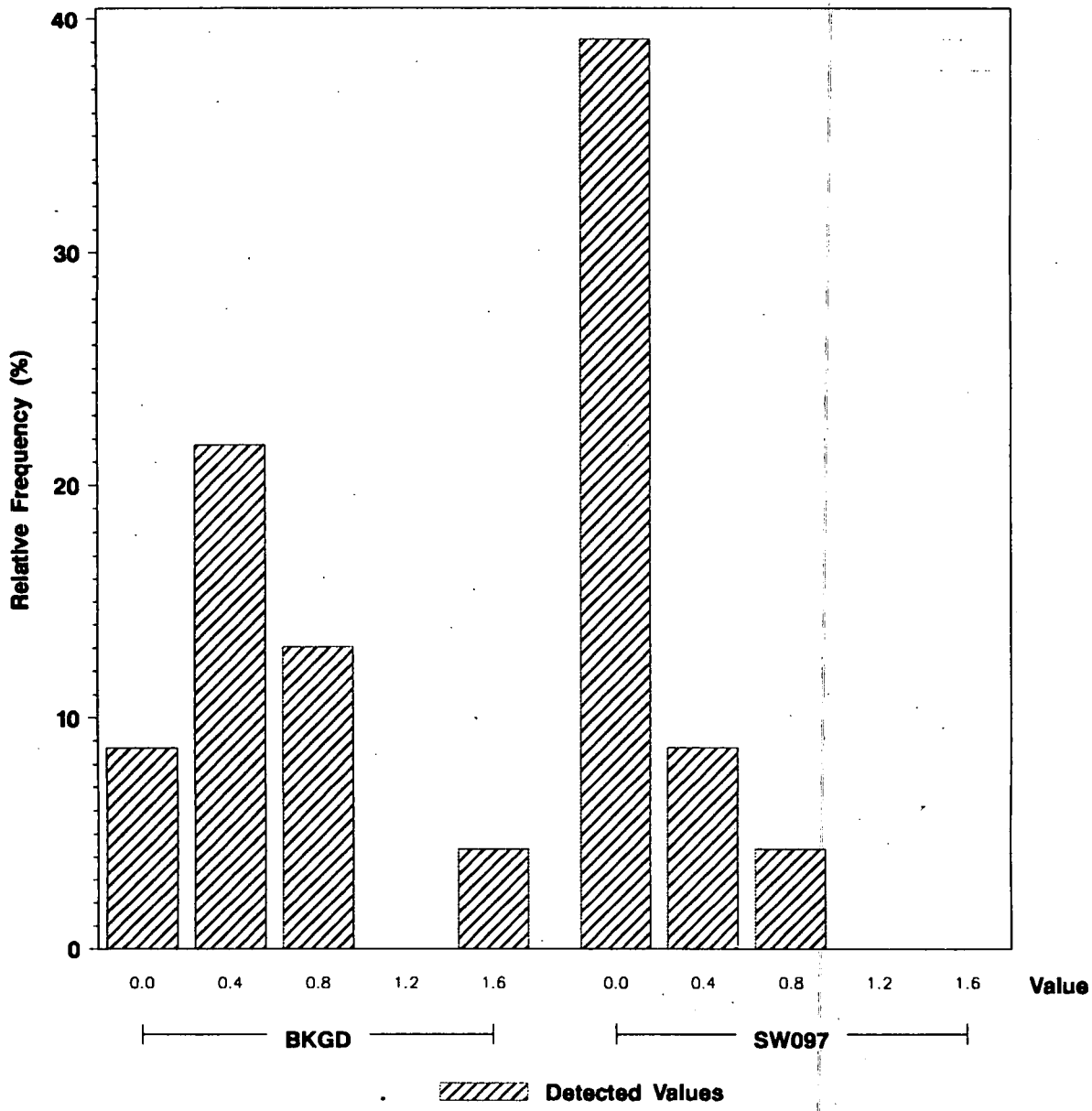
ANALYTE=URANIUM-235



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-238 (pCi/L) in Seep Water

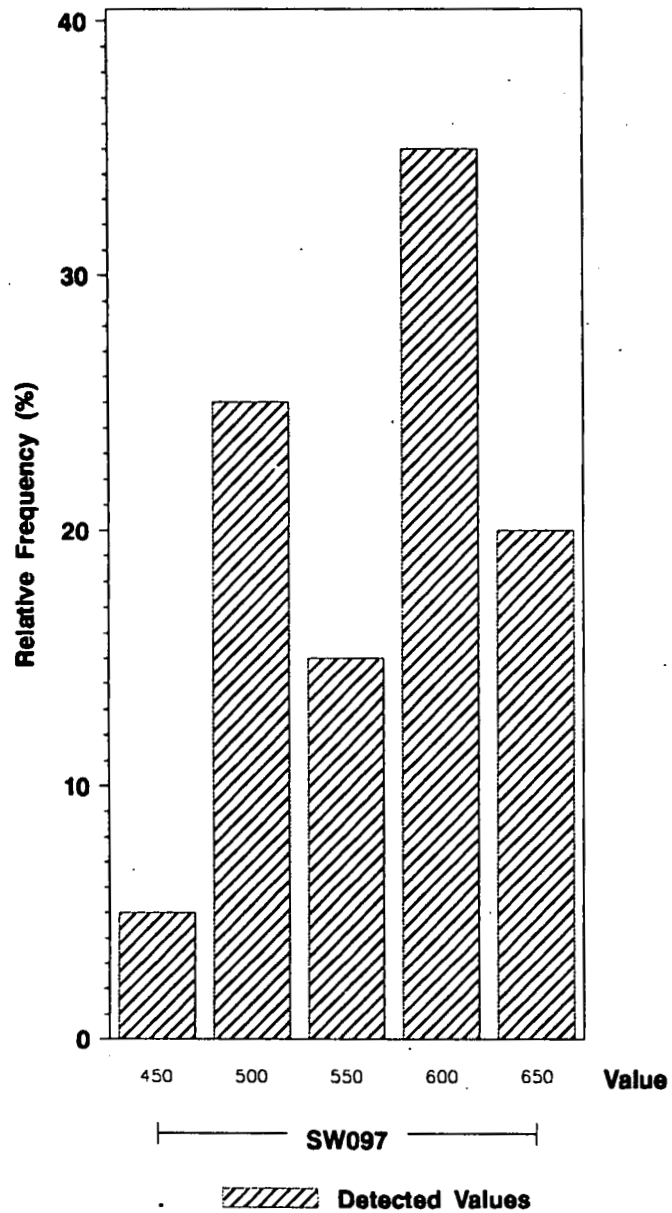
ANALYTE=URANIUM-238



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved BARIUM (ug/L) in Seep Water

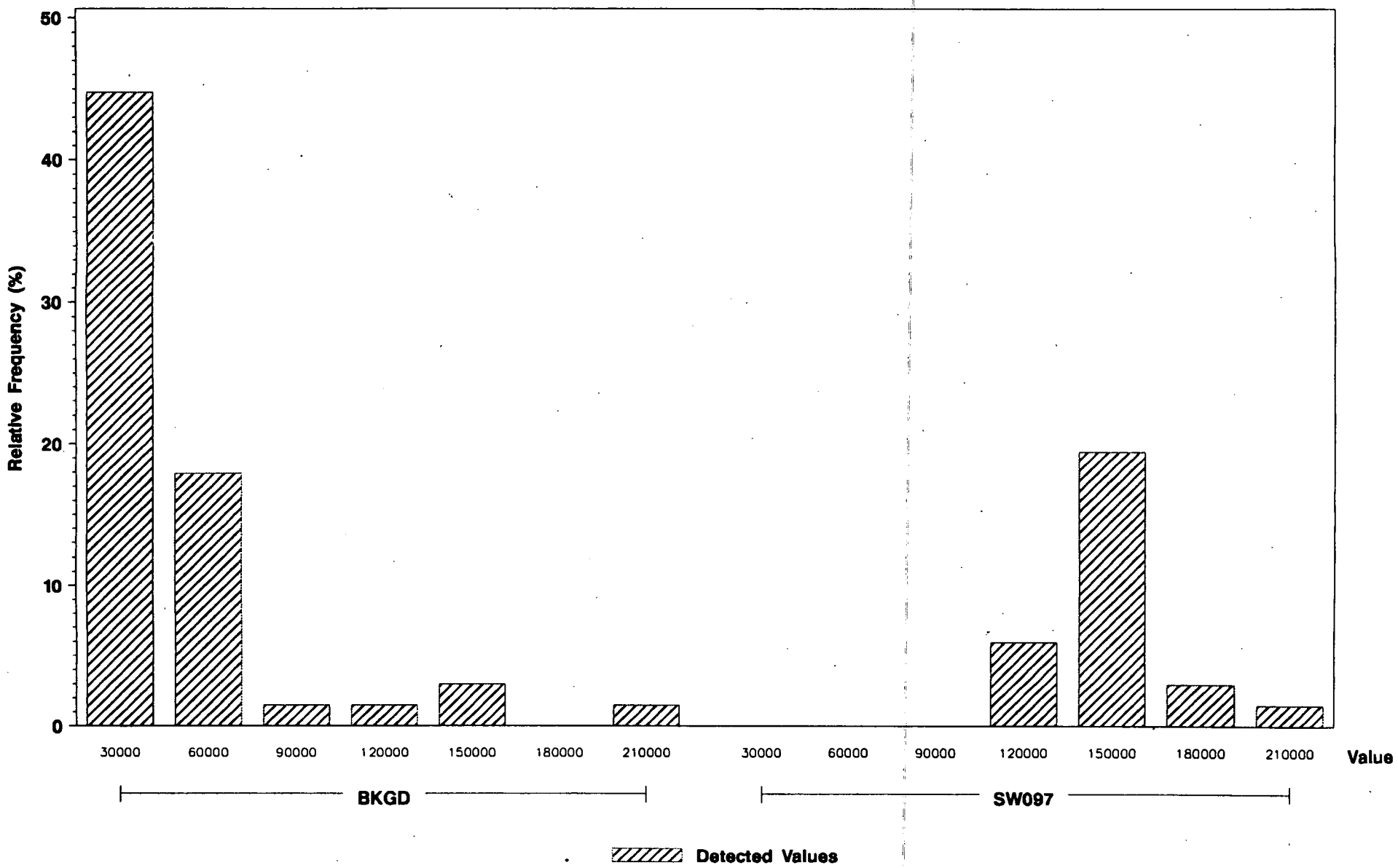
ANALYTE = BARIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved CALCIUM (ug/L) in Seep Water

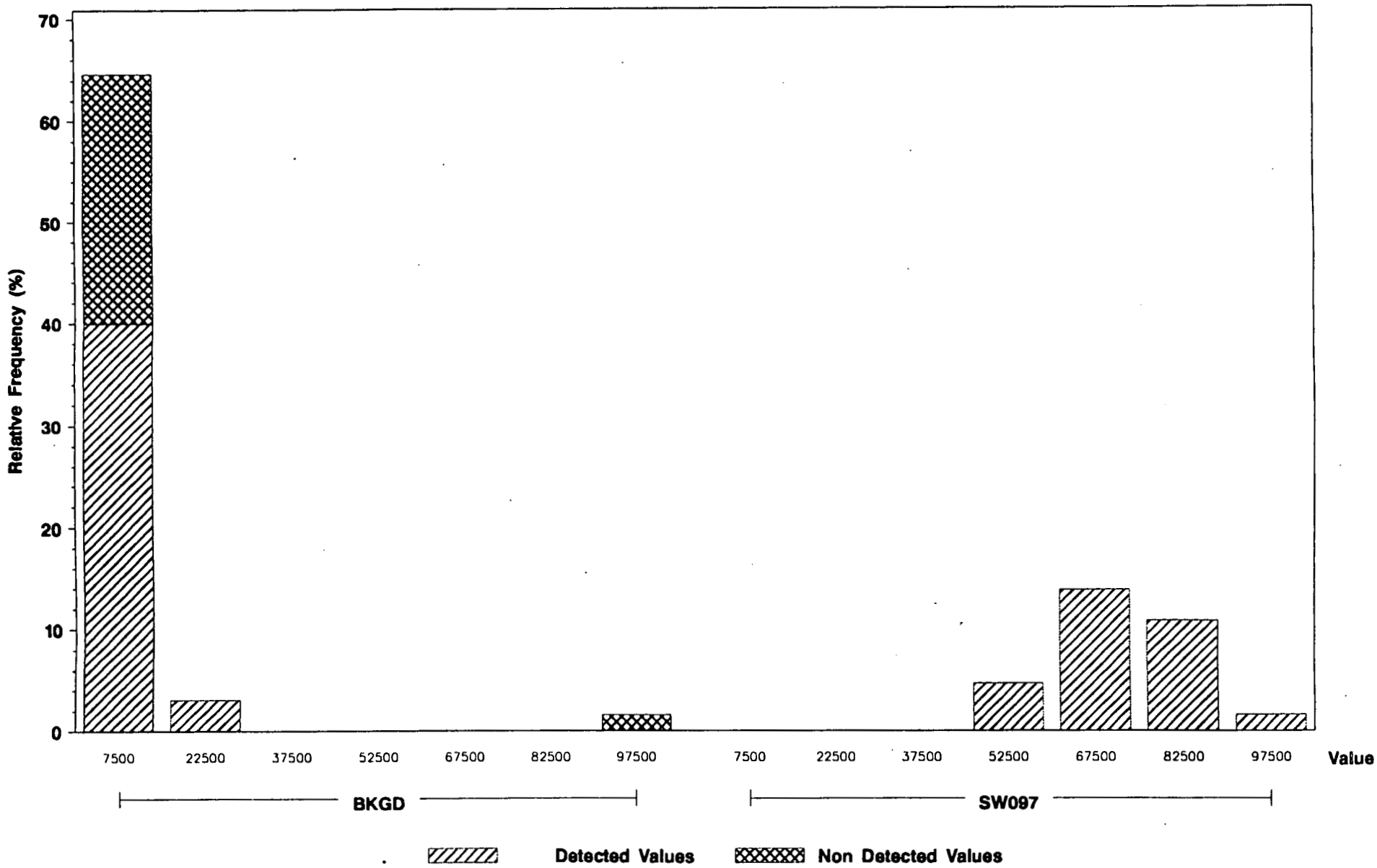
ANALYTE=CALCIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved IRON (ug/L) in Seep Water

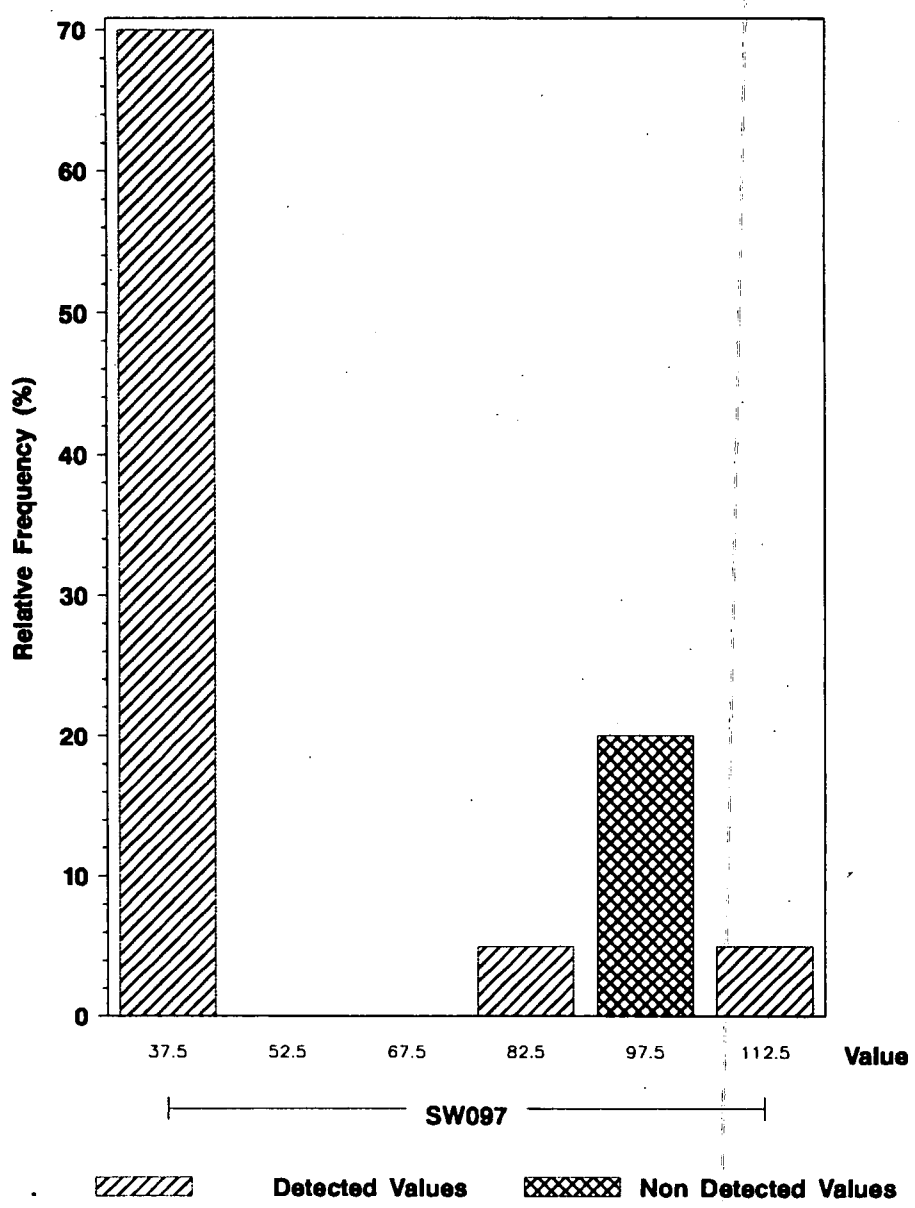
ANALYTE = IRON



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved LITHIUM (ug/L) in Seep Water

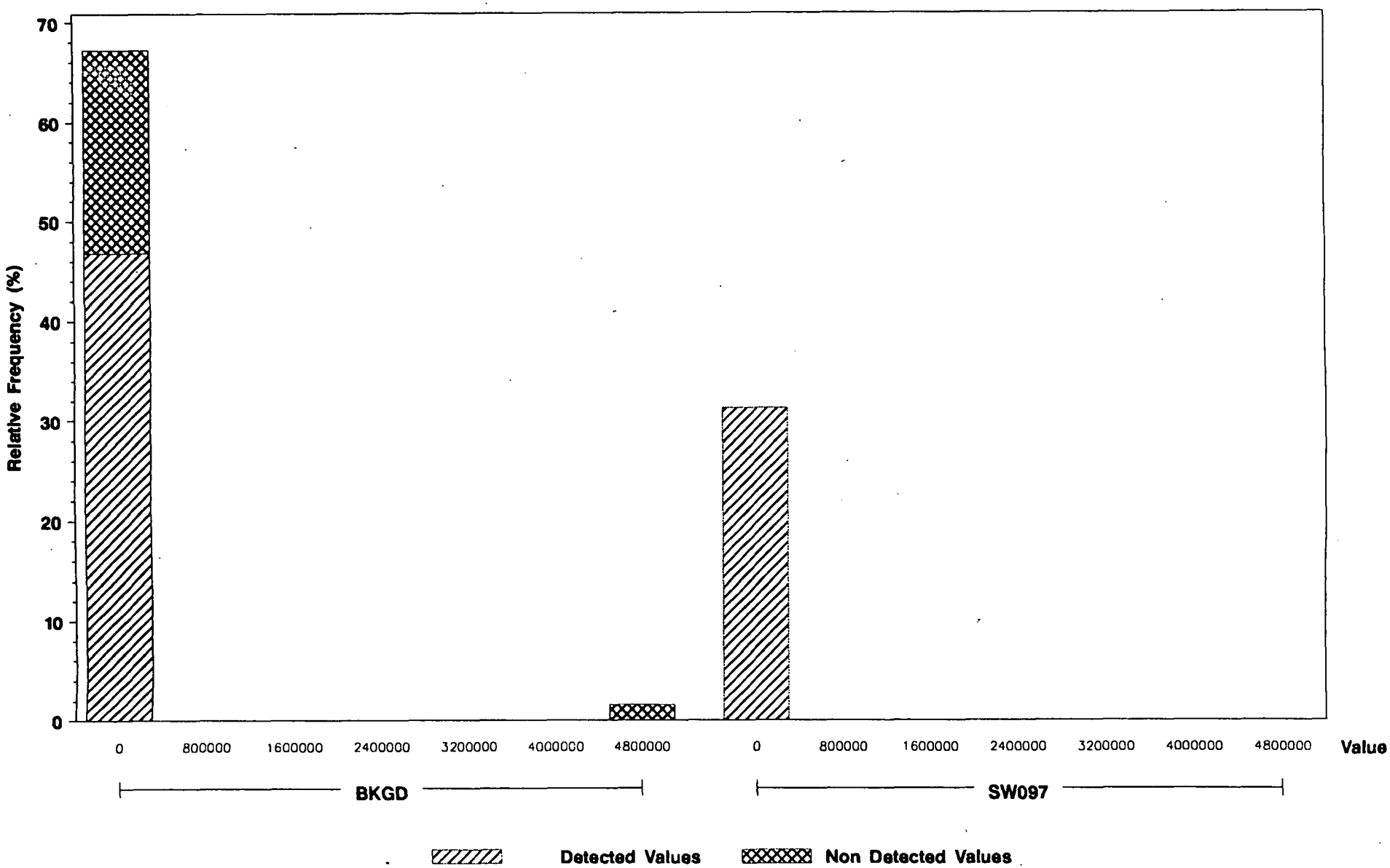
ANALYTE = LITHIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Seep Water

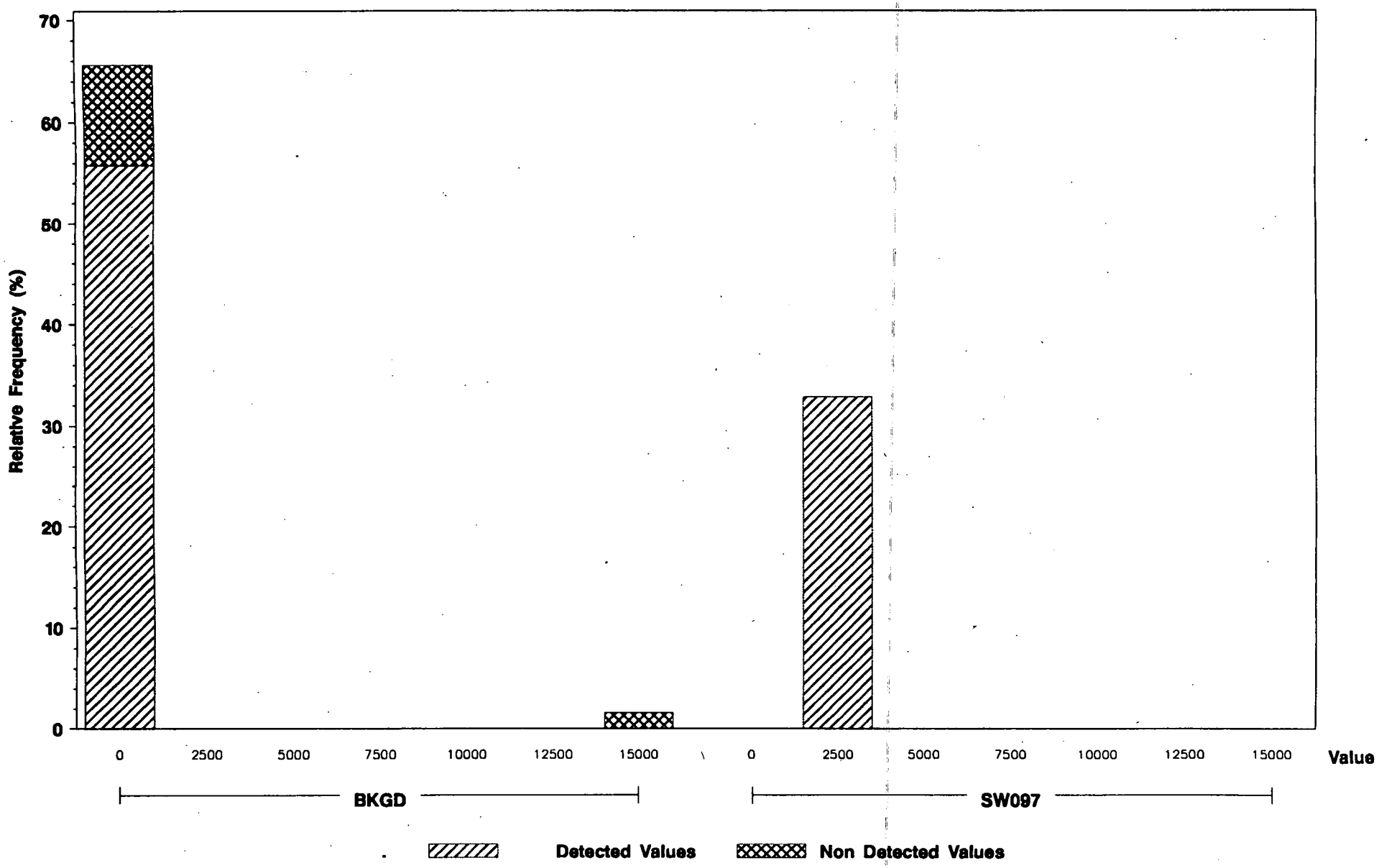
ANALYTE = MAGNESIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved MANGANESE (ug/L) in Seep Water

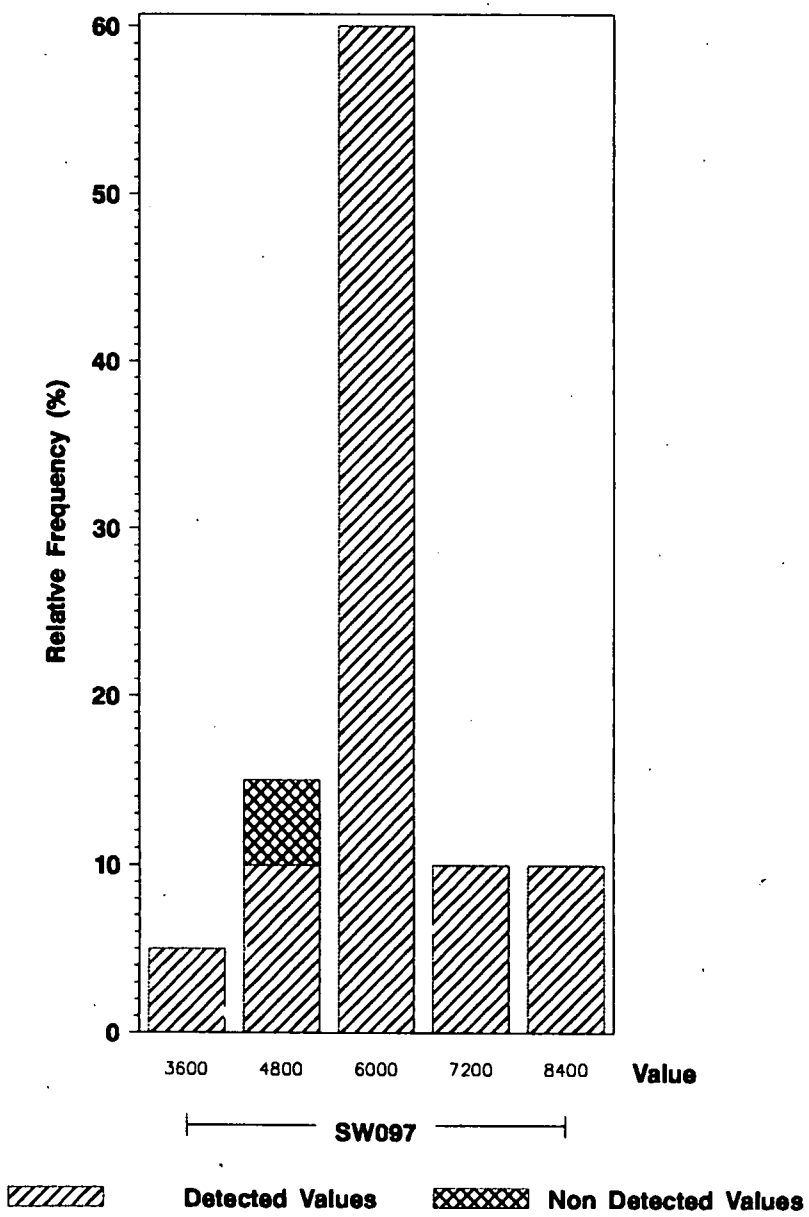
ANALYTE = MANGANESE



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Seep Water

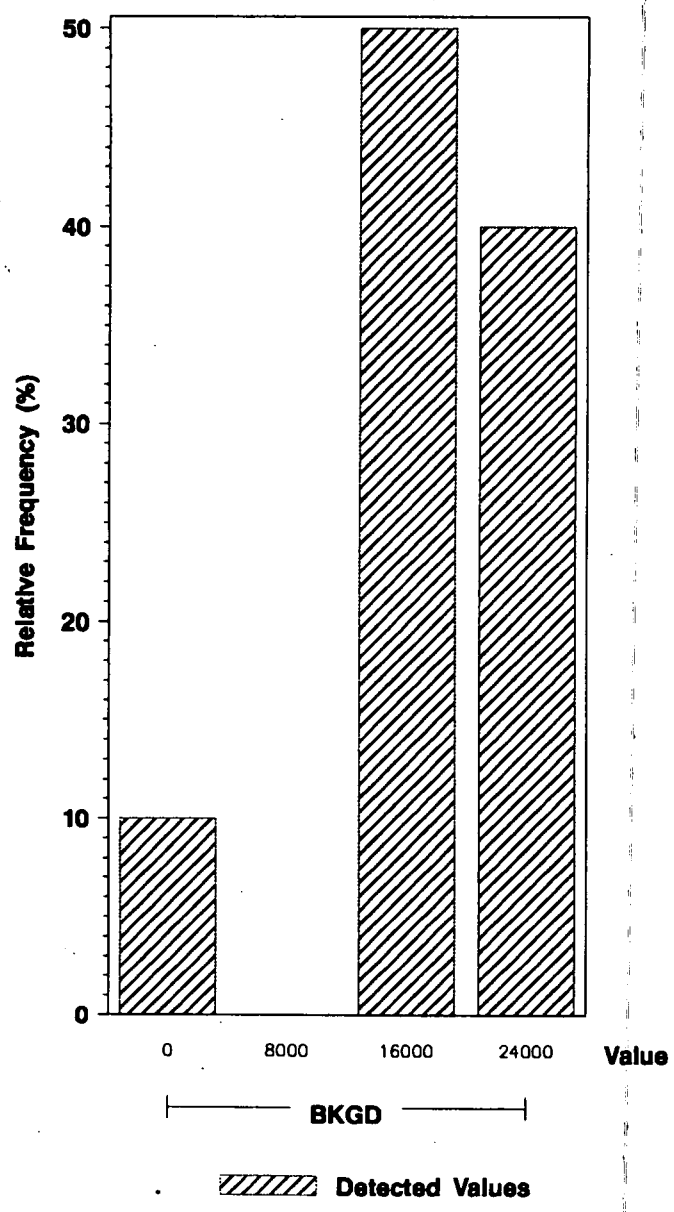
ANALYTE = POTASSIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved SILICA (ug/L) in Seep Water

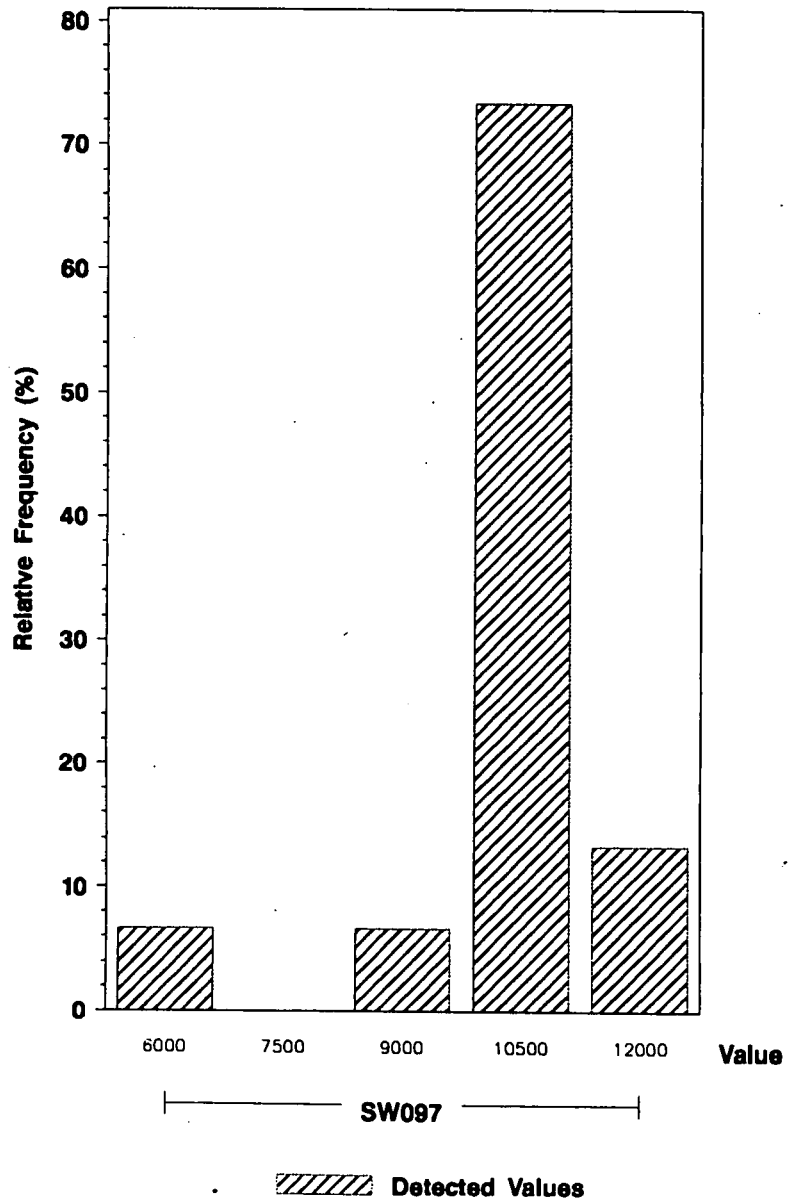
ANALYTE = SILICA



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved SILICON (ug/L) in Seep Water

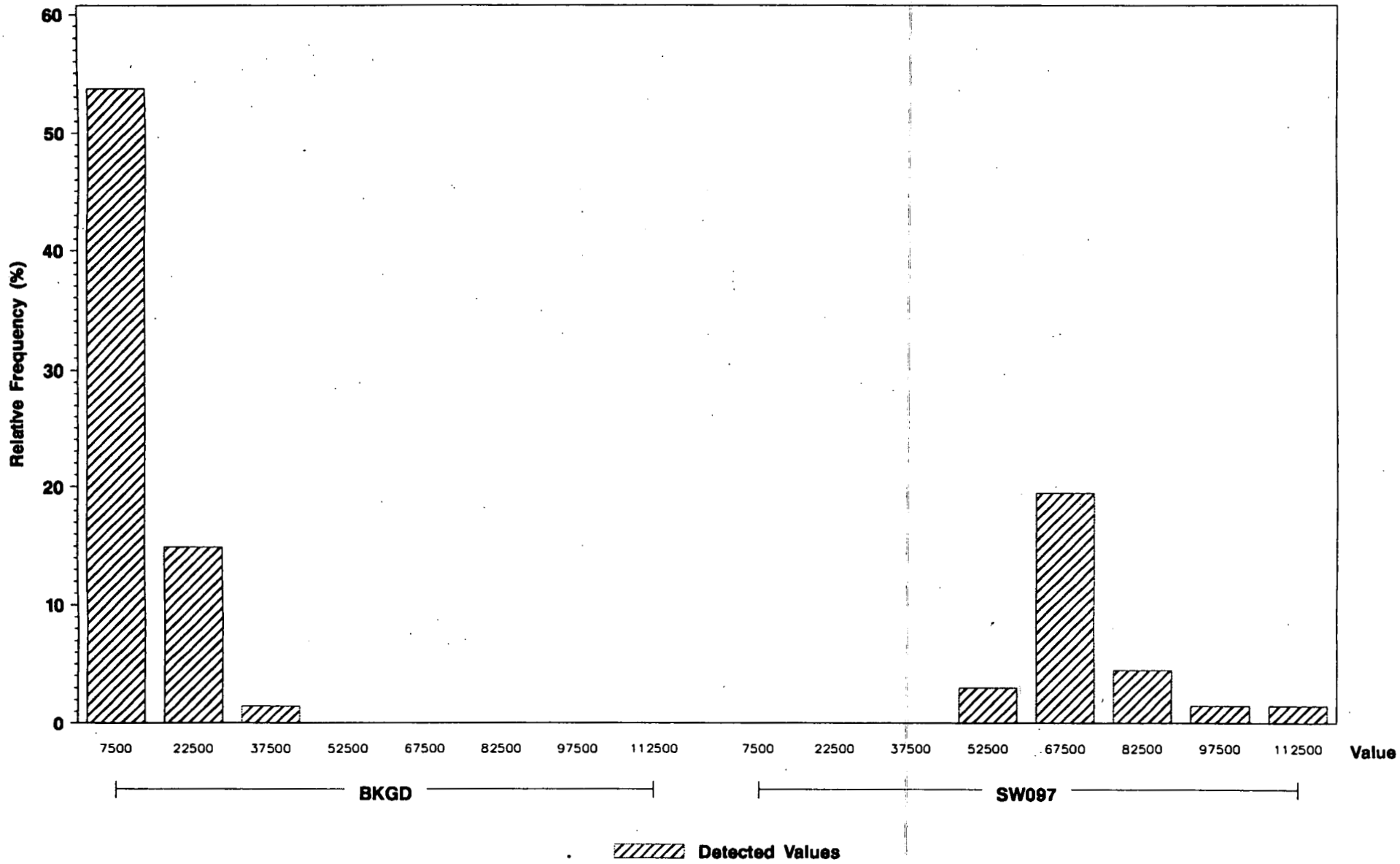
ANALYTE=SILICON



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved SODIUM (ug/L) in Seep Water

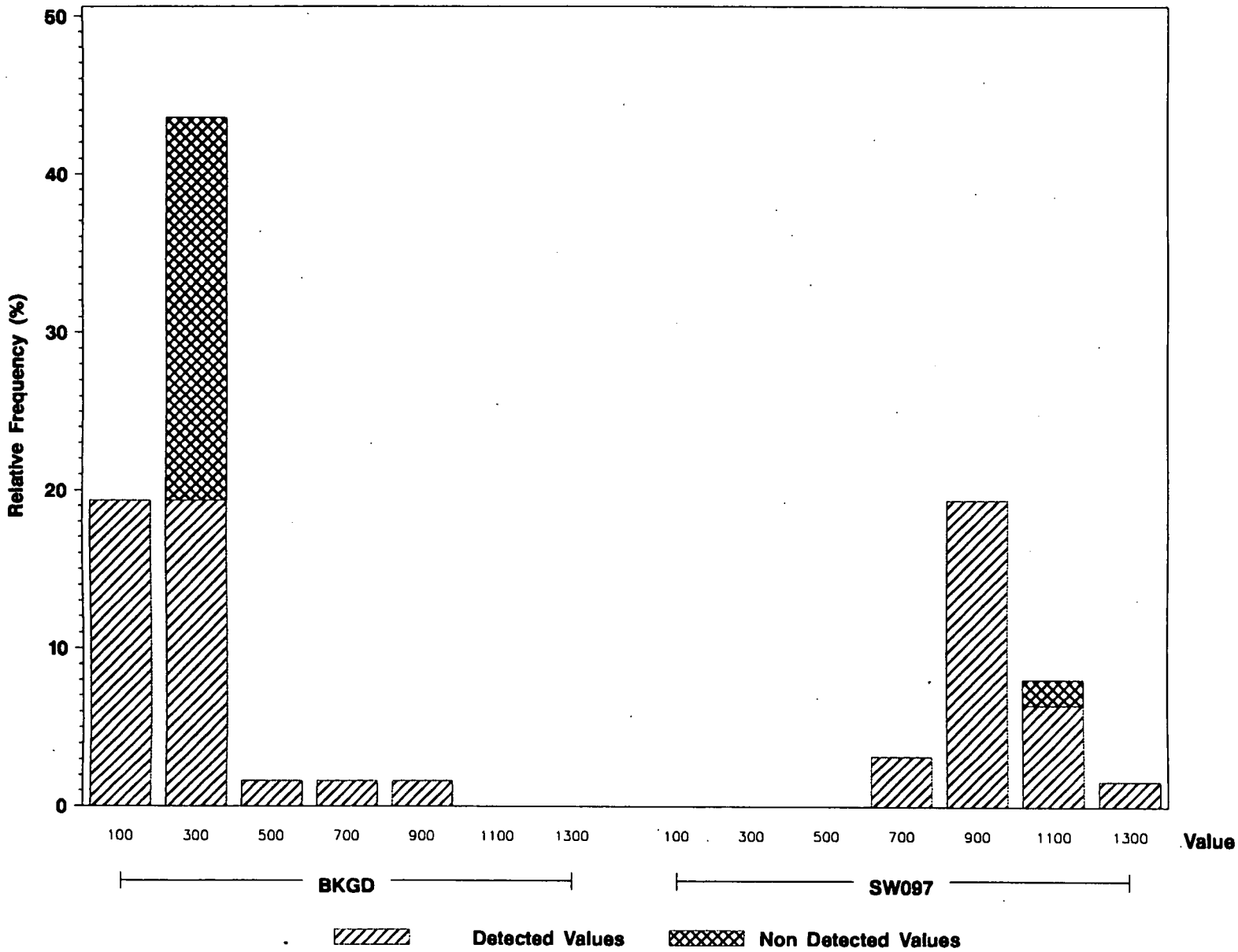
ANALYTE = SODIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Seep Water

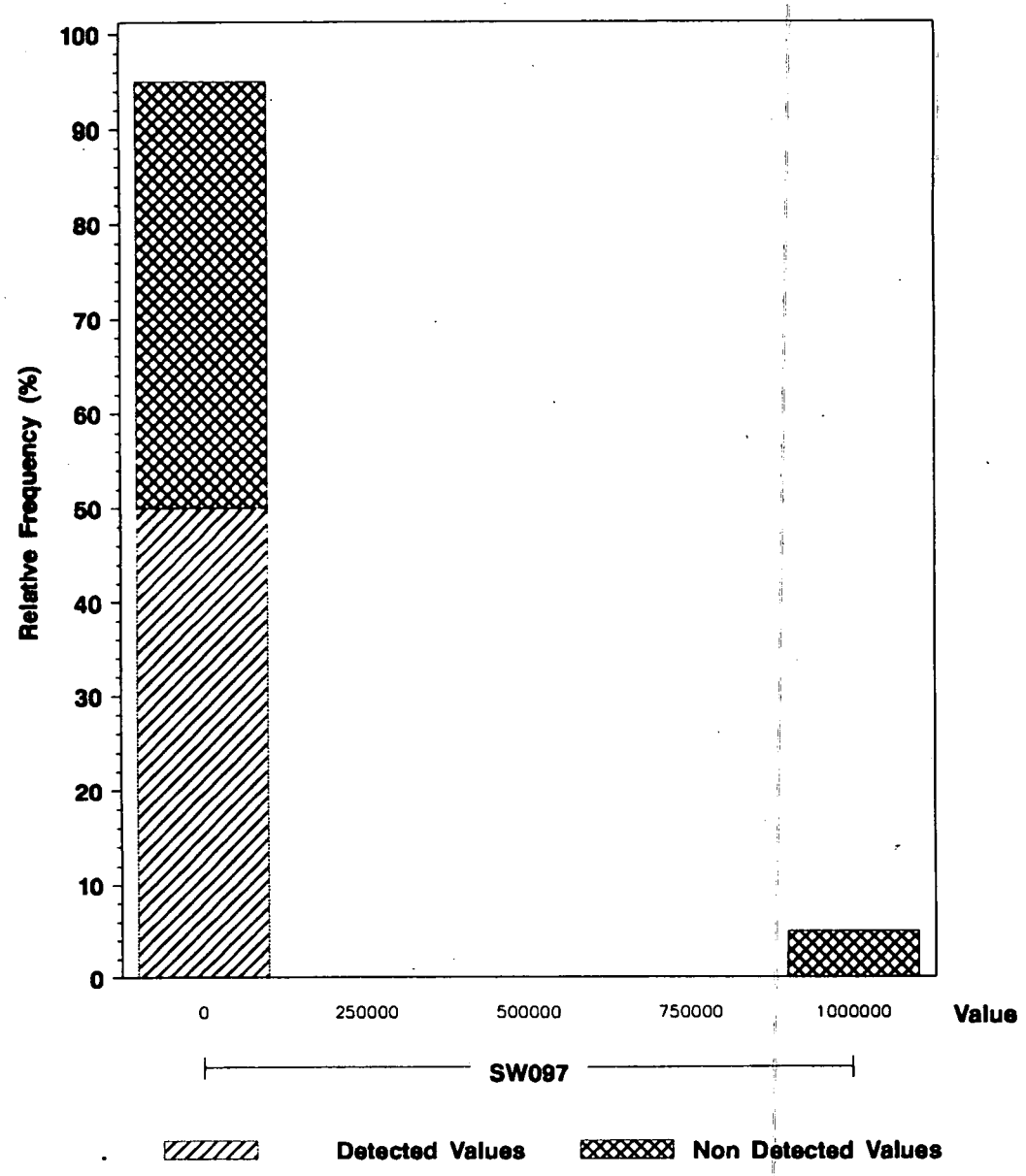
ANALYTE = STRONTIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved TIN (ug/L) in Seep Water

ANALYTE = TIN



**Leachate**

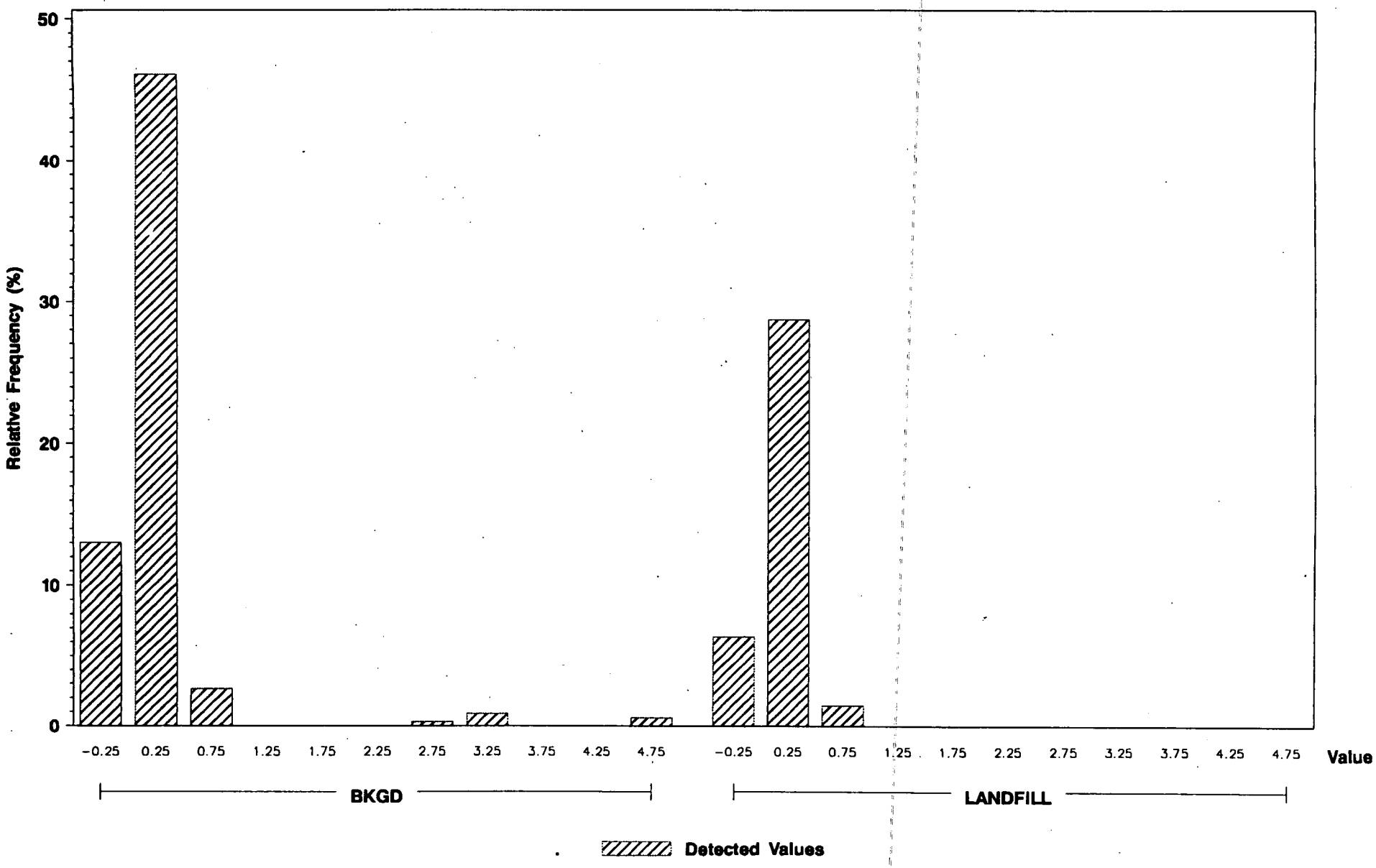
**(Dissolved)**

**Background vs. OU 7 (Landfill) UHSU**

# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved URANIUM – 235 (pCi/L) in Groundwater

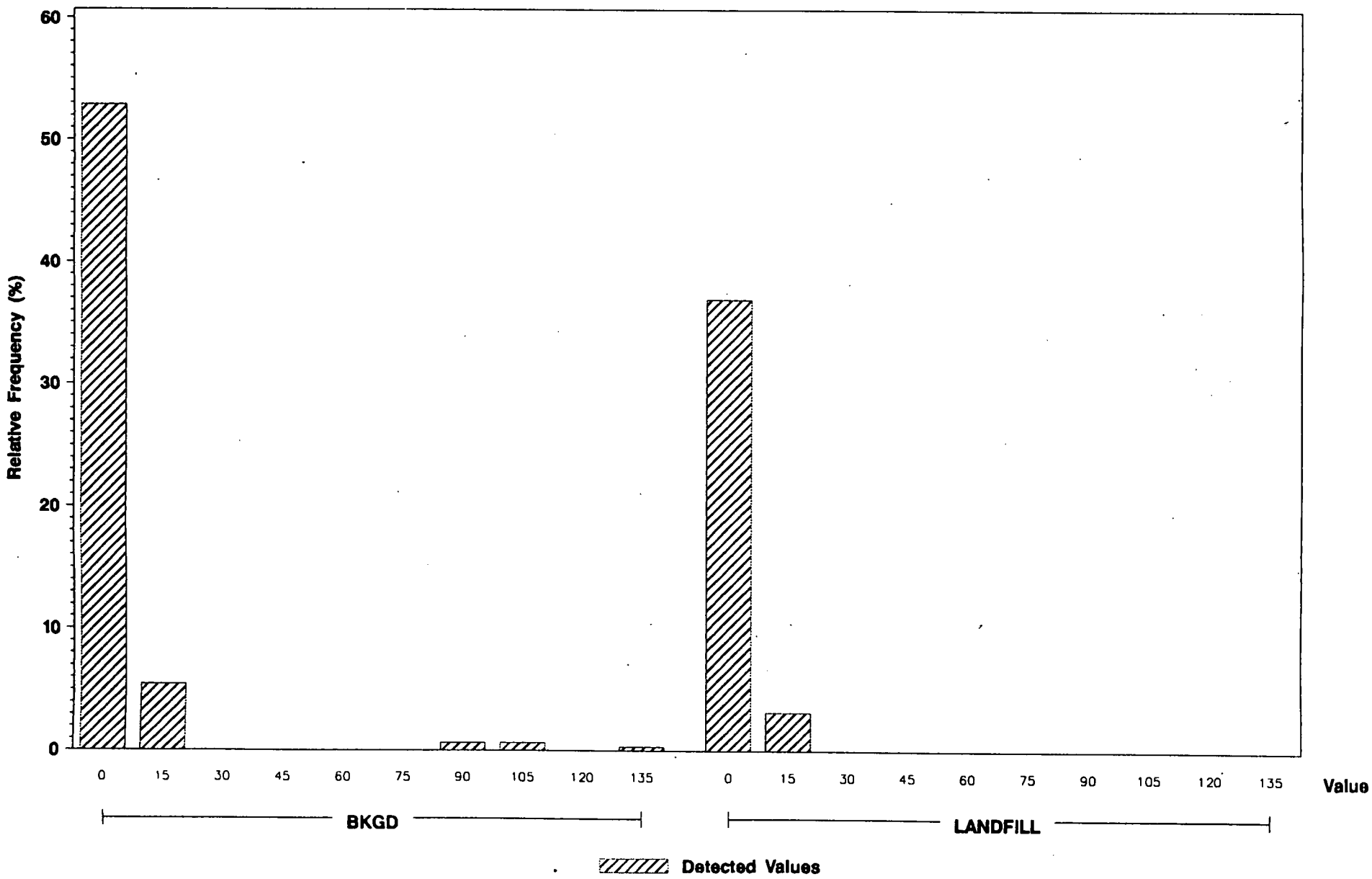
ANALYTE = URANIUM – 235



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved URANIUM – 238 (pCi/L) in Groundwater

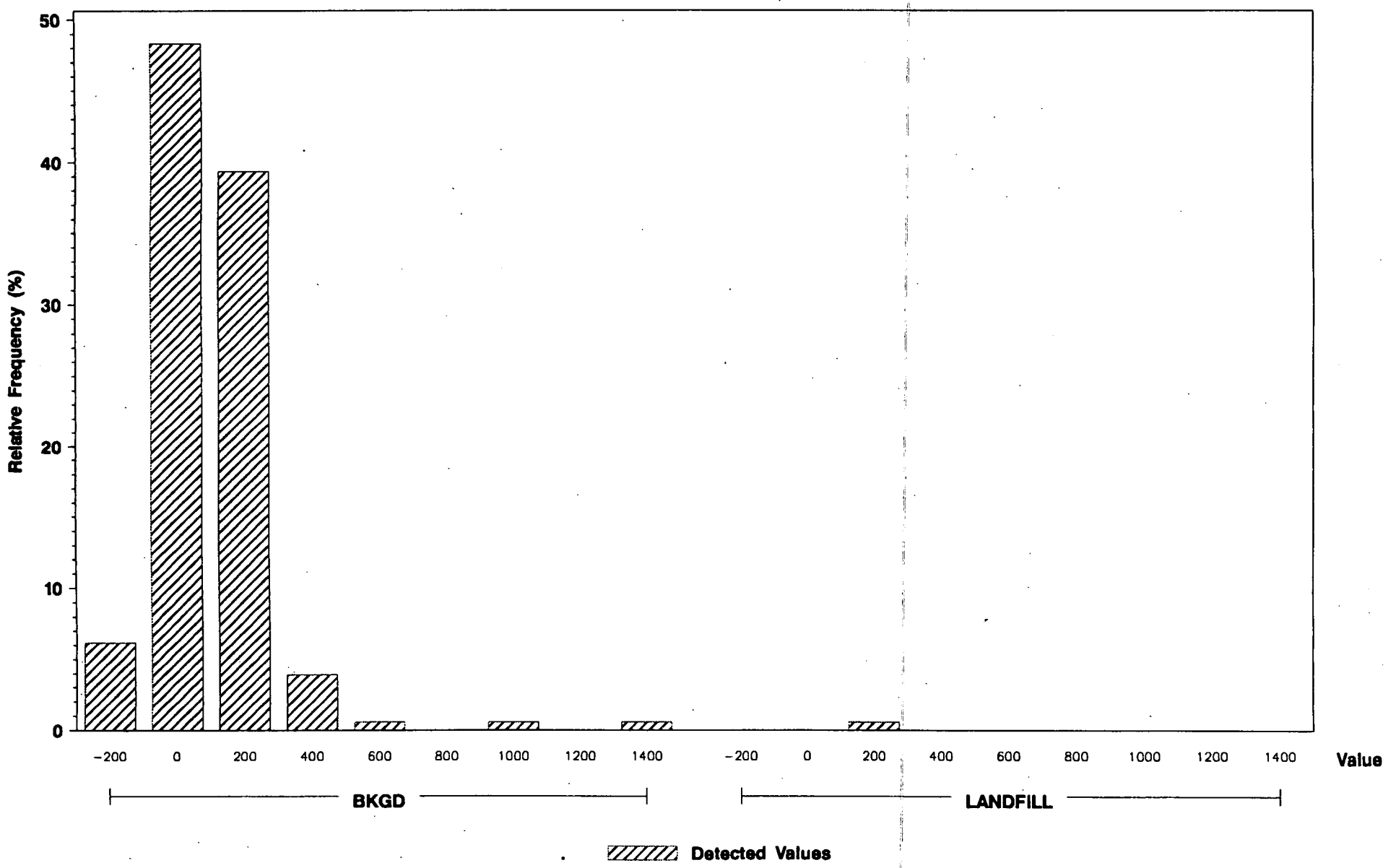
ANALYTE = URANIUM – 238



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Groundwater

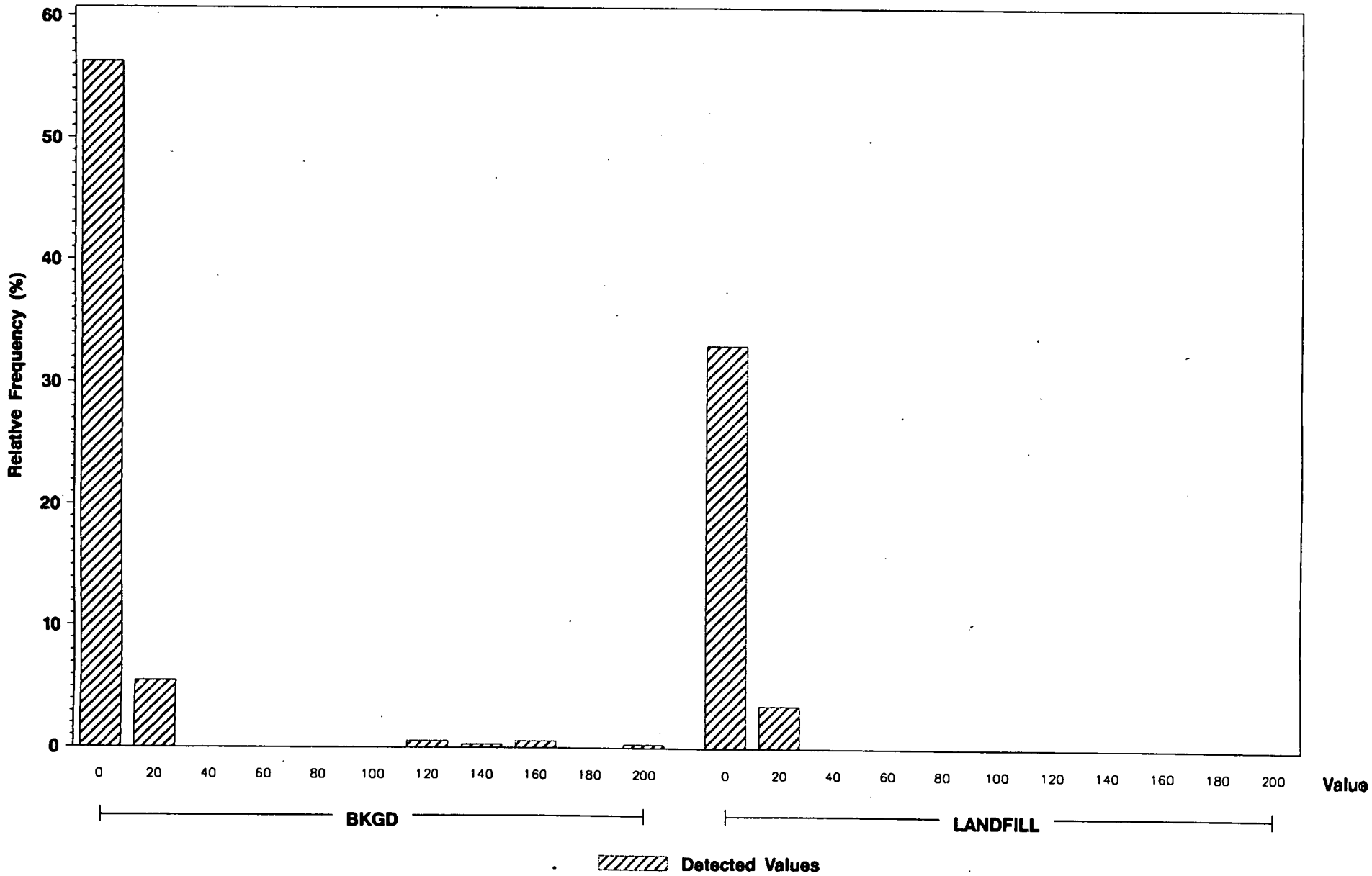
ANALYTE = TRITIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Groundwater

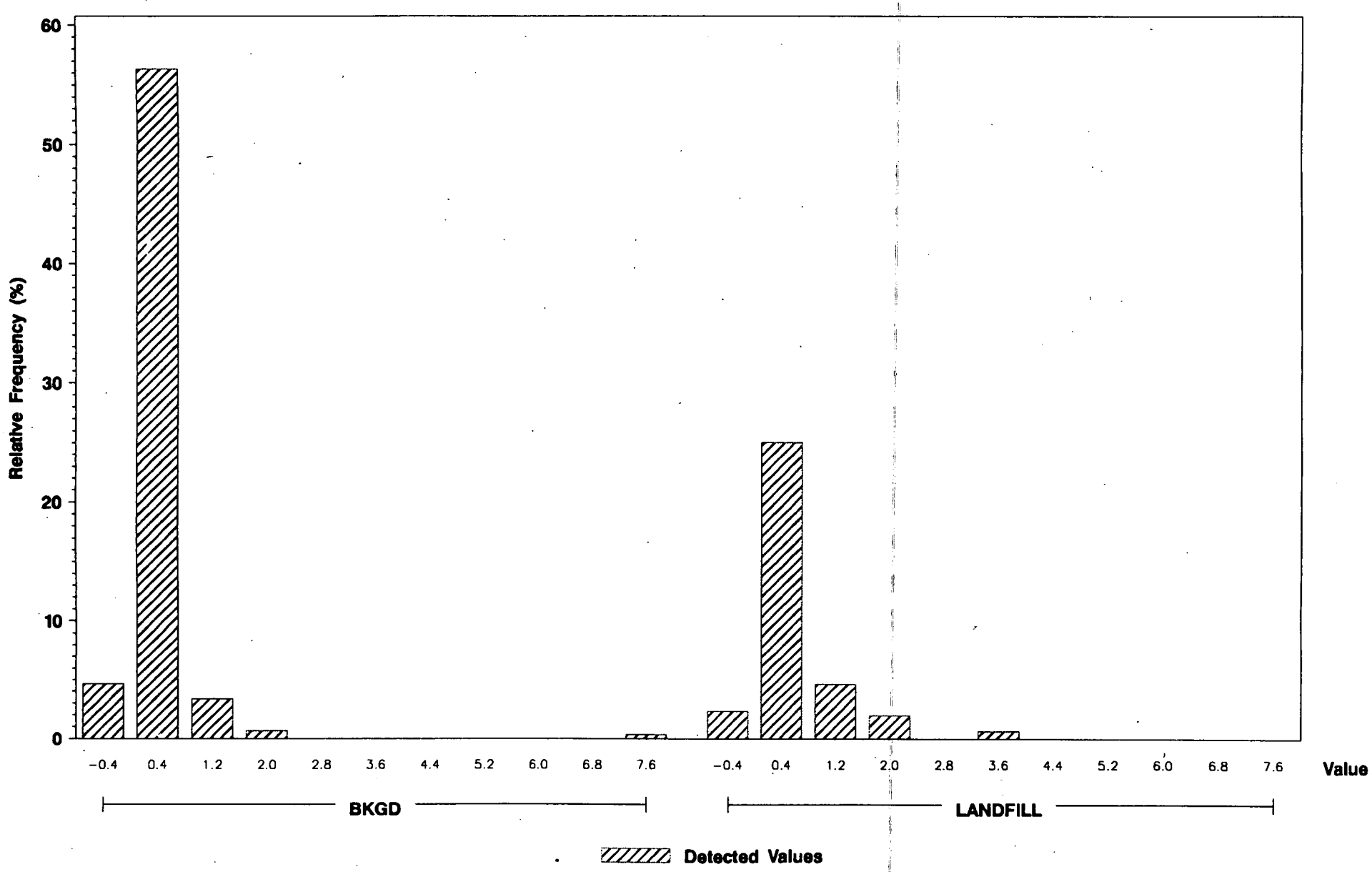
ANALYTE=URANIUM-233,-234



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Groundwater

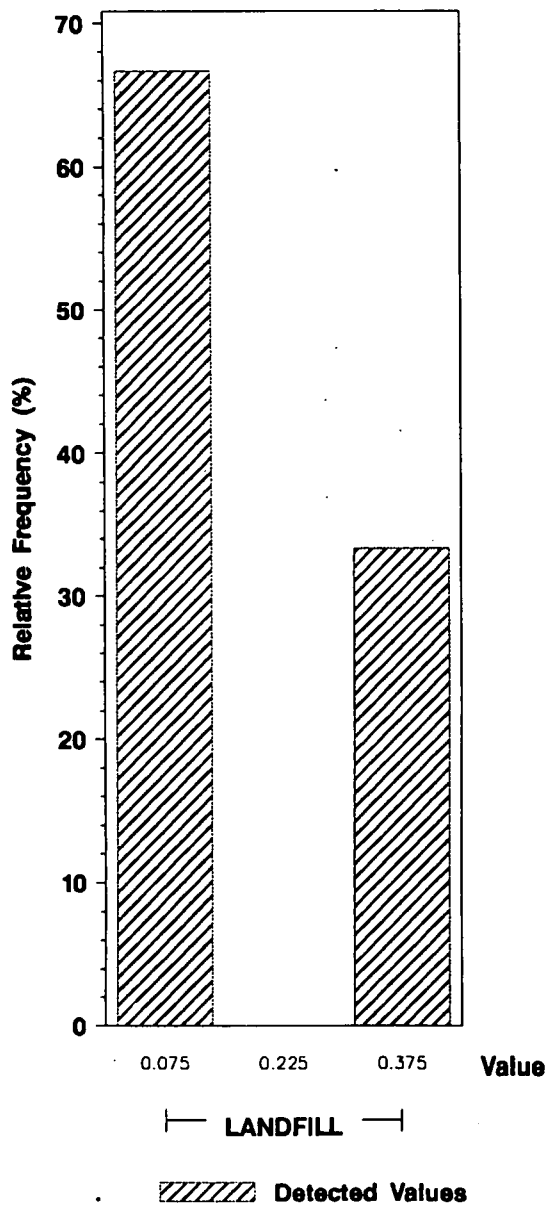
ANALYTE = STRONTIUM – 89,90



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved STRONTIUM – 90 (pCi/L) in Groundwater

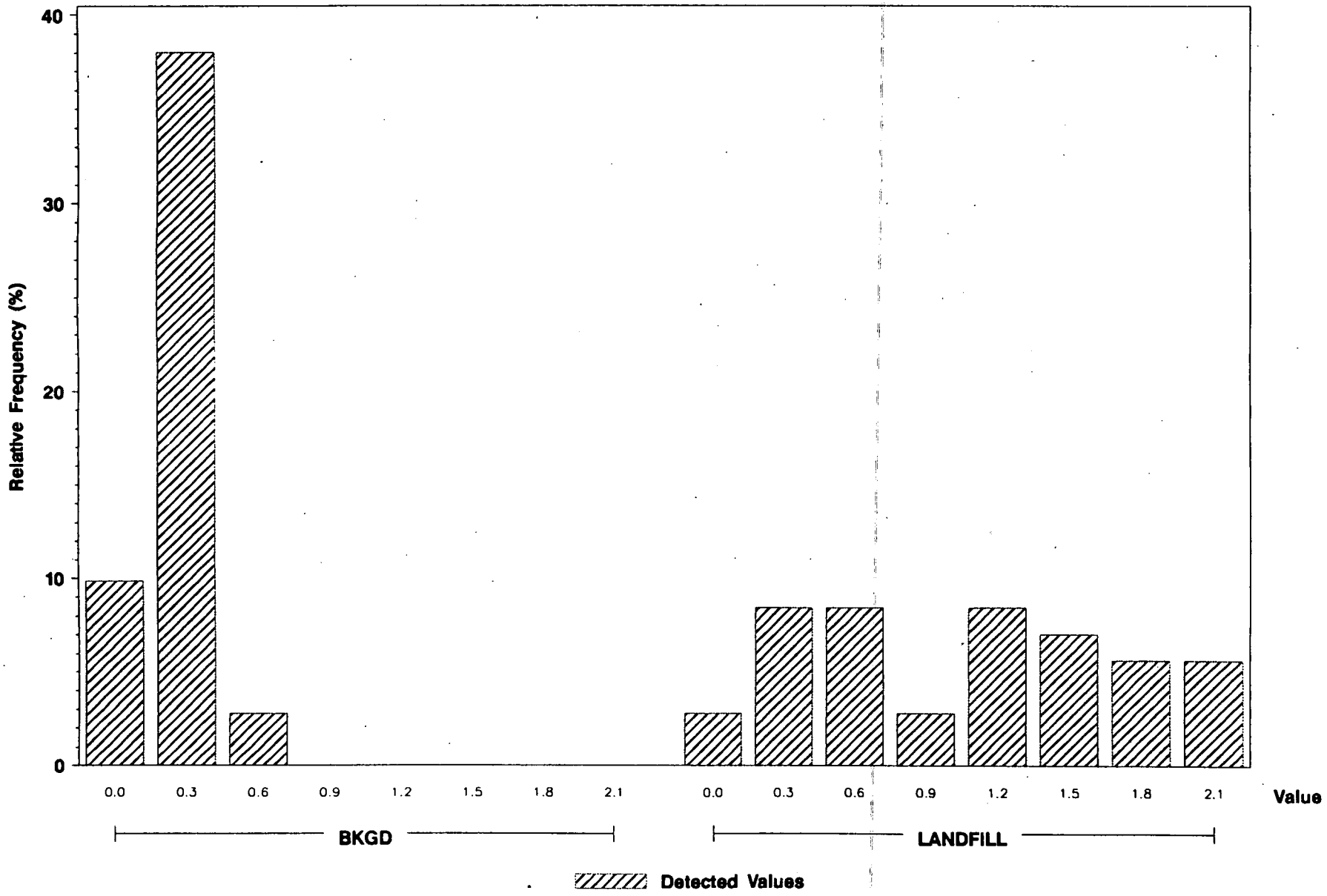
ANALYTE = STRONTIUM – 90



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved RADIUM – 226 (pCi/L) in Groundwater

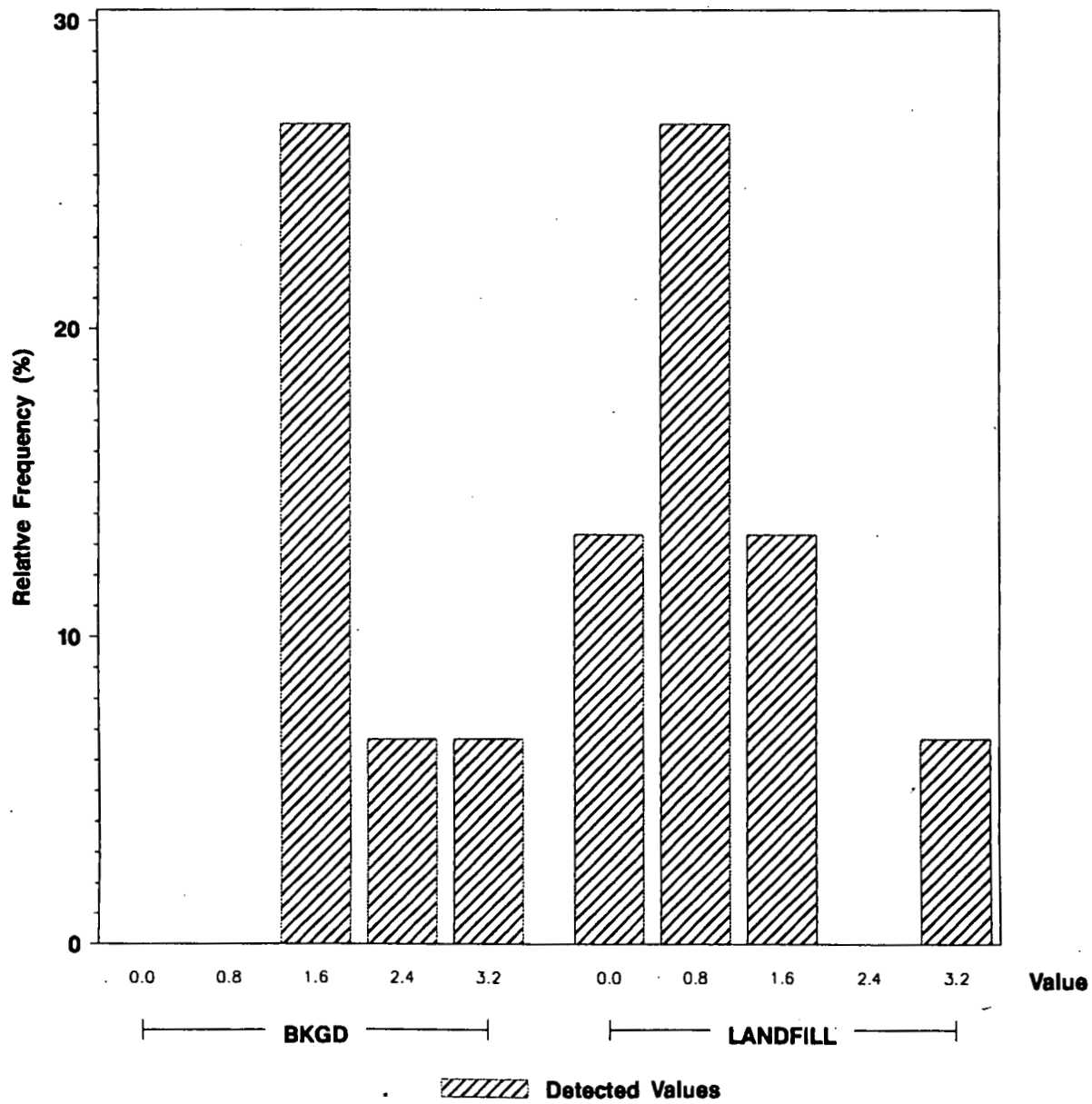
ANALYTE = RADIUM – 226



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved RADIUM – 228 (pCi/L) in Groundwater

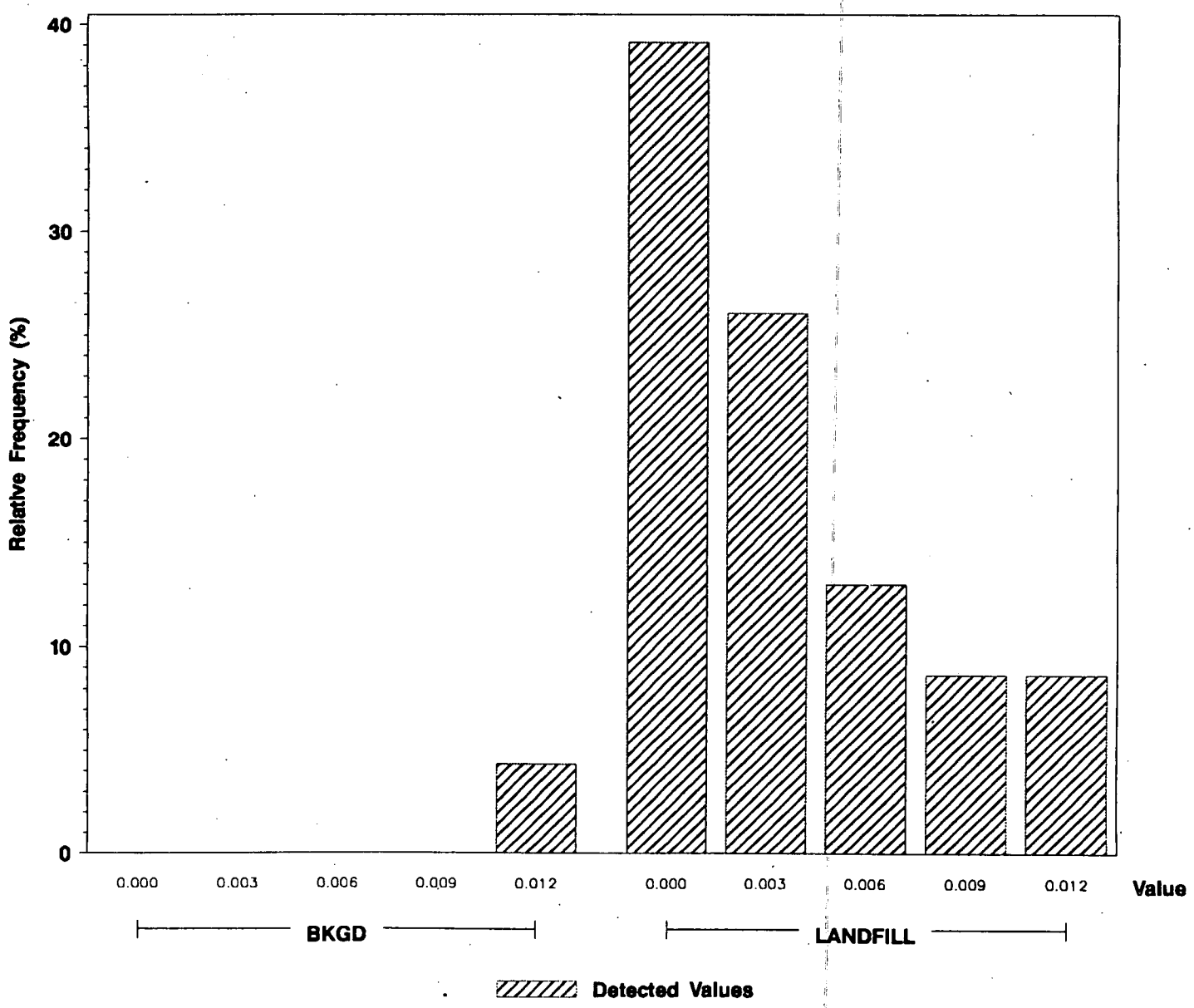
ANALYTE = RADIUM – 228



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved PLUTONIUM – 239/240 (pCi/L) in Groundwater

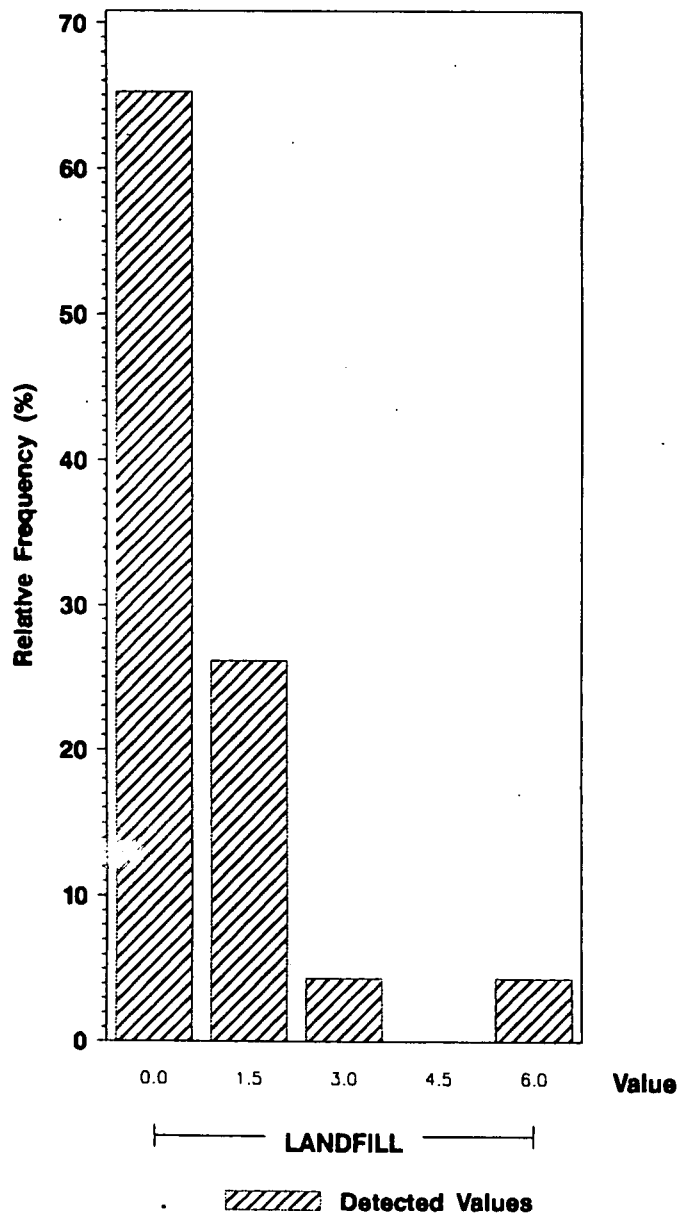
ANALYTE = PLUTONIUM – 239/240



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved TOTAL RADIOCESIUM (pCi/L) in Groundwater

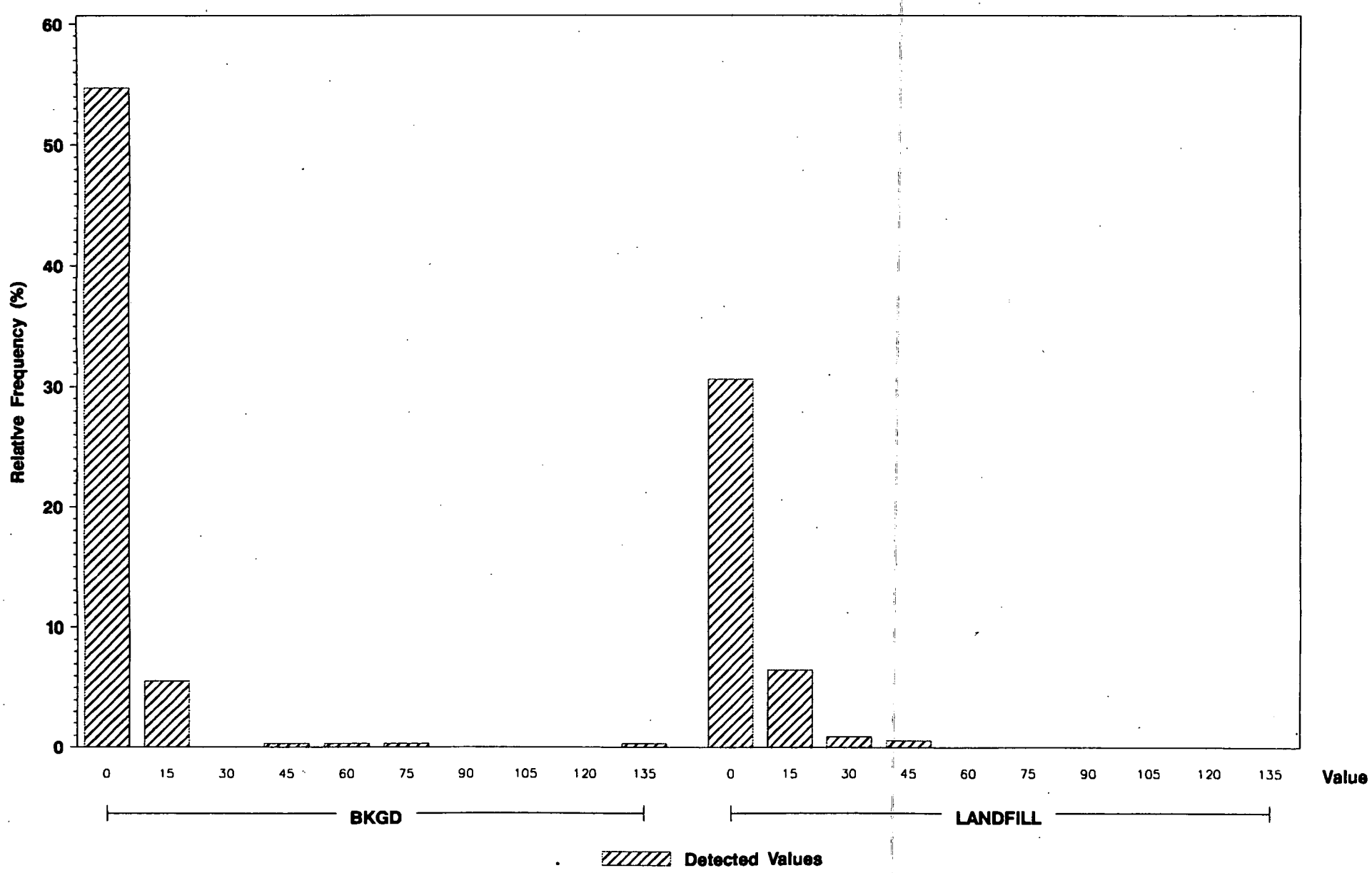
ANALYTE=TOTAL RADIOCESIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Groundwater

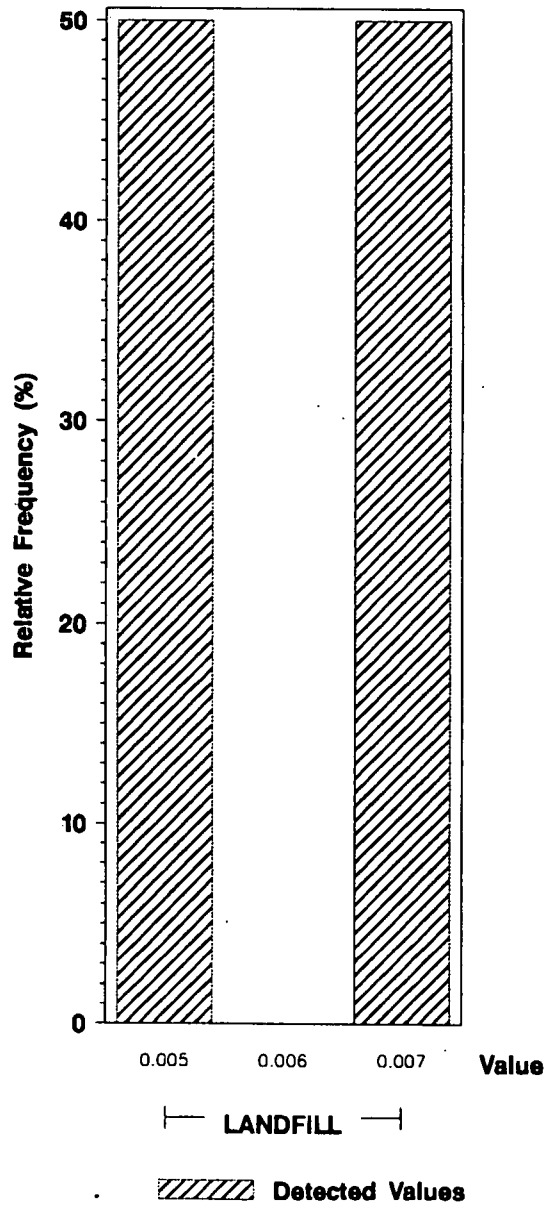
ANALYTE=GROSS BETA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved PLUTONIUM-239 (pCi/L) in Groundwater

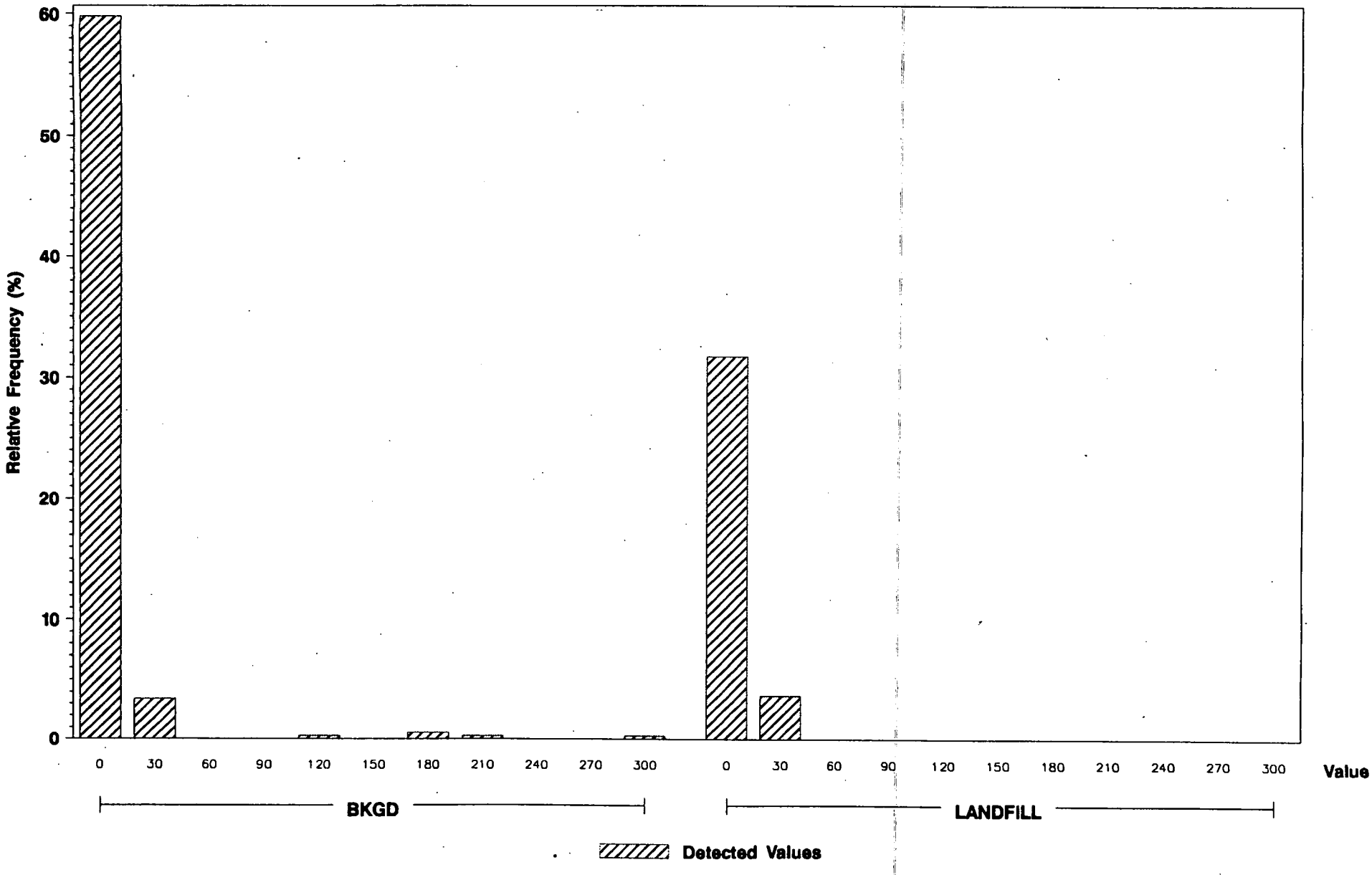
ANALYTE = PLUTONIUM-239



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Groundwater

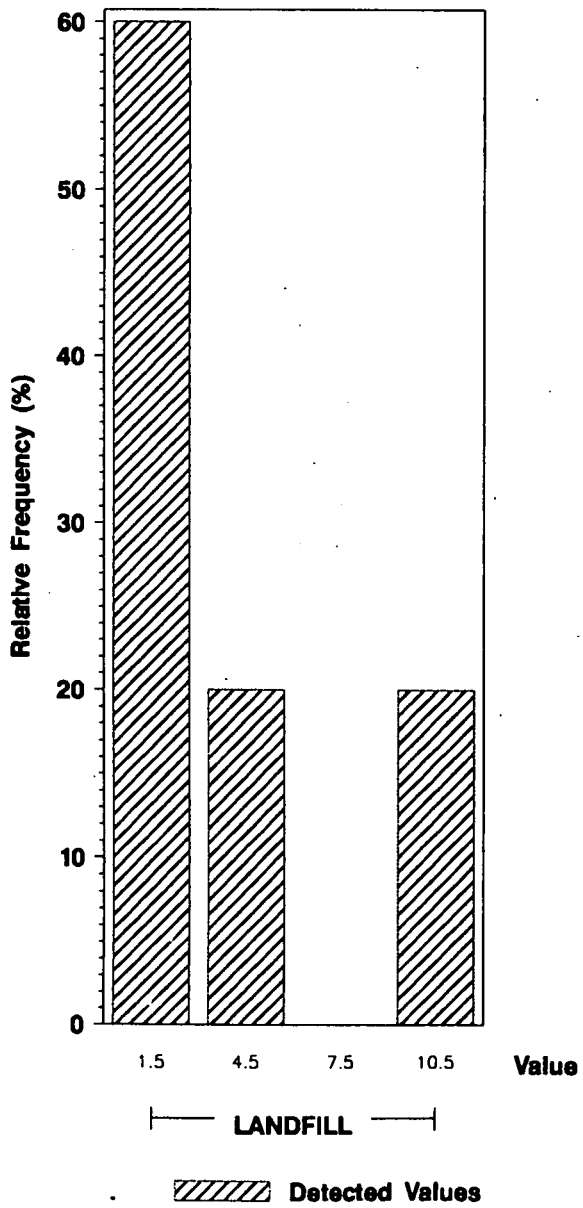
ANALYTE=GROSS ALPHA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA – SUSPENDED (pCi/L) in Groundwater

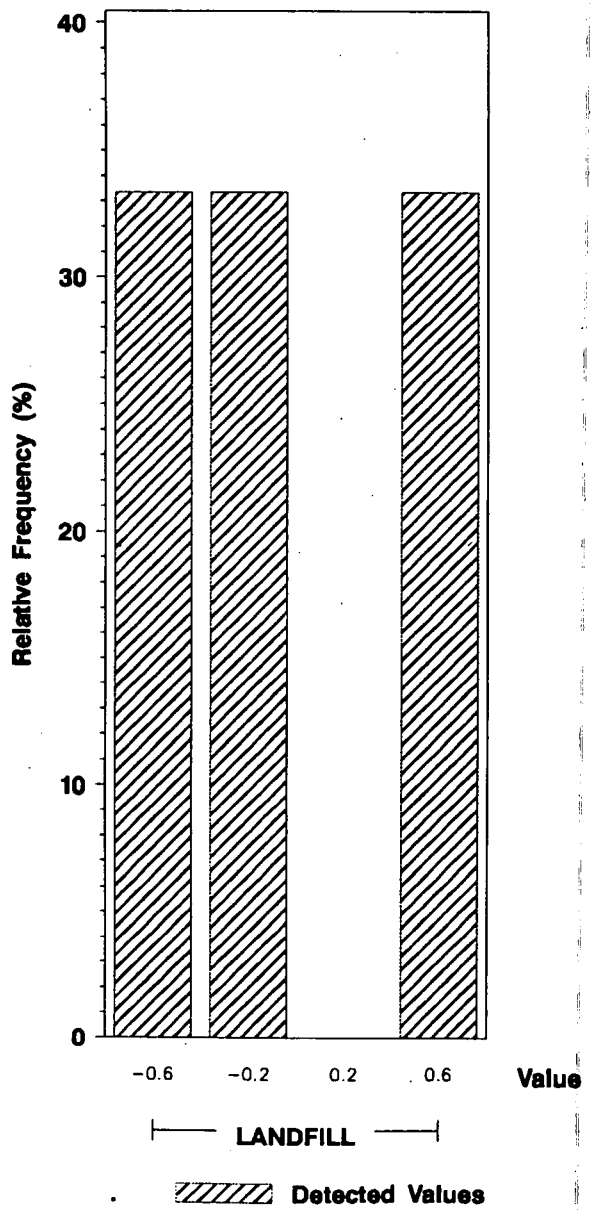
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Groundwater

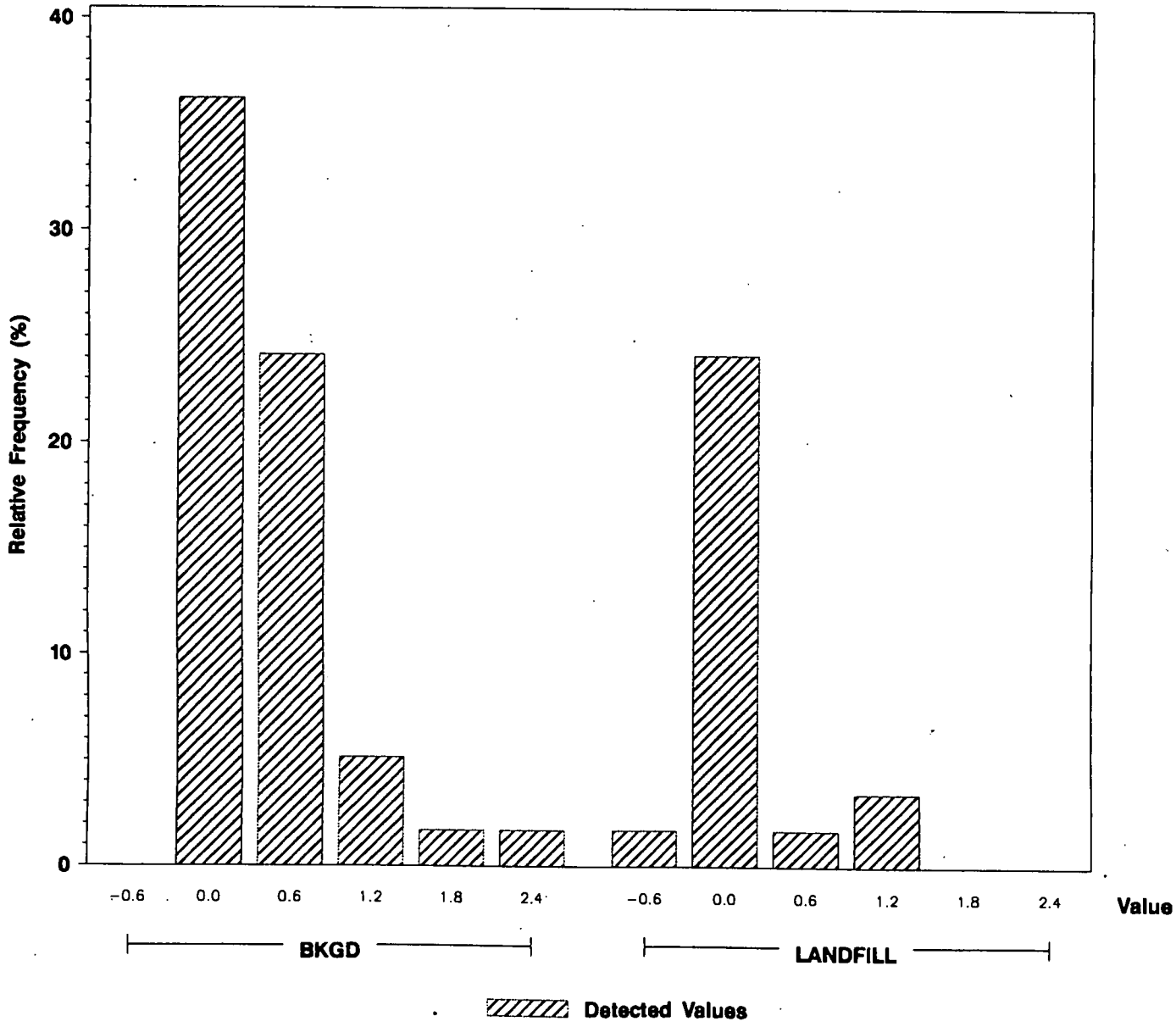
ANALYTE = CESIUM – 134



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Groundwater

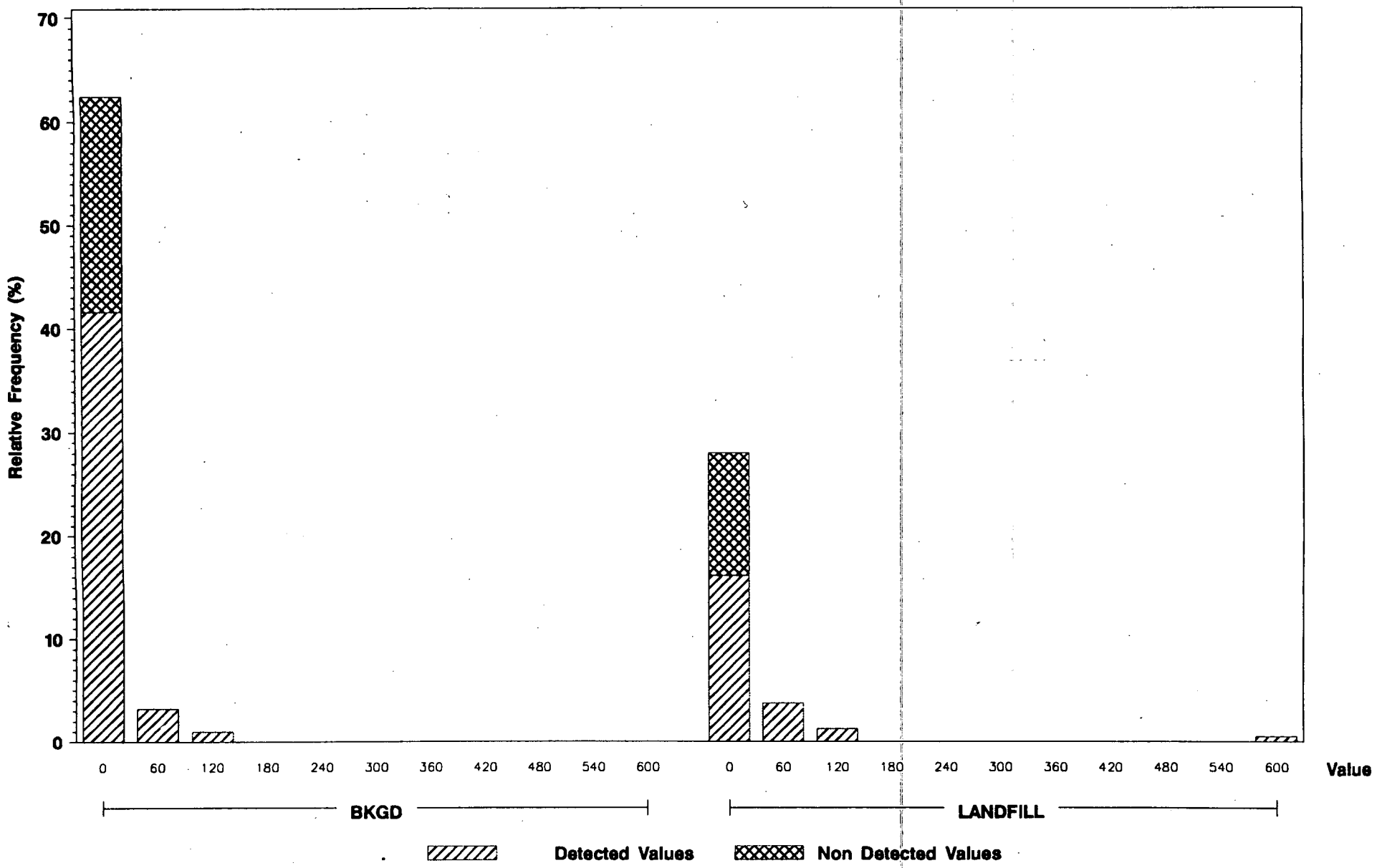
ANALYTE = CESIUM-137



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved ZINC (ug/L) in Groundwater

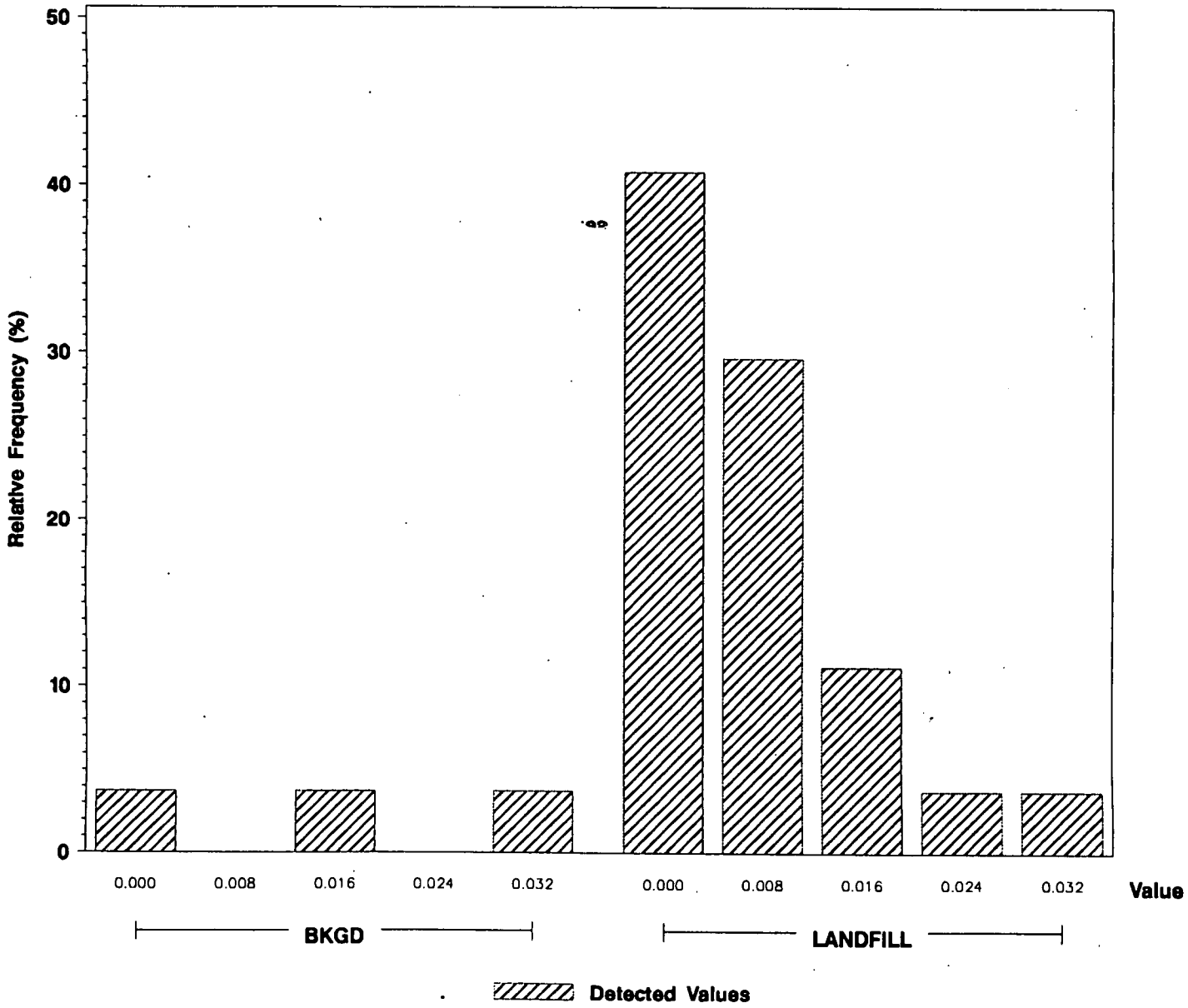
ANALYTE=ZINC



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Groundwater

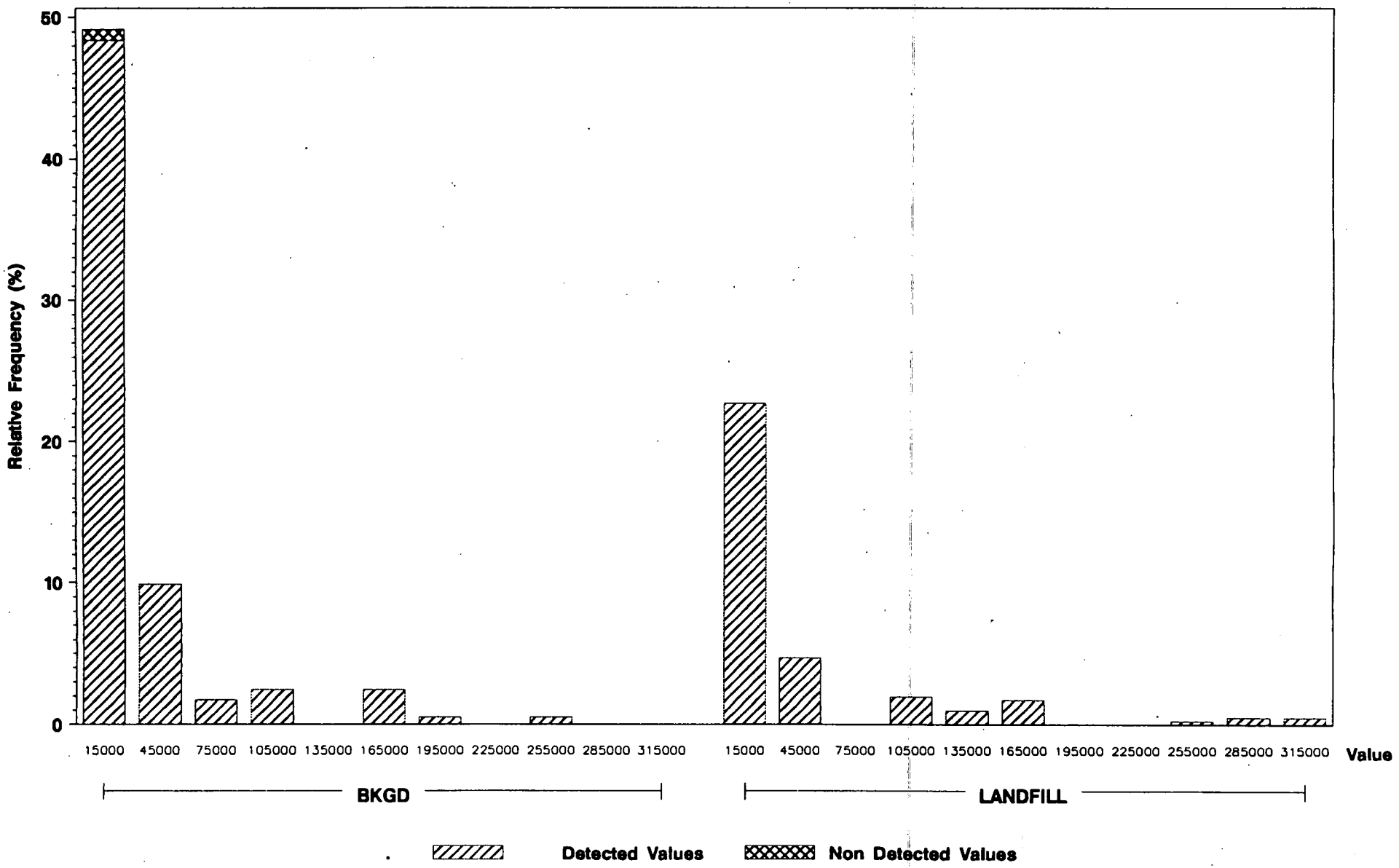
ANALYTE = AMERICIUM – 241



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved SODIUM (ug/L) in Groundwater

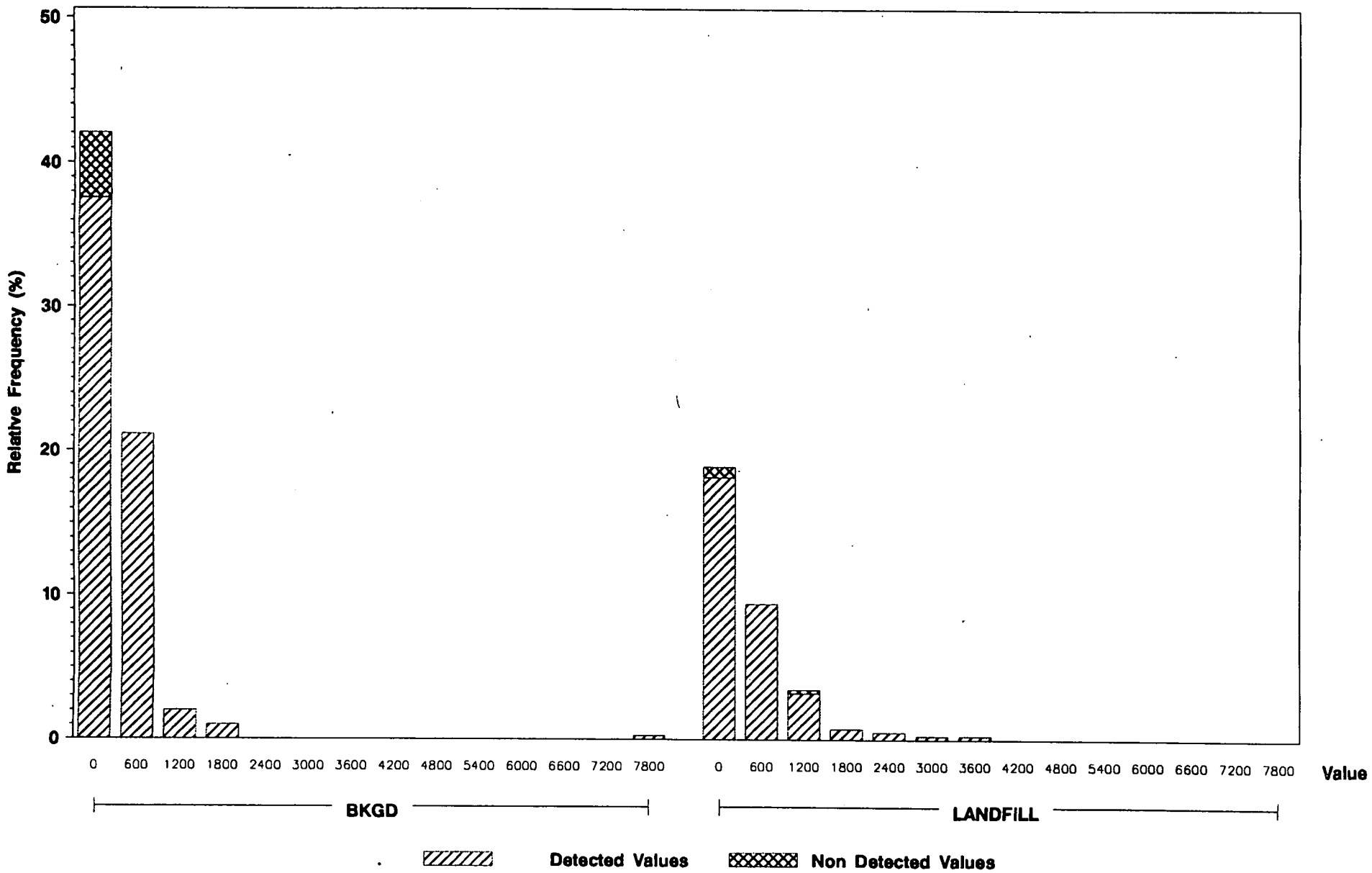
ANALYTE = SODIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Groundwater

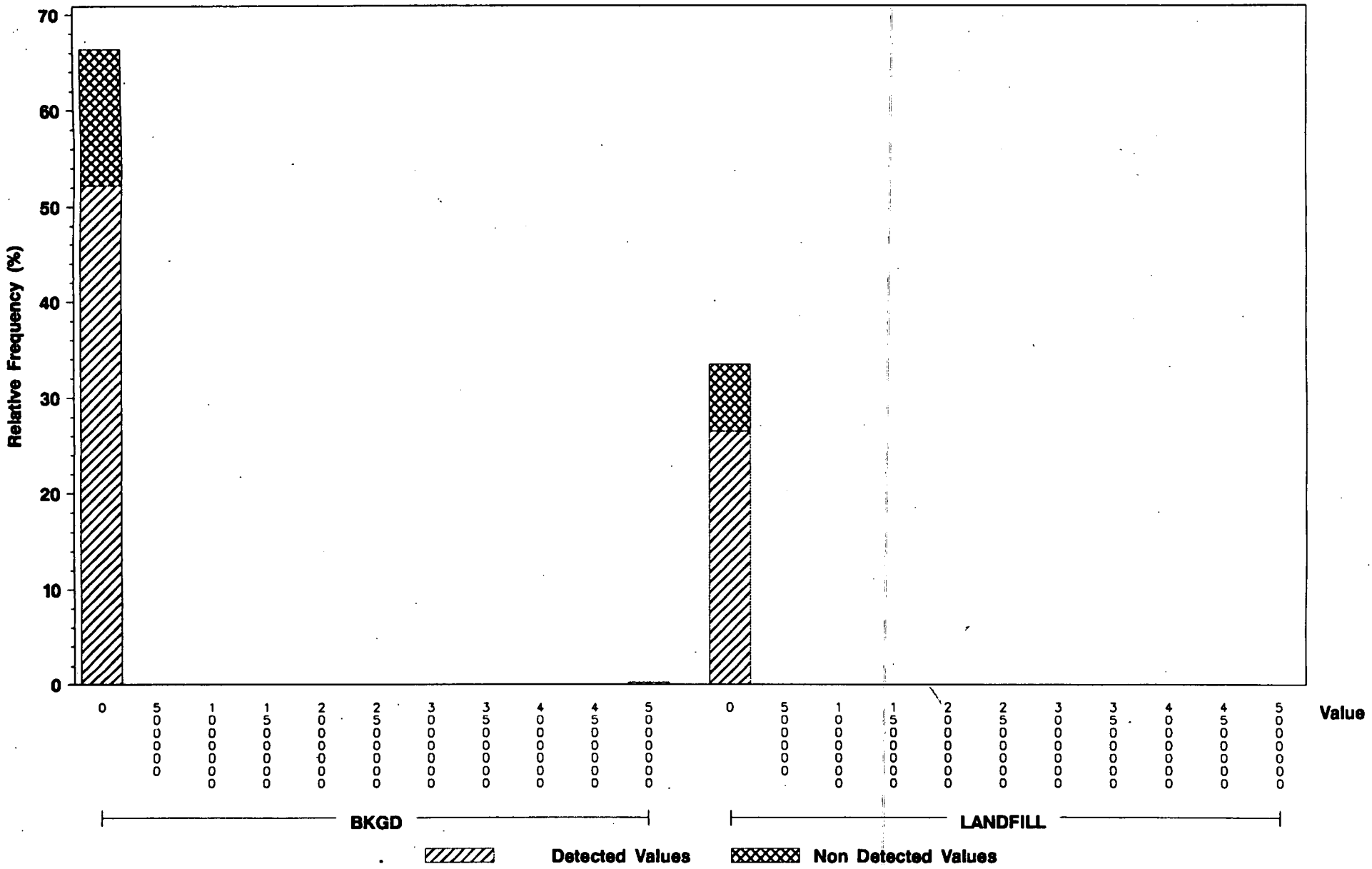
ANALYTE = STRONTIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Groundwater

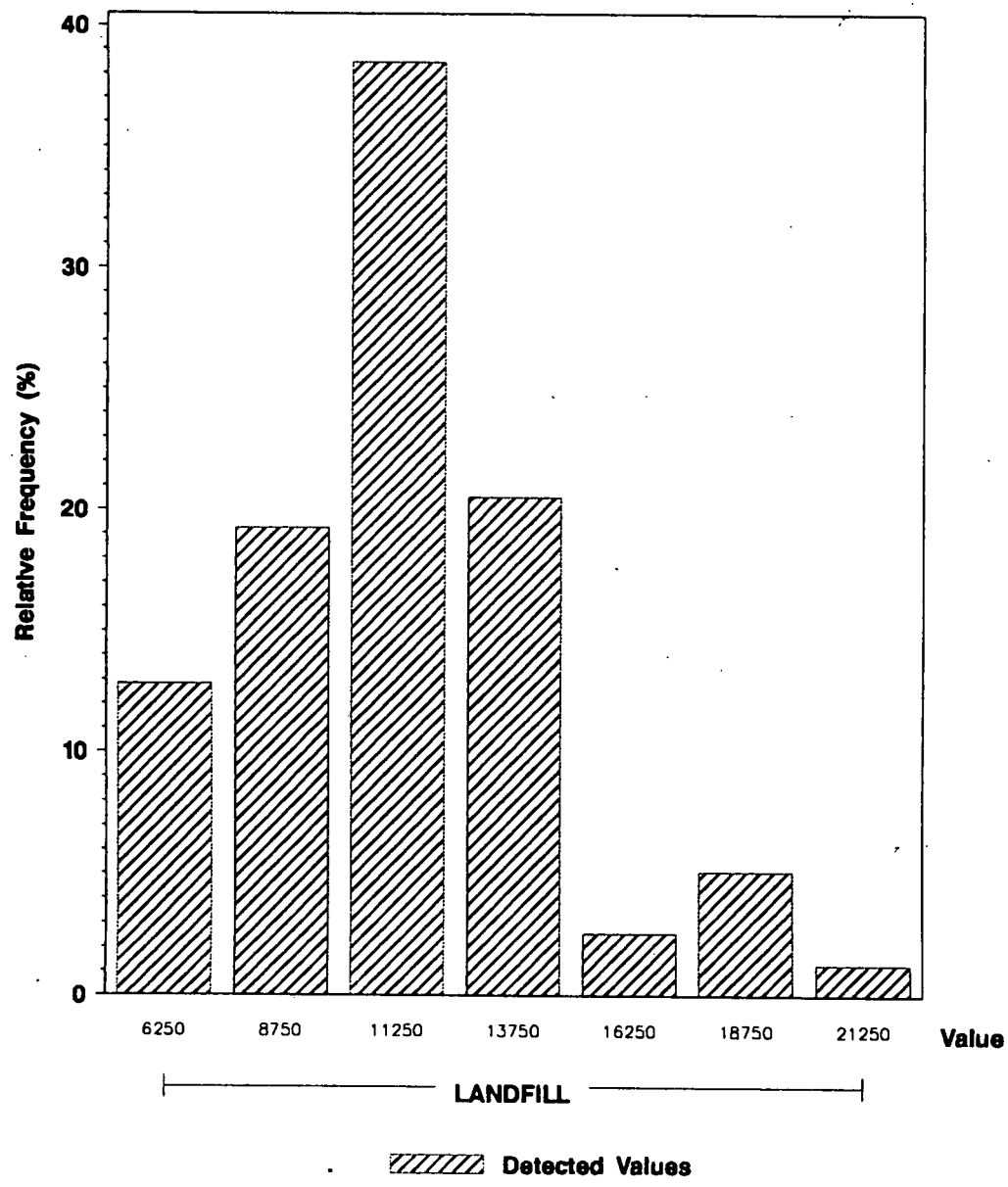
ANALYTE = POTASSIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved SILICON (ug/L) in Groundwater

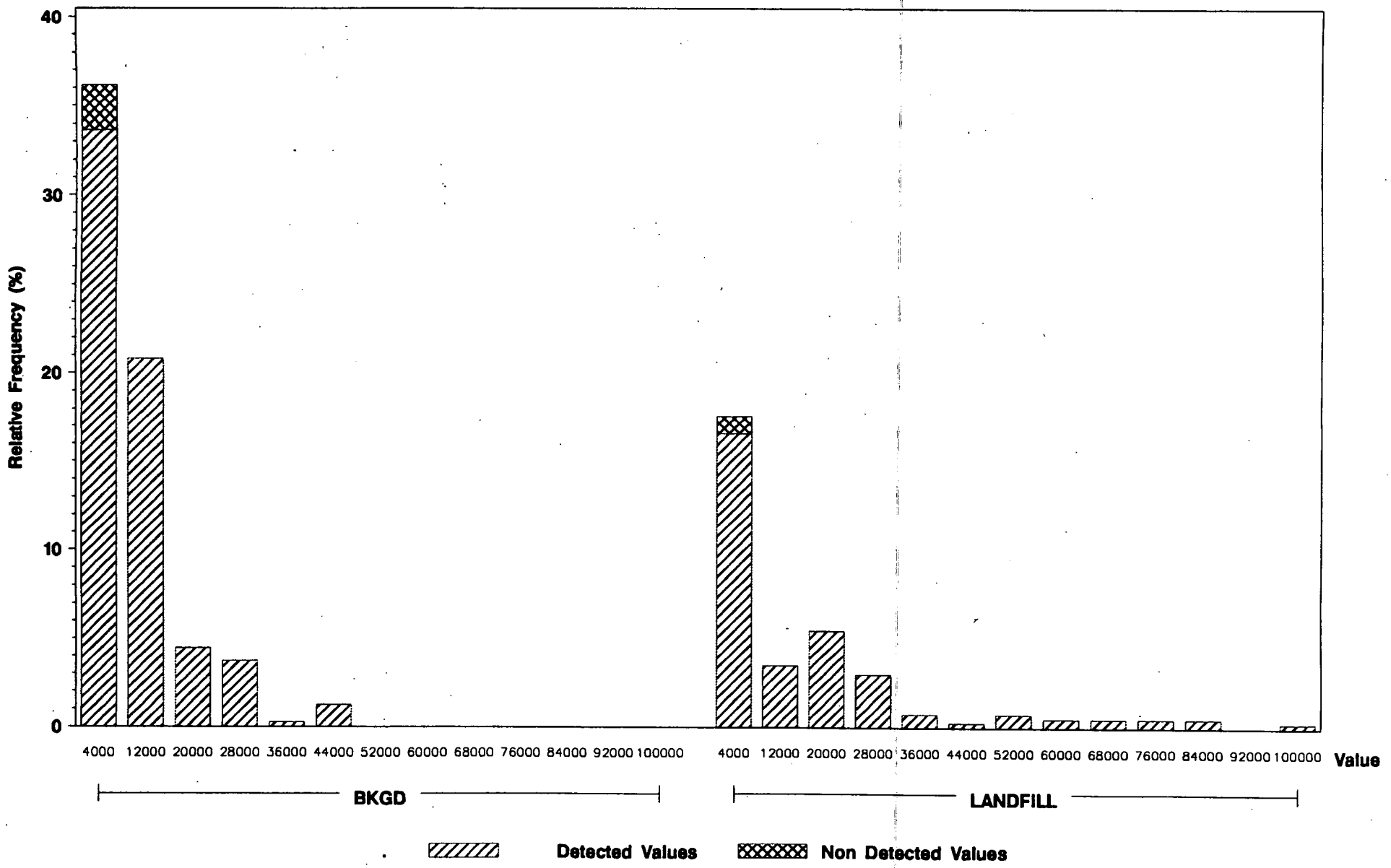
ANALYTE = SILICON



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Groundwater

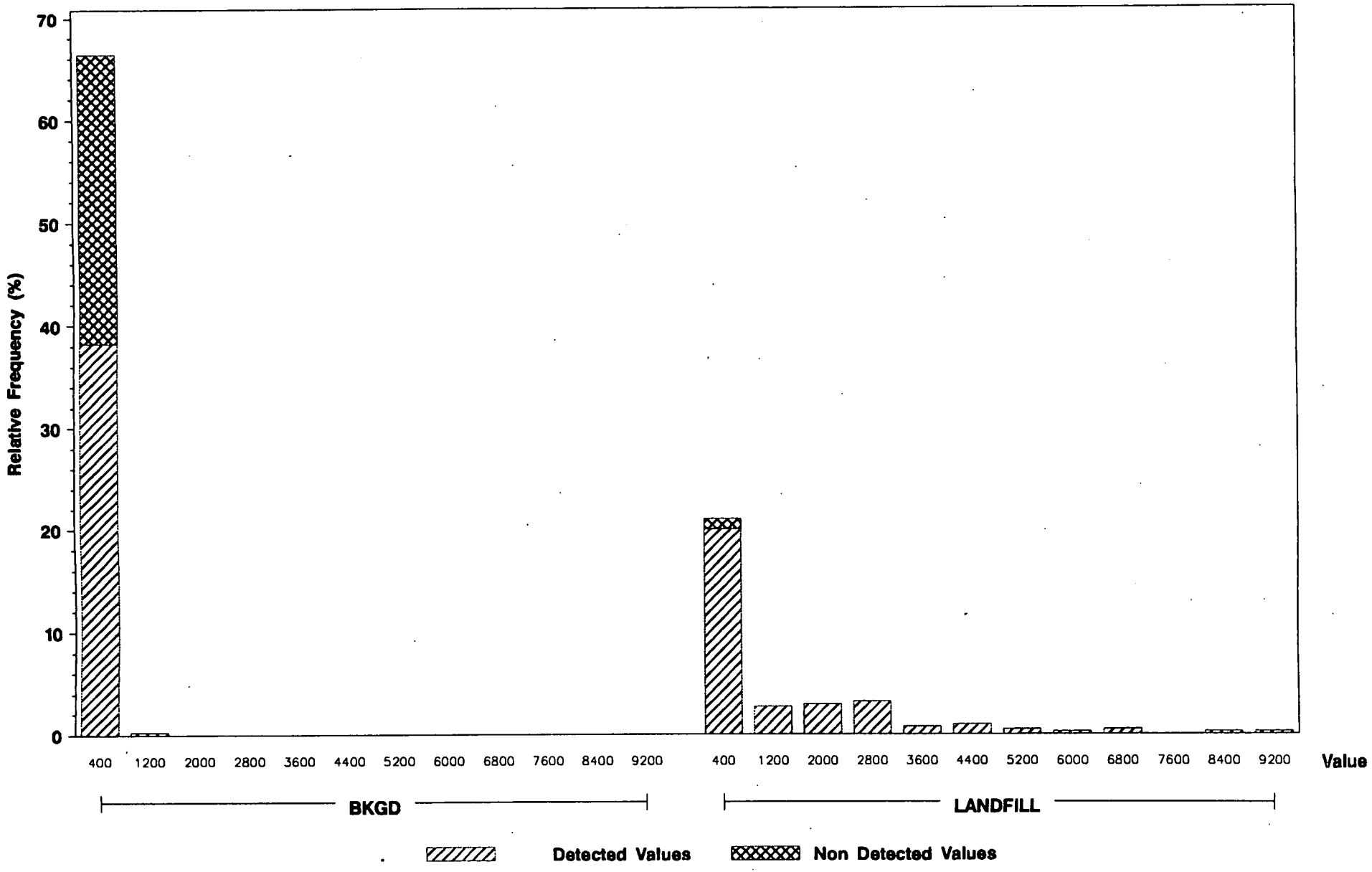
ANALYTE = MAGNESIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Groundwater

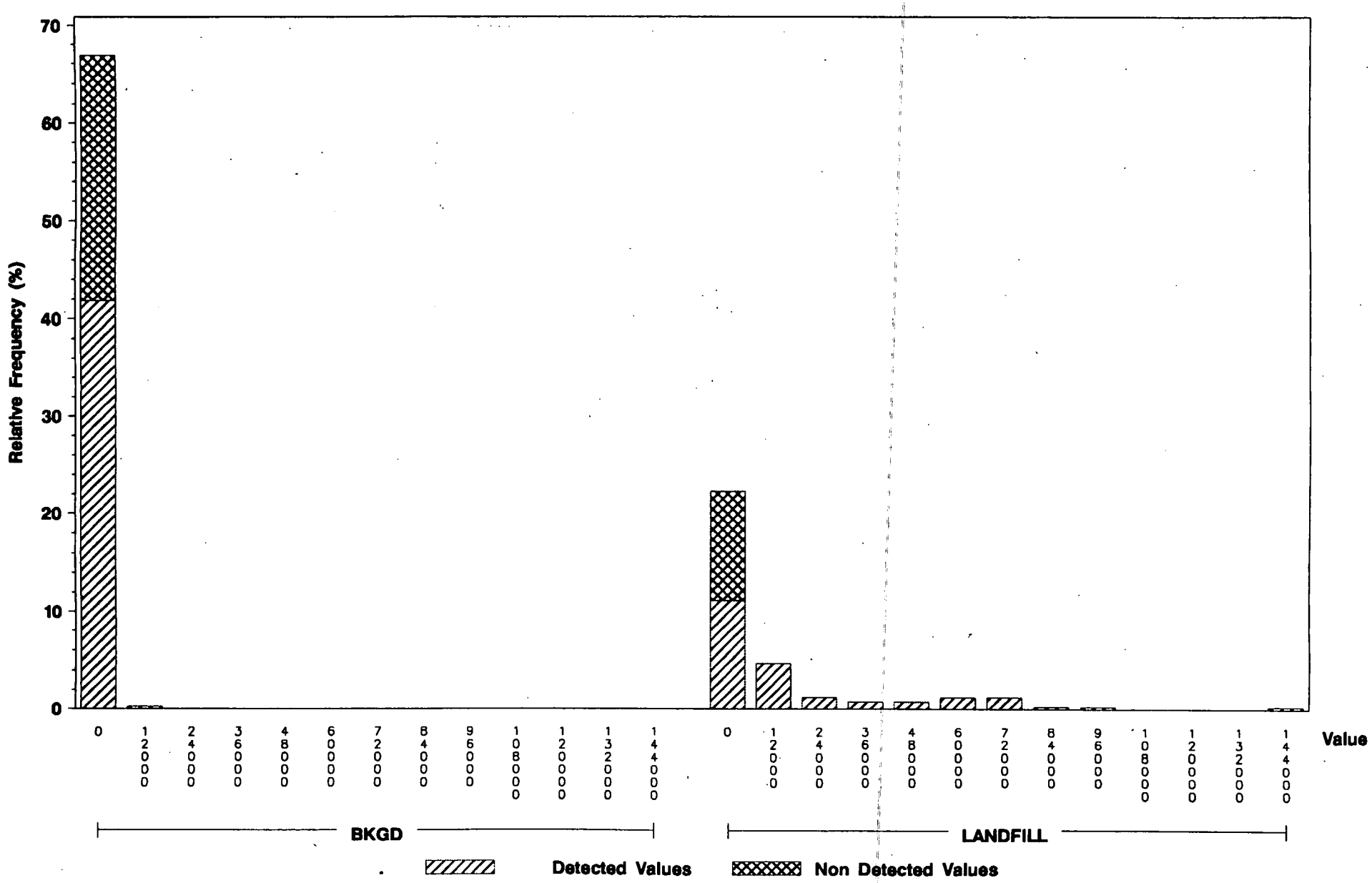
ANALYTE = MANGANESE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved IRON (ug/L) in Groundwater

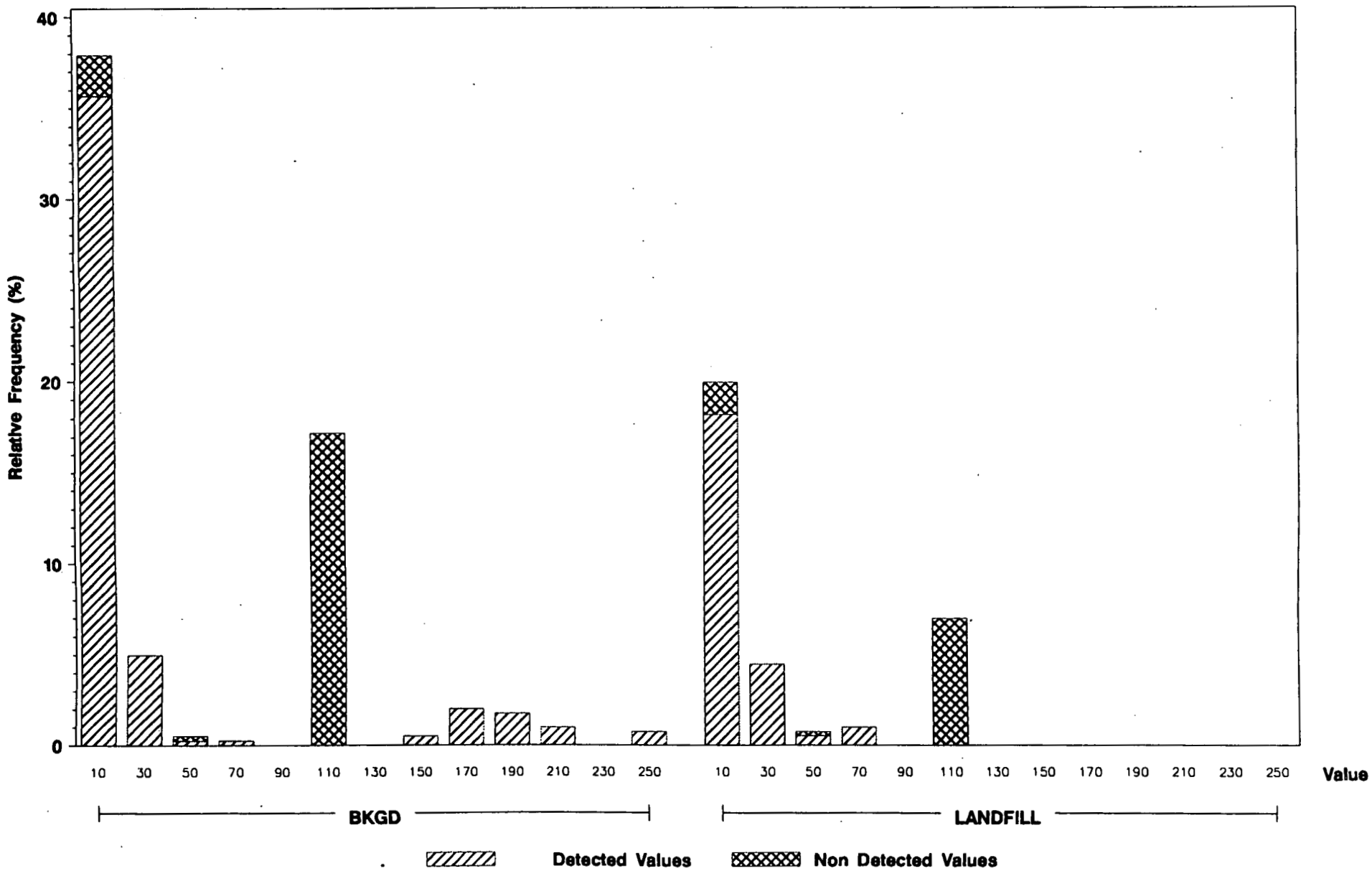
ANALYTE = IRON



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Groundwater

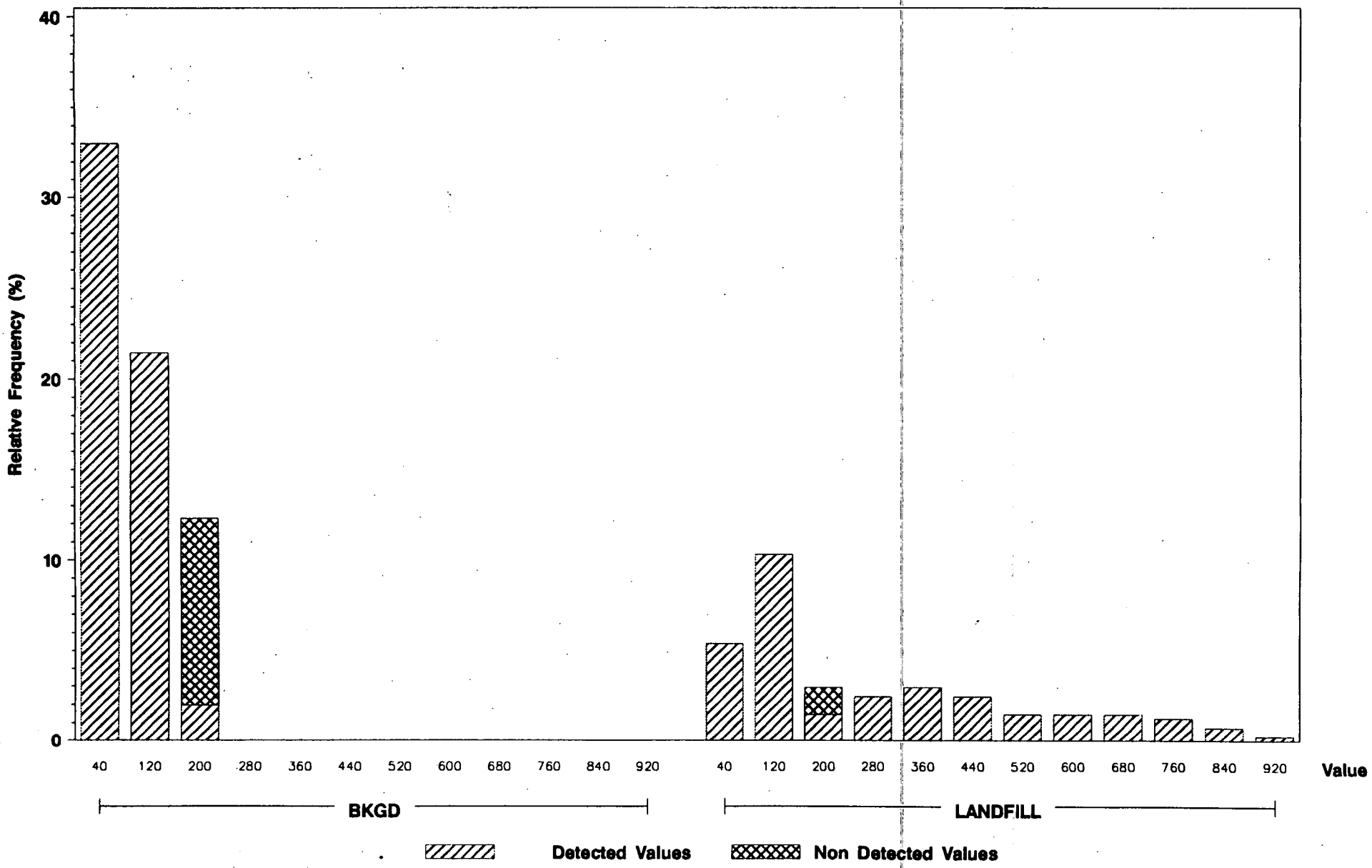
ANALYTE = LITHIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved BARIUM (ug/L) in Groundwater

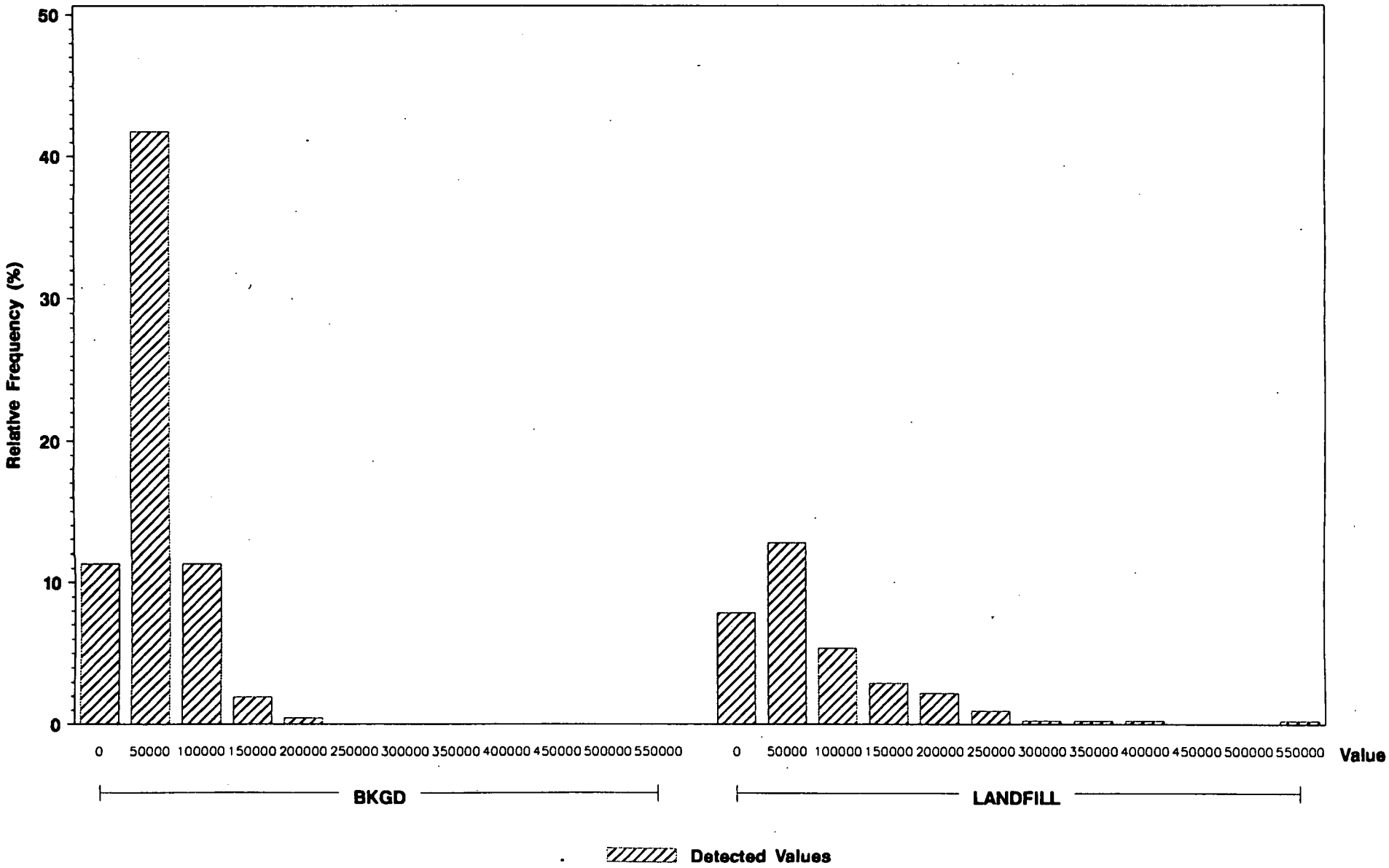
ANALYTE = BARIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Groundwater

ANALYTE = CALCIUM



**Leachate**

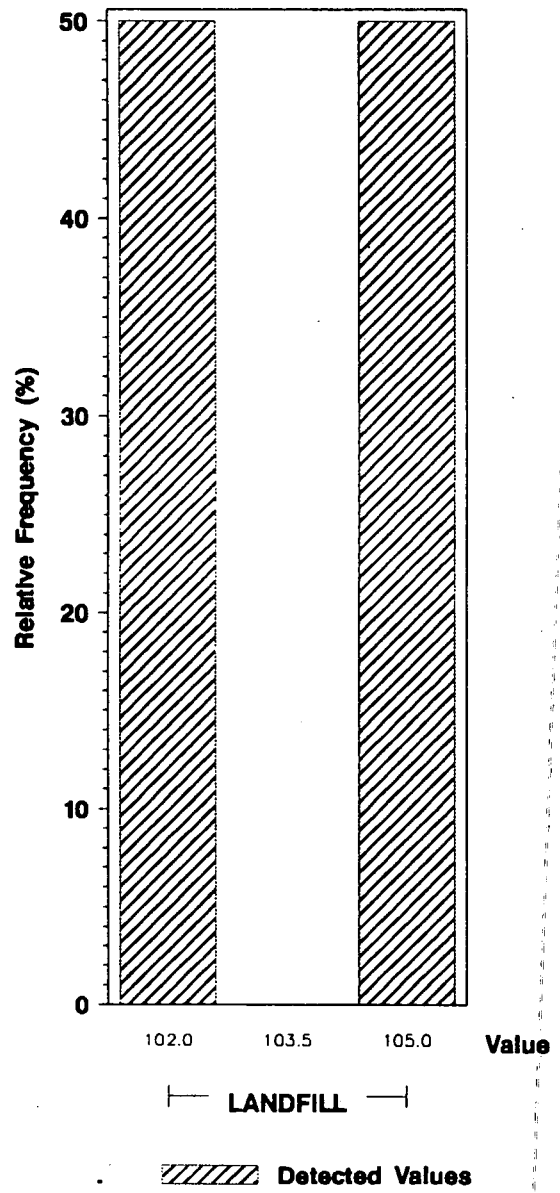
**(Total)**

**Background vs. OU 7 (Landfill) UHSU**

# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total 1,2 DICHLOROETHANE –D4 (ug/L) in Groundwater

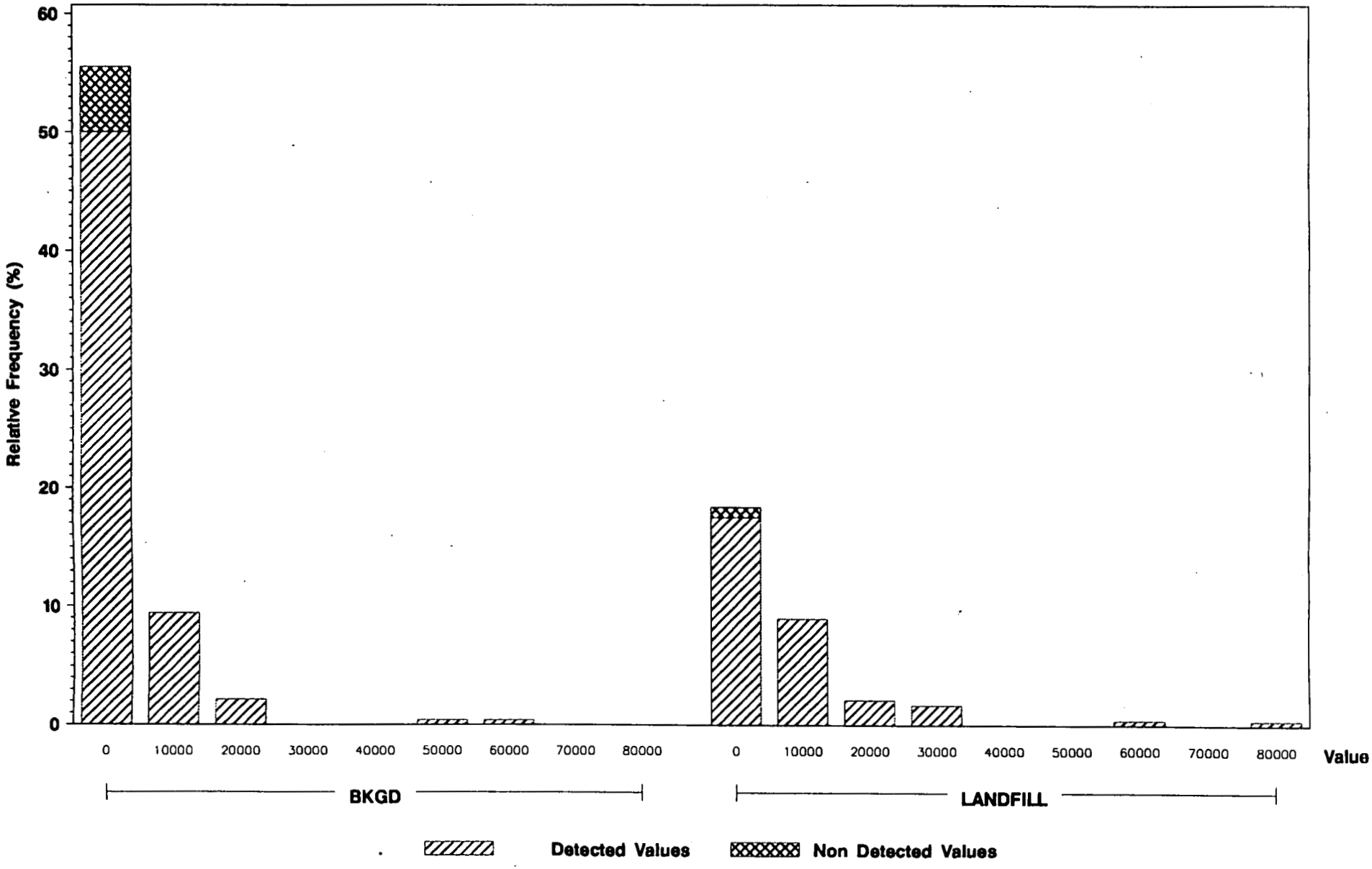
ANALYTE=1,2 DICHLOROETHANE –D4



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total ALUMINUM (ug/L) in Groundwater

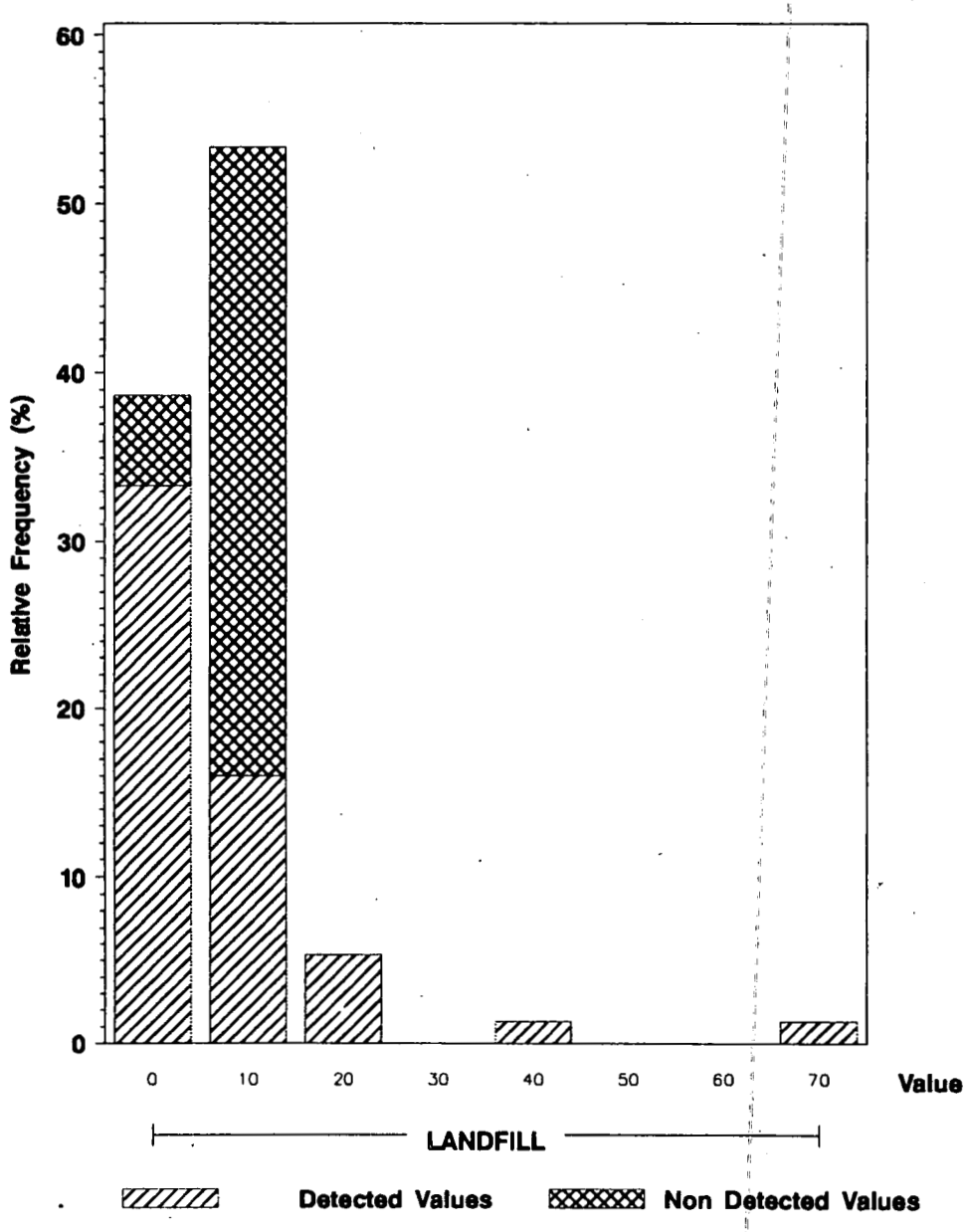
ANALYTE = ALUMINUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total ARSENIC (ug/L) in Groundwater

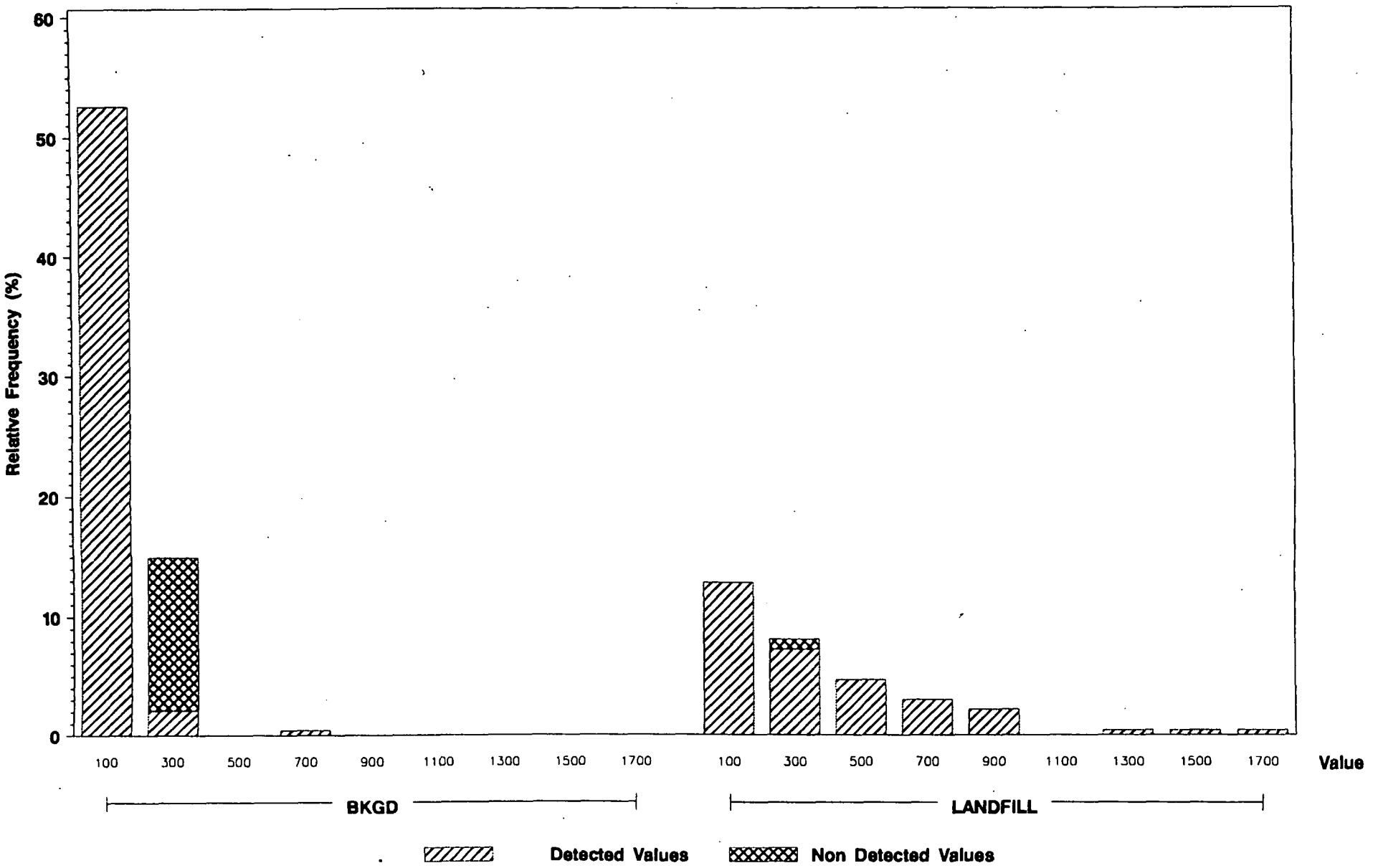
ANALYTE = ARSENIC



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total BARIUM (ug/L) in Groundwater

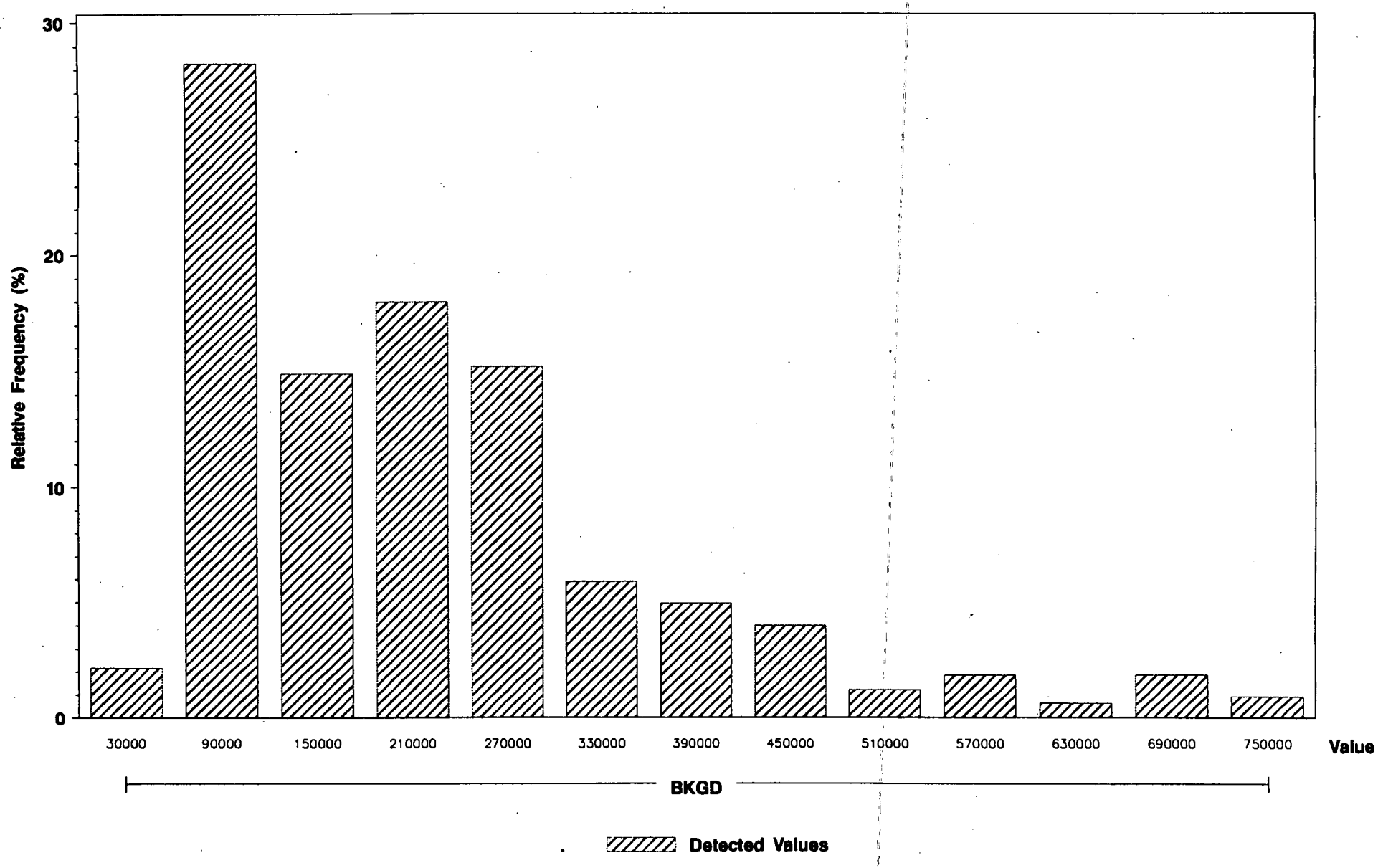
ANALYTE = BARIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total BICARBONATE (ug/L) in Groundwater

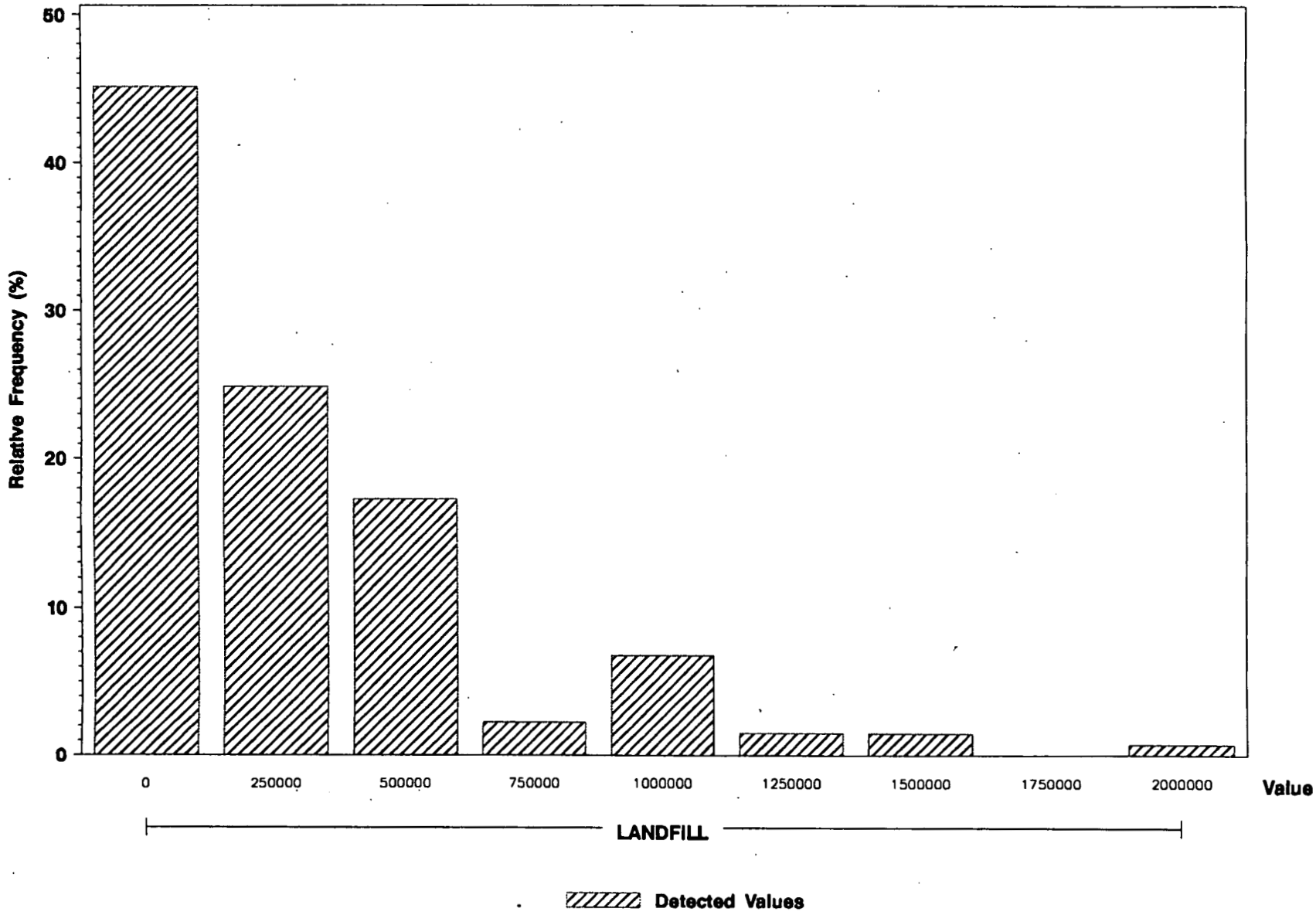
ANALYTE = BICARBONATE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Groundwater

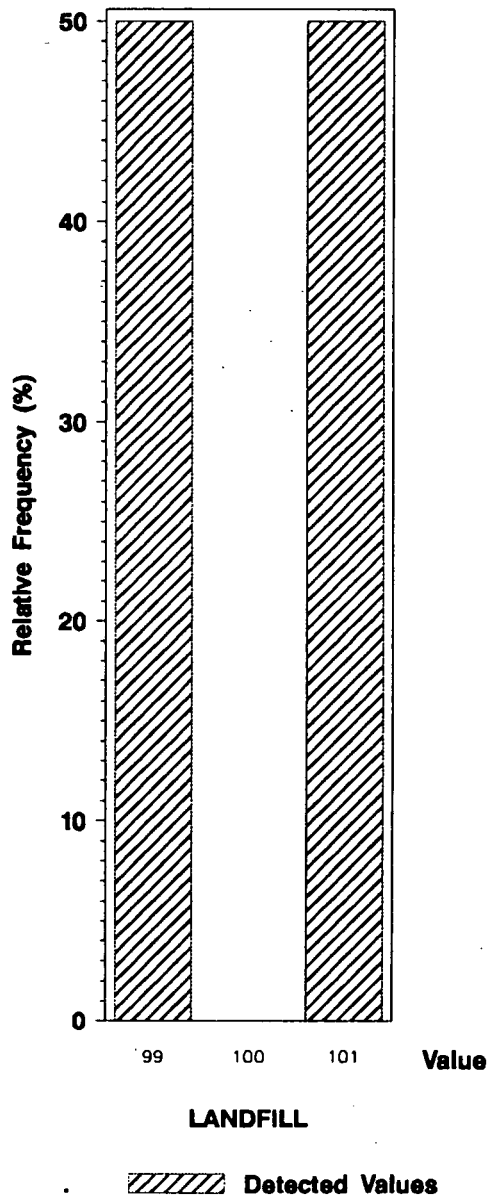
ANALYTE=BICARBONATE AS CACO3



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total BROMOFLUOROBENZENE (ug/L) in Groundwater

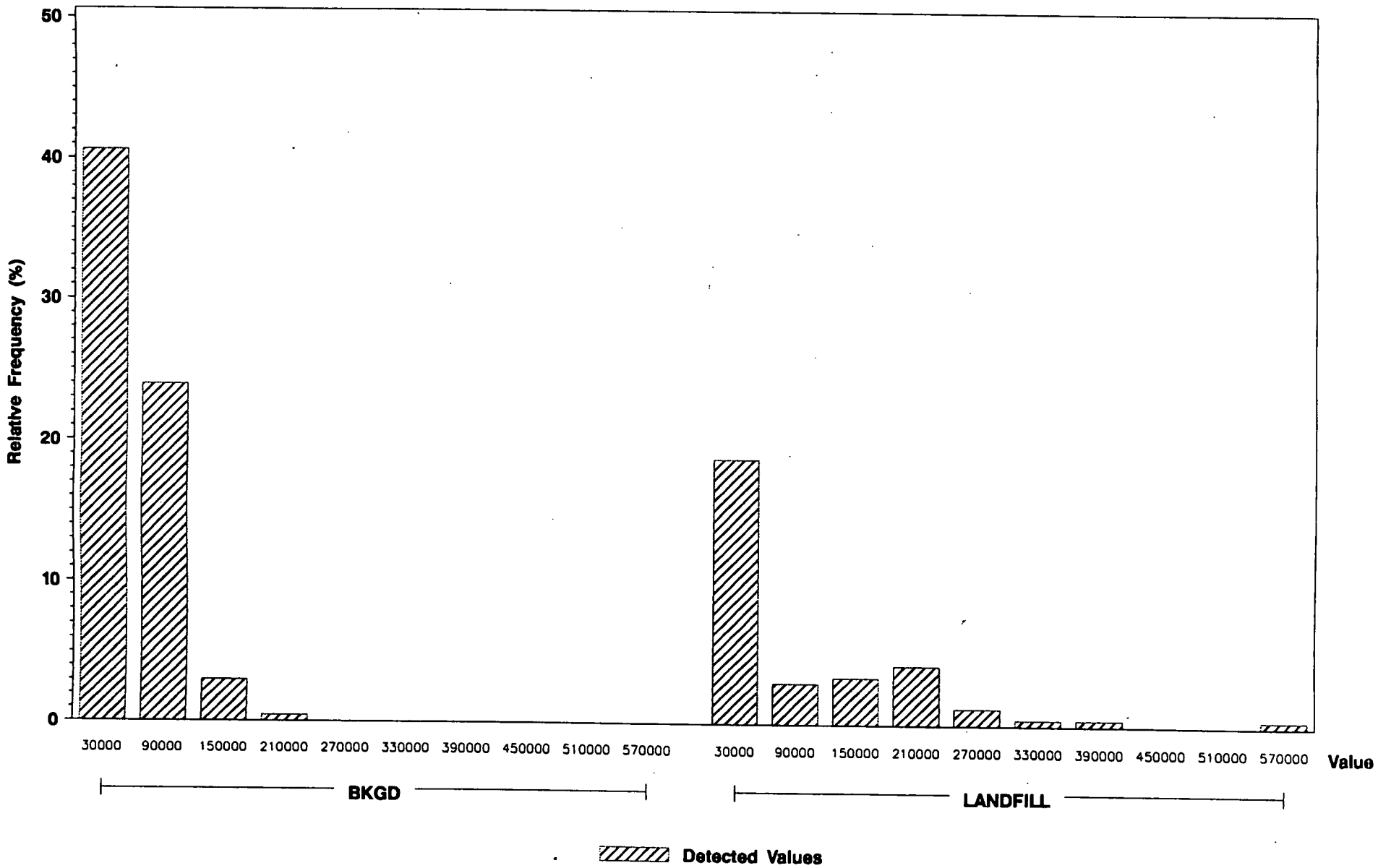
ANALYTE = BROMOFLUOROBENZENE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CALCIUM (ug/L) in Groundwater

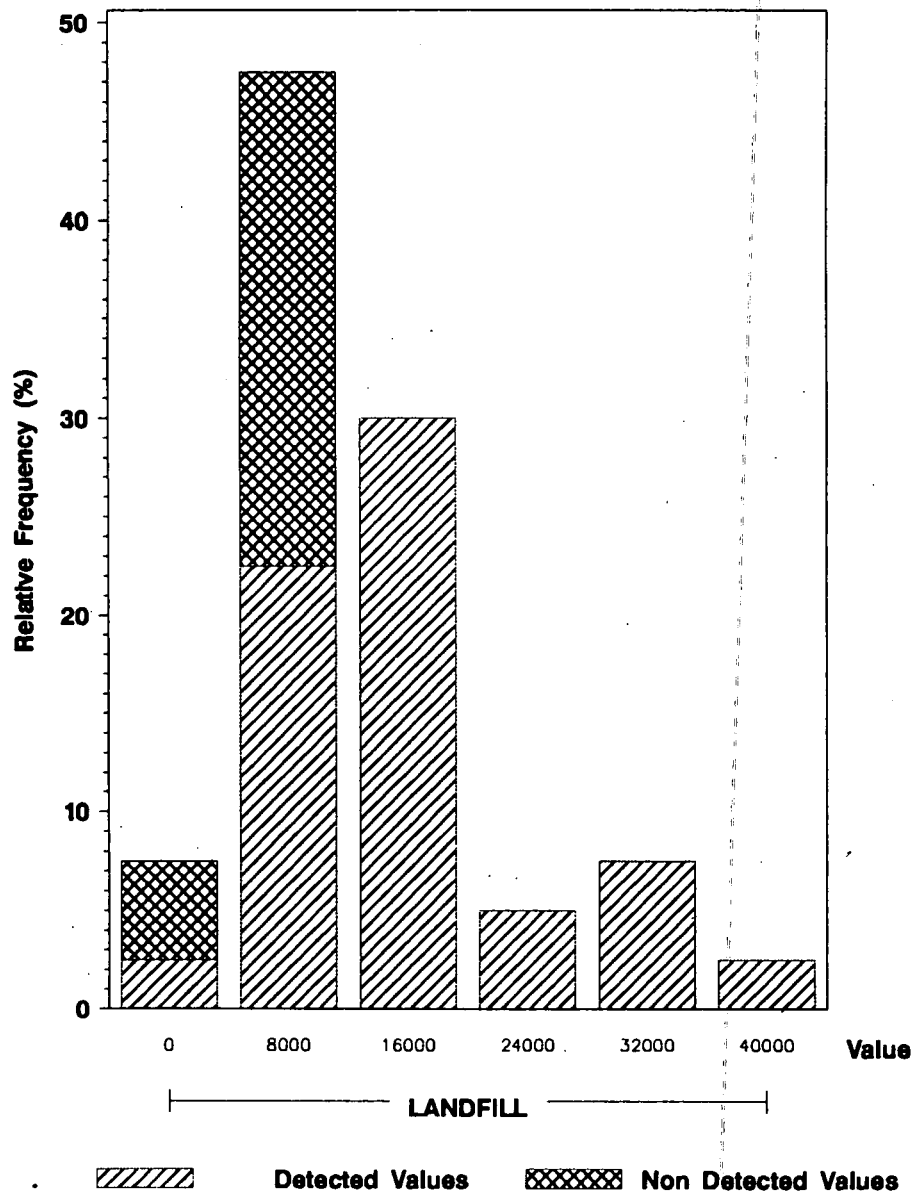
ANALYTE = CALCIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CHEMICAL OXYGEN DEMAND (ug/L) in Groundwater

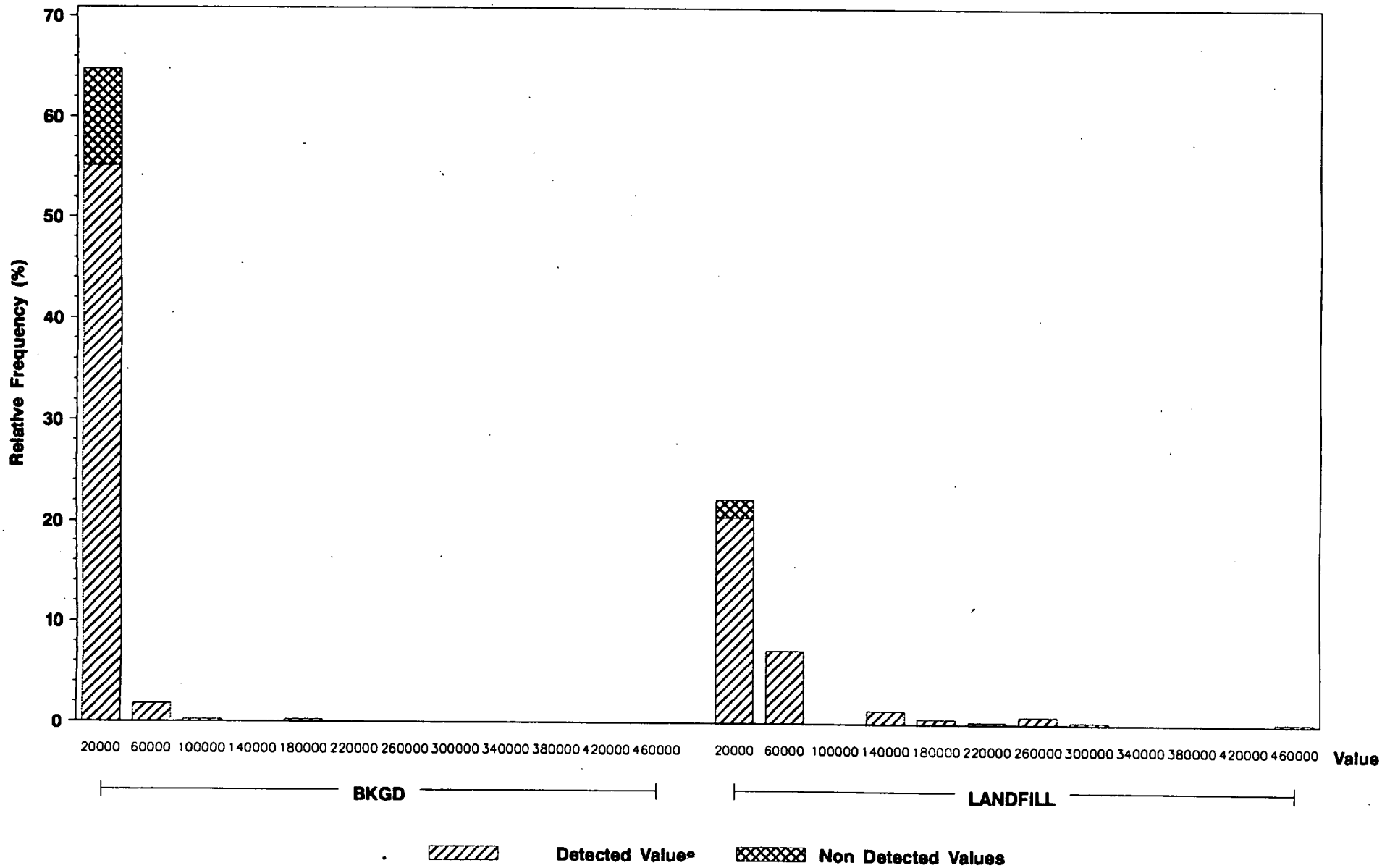
ANALYTE = CHEMICAL OXYGEN DEMAND



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CHLORIDE (ug/L) in Groundwater

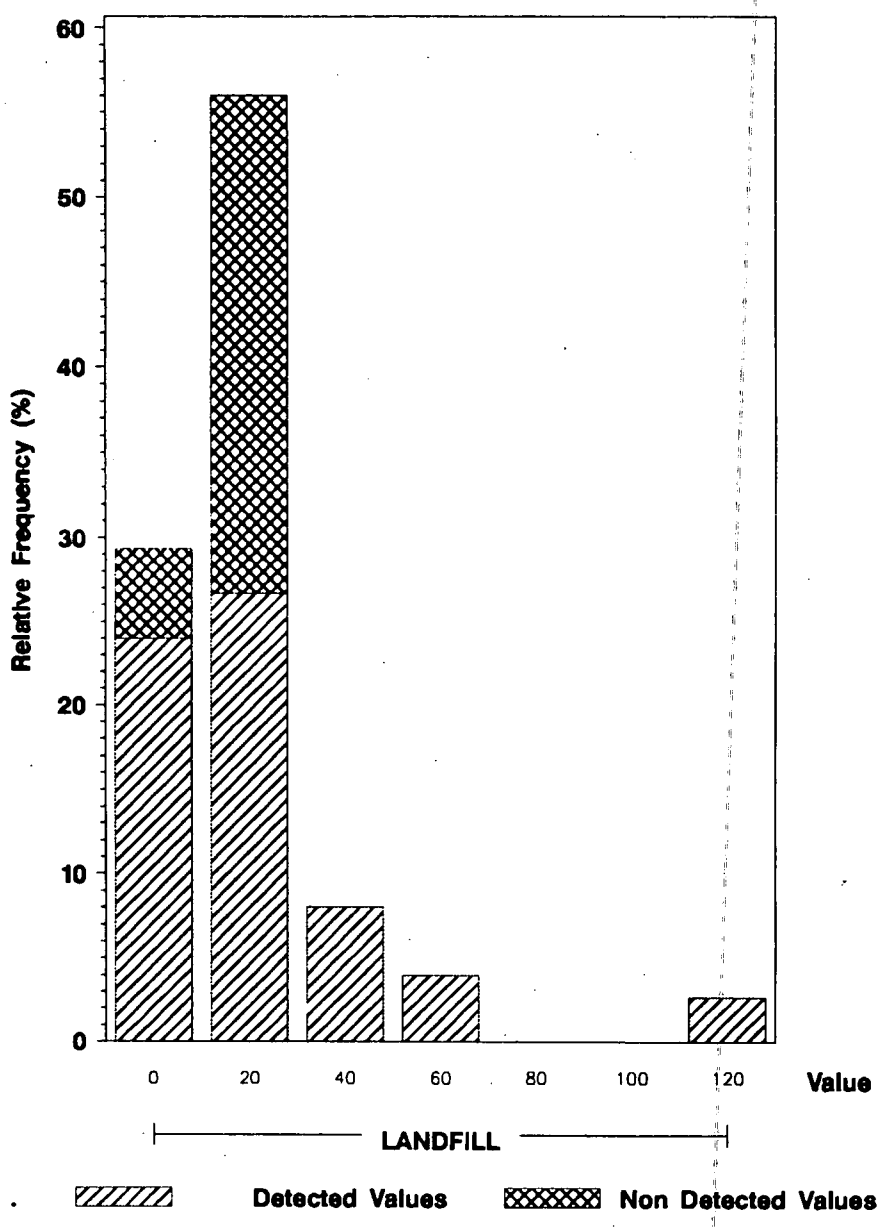
ANALYTE = CHLORIDE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CHROMIUM (ug/L) in Groundwater

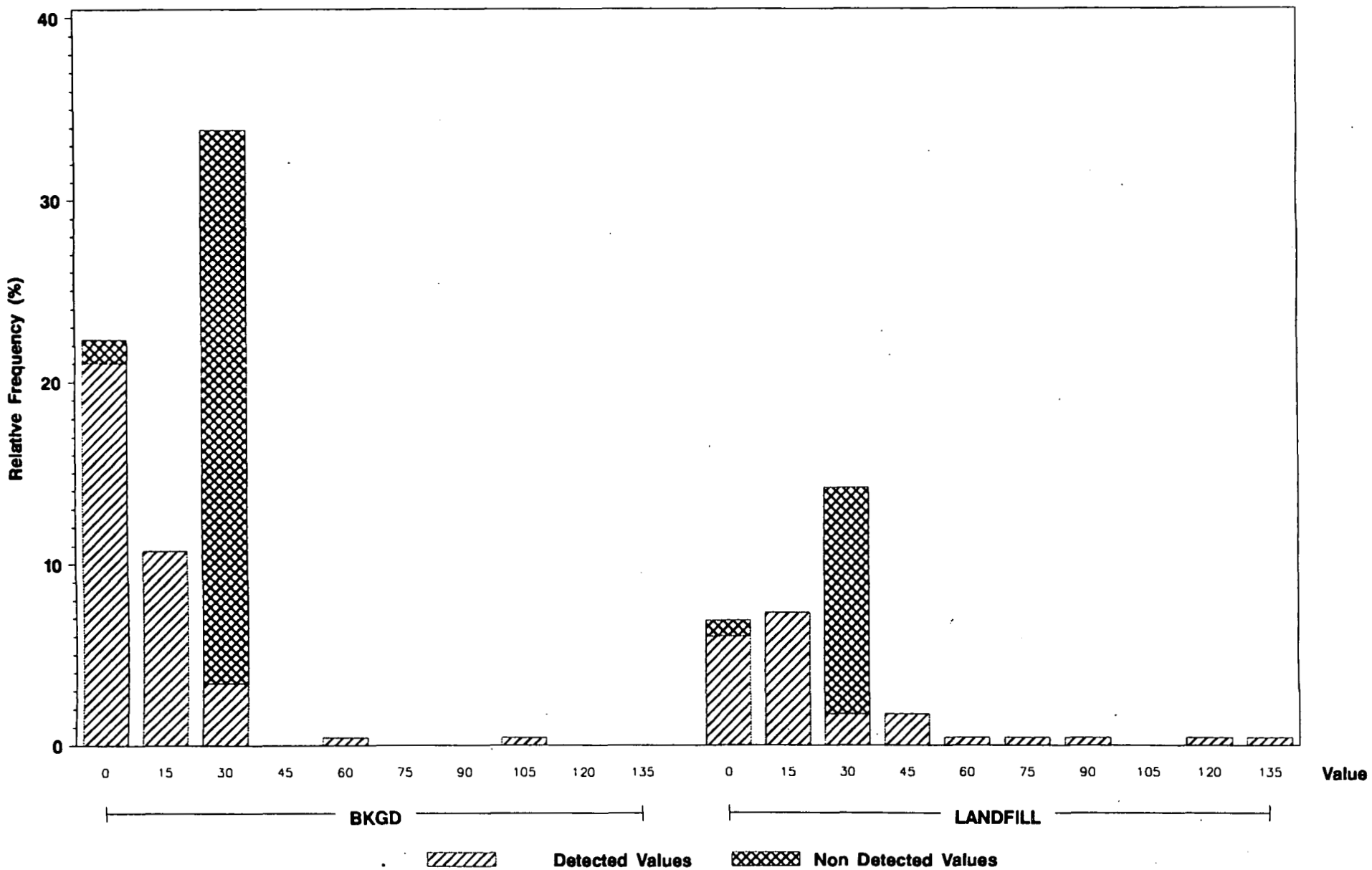
ANALYTE = CHROMIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total COPPER (ug/L) in Groundwater

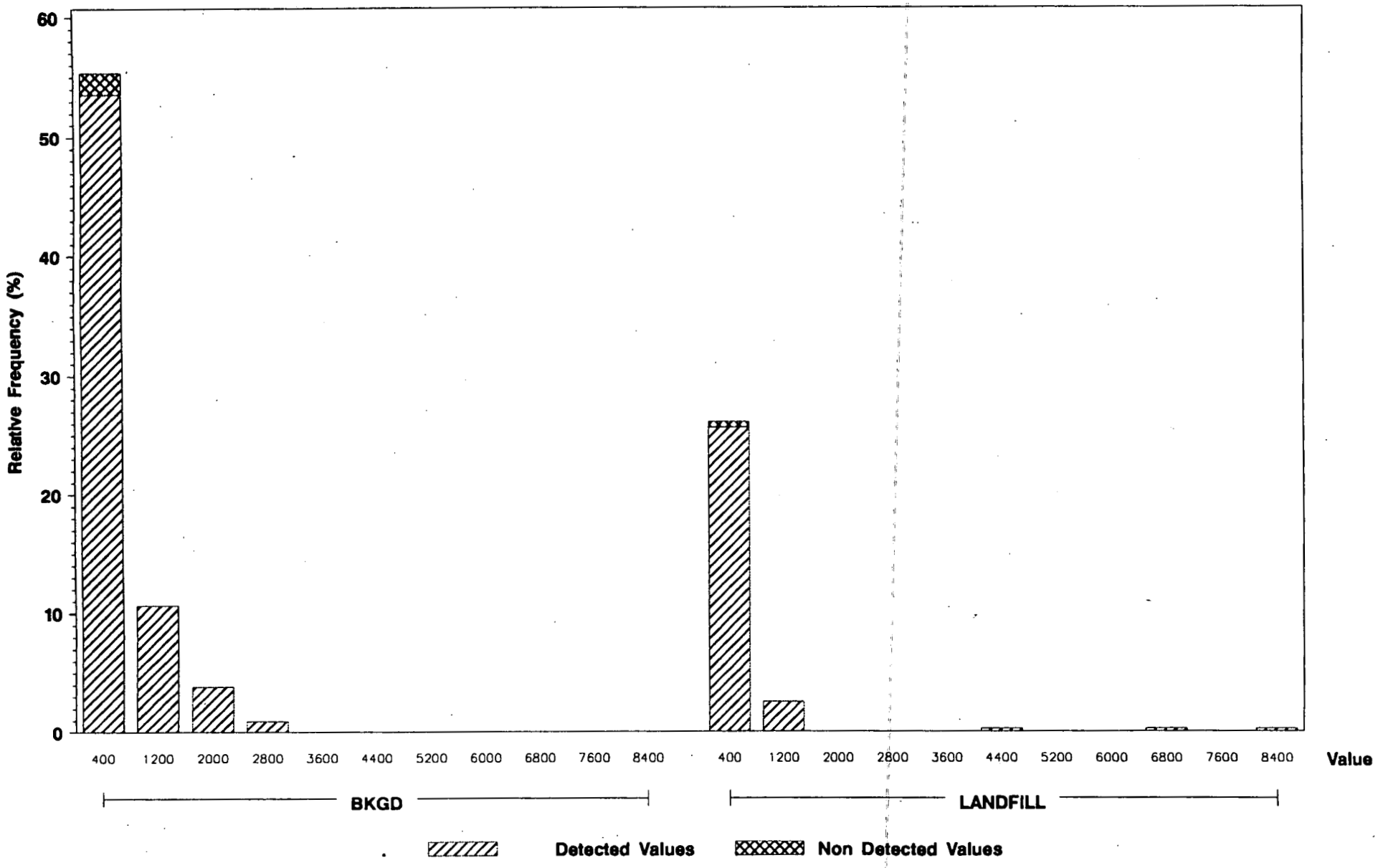
ANALYTE=COPPER



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total FLUORIDE (ug/L) in Groundwater

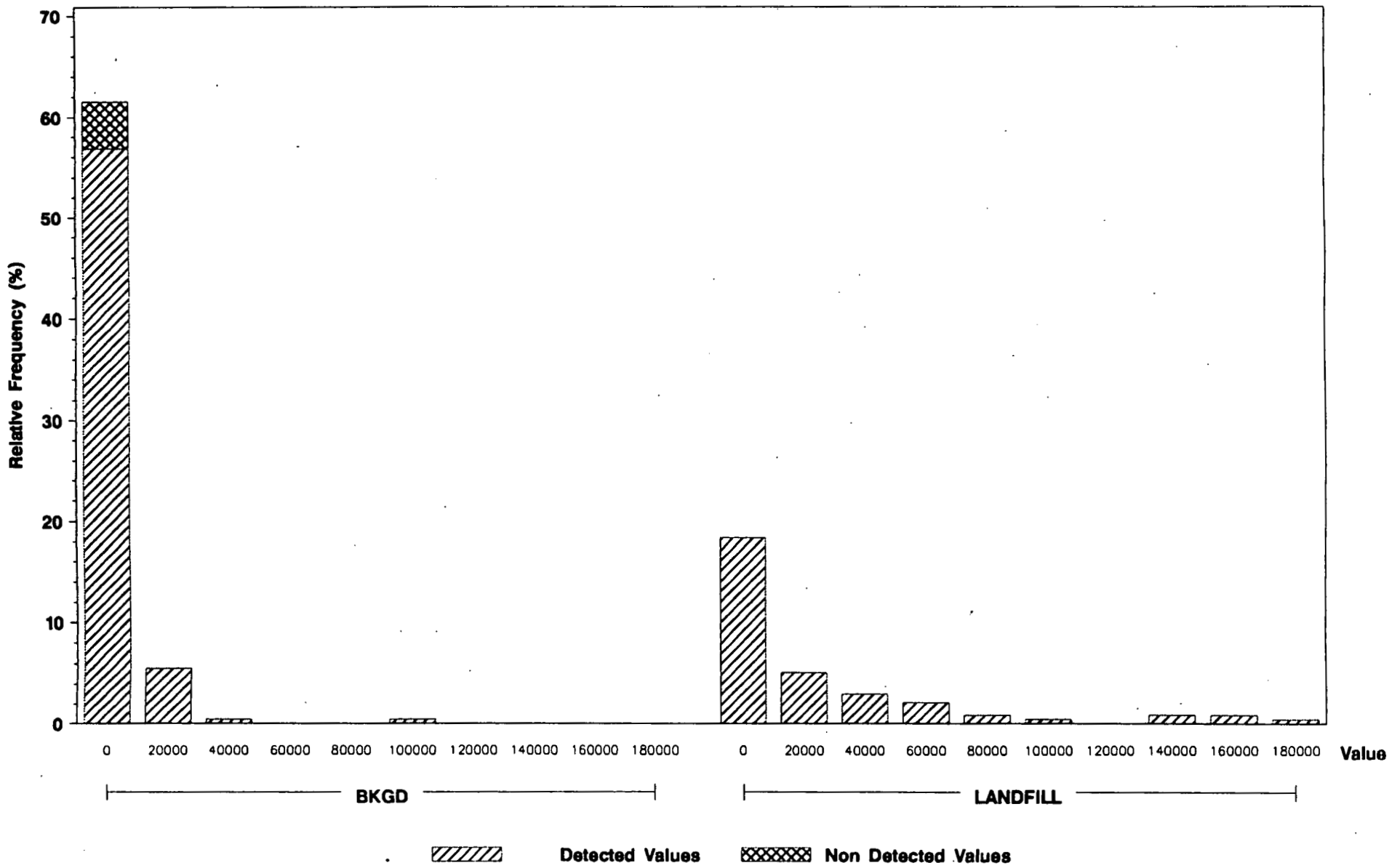
ANALYTE = FLUORIDE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total IRON (ug/L) in Groundwater

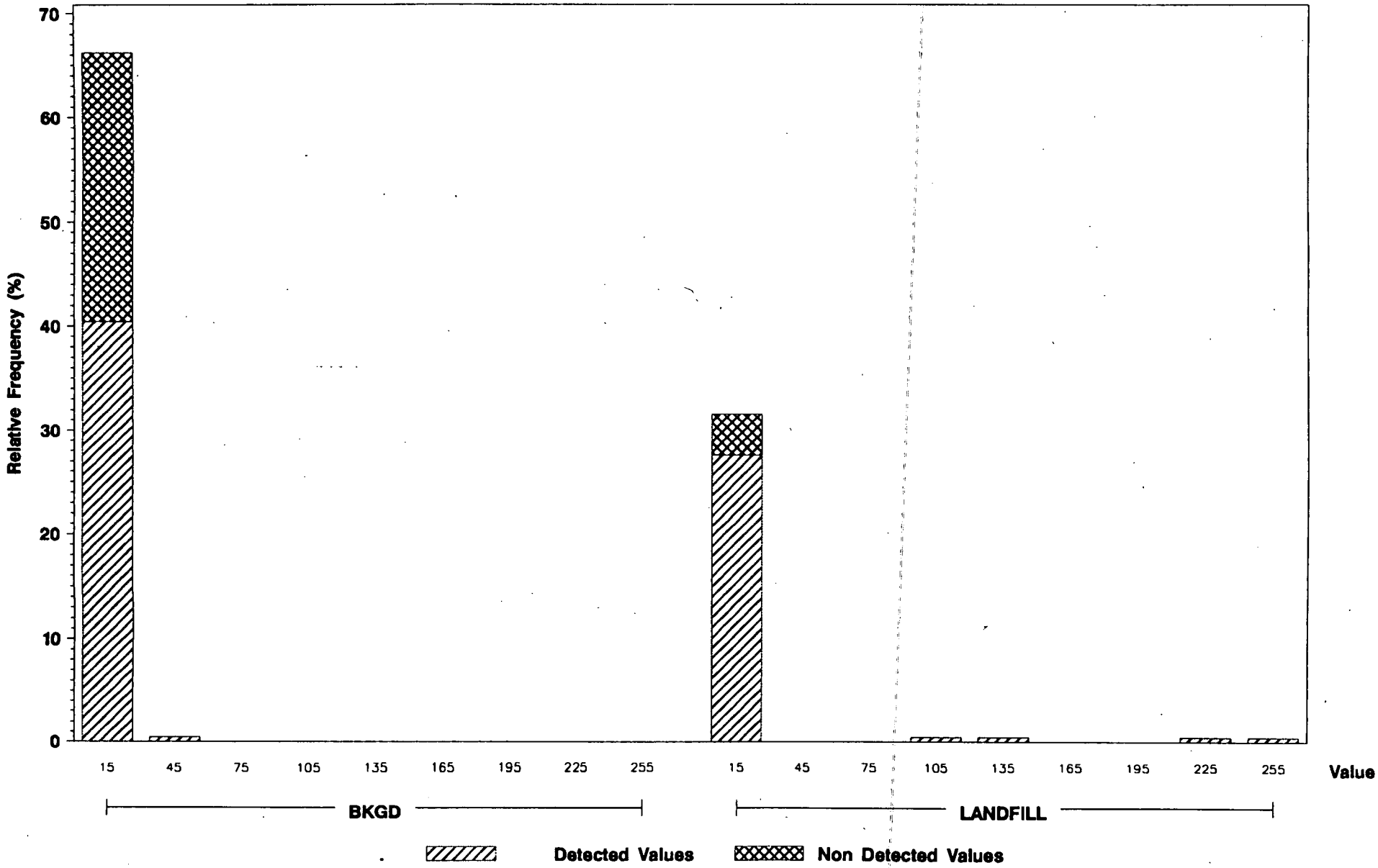
ANALYTE = IRON



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total LEAD (ug/L) in Groundwater

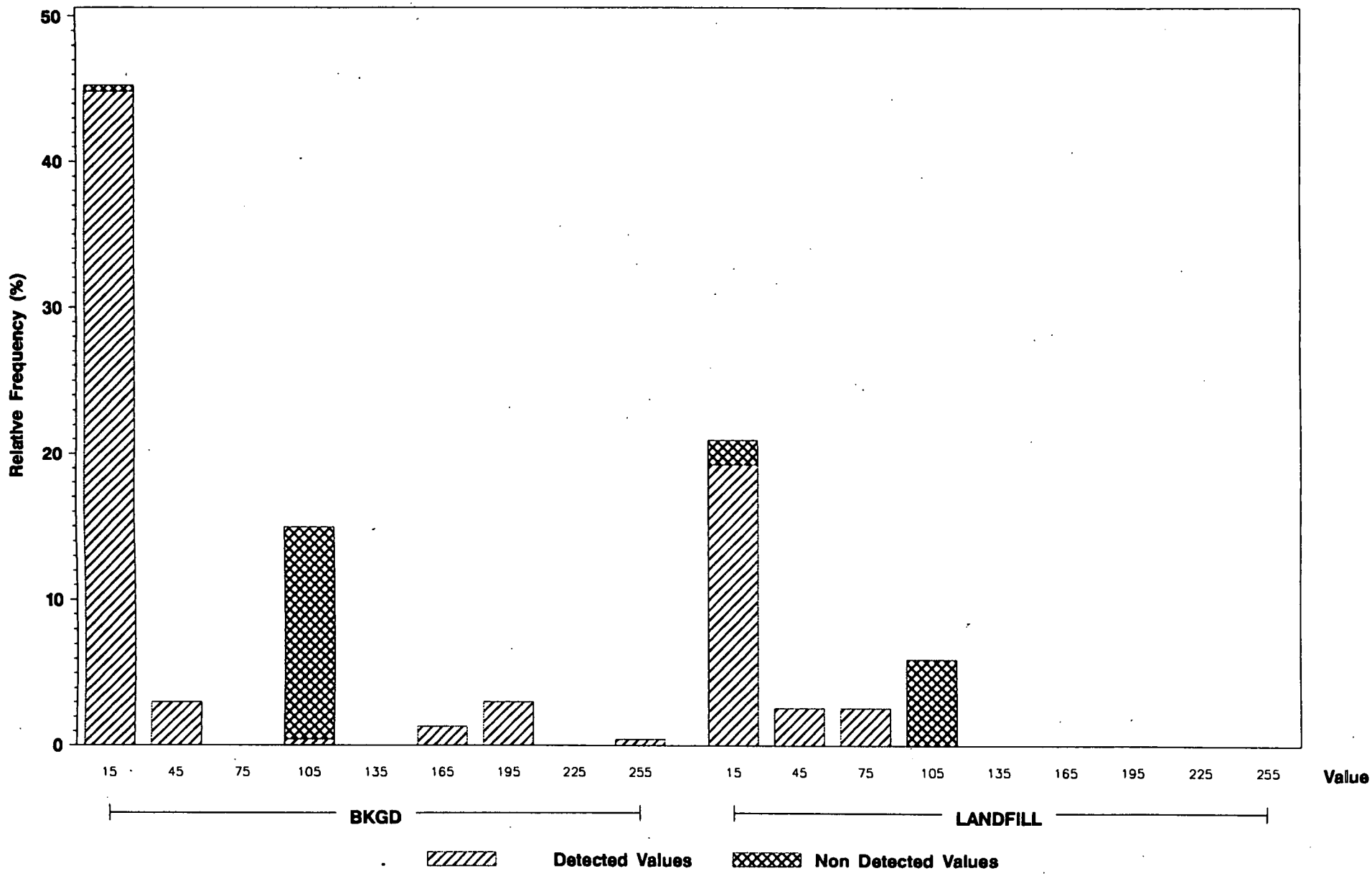
ANALYTE = LEAD



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total LITHIUM (ug/L) in Groundwater

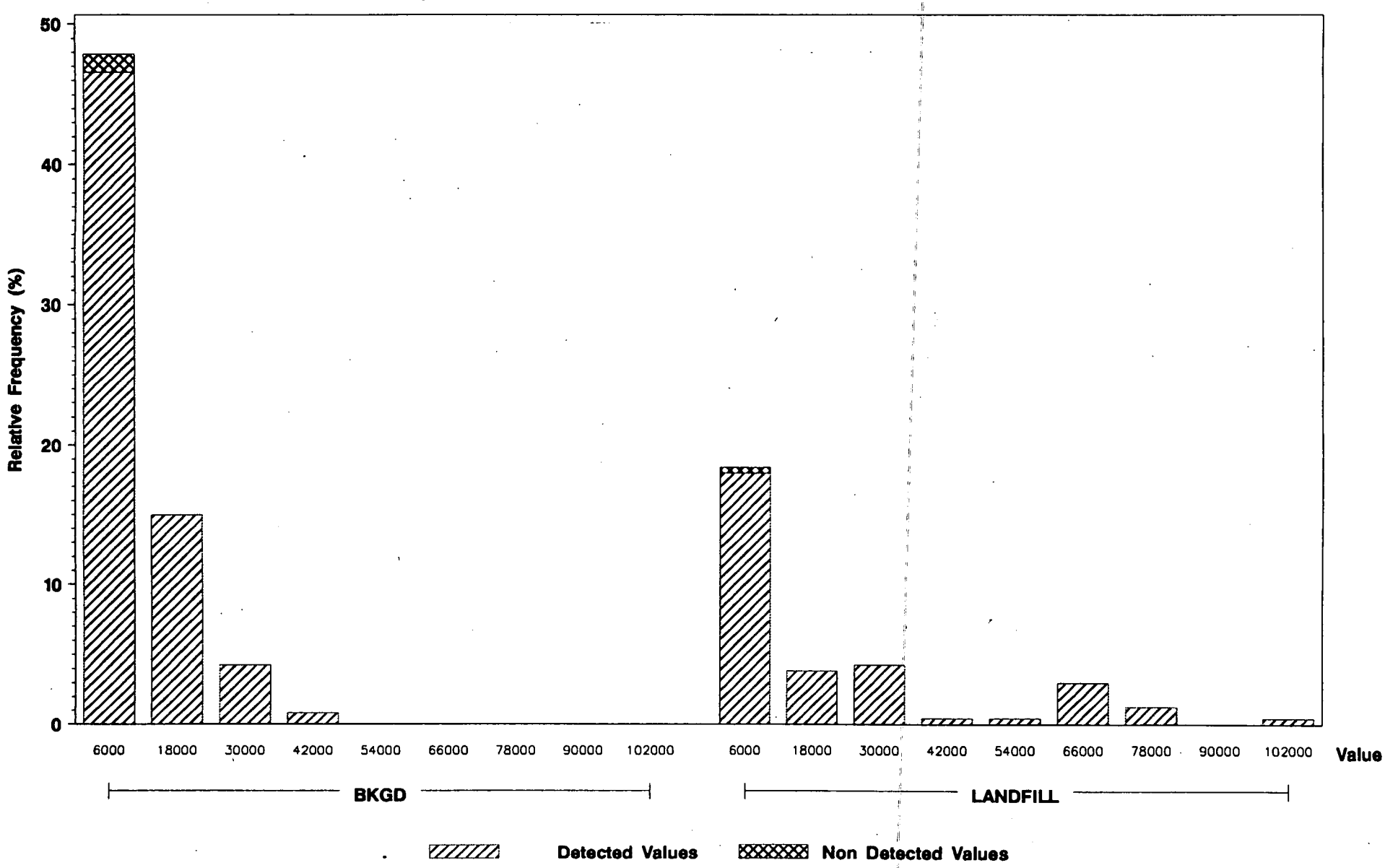
ANALYTE = LITHIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total MAGNESIUM (ug/L) in Groundwater

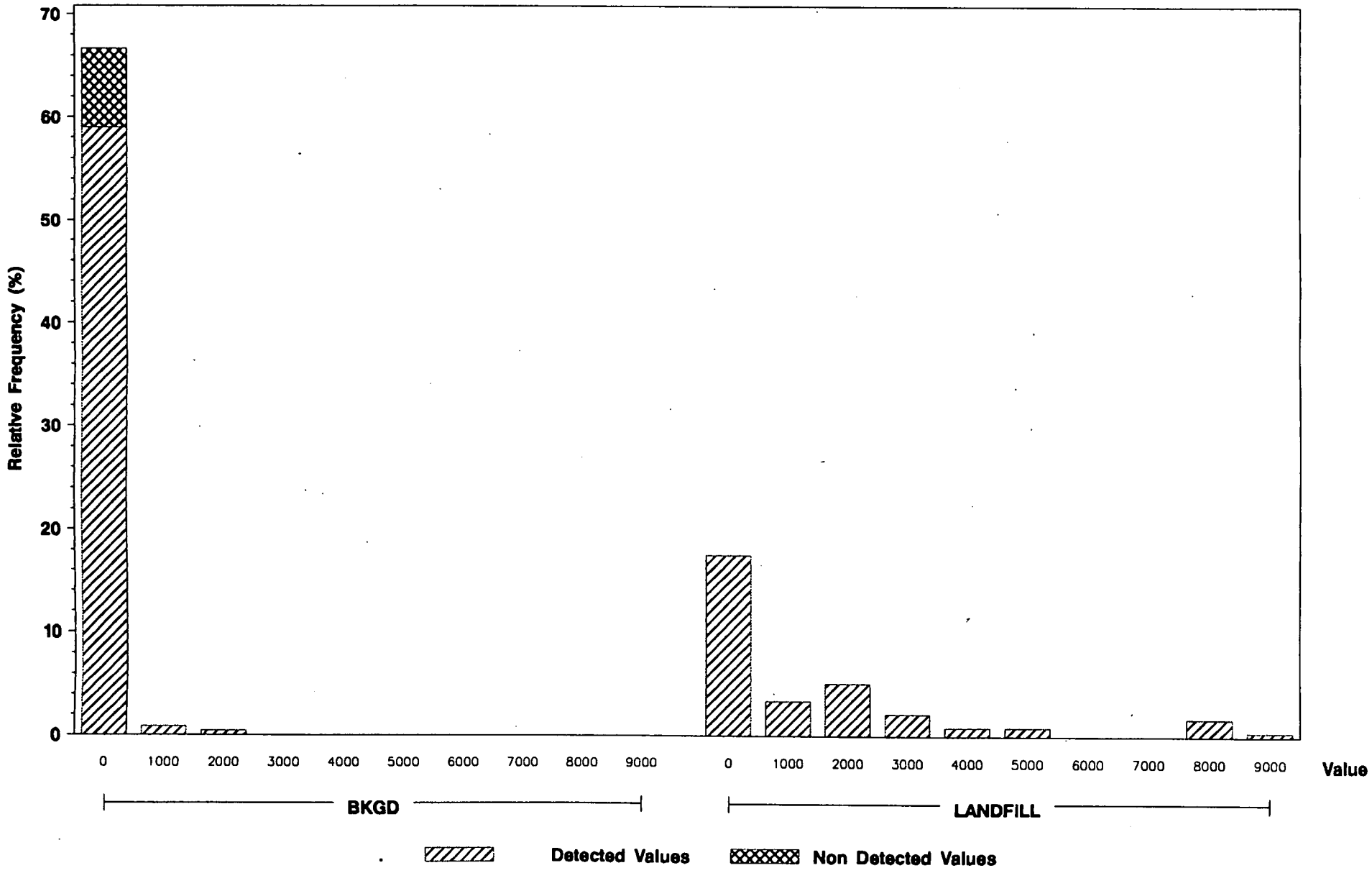
ANALYTE = MAGNESIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total MANGANESE (ug/L) in Groundwater

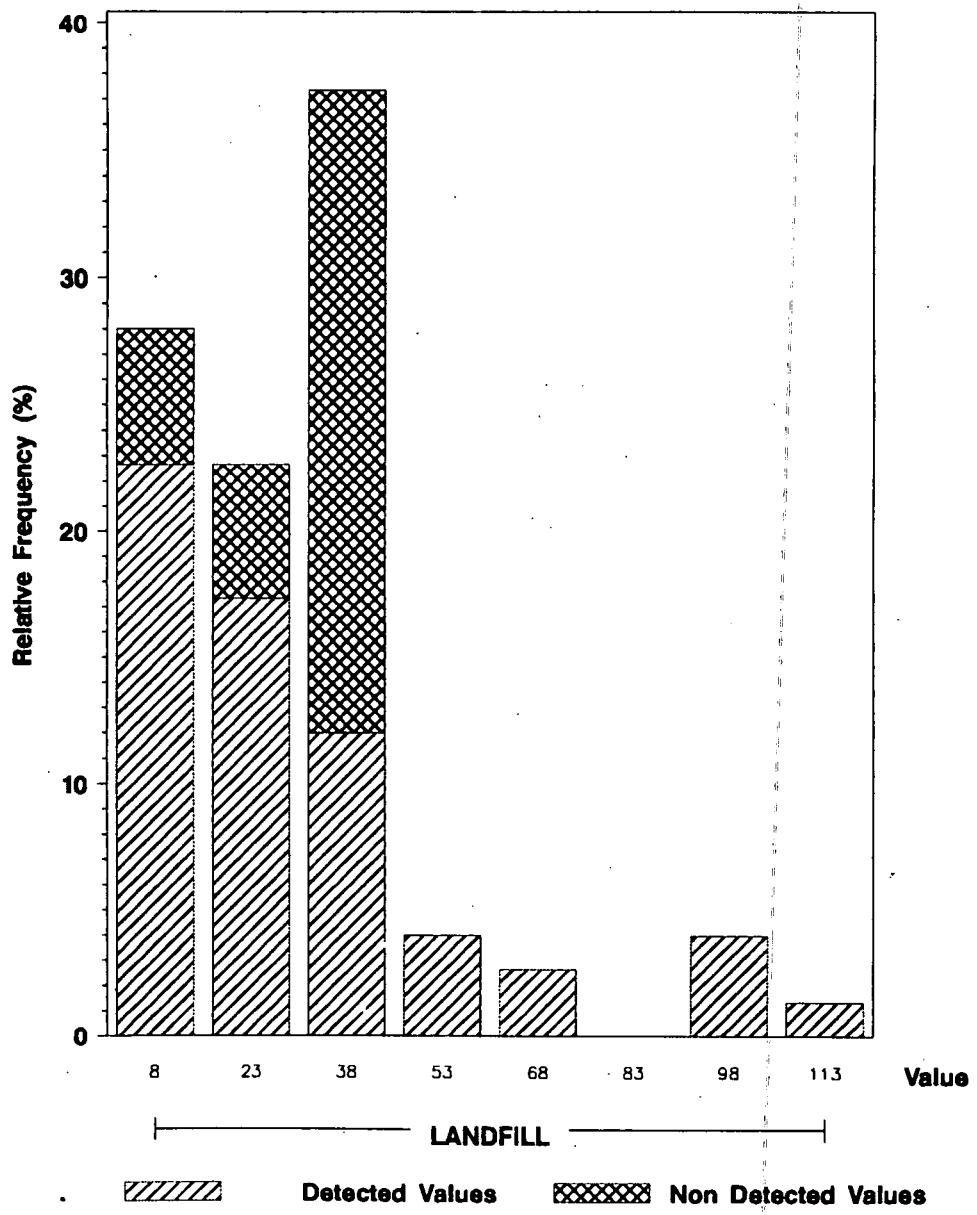
ANALYTE = MANGANESE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total NICKEL (ug/L) in Groundwater

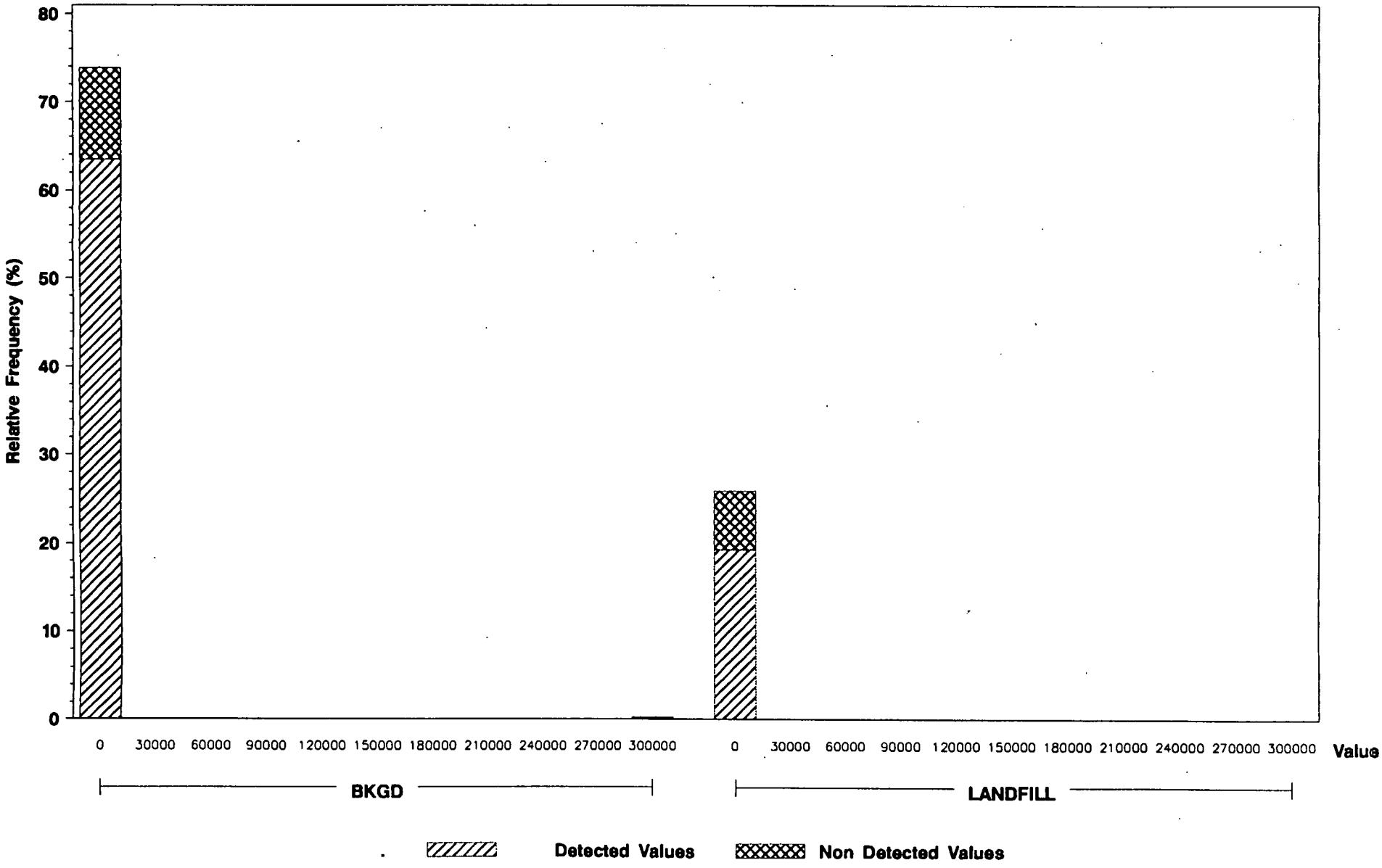
ANALYTE = NICKEL



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Groundwater

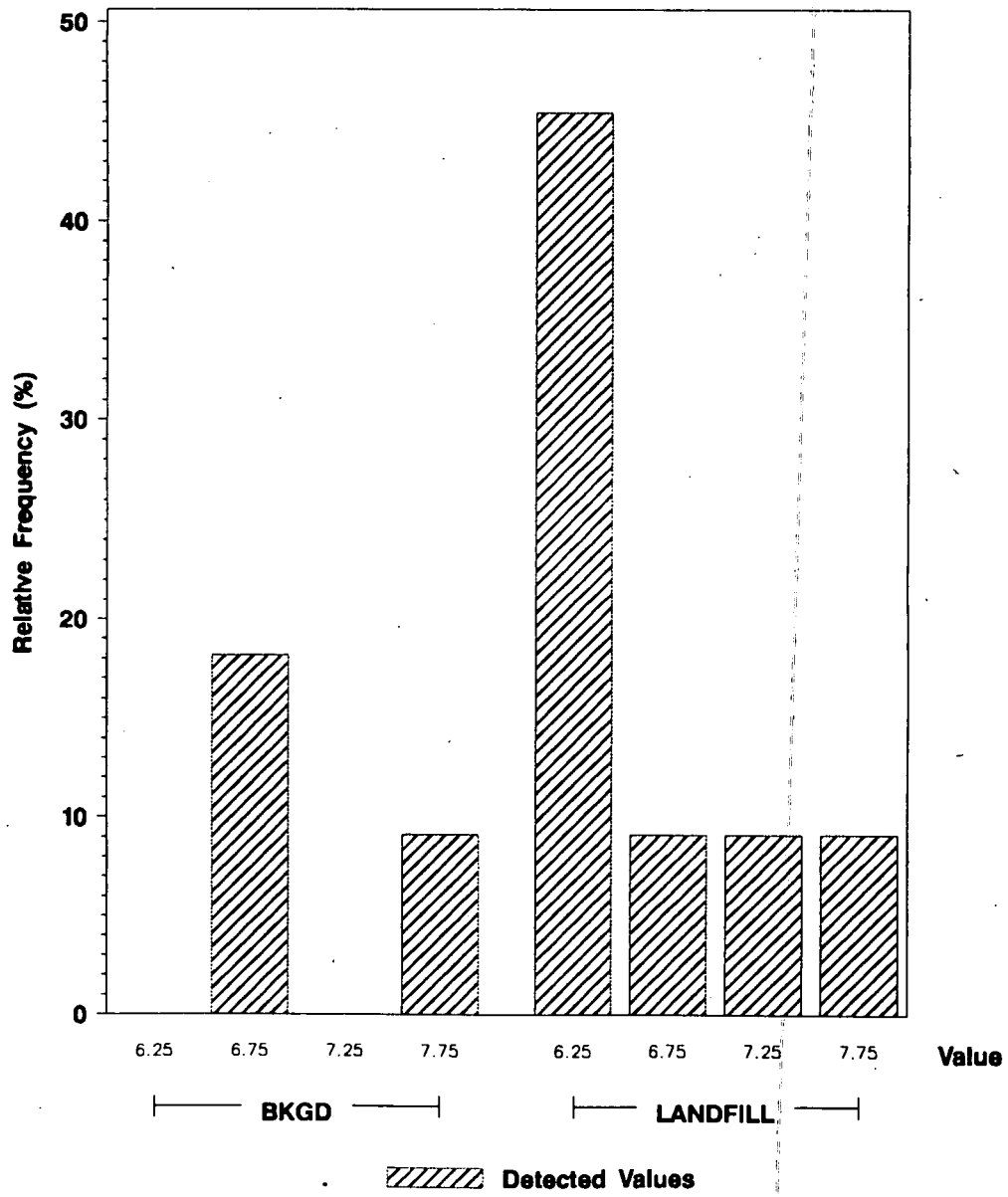
ANALYTE = NITRATE/NITRITE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## pH (Standard Units) in Groundwater

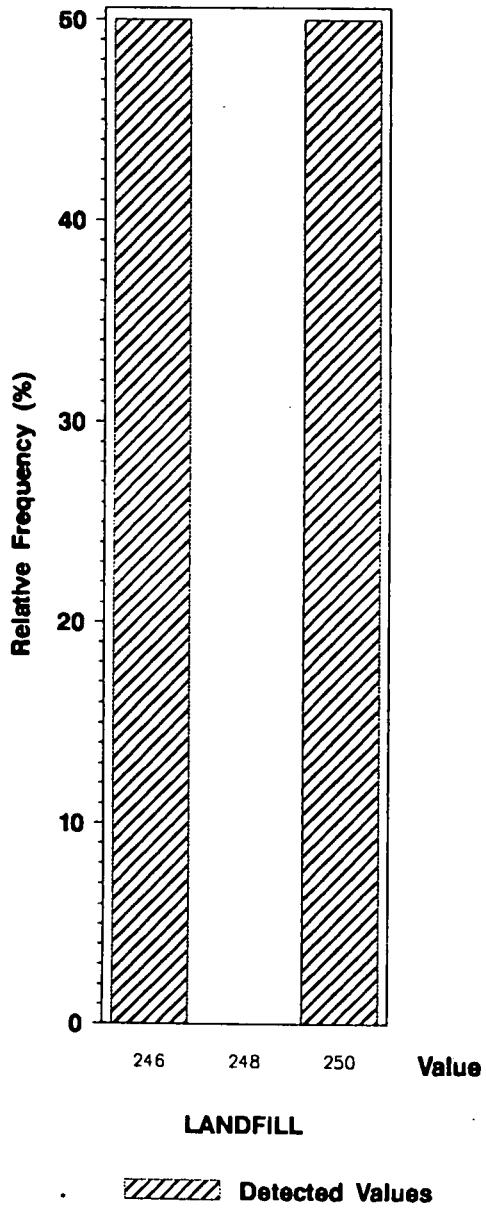
ANALYTE = pH



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total PHOSPHORUS (ug/L) in Groundwater

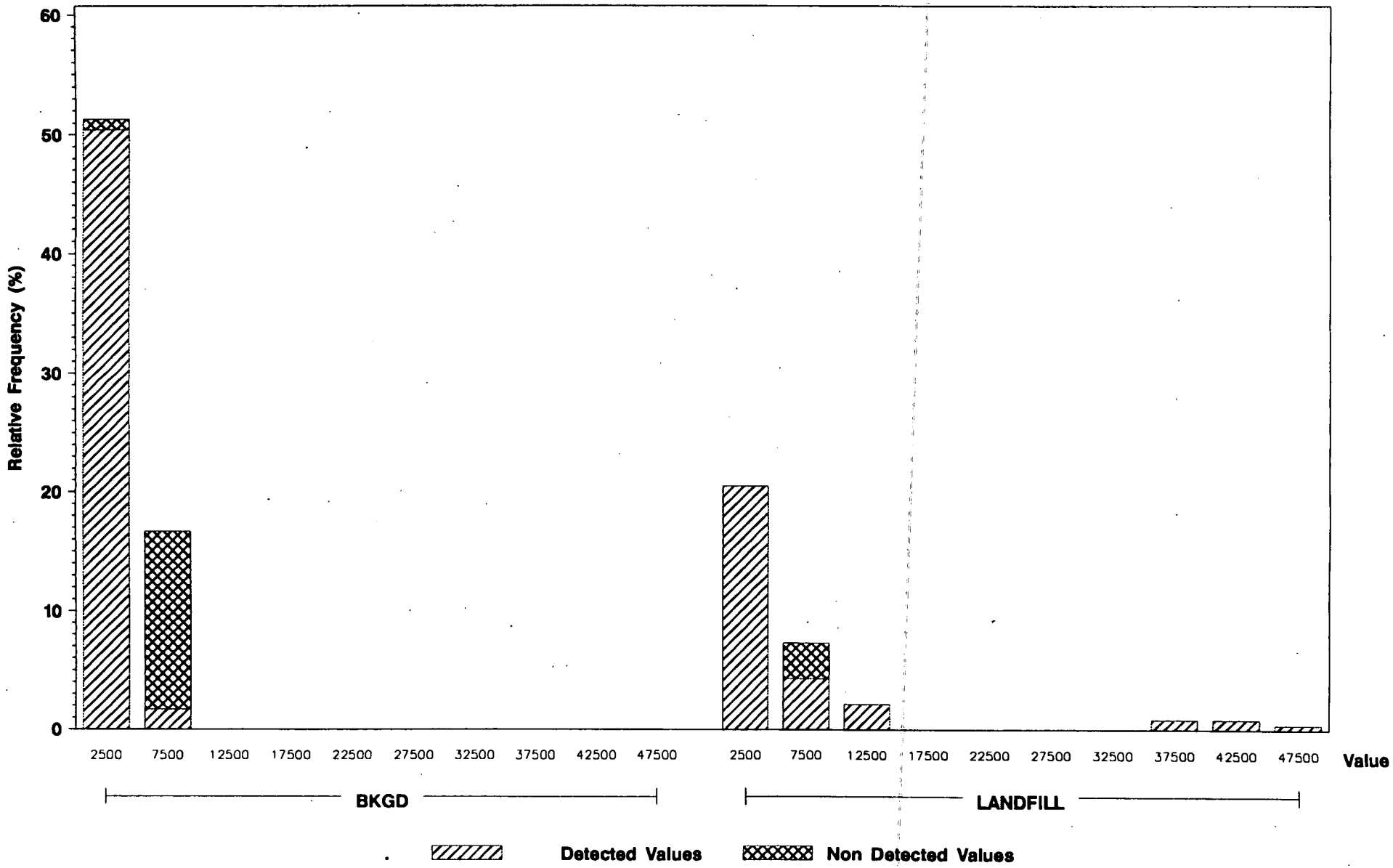
ANALYTE = PHOSPHORUS



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total POTASSIUM (ug/L) in Groundwater

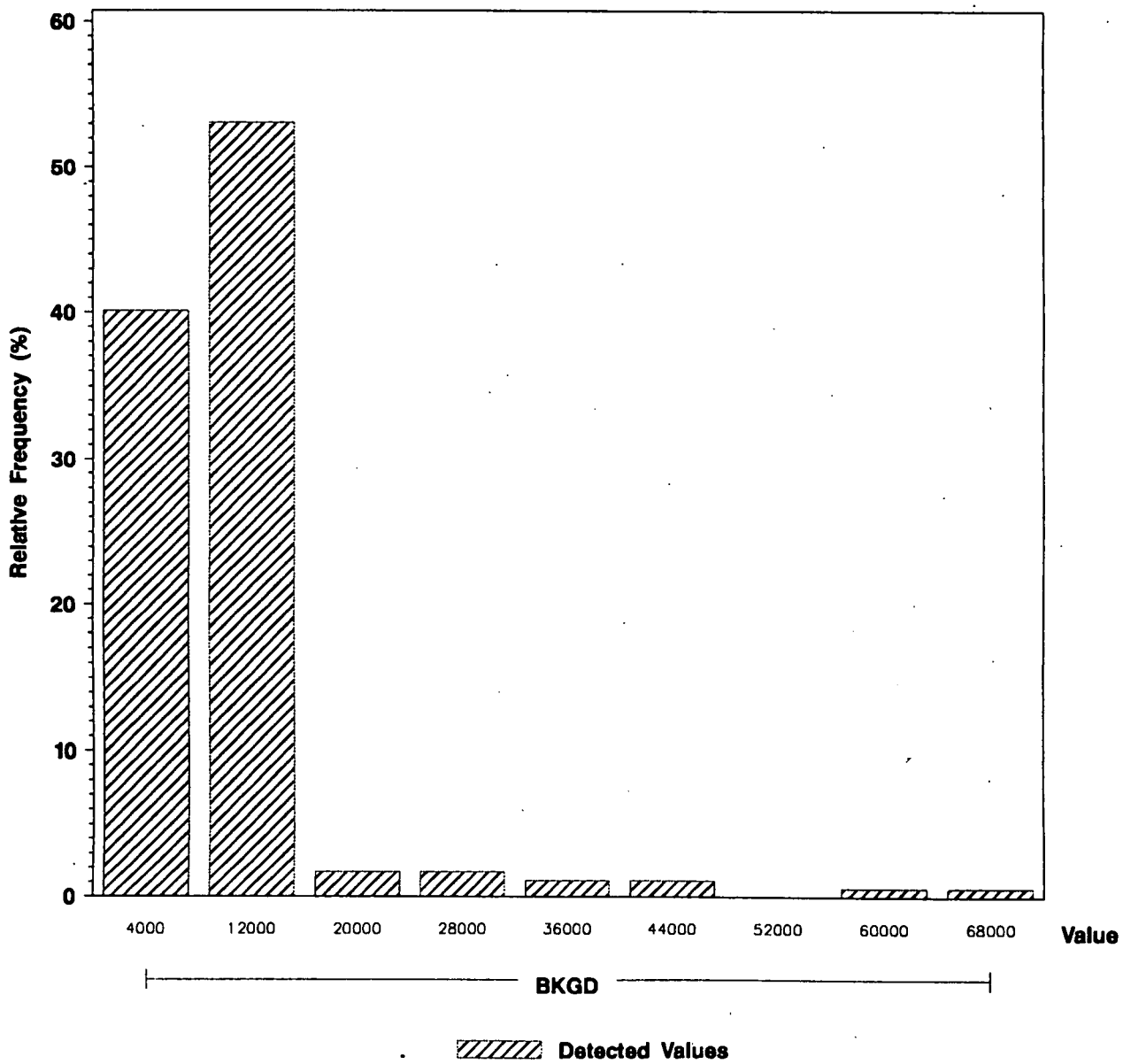
ANALYTE = POTASSIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SILICA (ug/L) in Groundwater

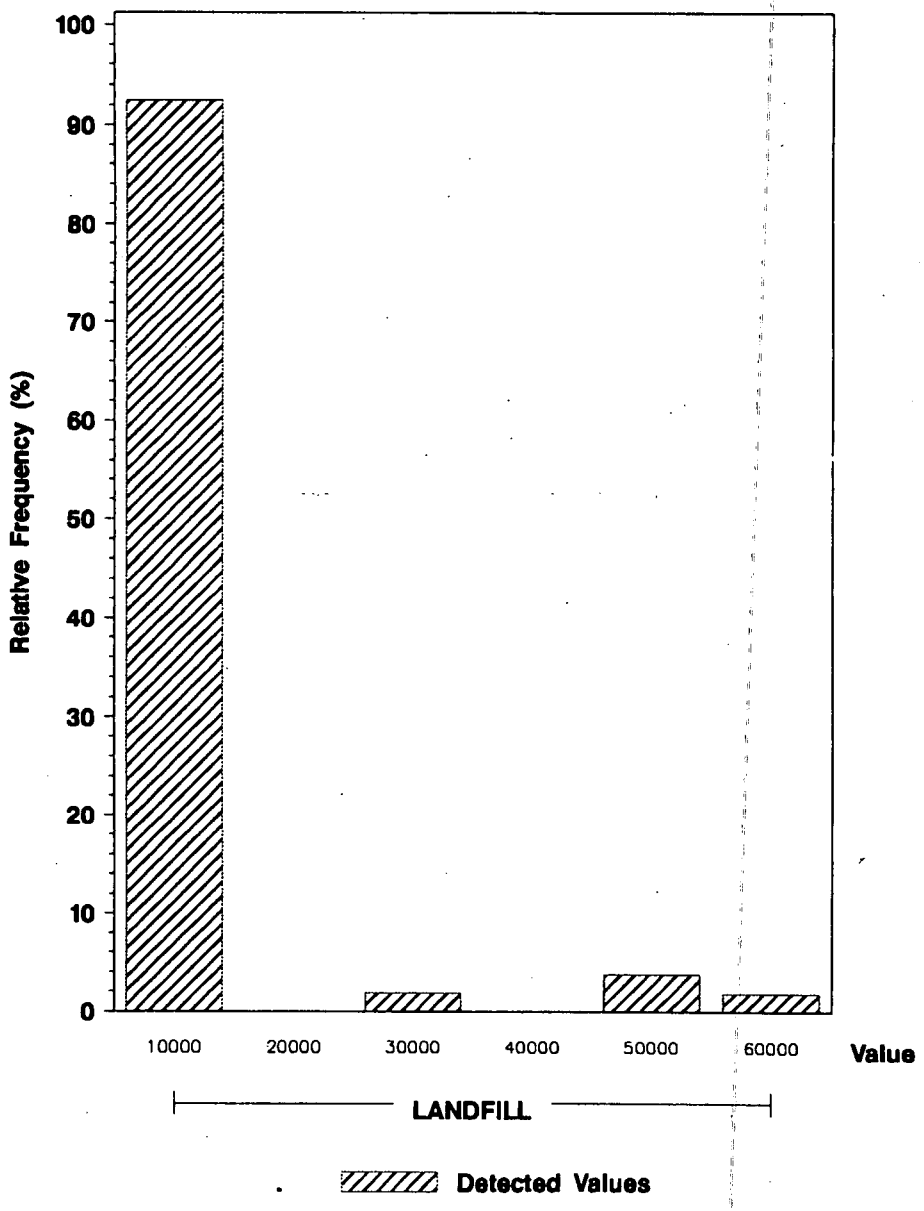
ANALYTE = SILICA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SILICA, DISSOLVED (ug/L) in Groundwater

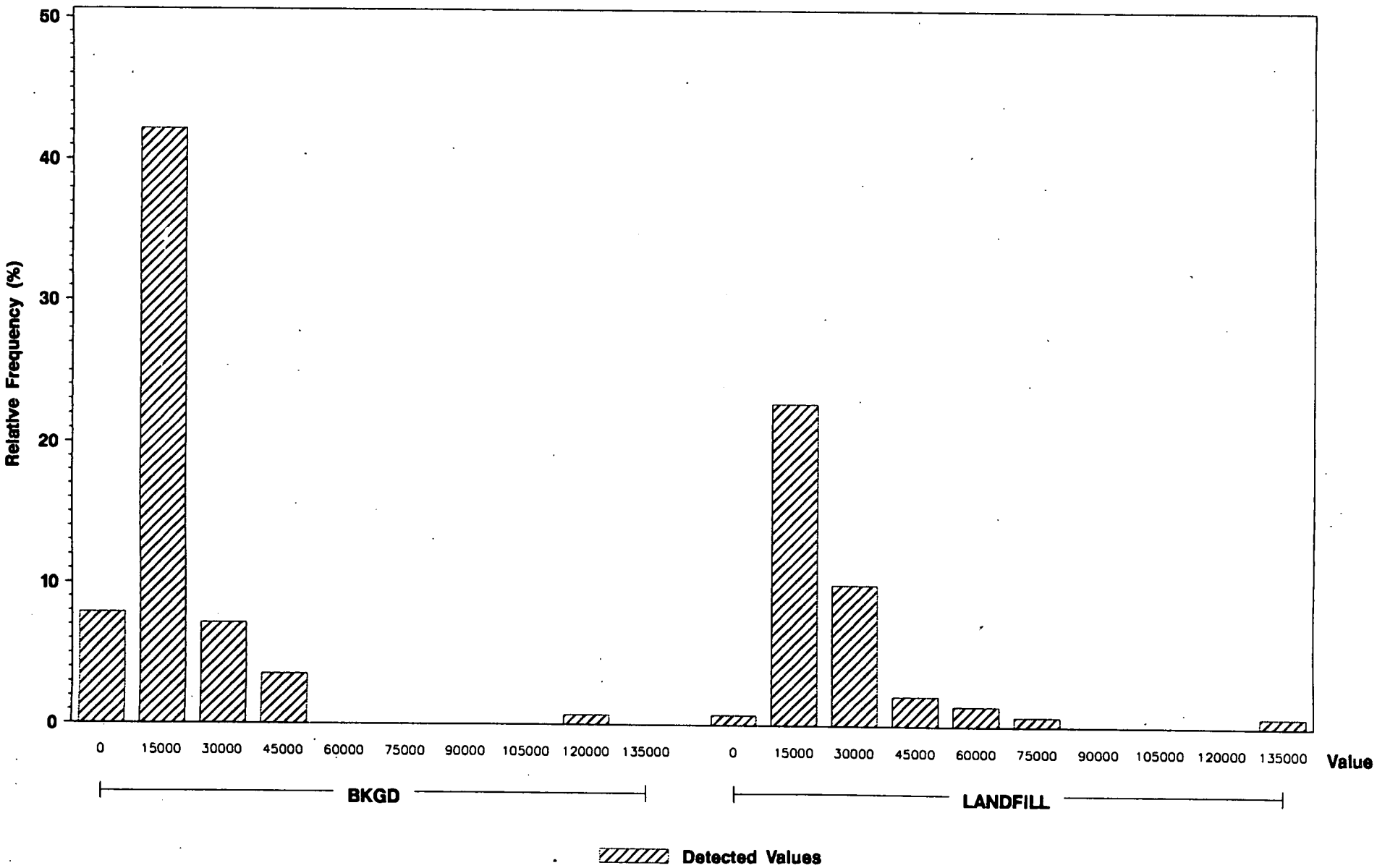
ANALYTE = SILICA, DISSOLVED



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SILICON (ug/L) in Groundwater

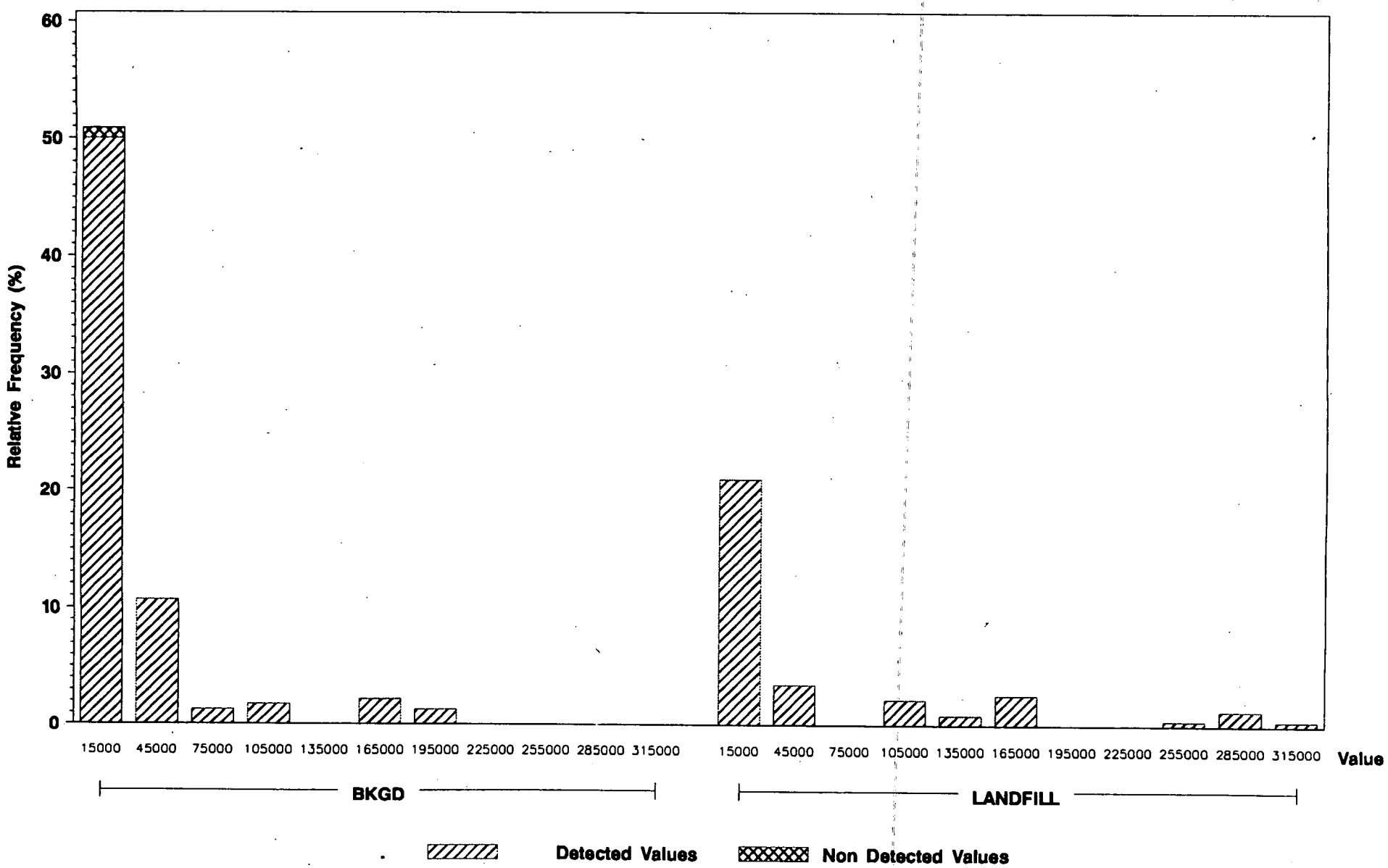
ANALYTE=SILICON



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SODIUM (ug/L) in Groundwater

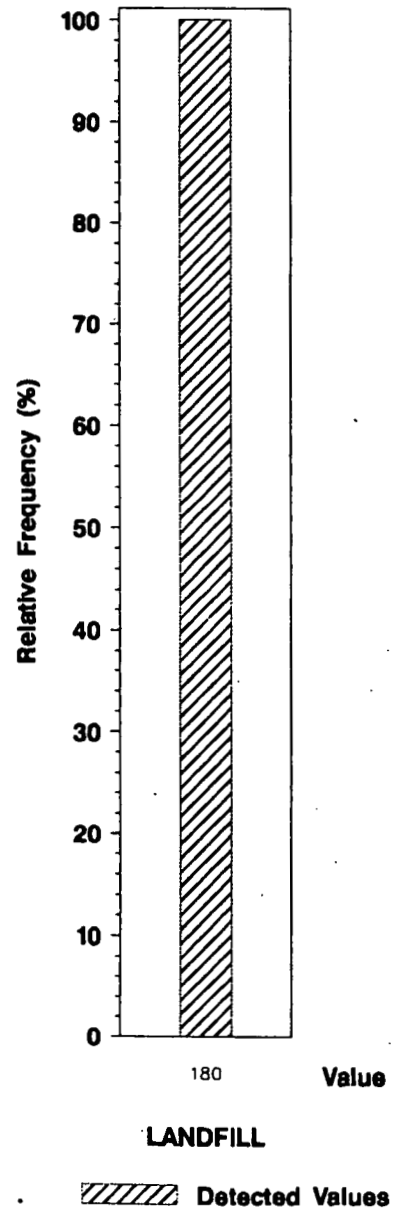
ANALYTE=SODIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SODIUM FLUORIDE (ug/L) in Groundwater

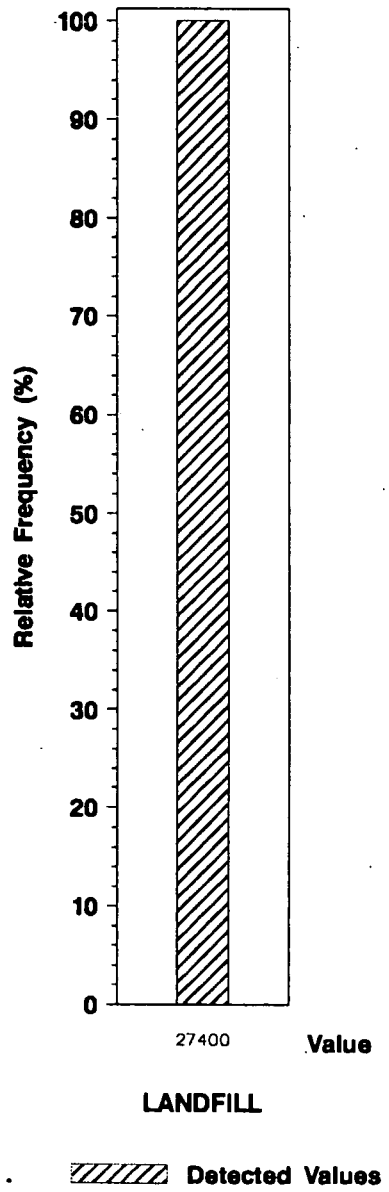
ANALYTE = SODIUM FLUORIDE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SODIUM SULFATE (ug/L) in Groundwater

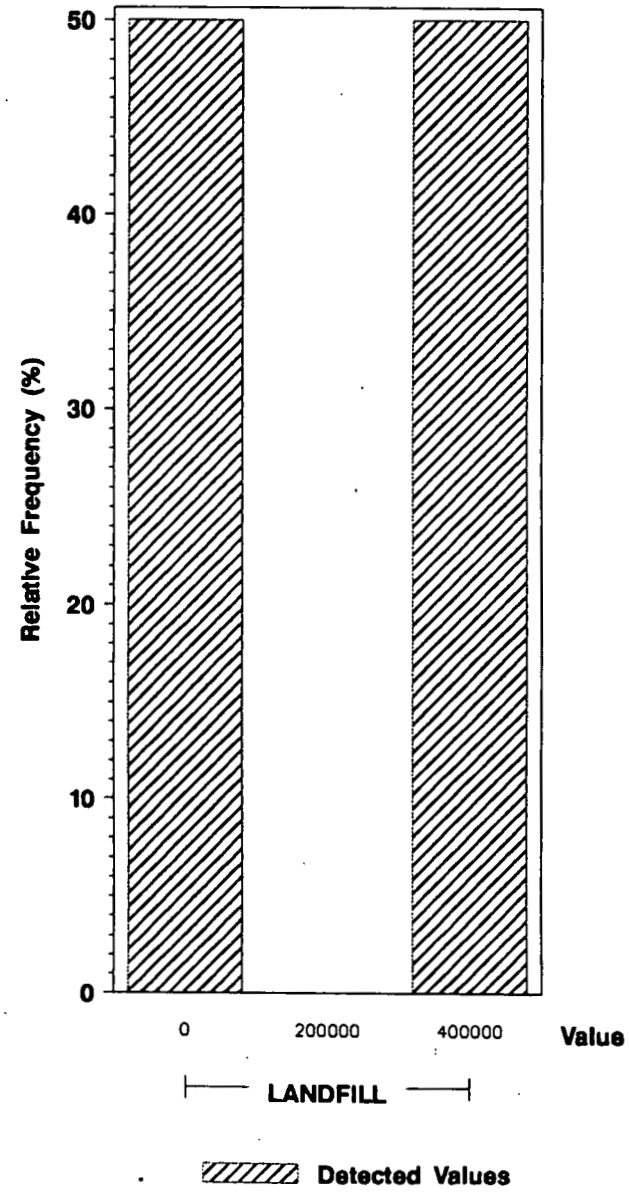
ANALYTE=SODIUM SULFATE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SOLIDS, NONVOLATILE SUSPENDED (ug/L) in Groundwater

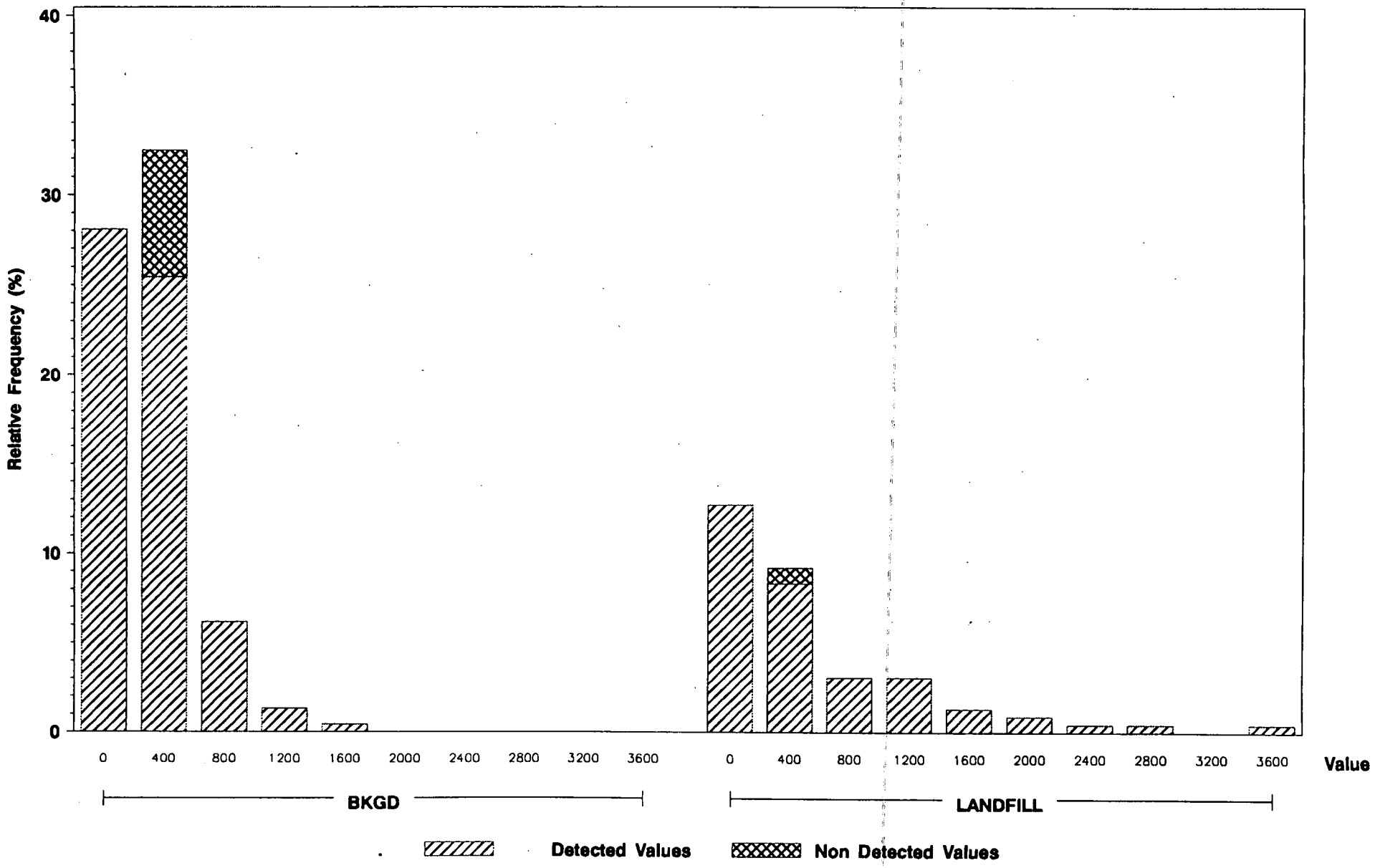
ANALYTE = SOLIDS, NONVOLATILE SUSPENDED



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total STRONTIUM (ug/L) in Groundwater

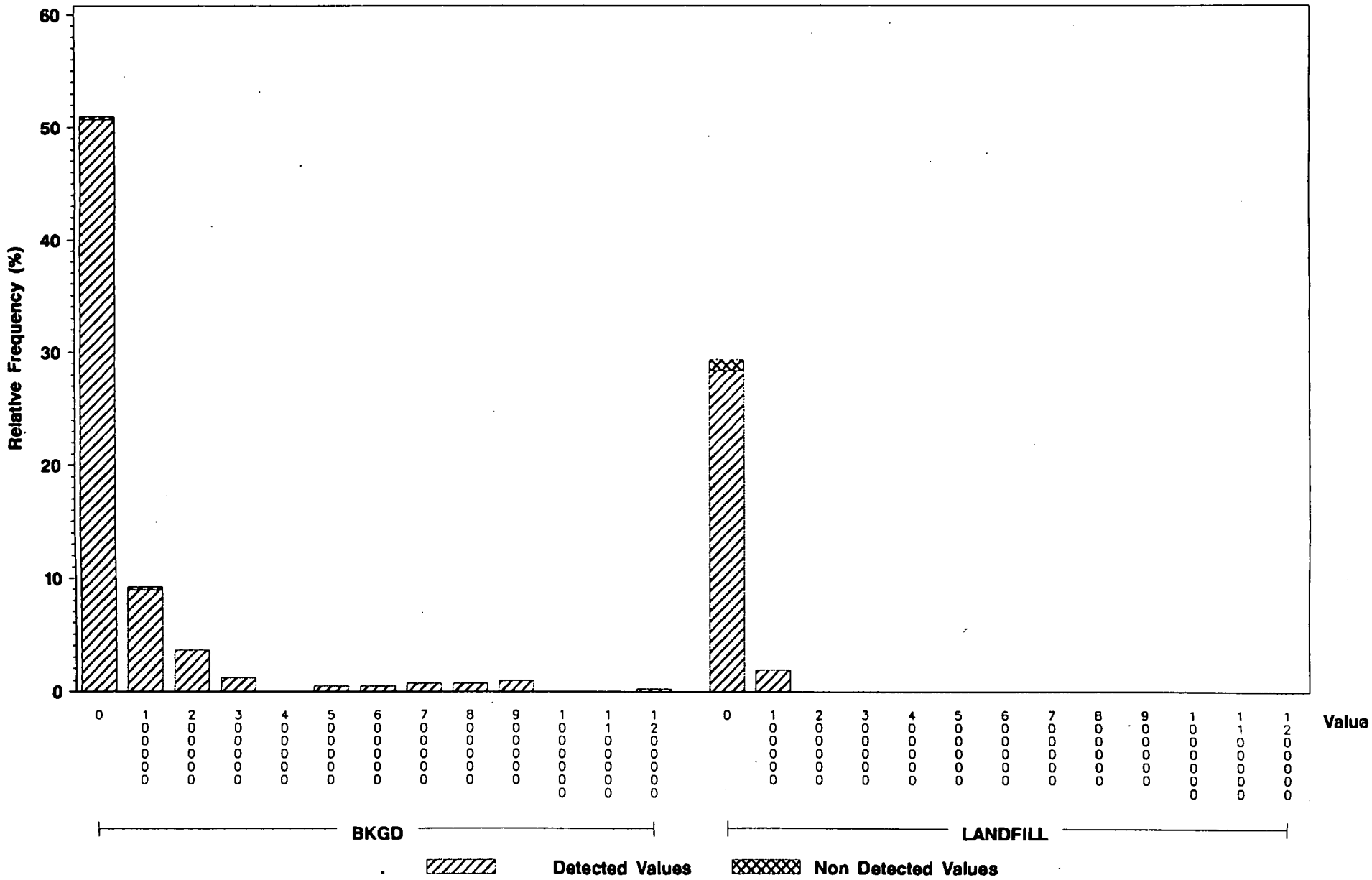
ANALYTE = STRONTIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SULFATE (ug/L) in Groundwater

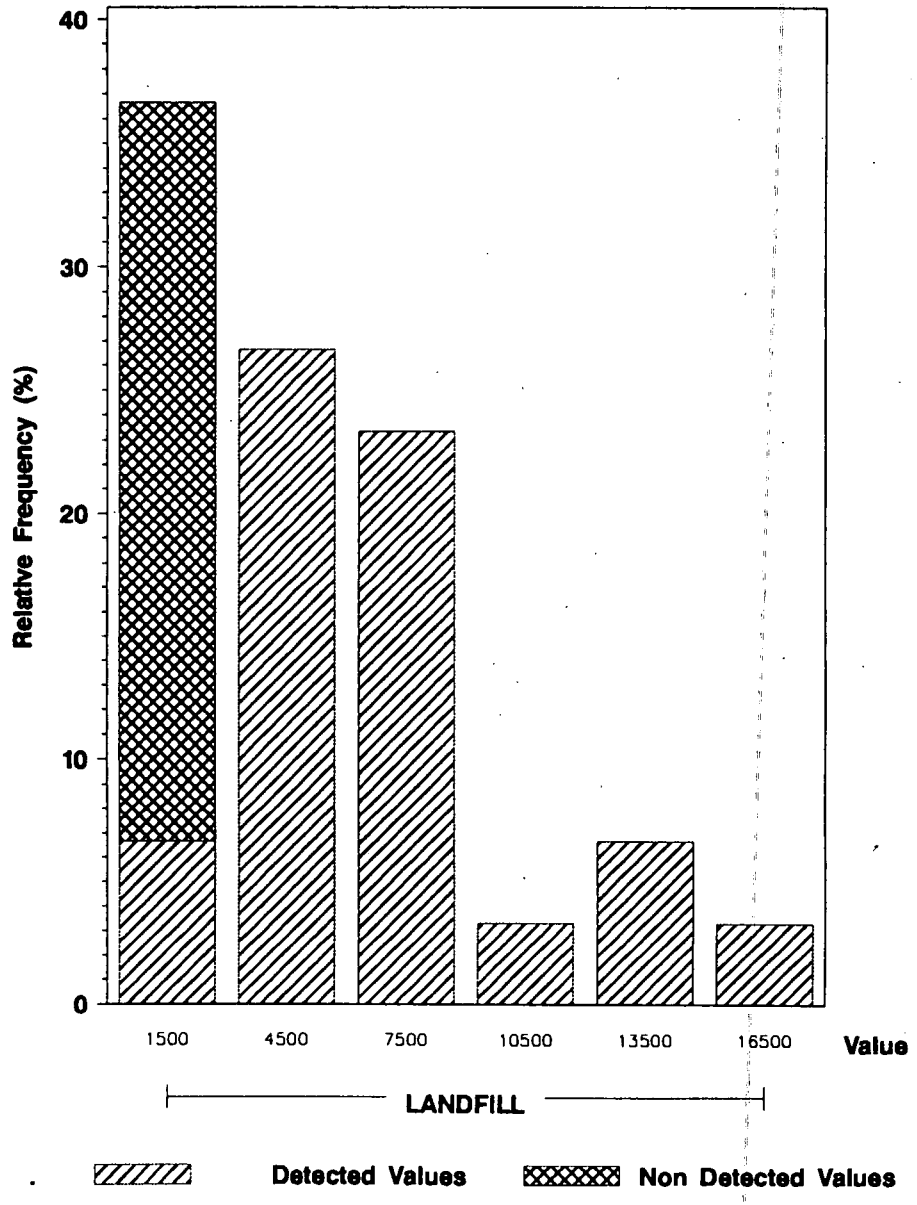
ANALYTE = SULFATE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total SULFIDE (ug/L) in Groundwater

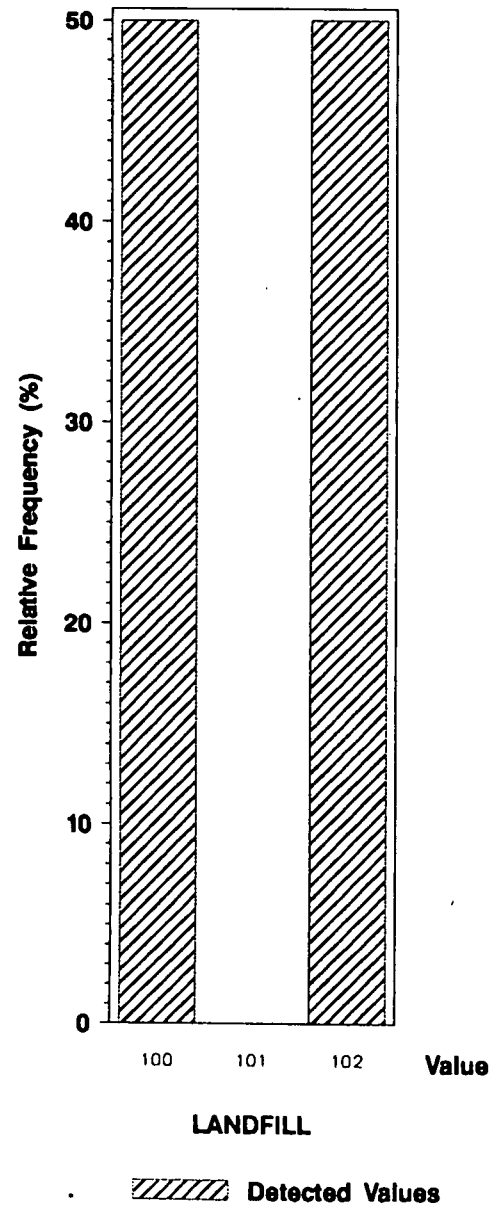
ANALYTE = SULFIDE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total TOLUENE – D8 (ug/L) in Groundwater

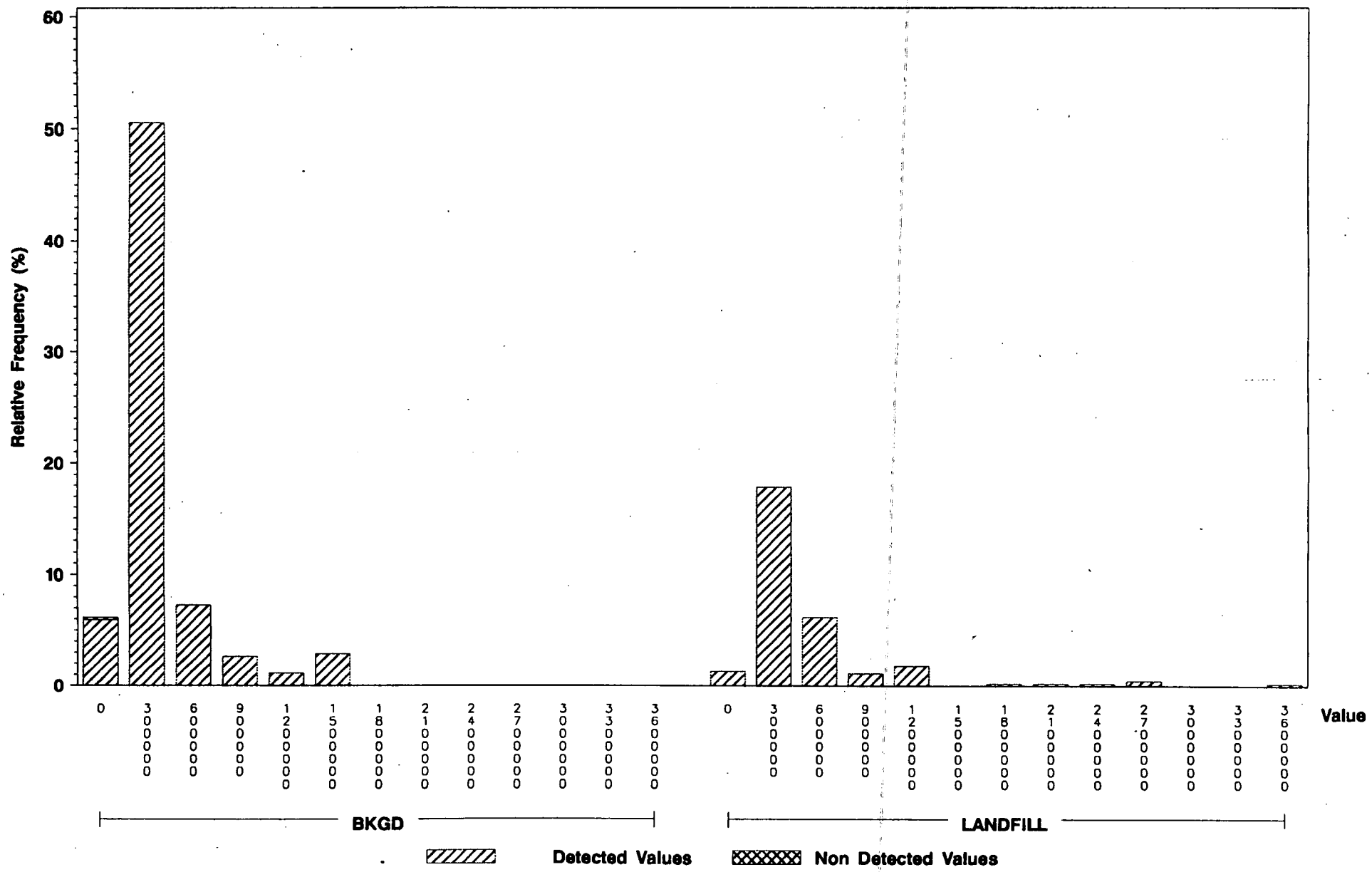
ANALYTE = TOLUENE – D8



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## TOTAL DISSOLVED SOLIDS (ug/L) in Groundwater

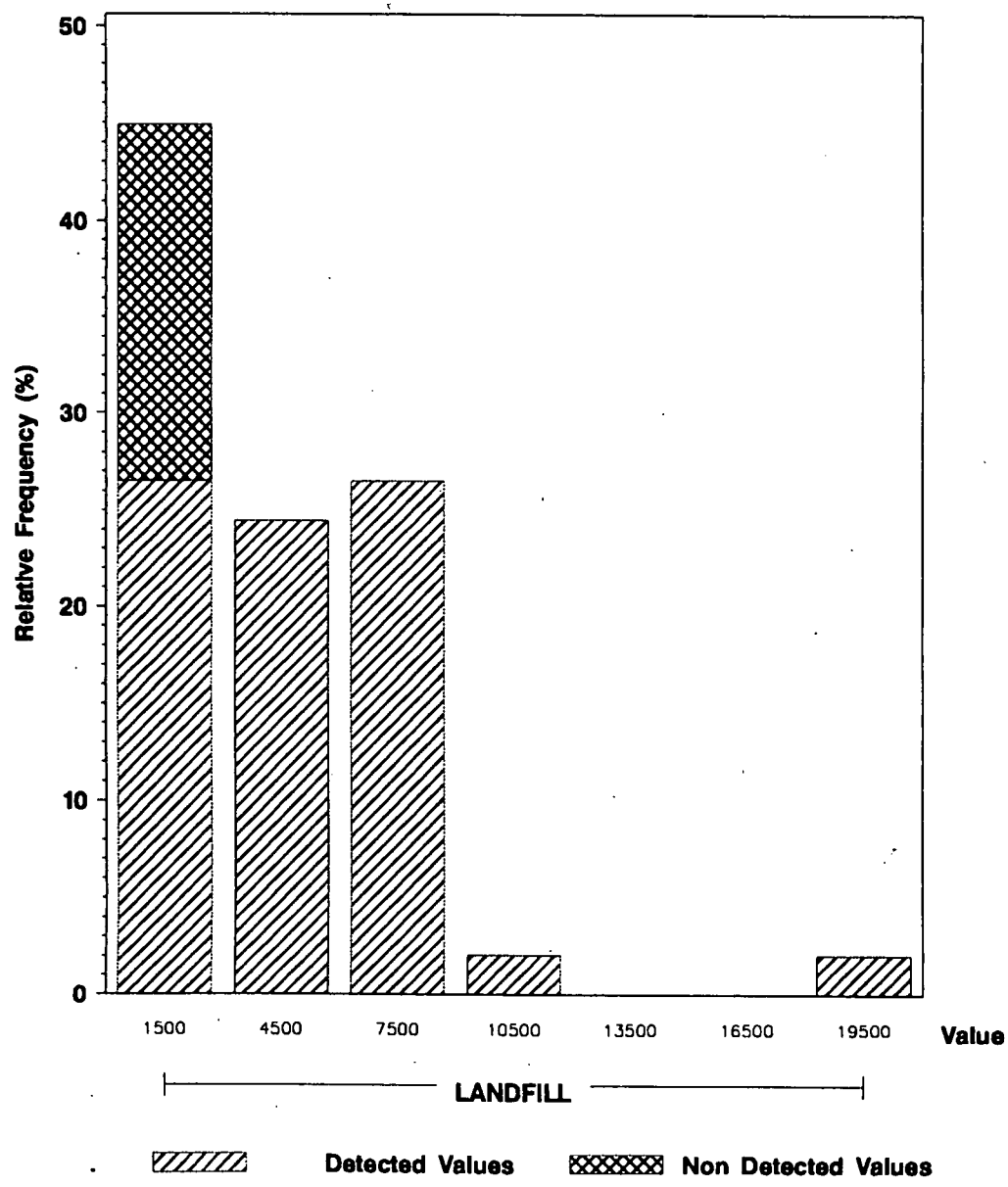
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## TOTAL ORGANIC CARBON (ug/L) in Groundwater

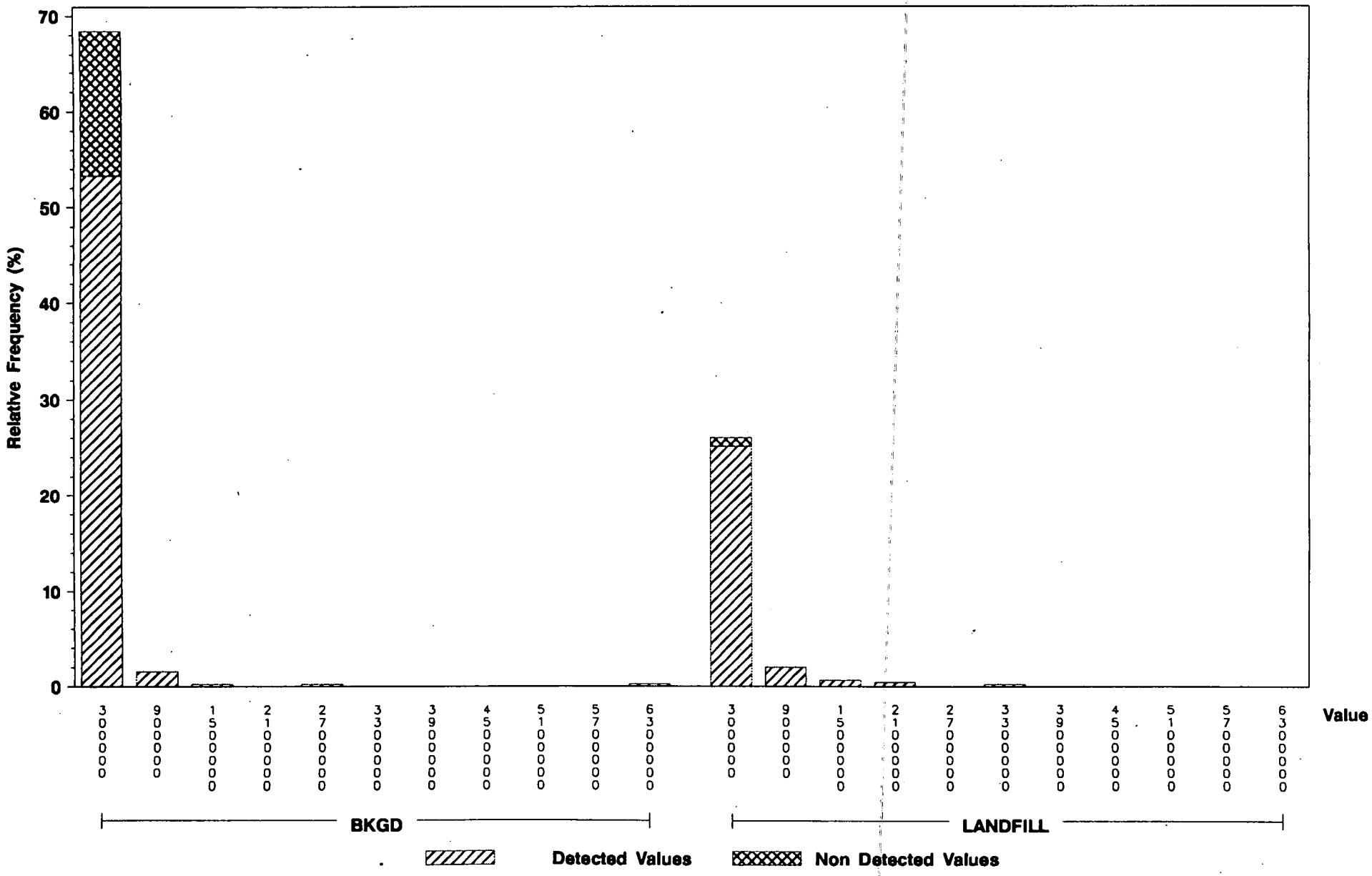
ANALYTE = TOTAL ORGANIC CARBON



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## TOTAL SUSPENDED SOLIDS (ug/L) in Groundwater

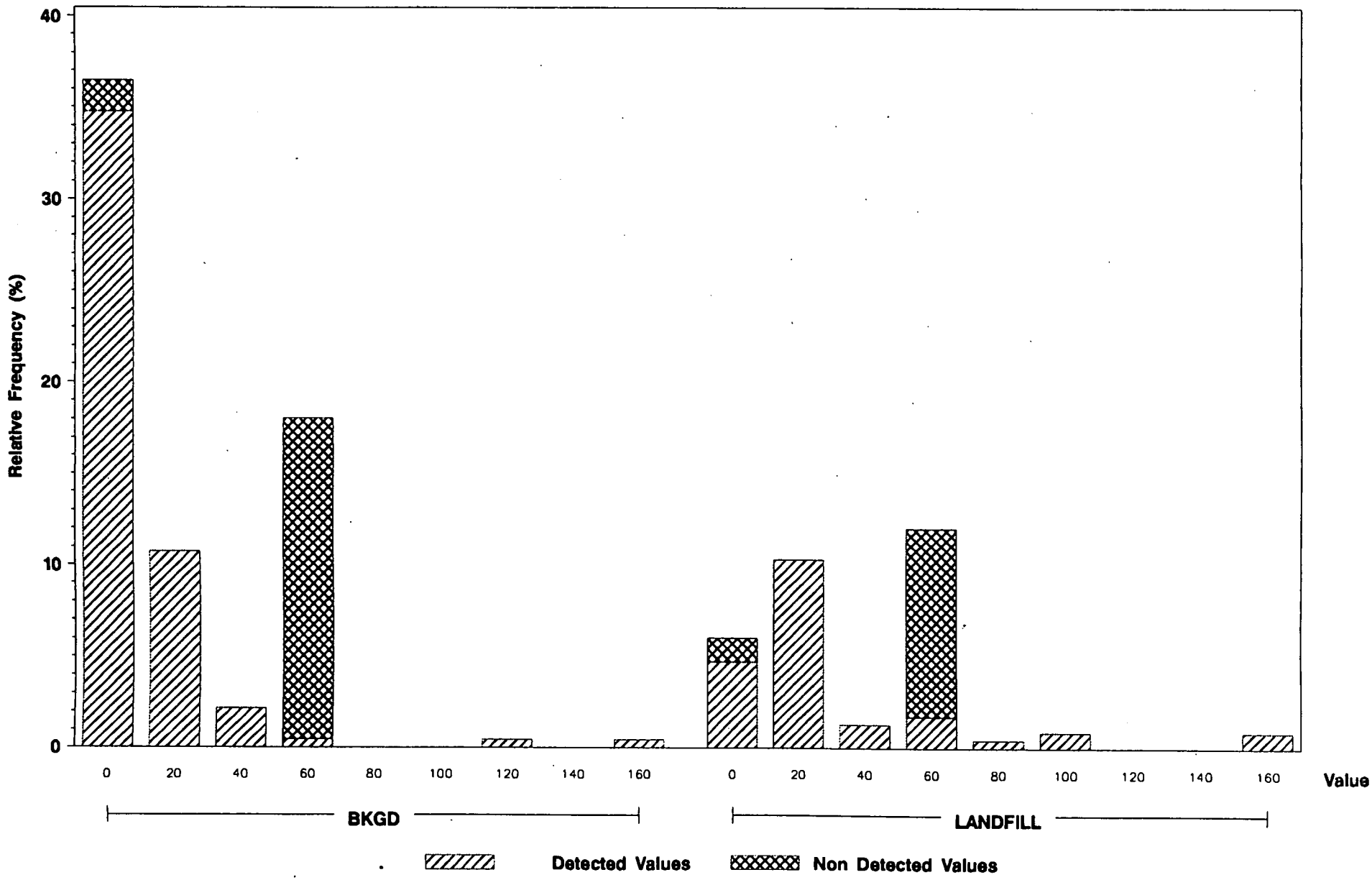
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total VANADIUM (ug/L) in Groundwater

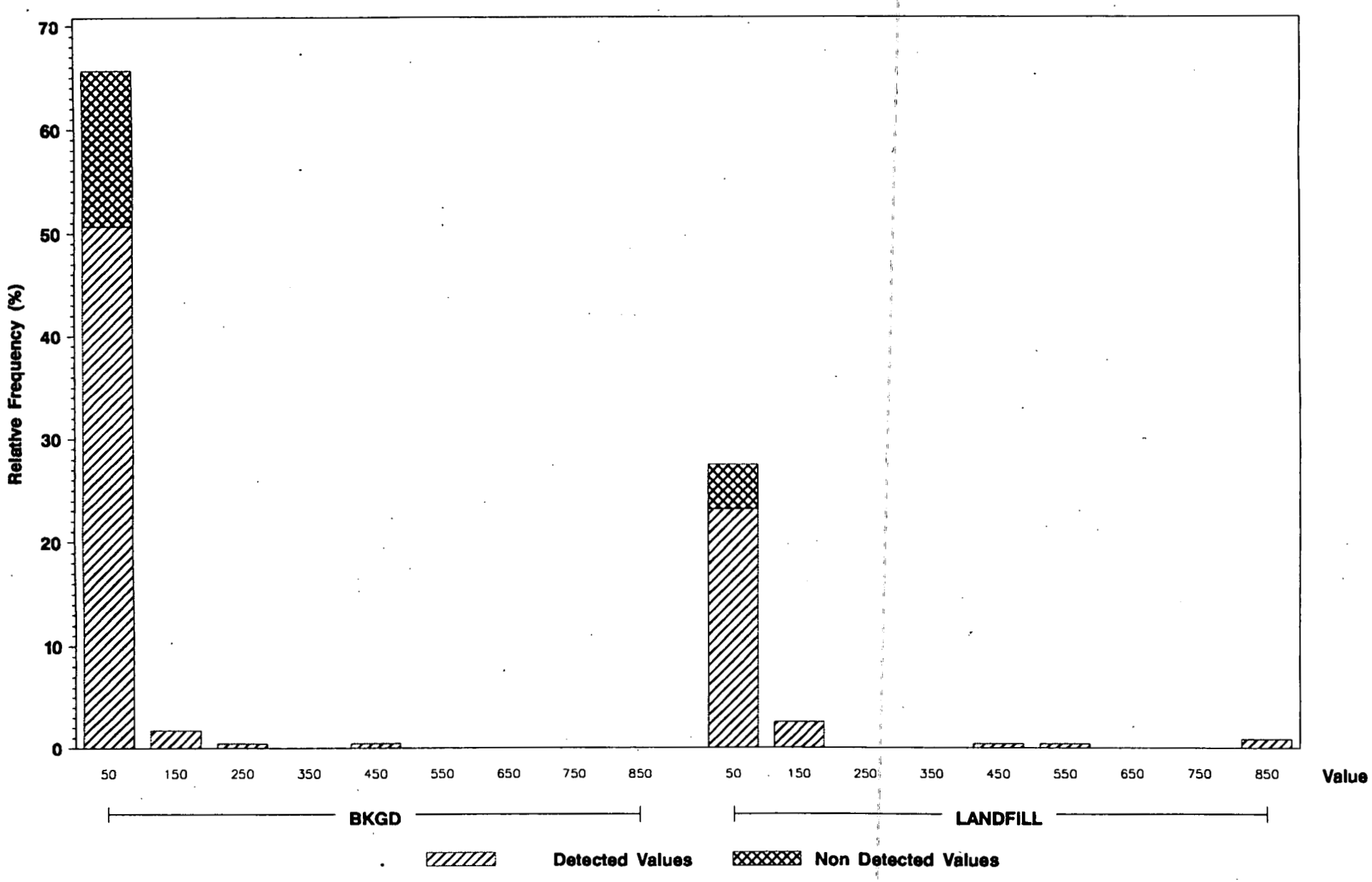
ANALYTE = VANADIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total ZINC (ug/L) in Groundwater

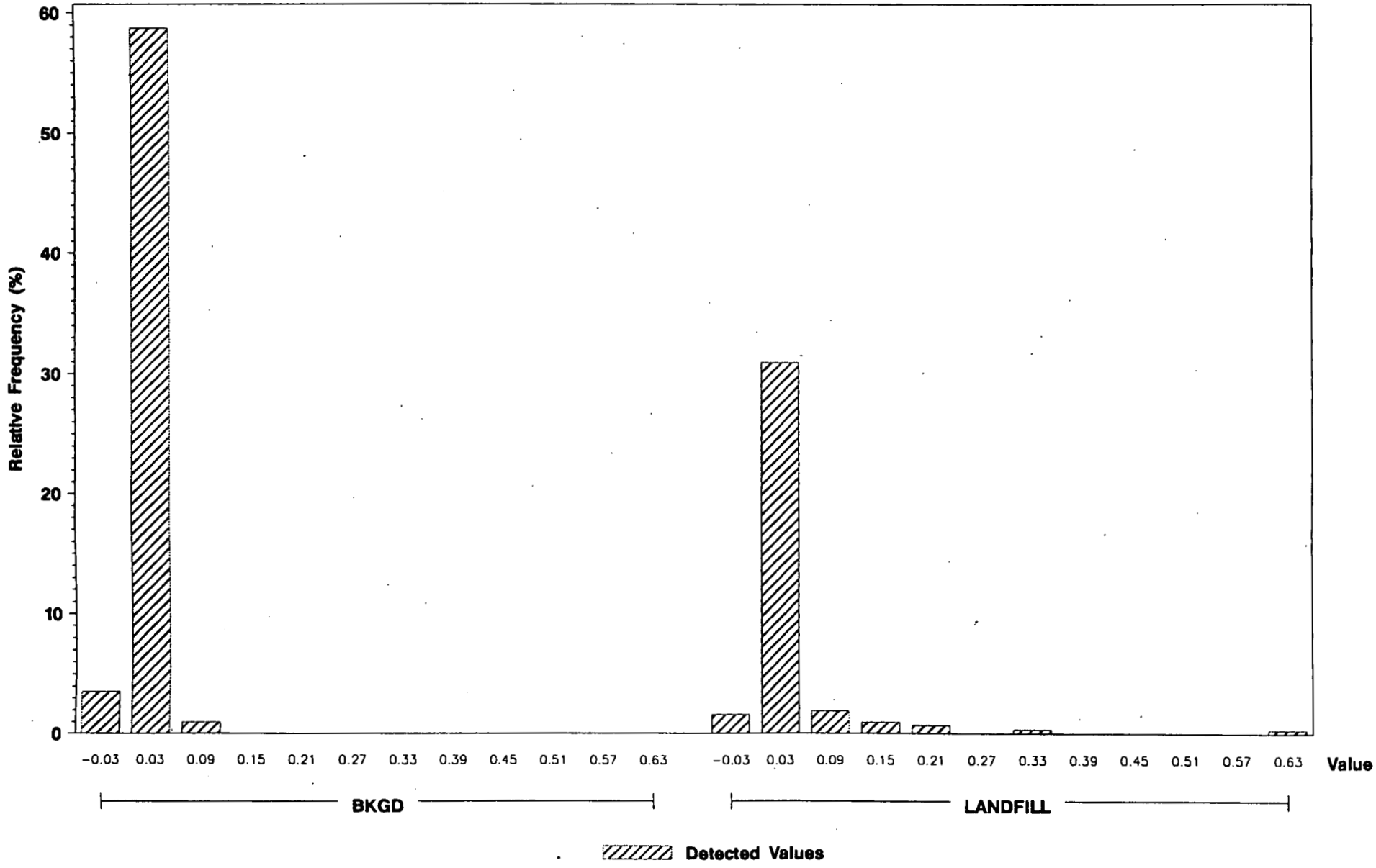
ANALYTE = ZINC



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total AMERICIUM – 241 (pCi/L) in Groundwater

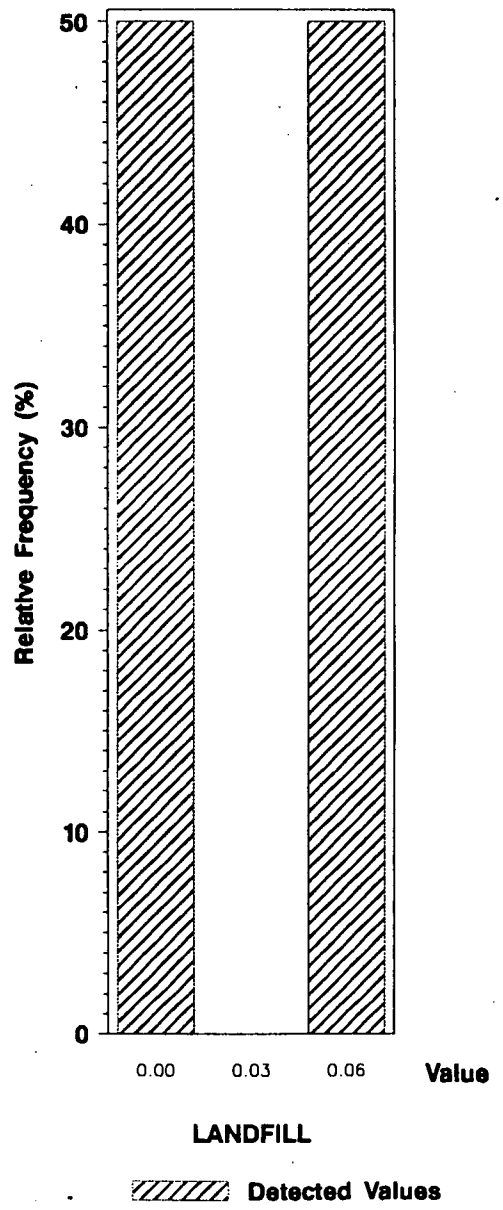
ANALYTE = AMERICIUM – 241



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CESIUM RADIOACTIVE UNKN ISOTOPE (pCi/L) in Groundwater

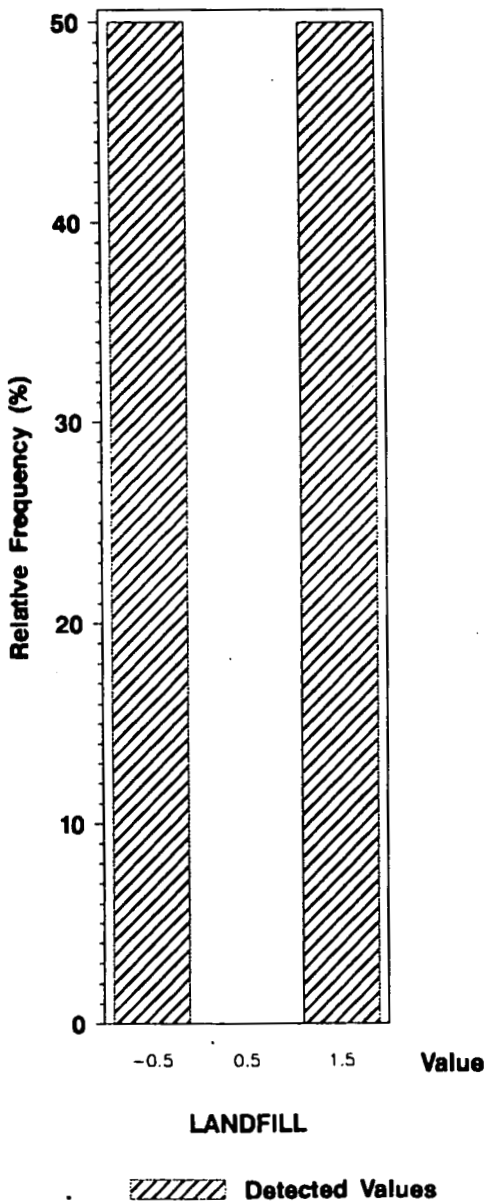
ANALYTE = CESIUM RADIOACTIVE UNKN ISOTOPE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CESIUM – 134 (pCi/L) in Groundwater

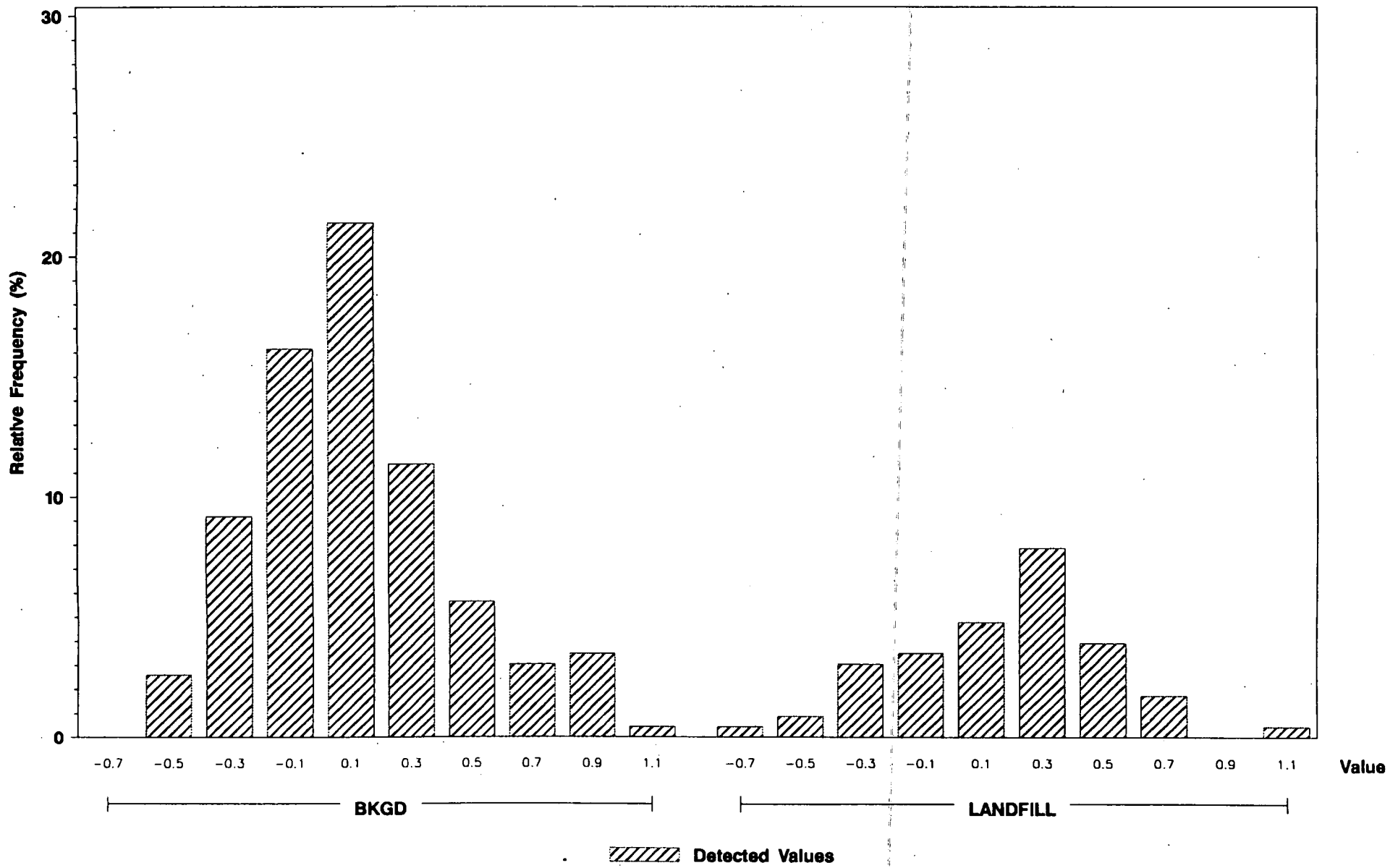
ANALYTE = CESIUM – 134



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Groundwater

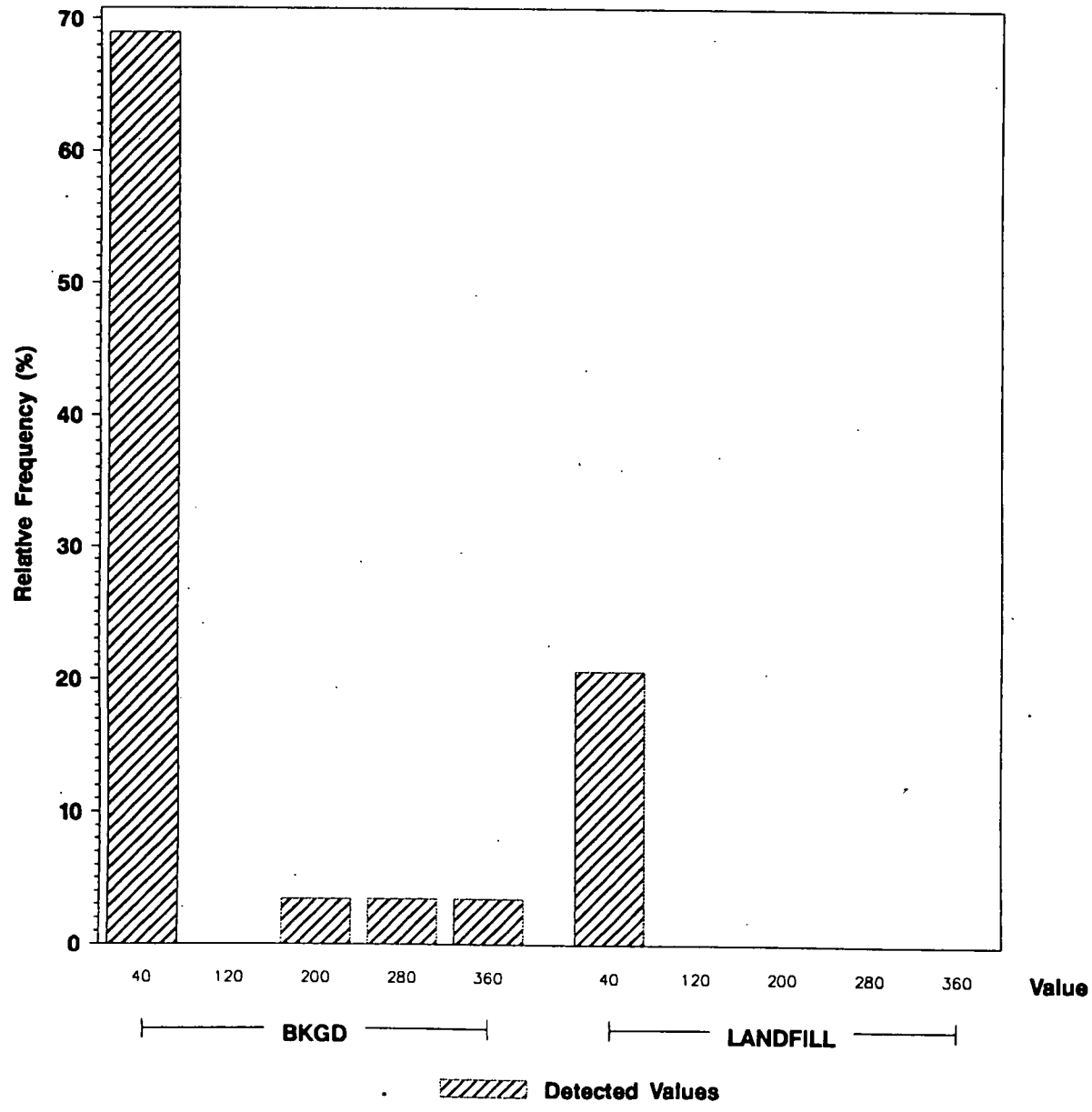
ANALYTE = CESIUM-137



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Groundwater

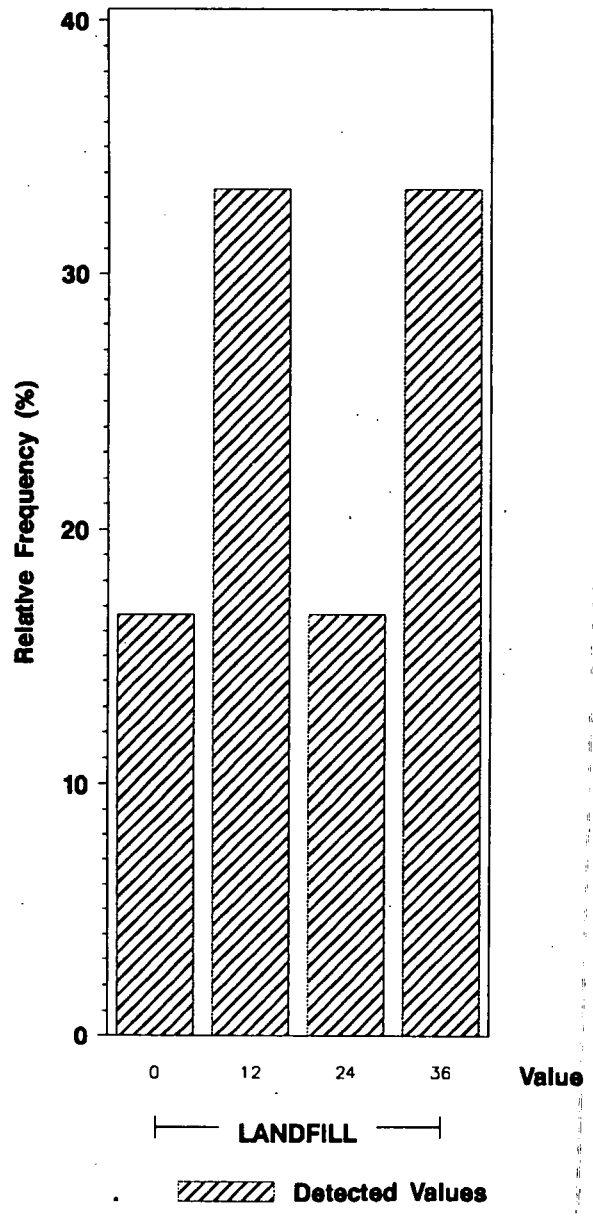
ANALYTE = GROSS ALPHA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total GROSS ALPHA – DISSOLVED (pCi/L) in Groundwater

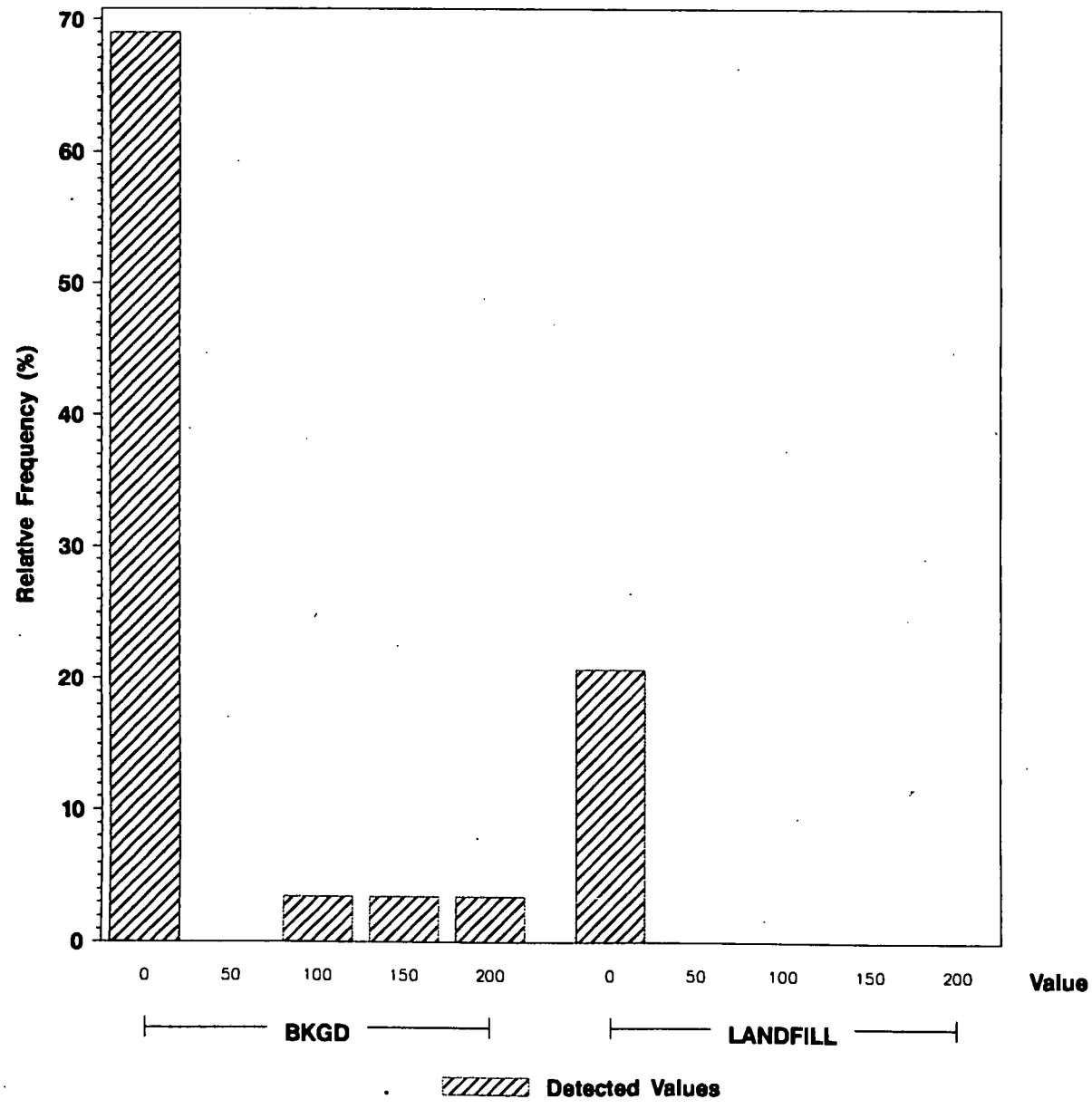
ANALYTE=GROSS ALPHA – DISSOLVED



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total GROSS BETA (pCi/L) in Groundwater

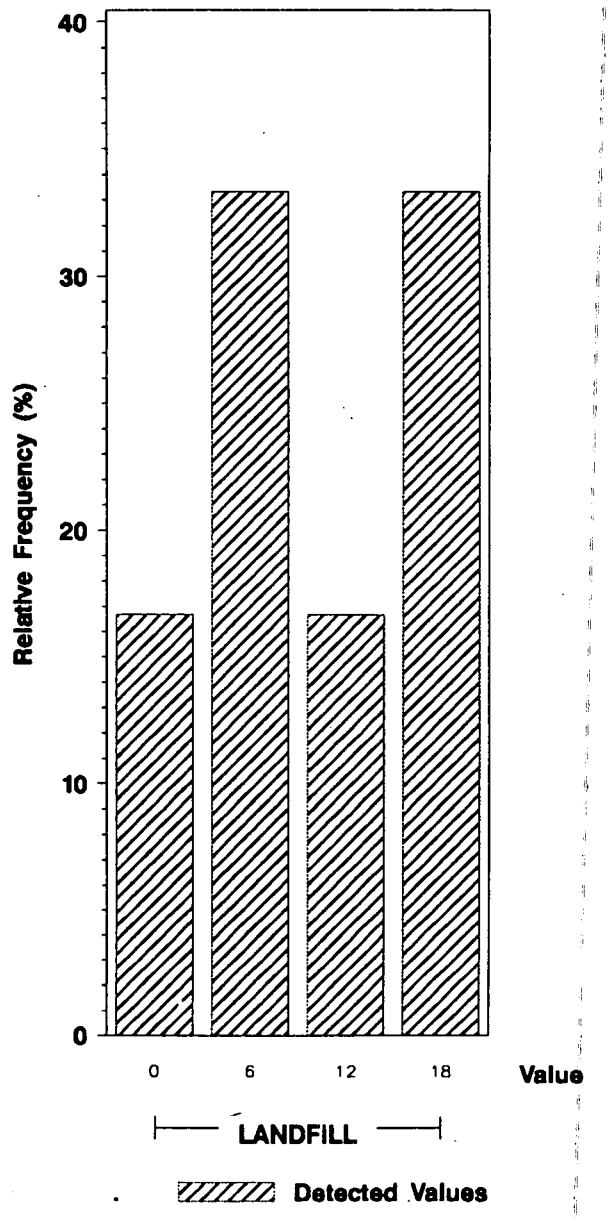
ANALYTE=GROSS BETA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total GROSS BETA – DISSOLVED (pCi/L) in Groundwater

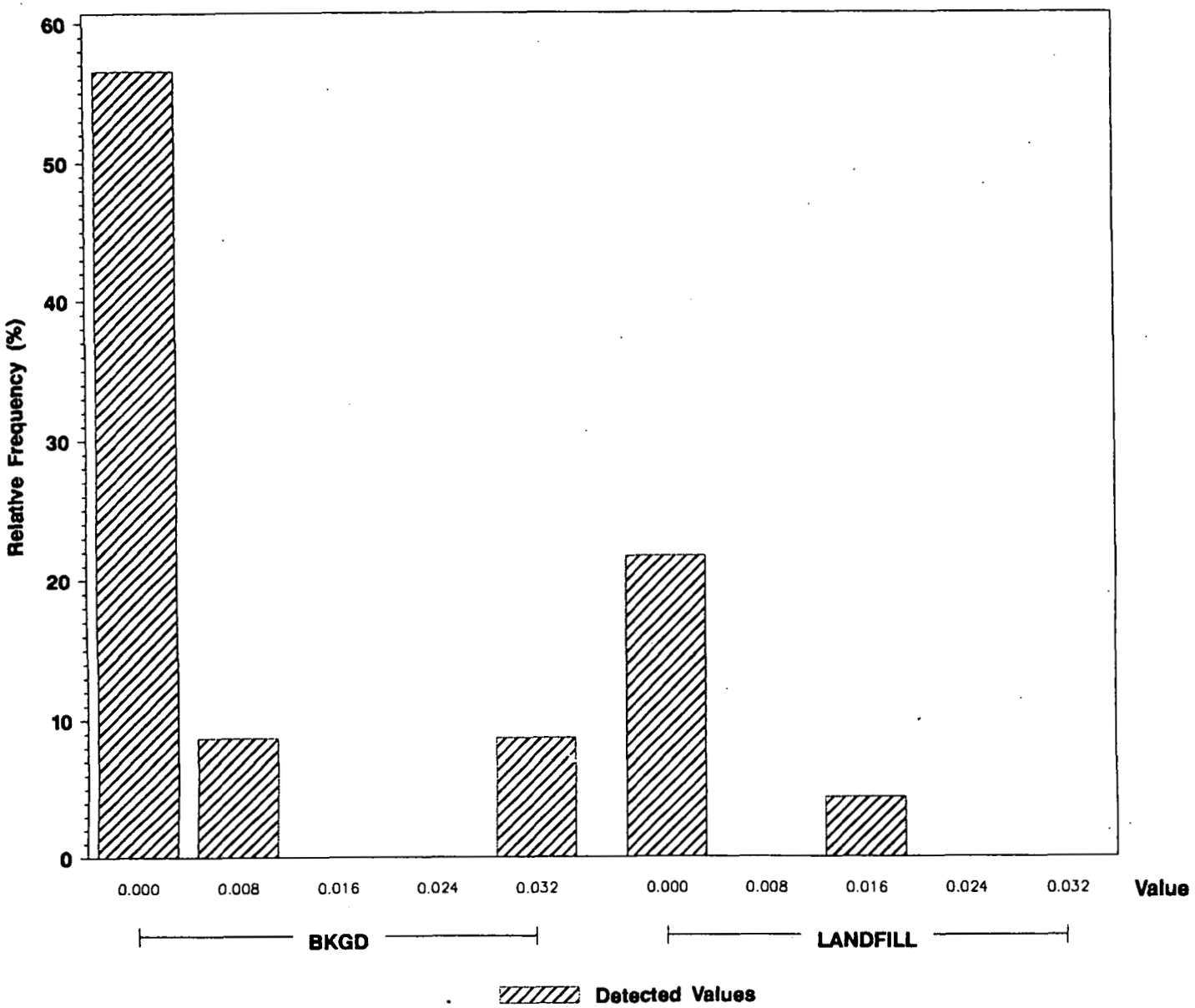
ANALYTE=GROSS BETA – DISSOLVED



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total PLUTONIUM-238 (pCi/L) in Groundwater

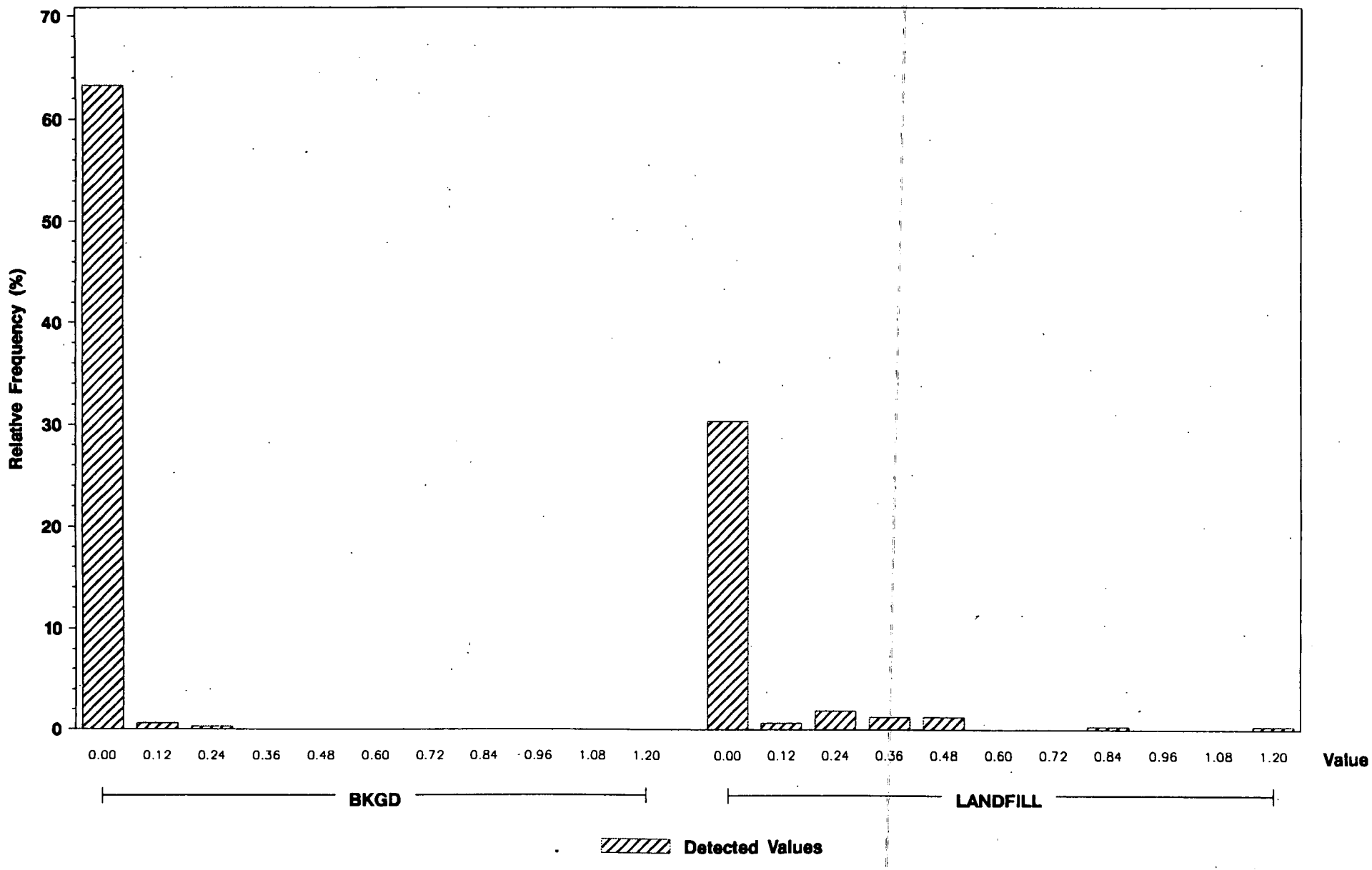
ANALYTE = PLUTONIUM-238



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Groundwater

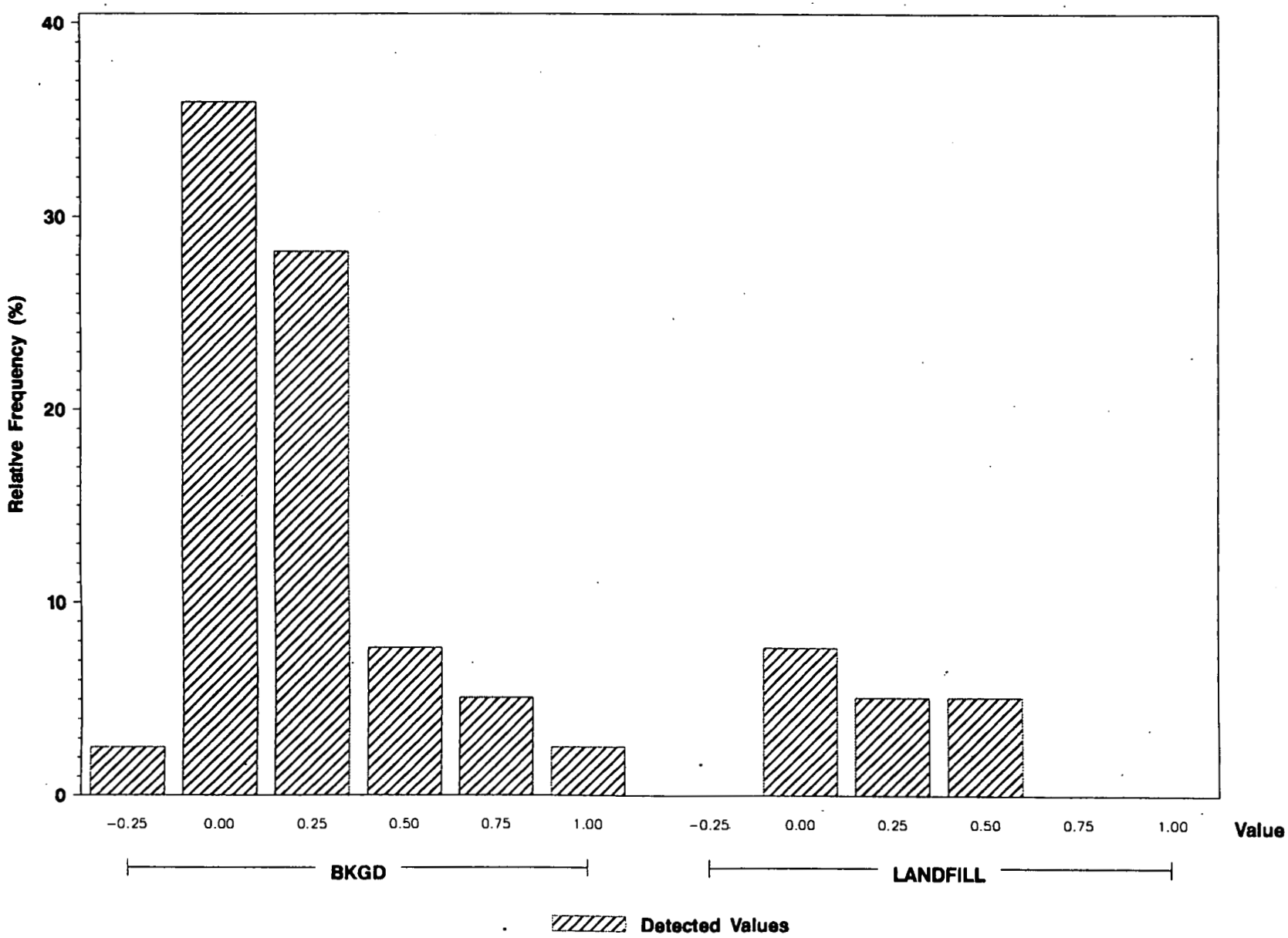
ANALYTE = PLUTONIUM – 239/240



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Groundwater

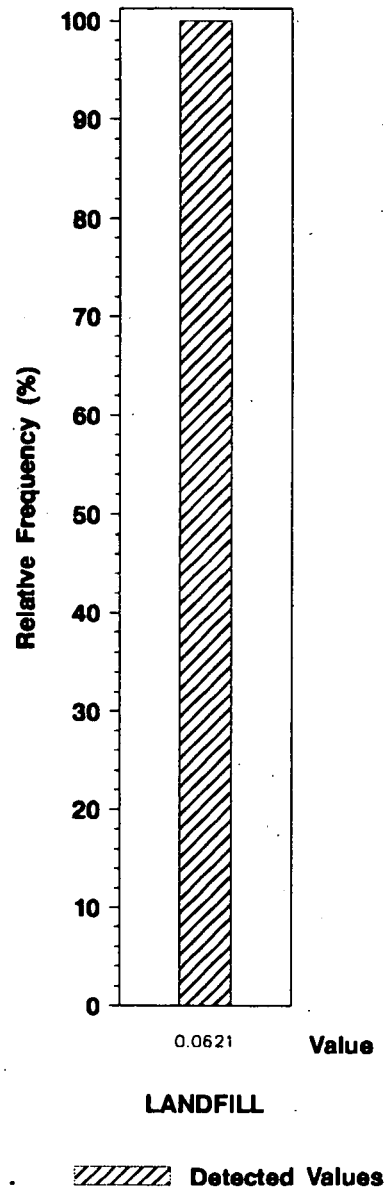
ANALYTE = STRONTIUM – 89,90



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total STRONTIUM – 90 (pCi/L) in Groundwater

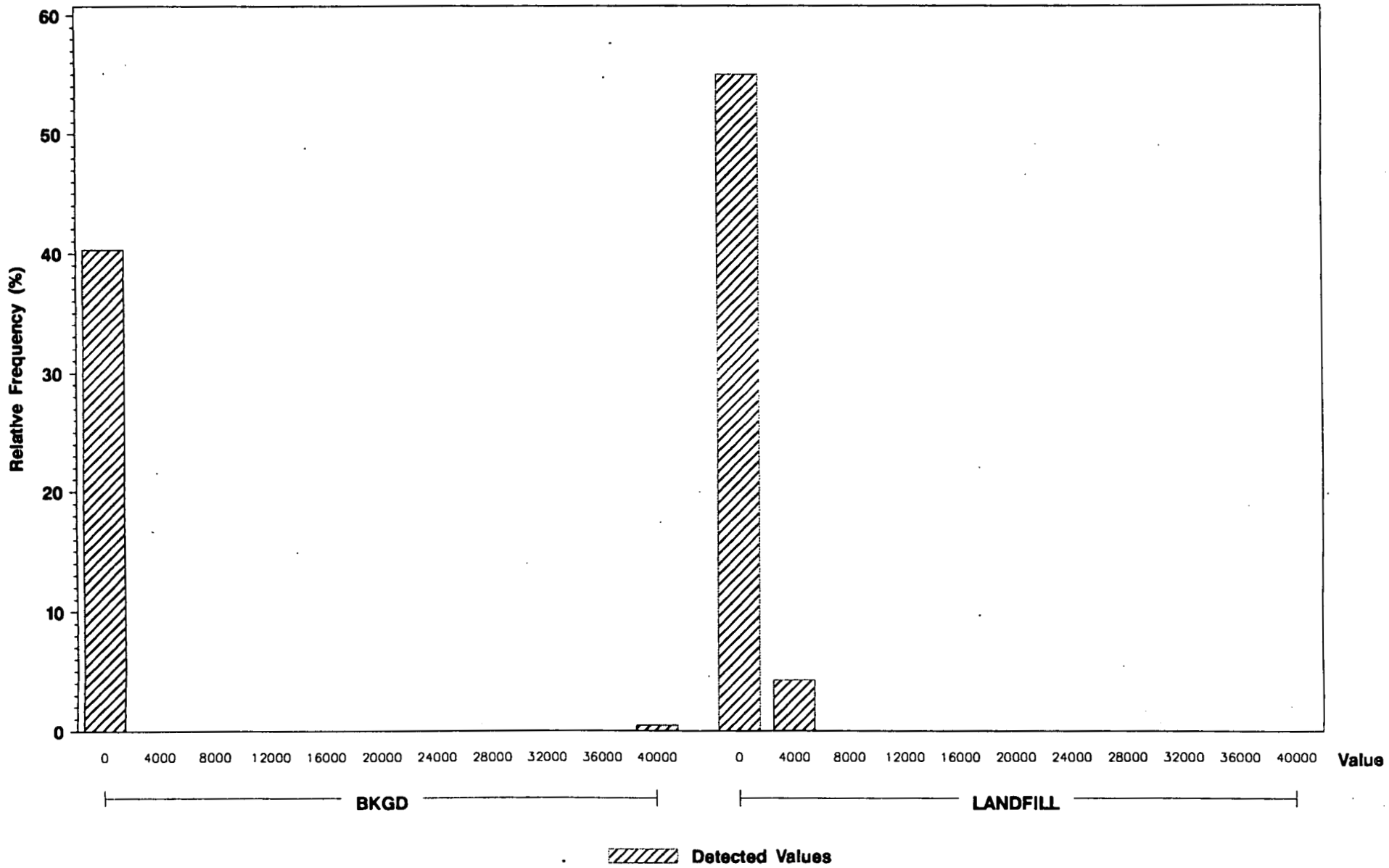
ANALYTE = STRONTIUM – 90



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total TRITIUM (pCi/L) in Groundwater

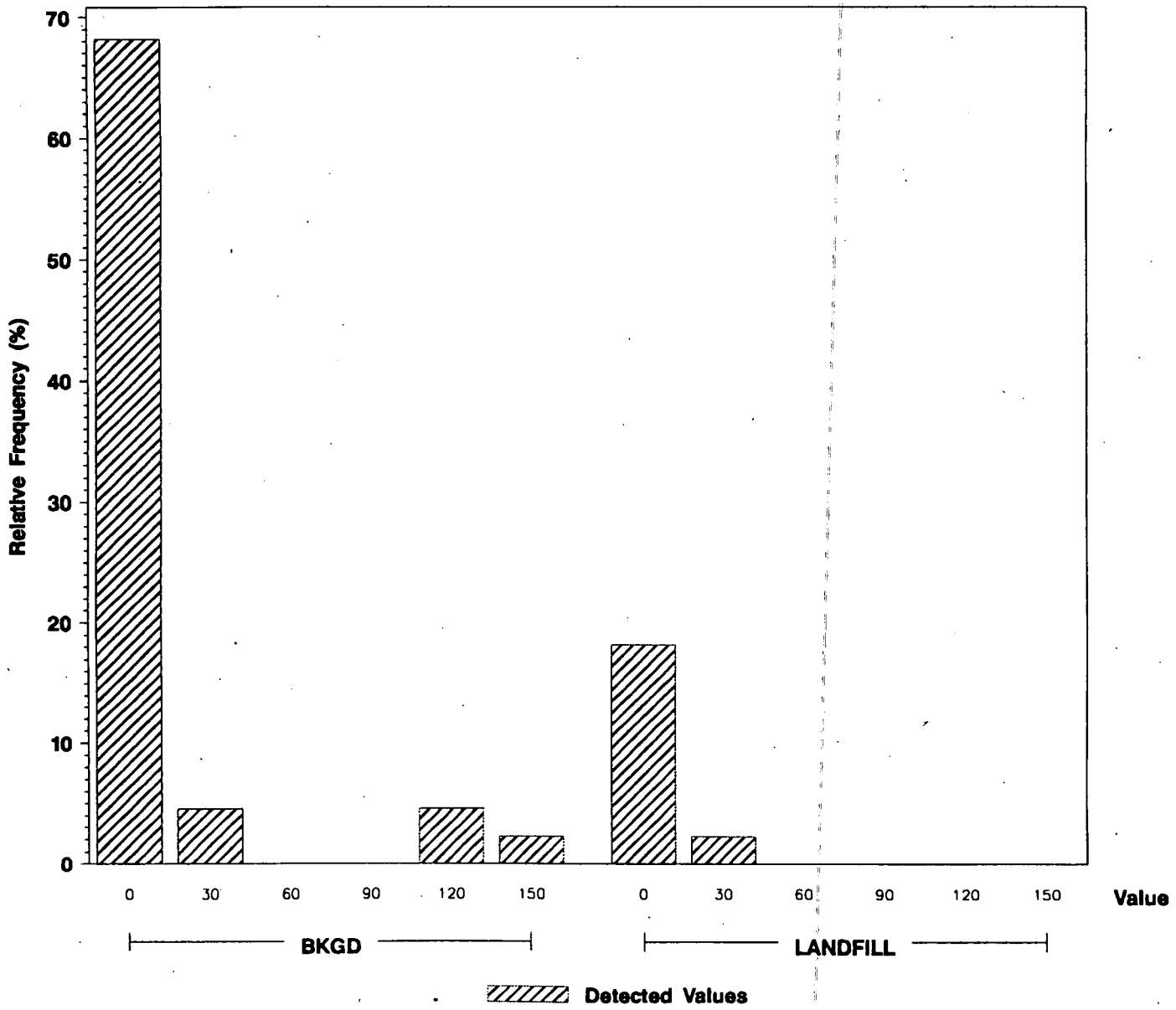
ANALYTE = TRITIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Groundwater

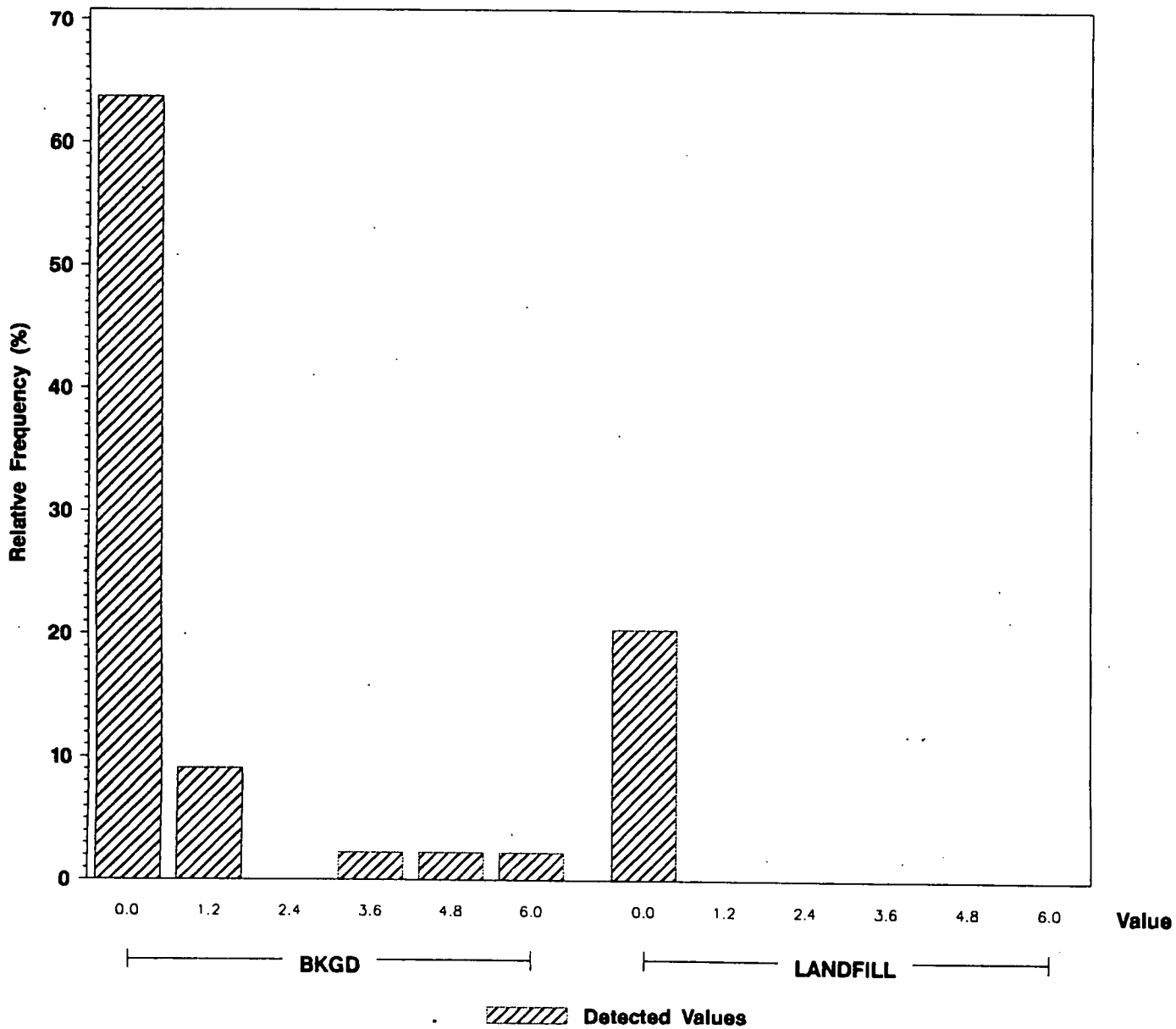
ANALYTE = URANIUM – 233, – 234



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total URANIUM – 235 (pCi/L) in Groundwater

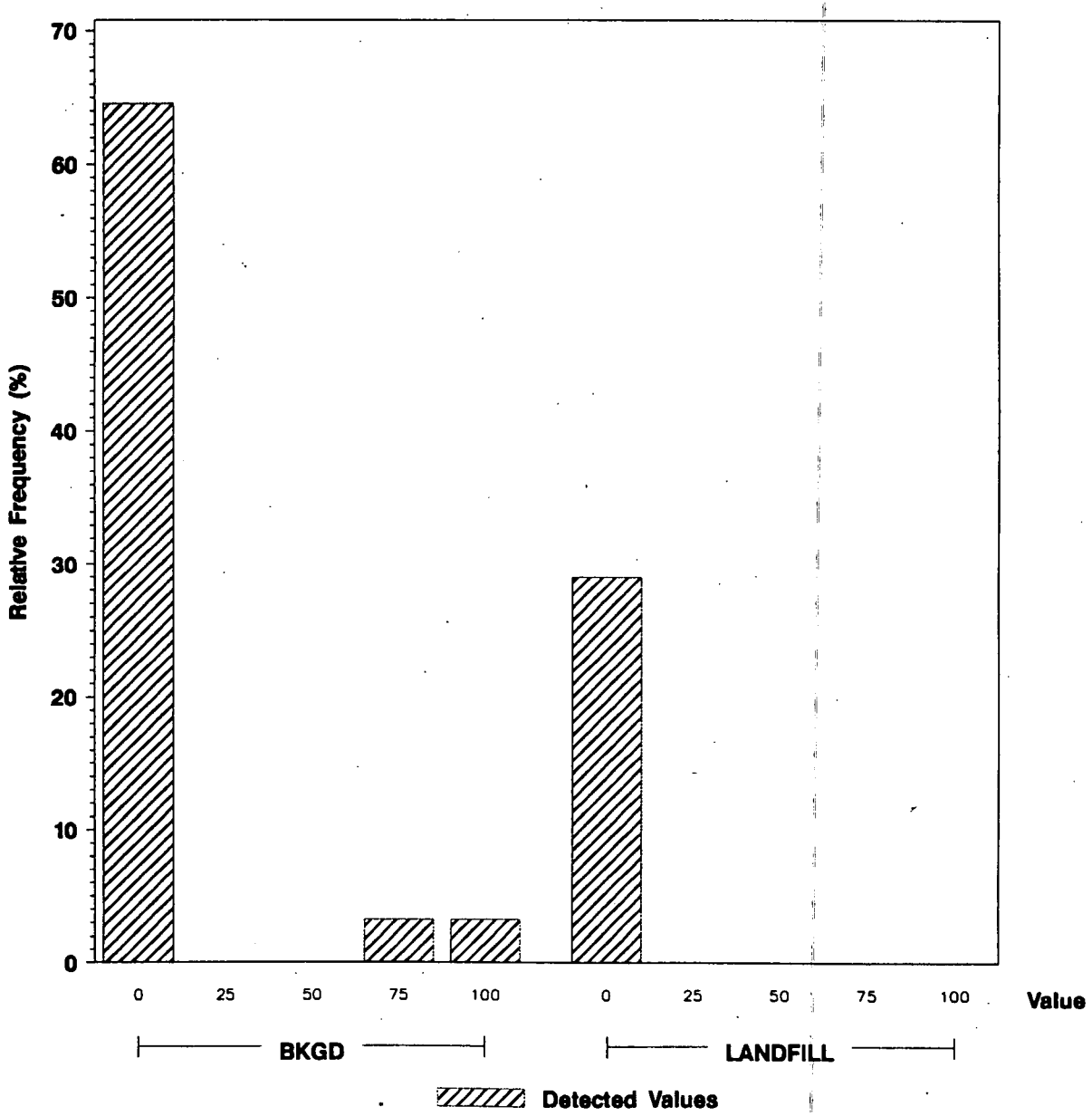
ANALYTE = URANIUM – 235



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Total URANIUM – 238 (pCi/L) in Groundwater

ANALYTE = URANIUM – 238



# Groundwater

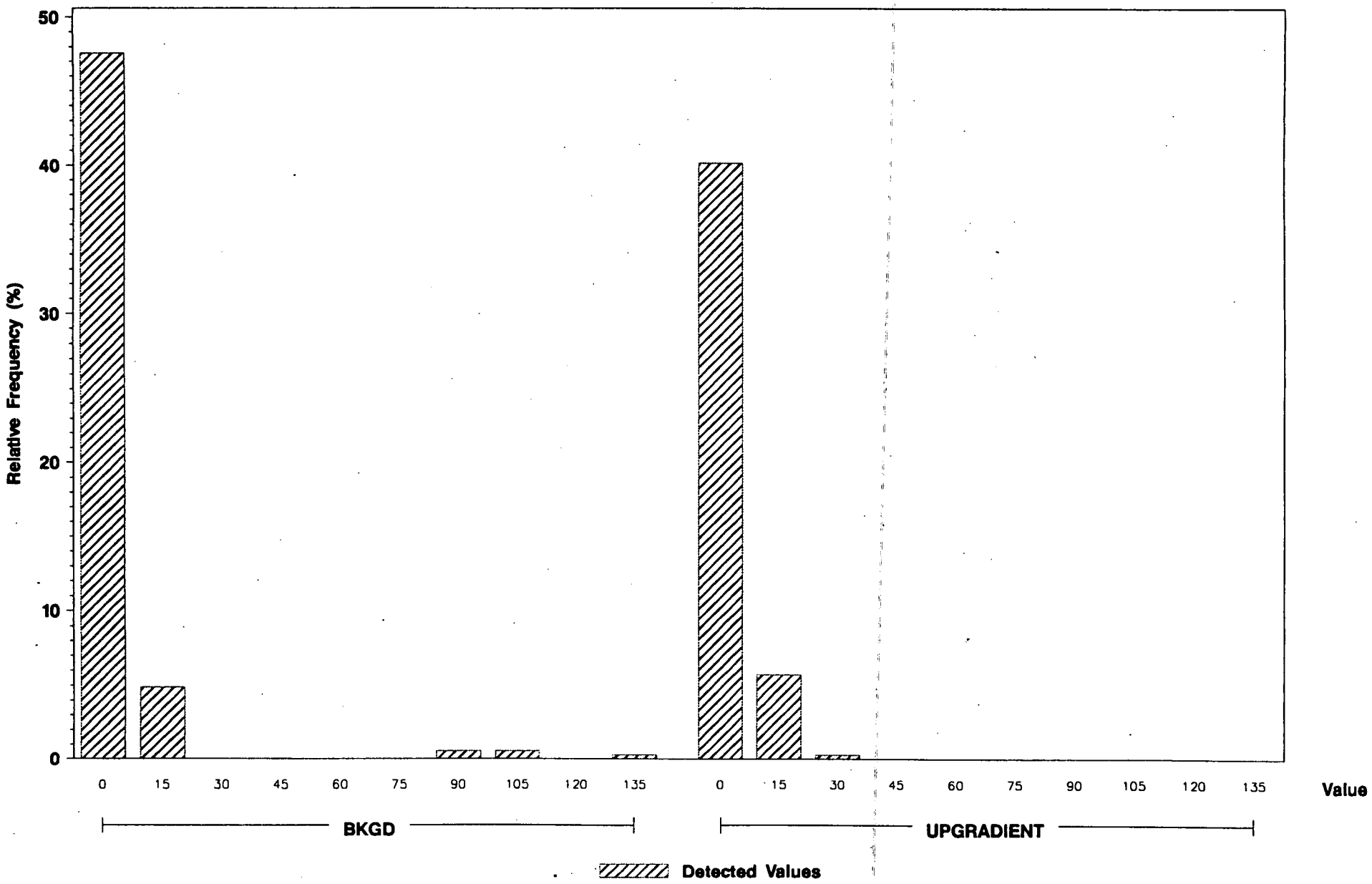
# (Dissolved)

# Background vs. OU 7 Upgradient UHSU

# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved URANIUM – 238 (pCi/L) in Groundwater

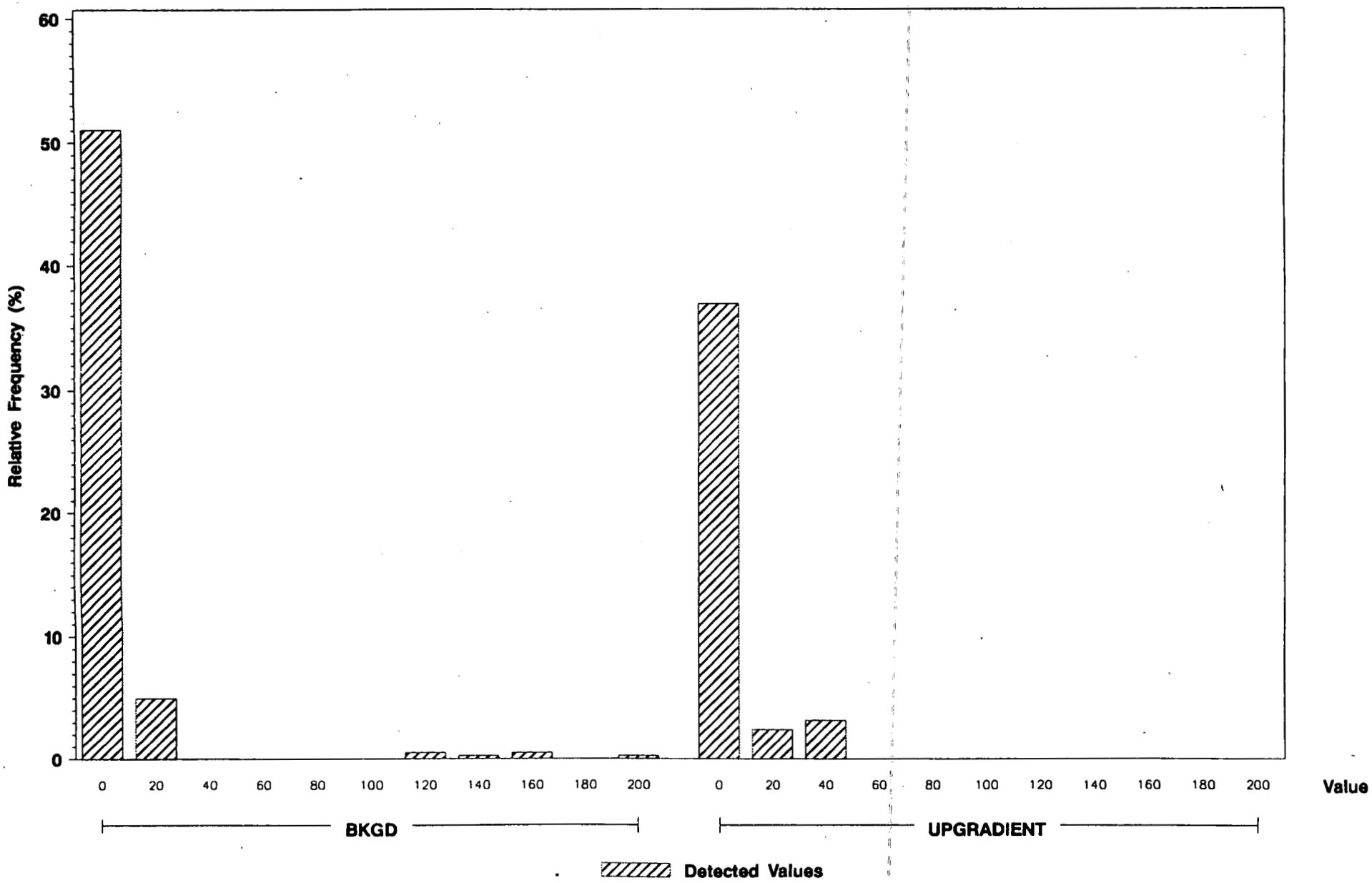
ANALYTE = URANIUM – 238



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Groundwater

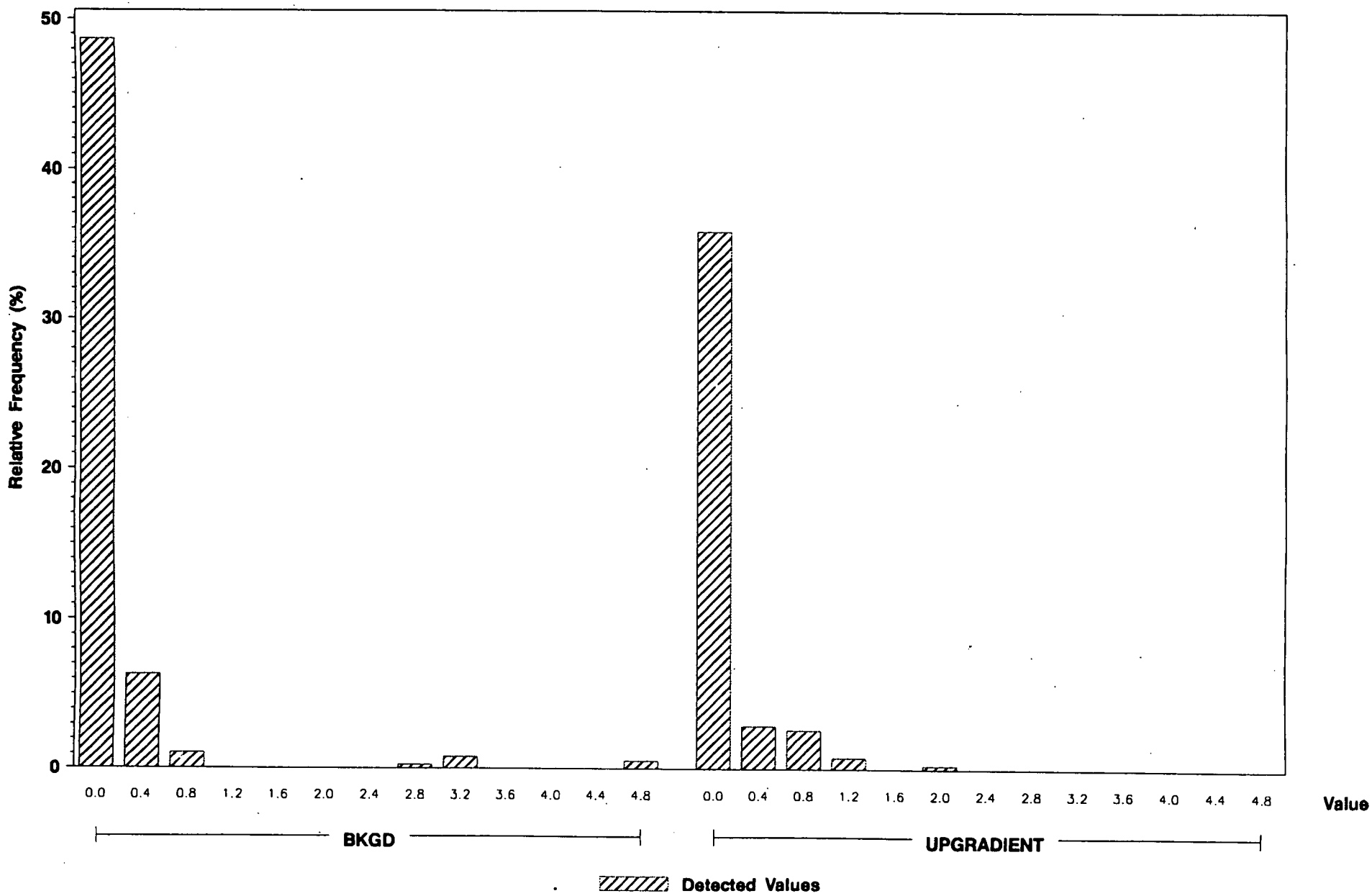
ANALYTE = URANIUM-233,-234



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved URANIUM – 235 (pCi/L) in Groundwater

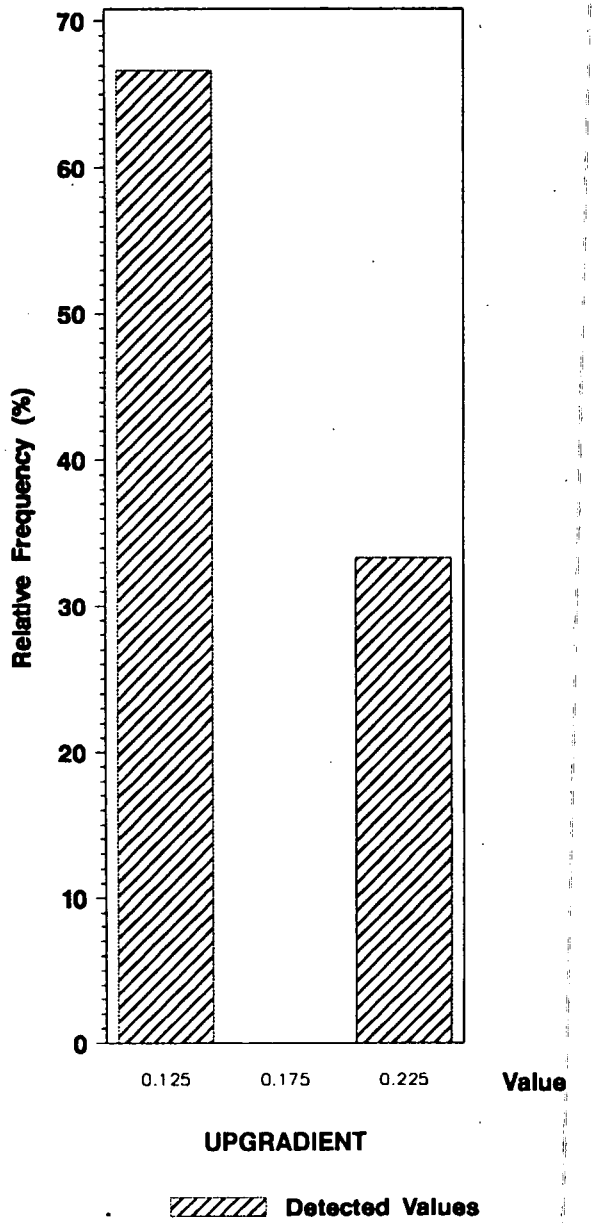
ANALYTE = URANIUM – 235



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved STRONTIUM-90 (pCi/L) in Groundwater

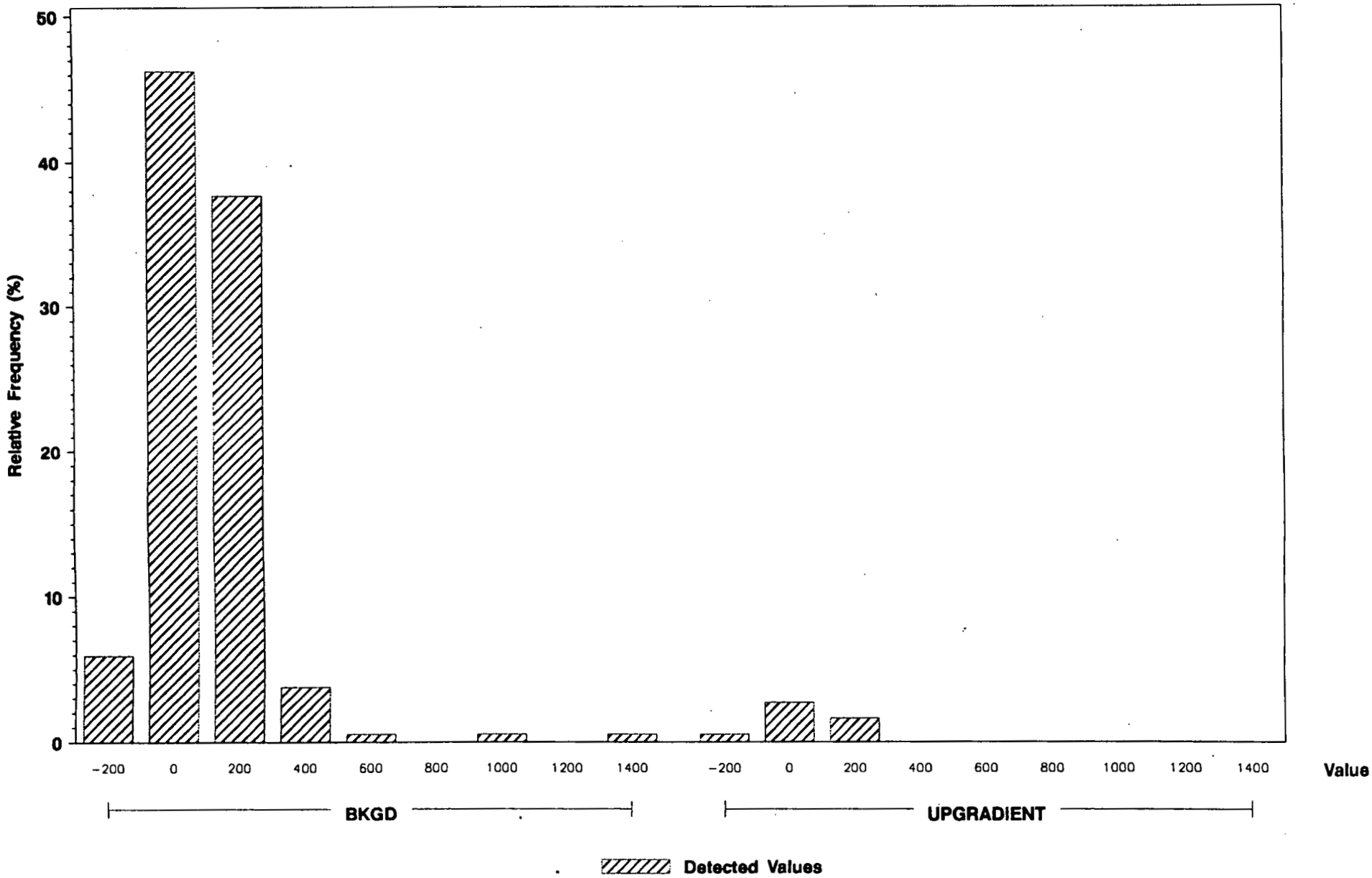
ANALYTE = STRONTIUM-90



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Groundwater

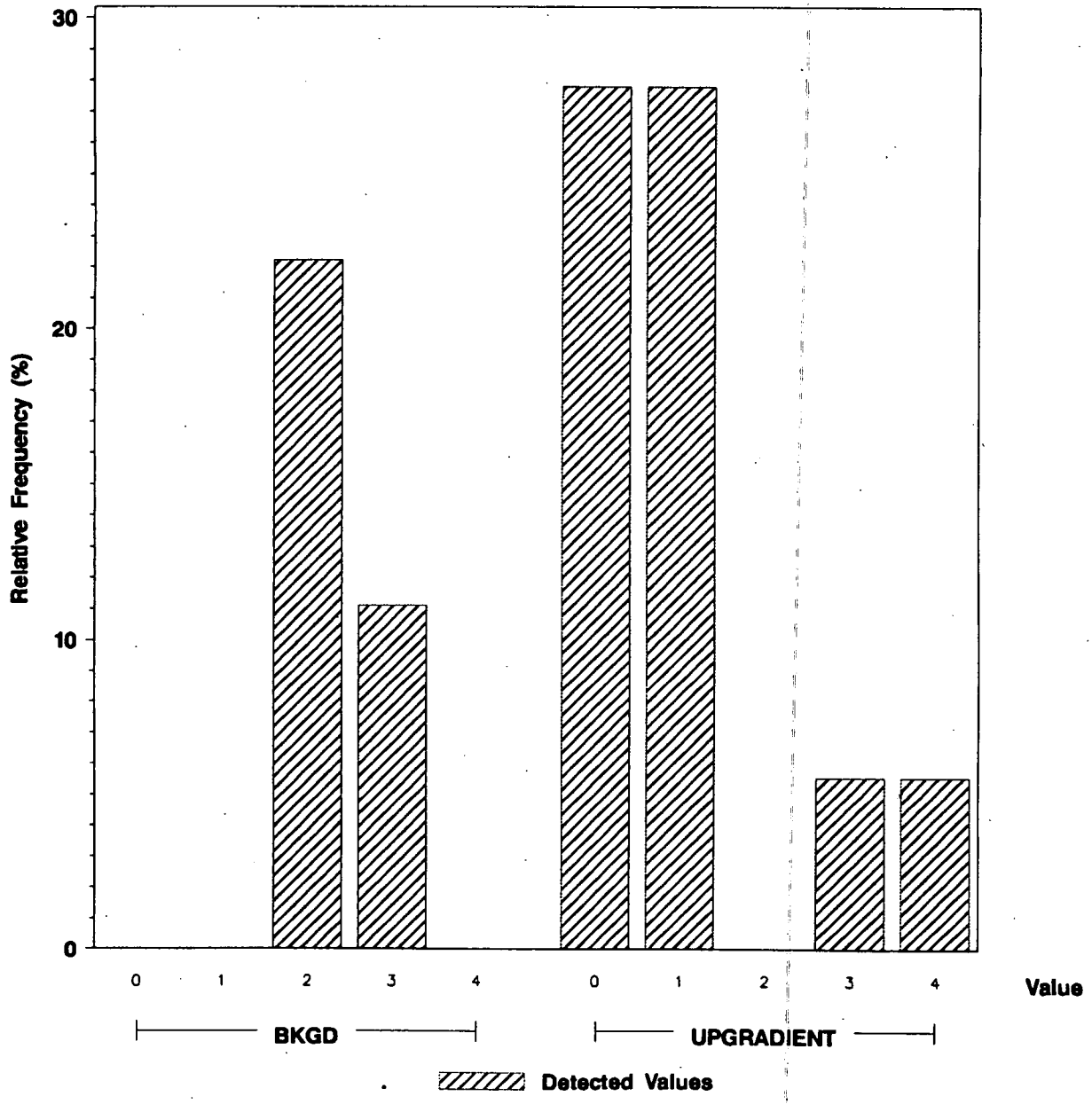
ANALYTE = TRITIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved RADIUM – 228 (pCi/L) in Groundwater

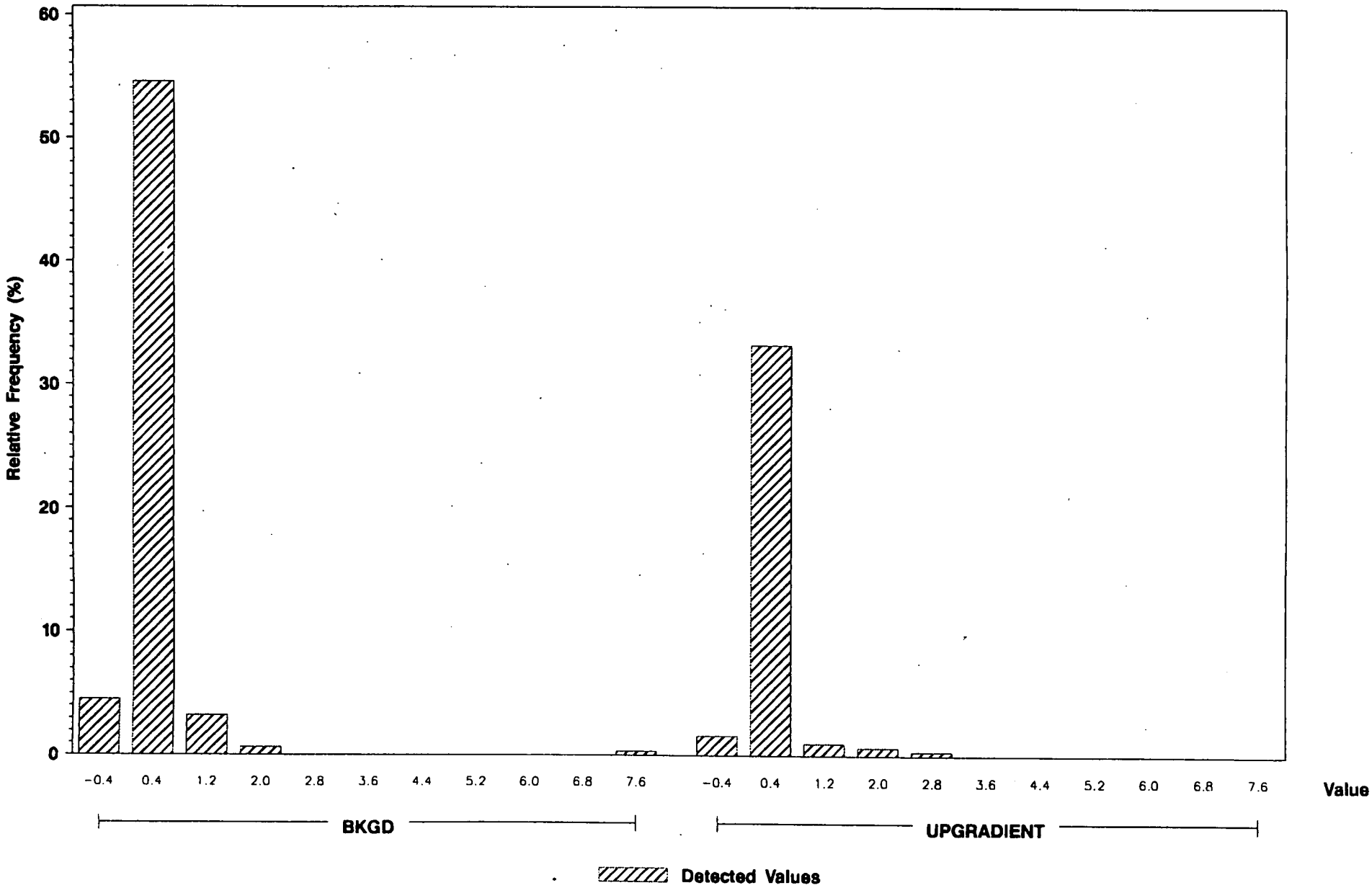
ANALYTE = RADIUM – 228



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Groundwater

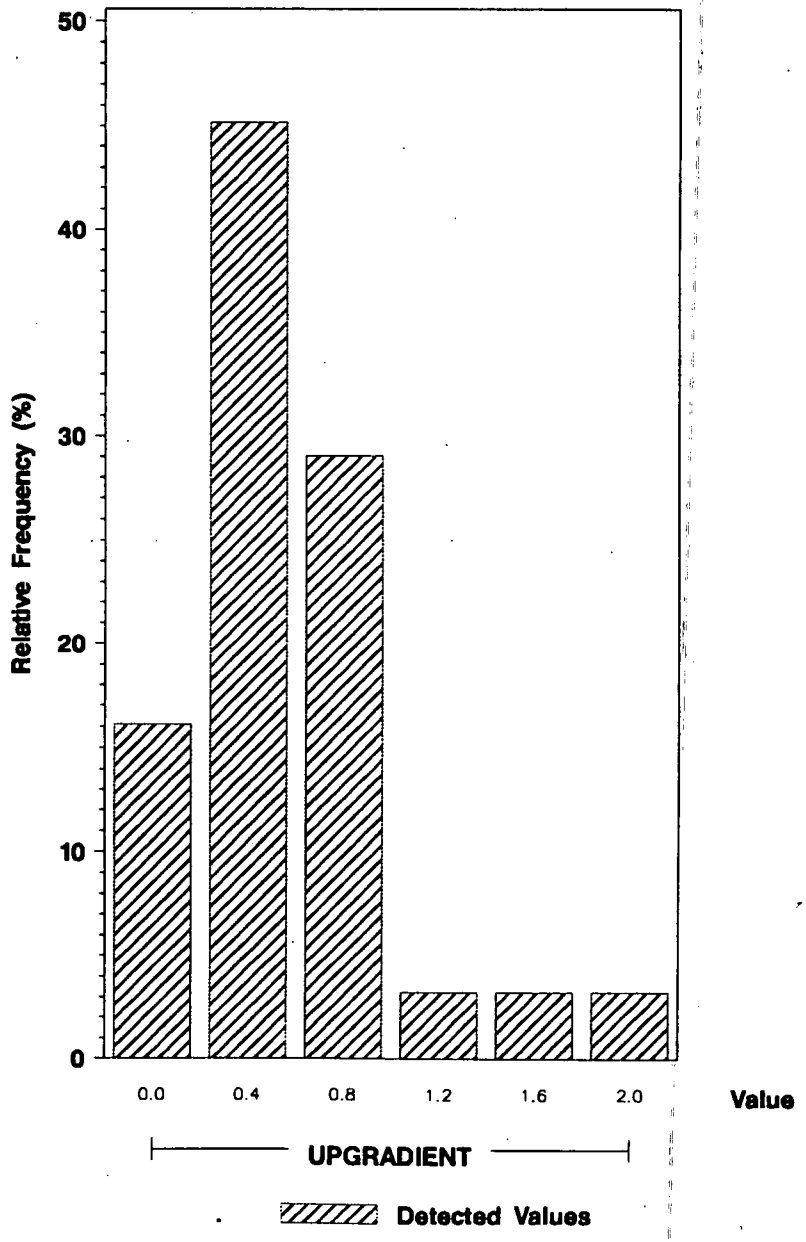
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved TOTAL RADIOCESIUM (pCi/L) in Groundwater

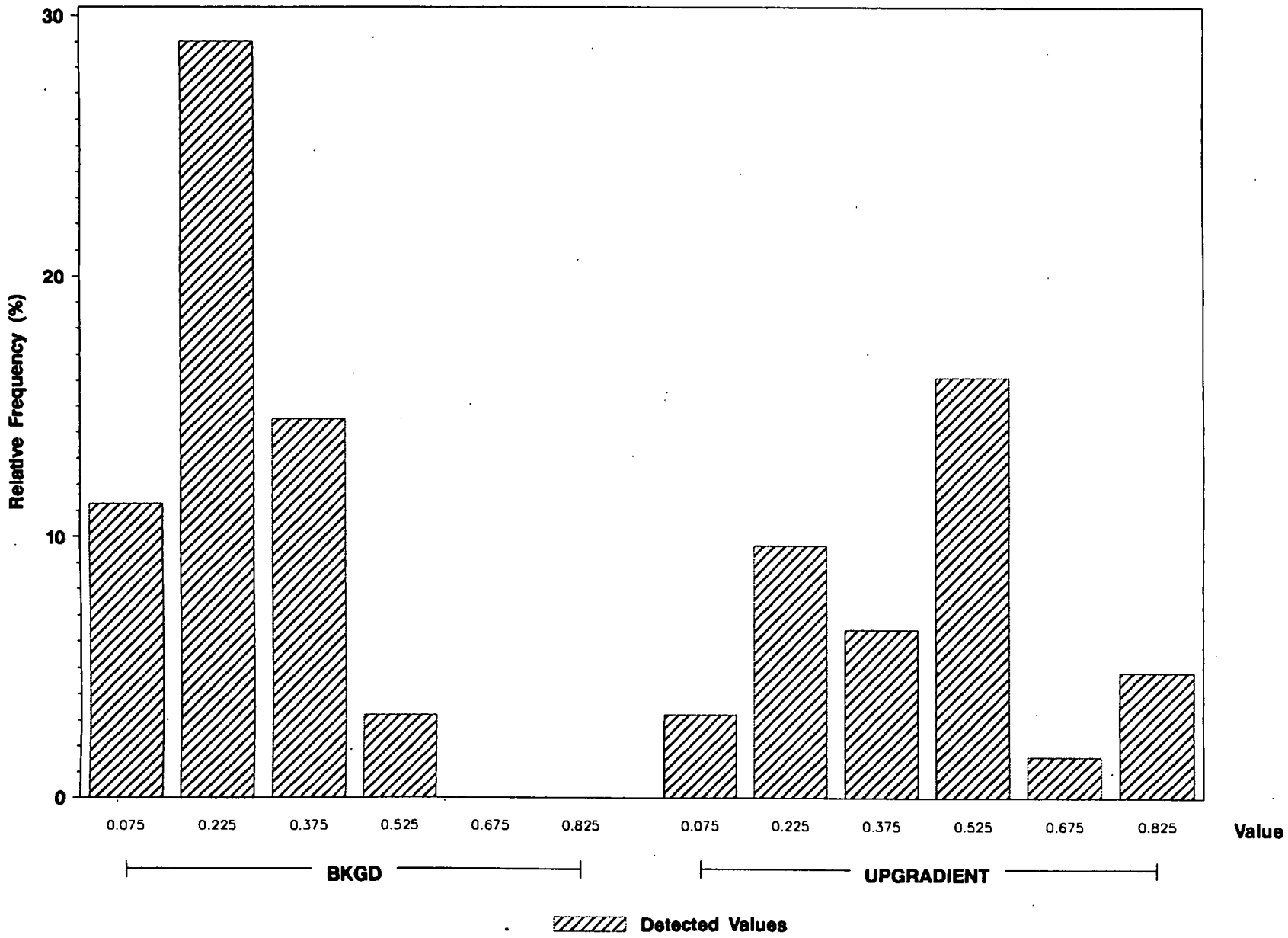
ANALYTE=TOTAL RADIOCESIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved RADIUM – 226 (pCi/L) in Groundwater

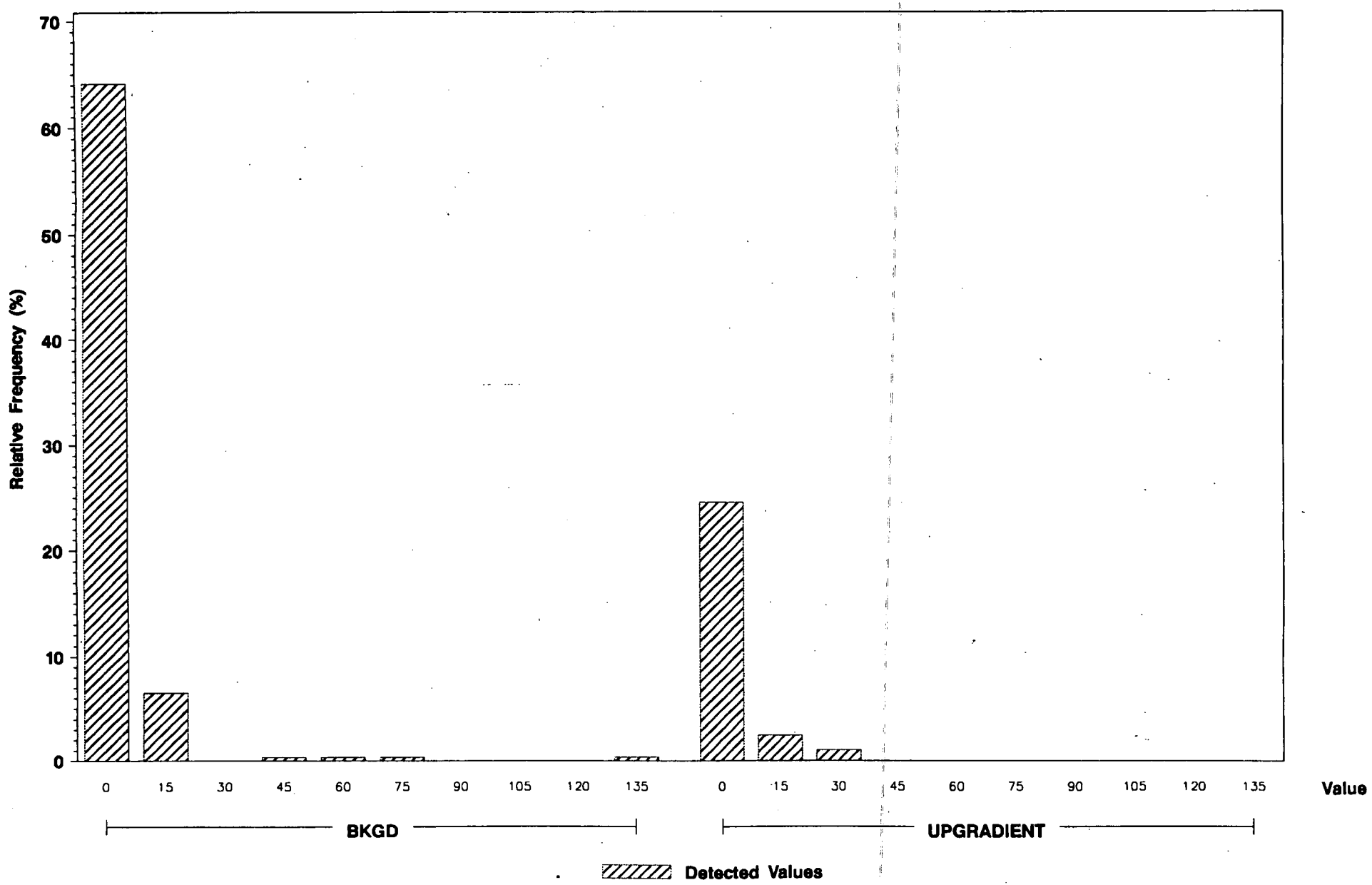
ANALYTE = RADIUM – 226



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Groundwater

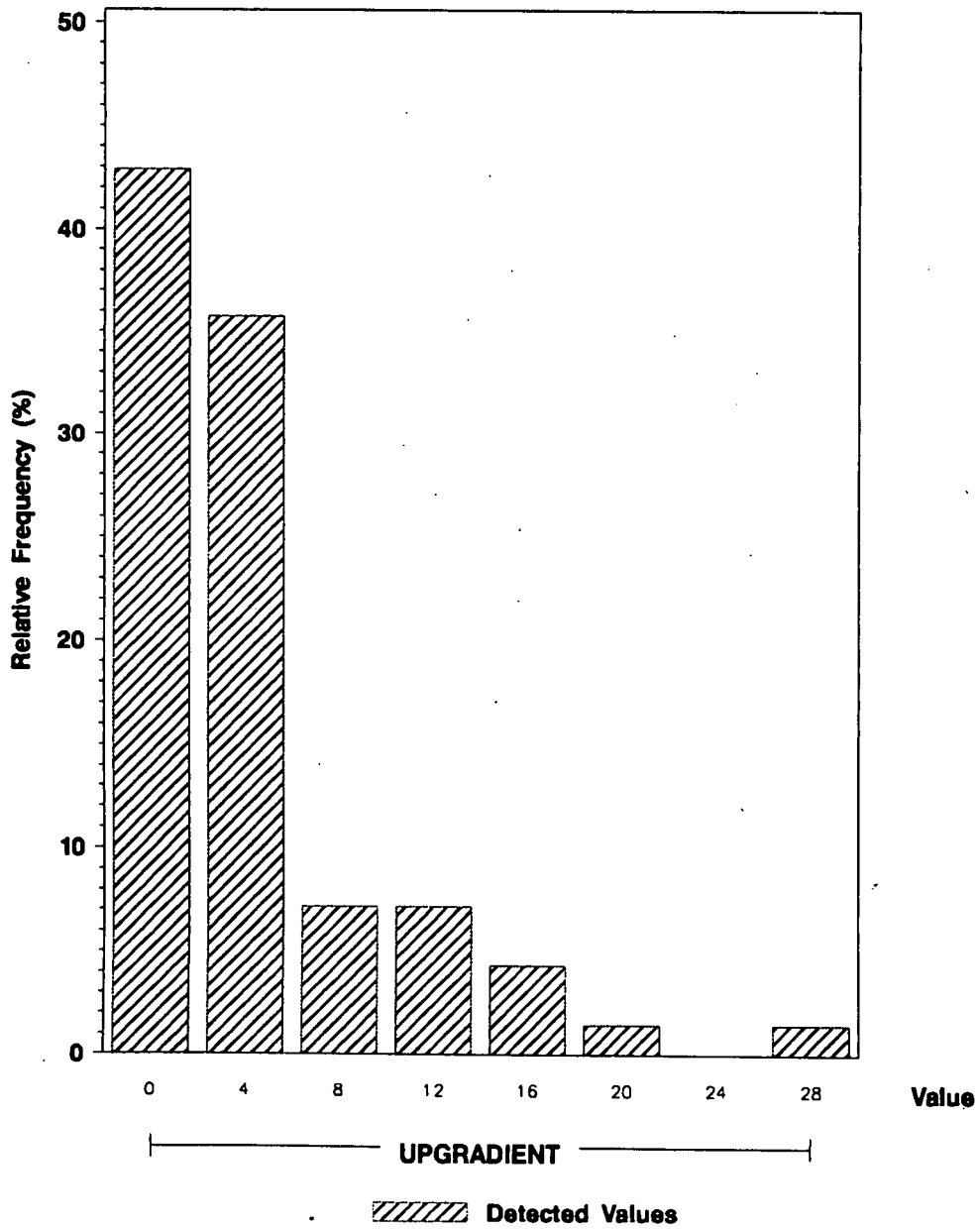
ANALYTE=GROSS BETA



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS BETA – DISSOLVED (pCi/L) in Groundwater

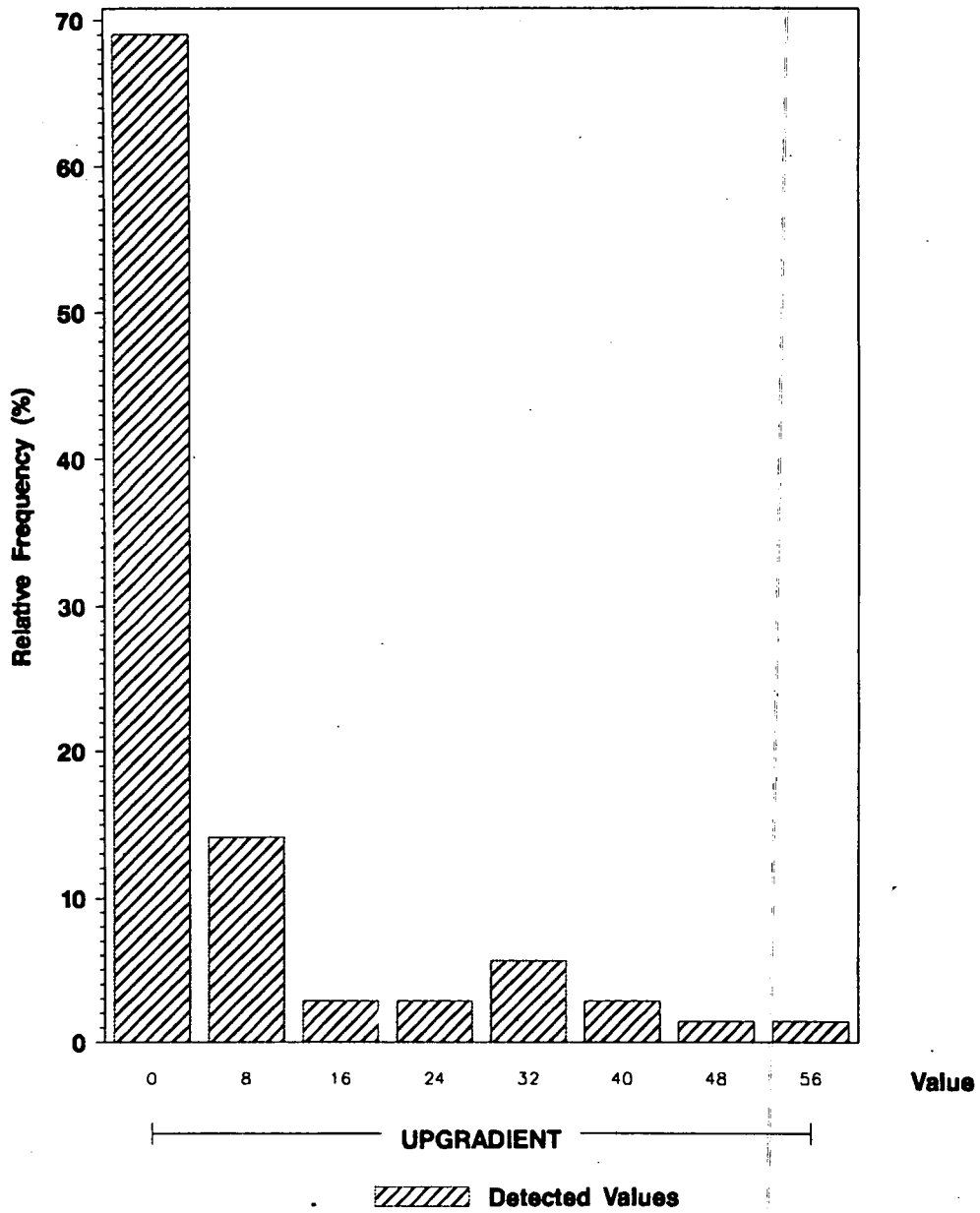
ANALYTE=GROSS BETA – DISSOLVED



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA – DISSOLVED (pCi/L) in Groundwater

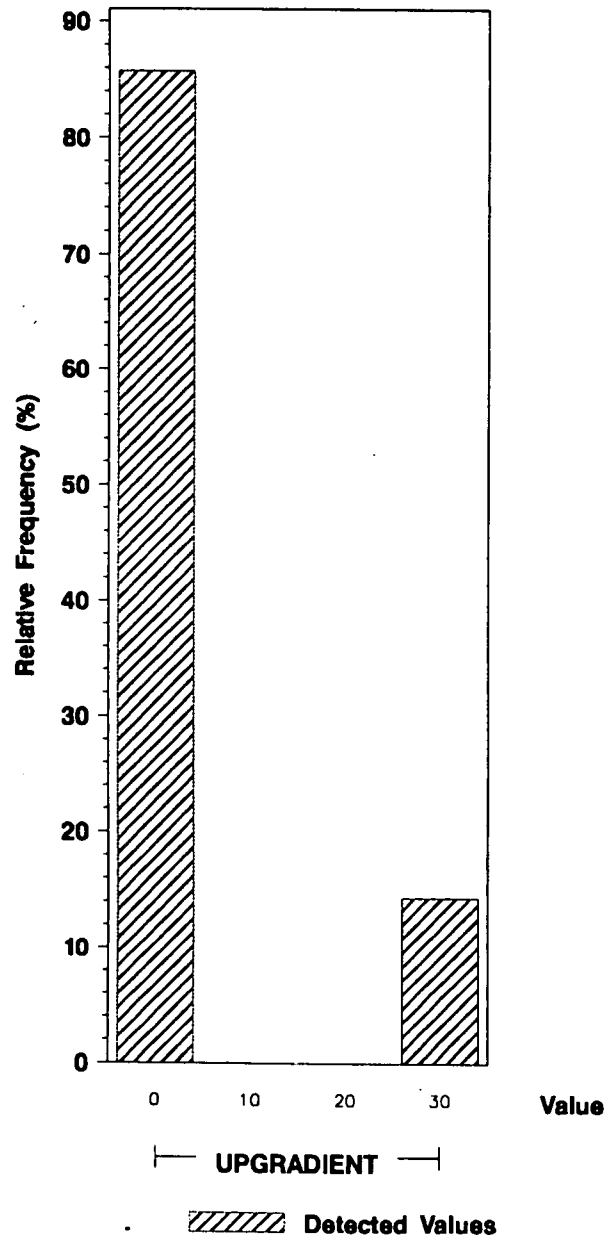
ANALYTE=GROSS ALPHA – DISSOLVED



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA – SUSPENDED (pCi/L) in Groundwater

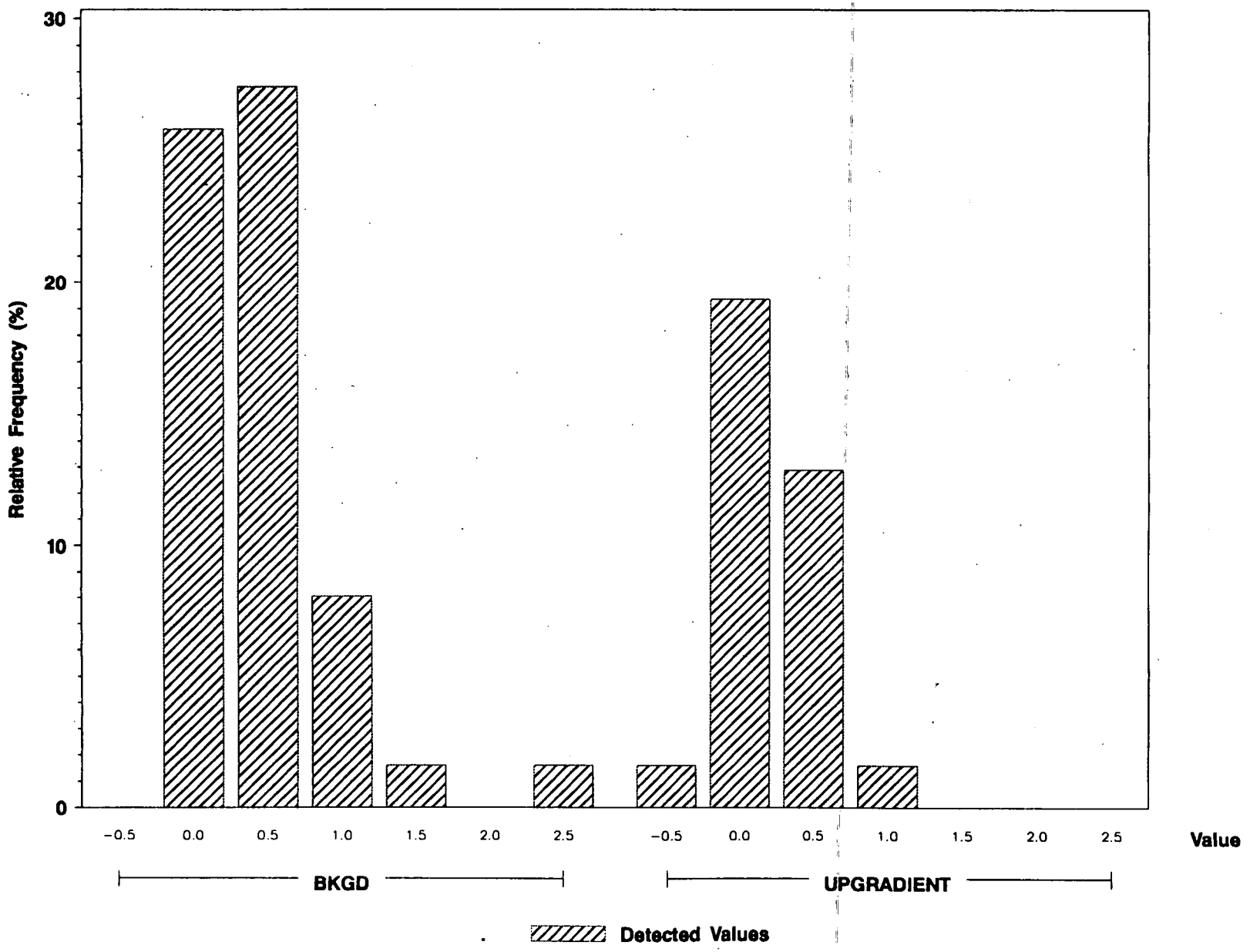
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Groundwater

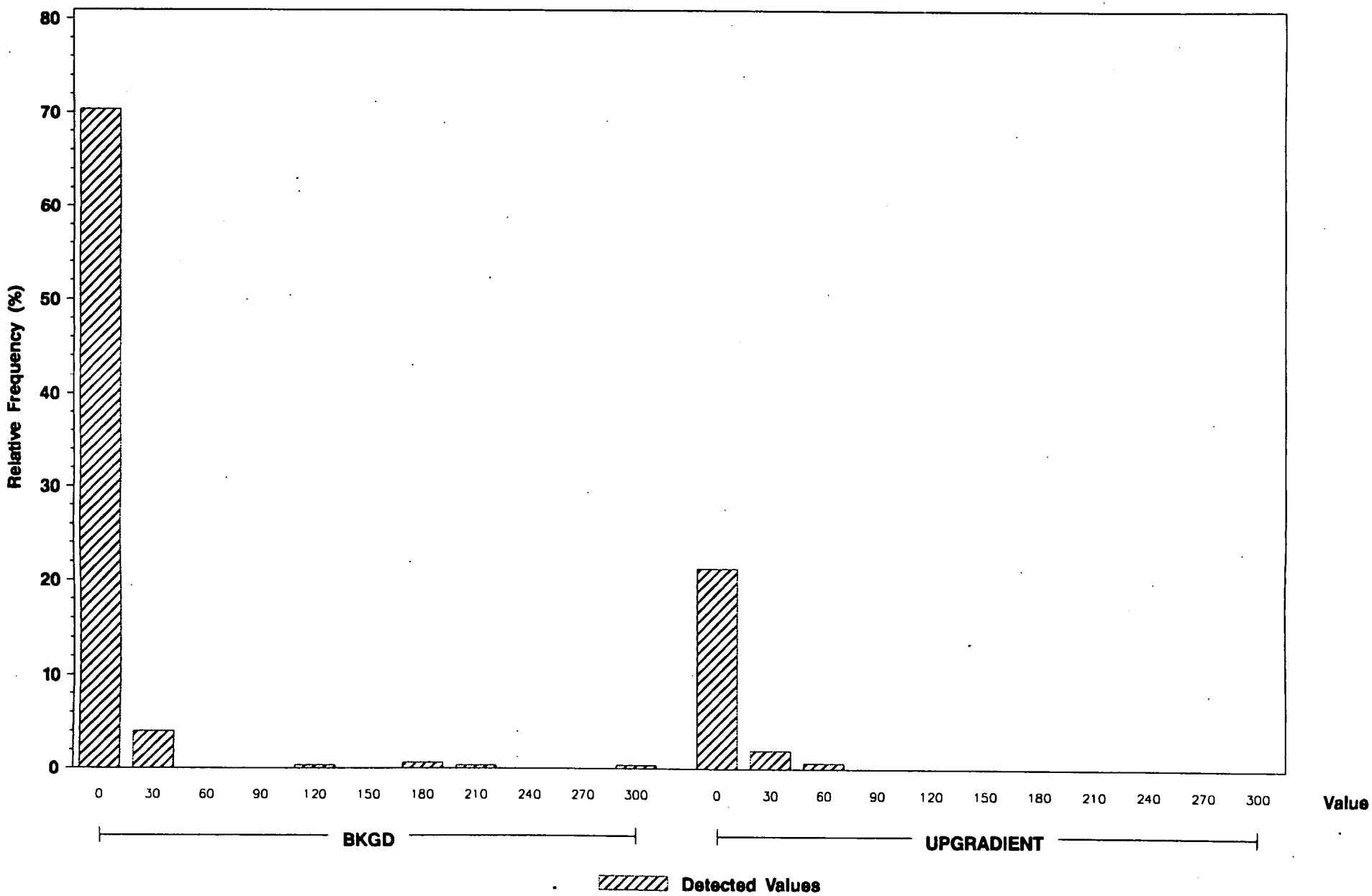
ANALYTE = CESIUM-137



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Groundwater

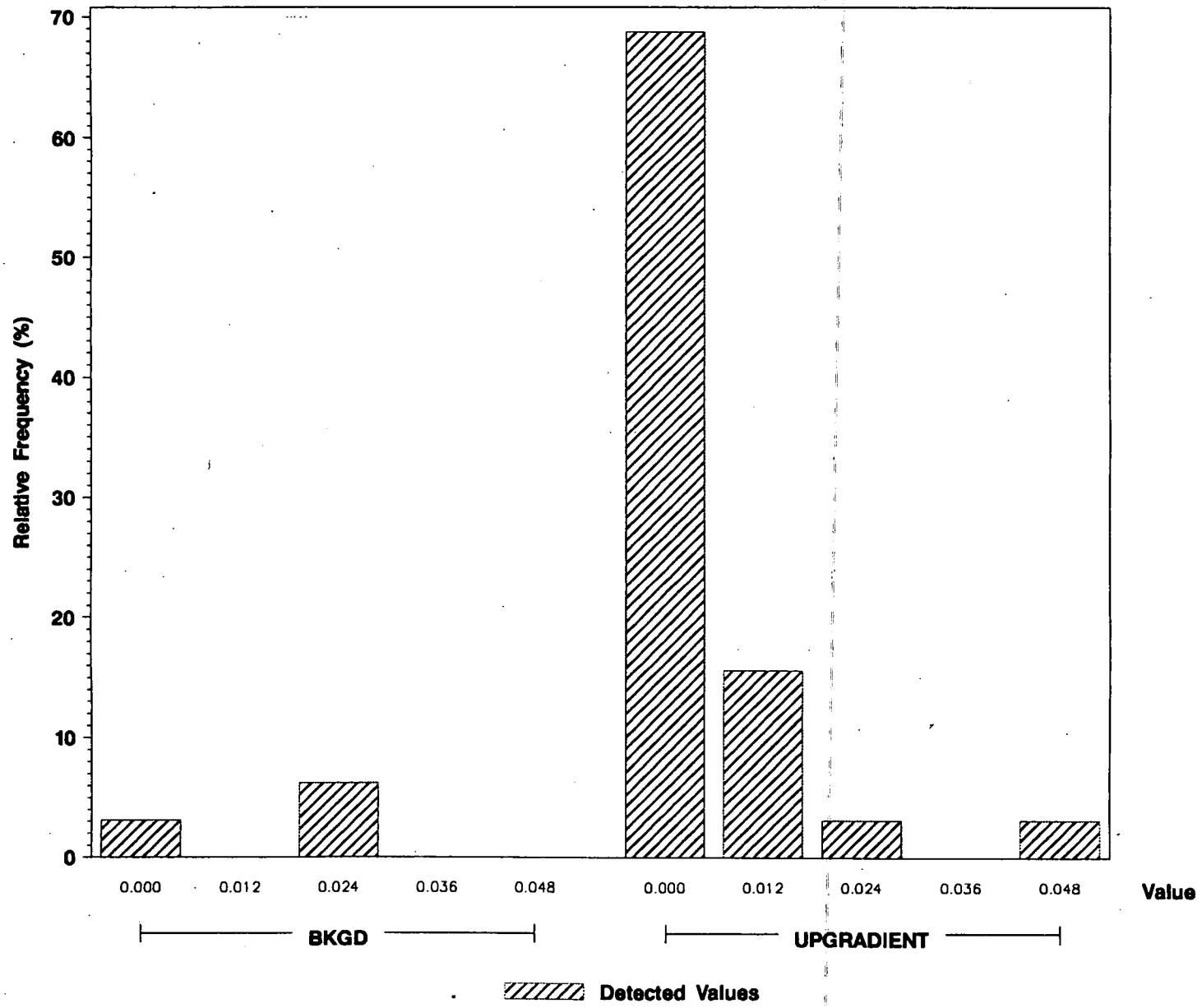
ANALYTE = GROSS ALPHA



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Groundwater

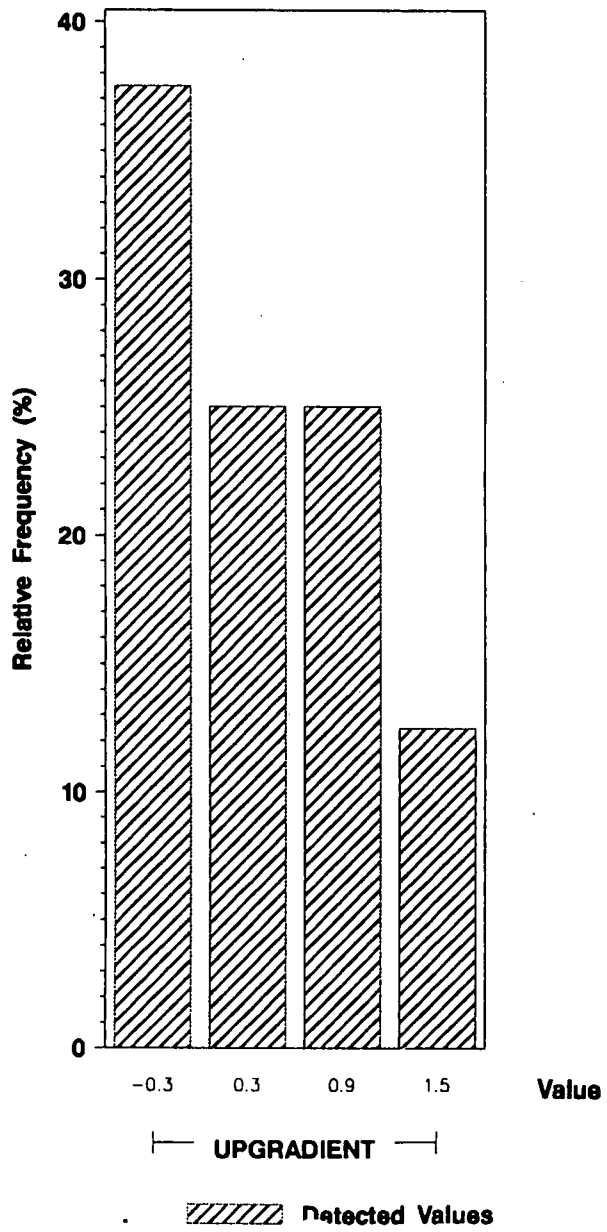
ANALYTE = AMERICIUM – 241



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Groundwater

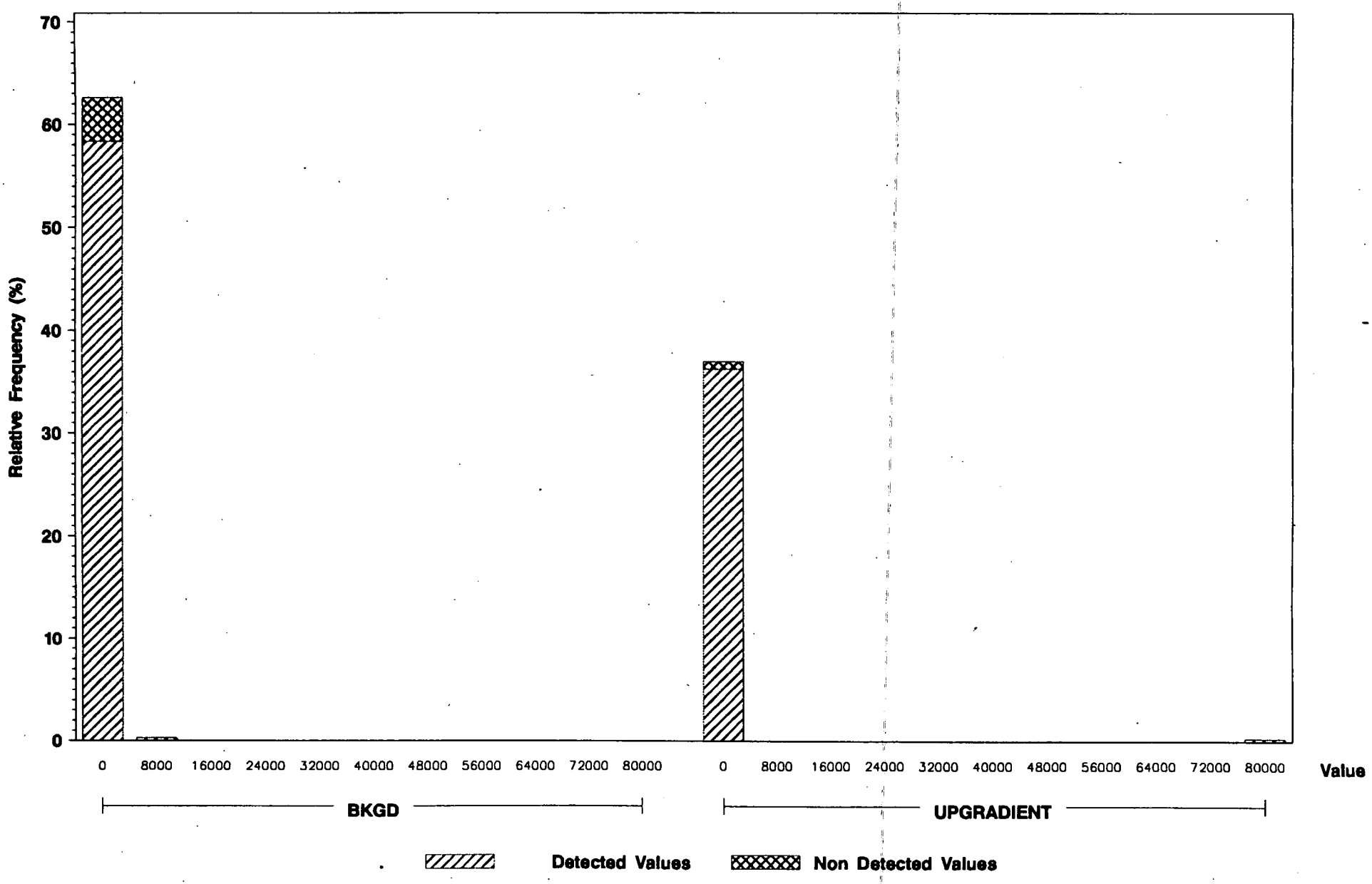
ANALYTE = CESIUM – 134



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Groundwater

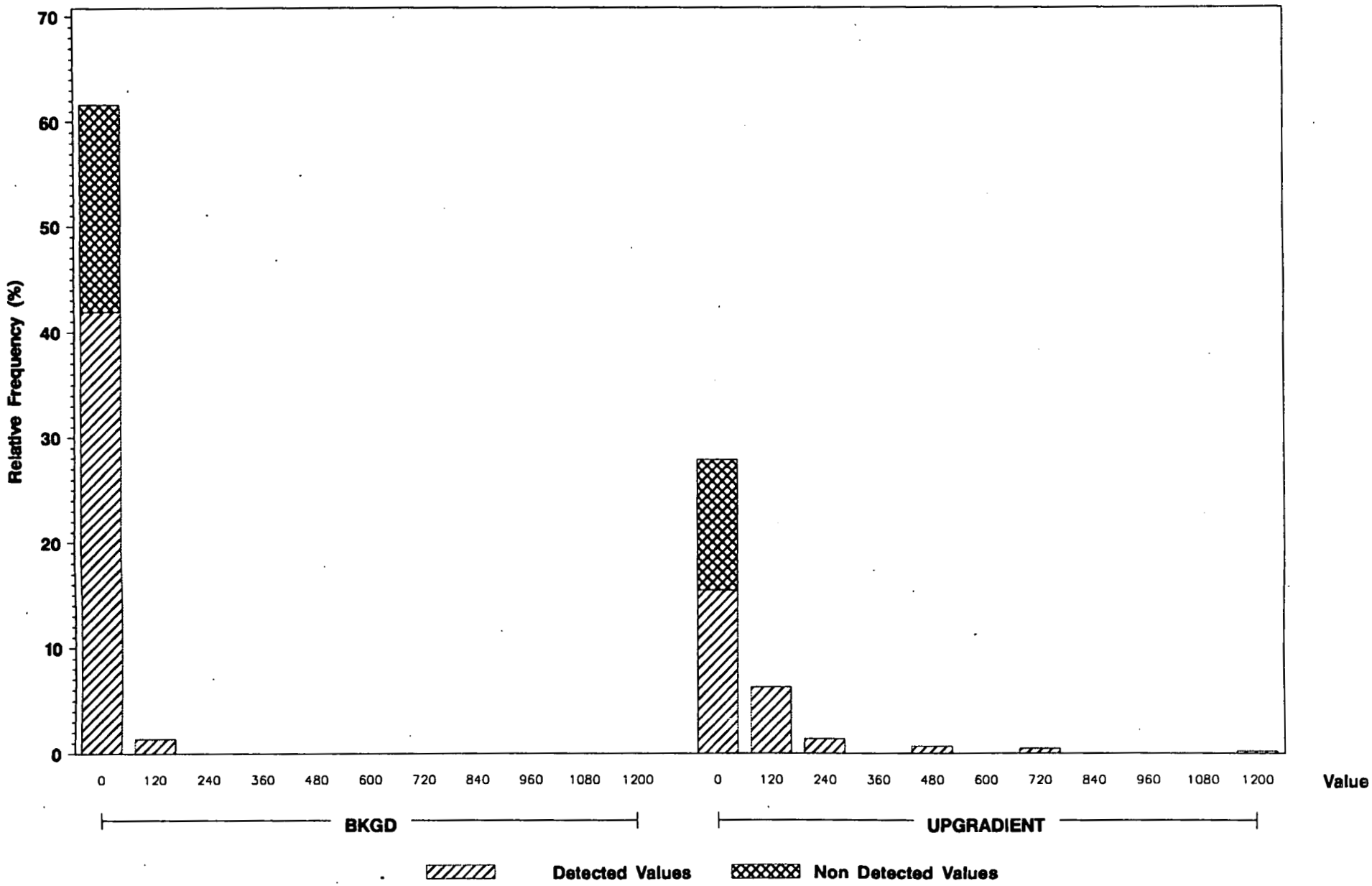
ANALYTE = STRONTIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved ZINC (ug/L) in Groundwater

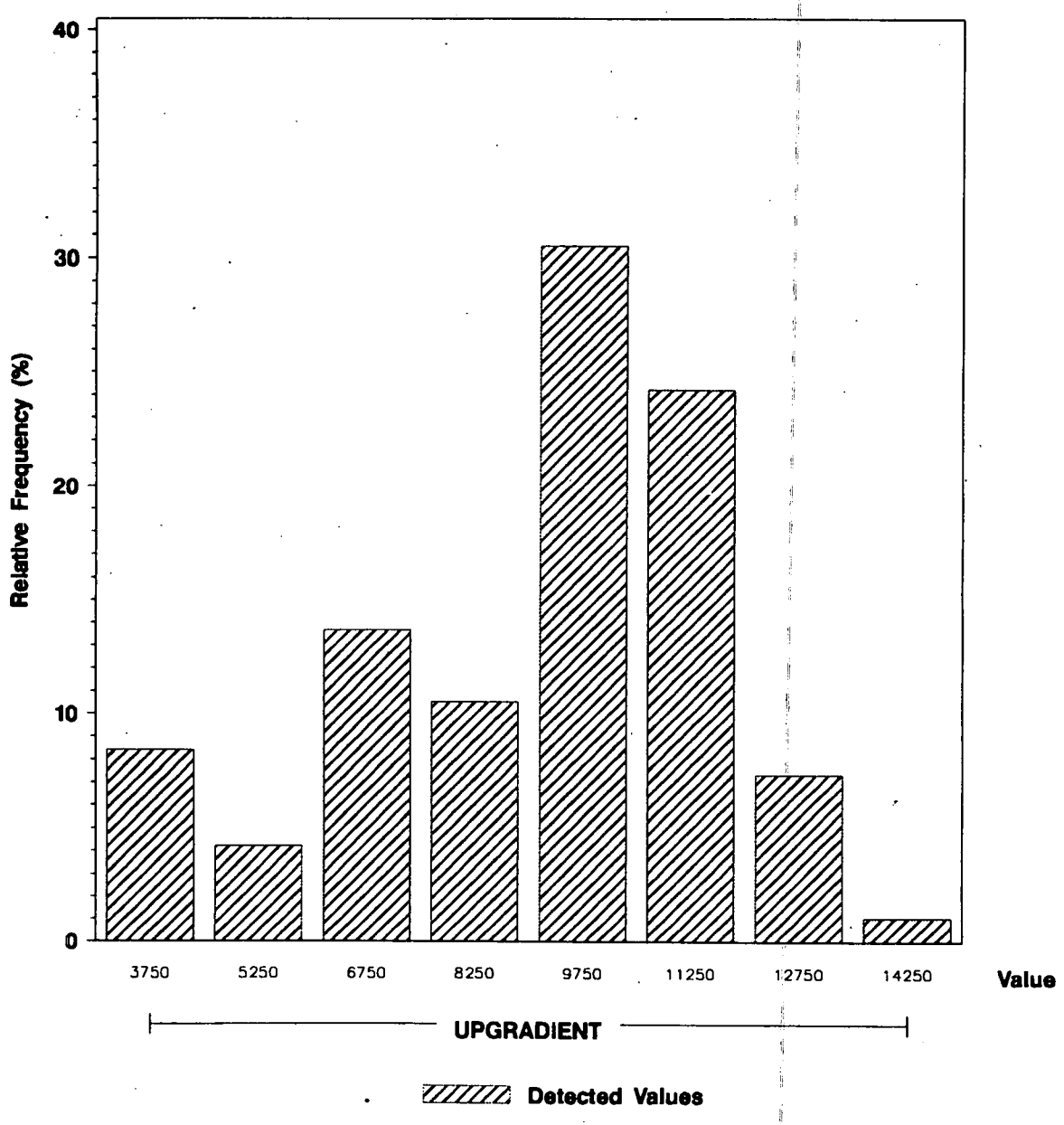
ANALYTE = ZINC



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved SILICON (ug/L) in Groundwater

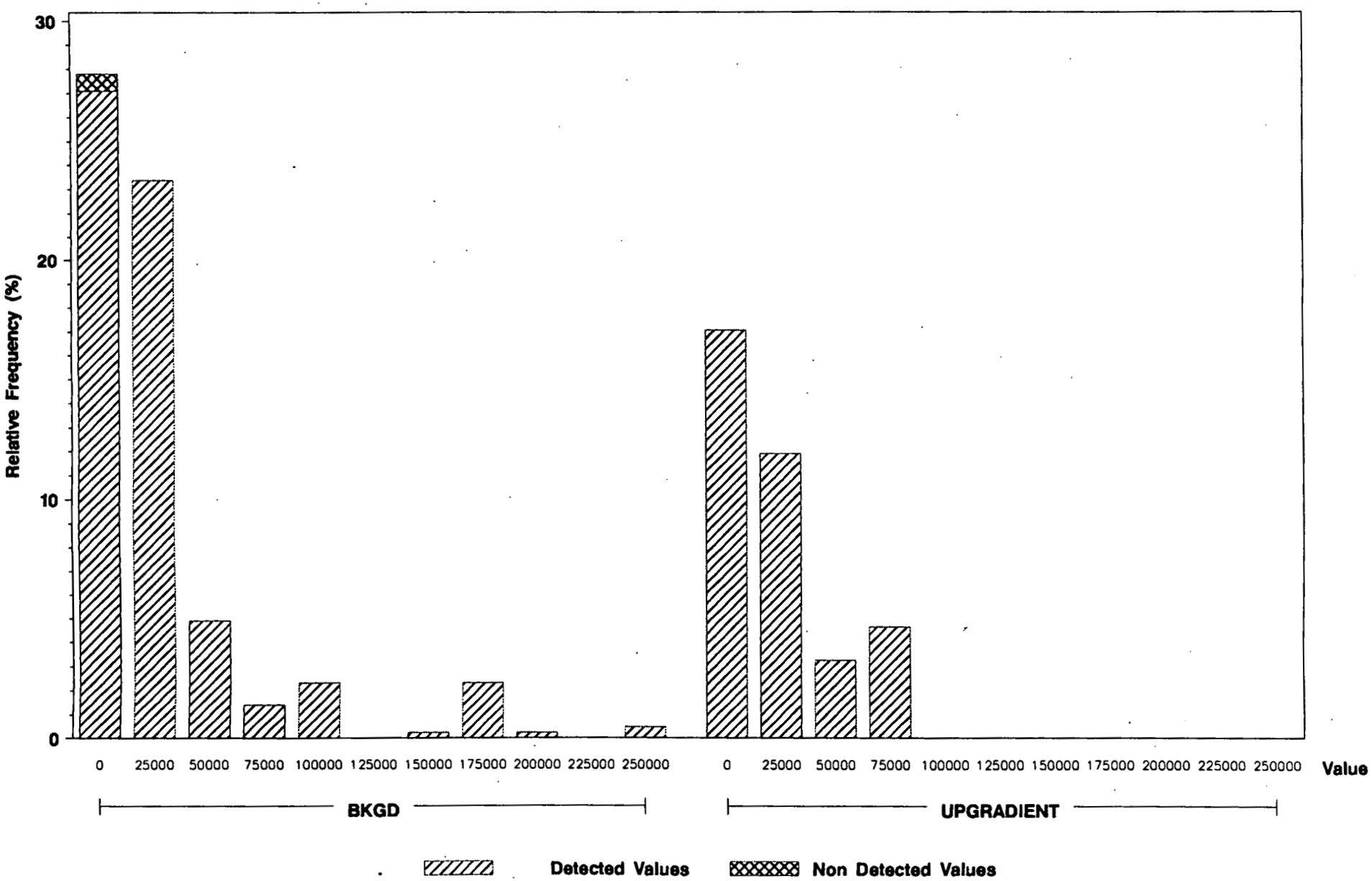
ANALYTE=SILICON



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved SODIUM (ug/L) in Groundwater

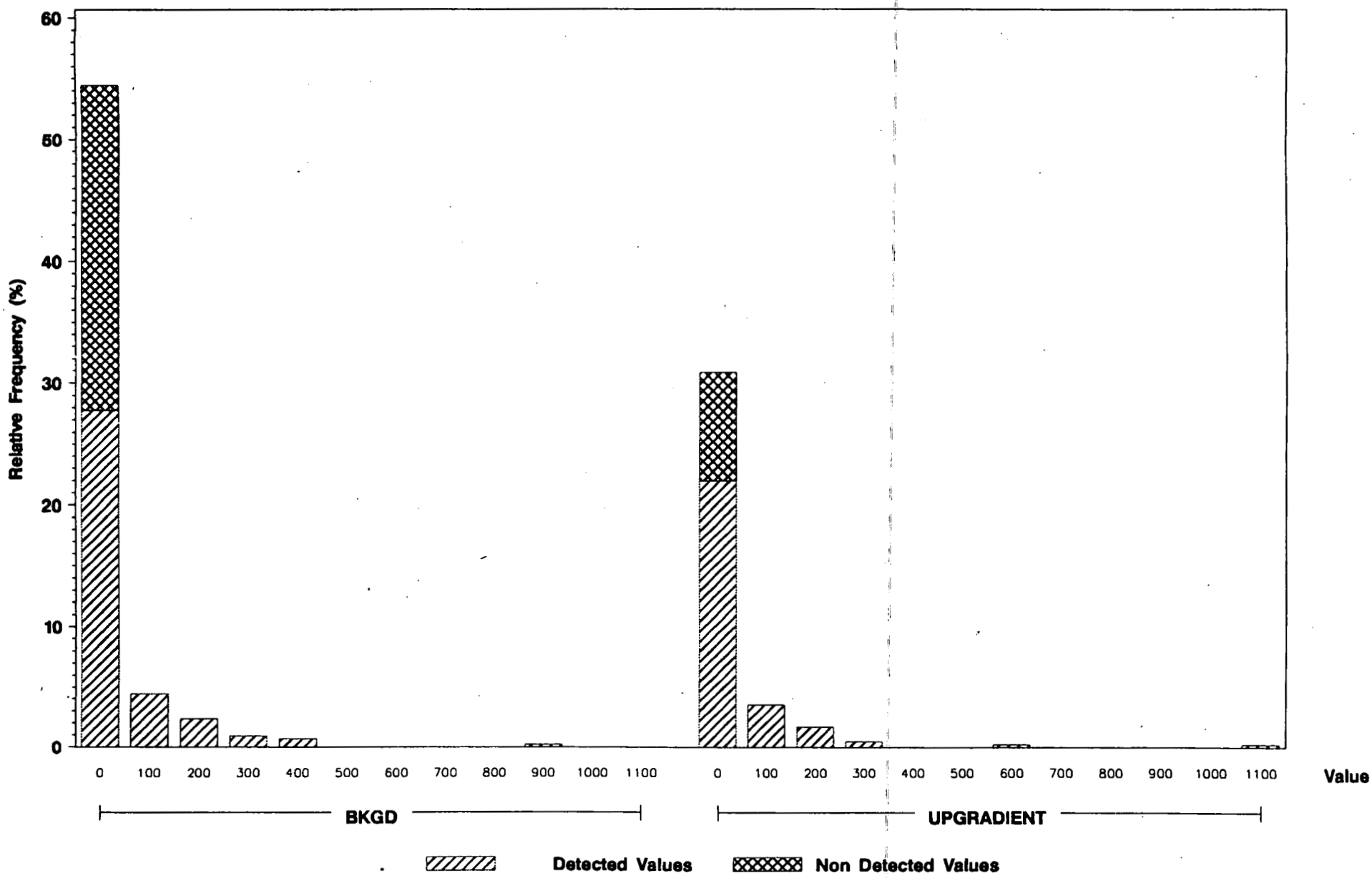
ANALYTE = SODIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Groundwater

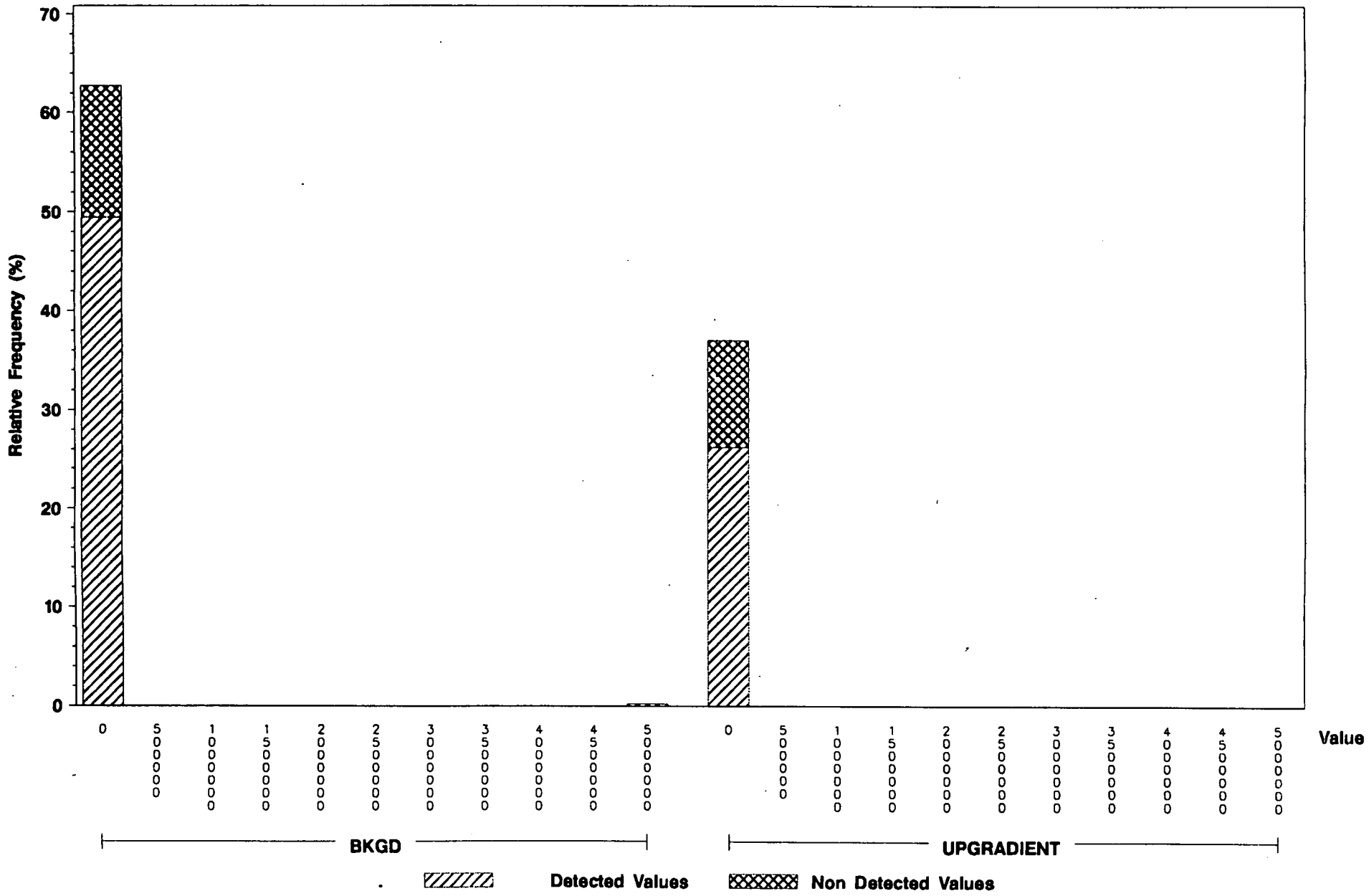
ANALYTE = MANGANESE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Groundwater

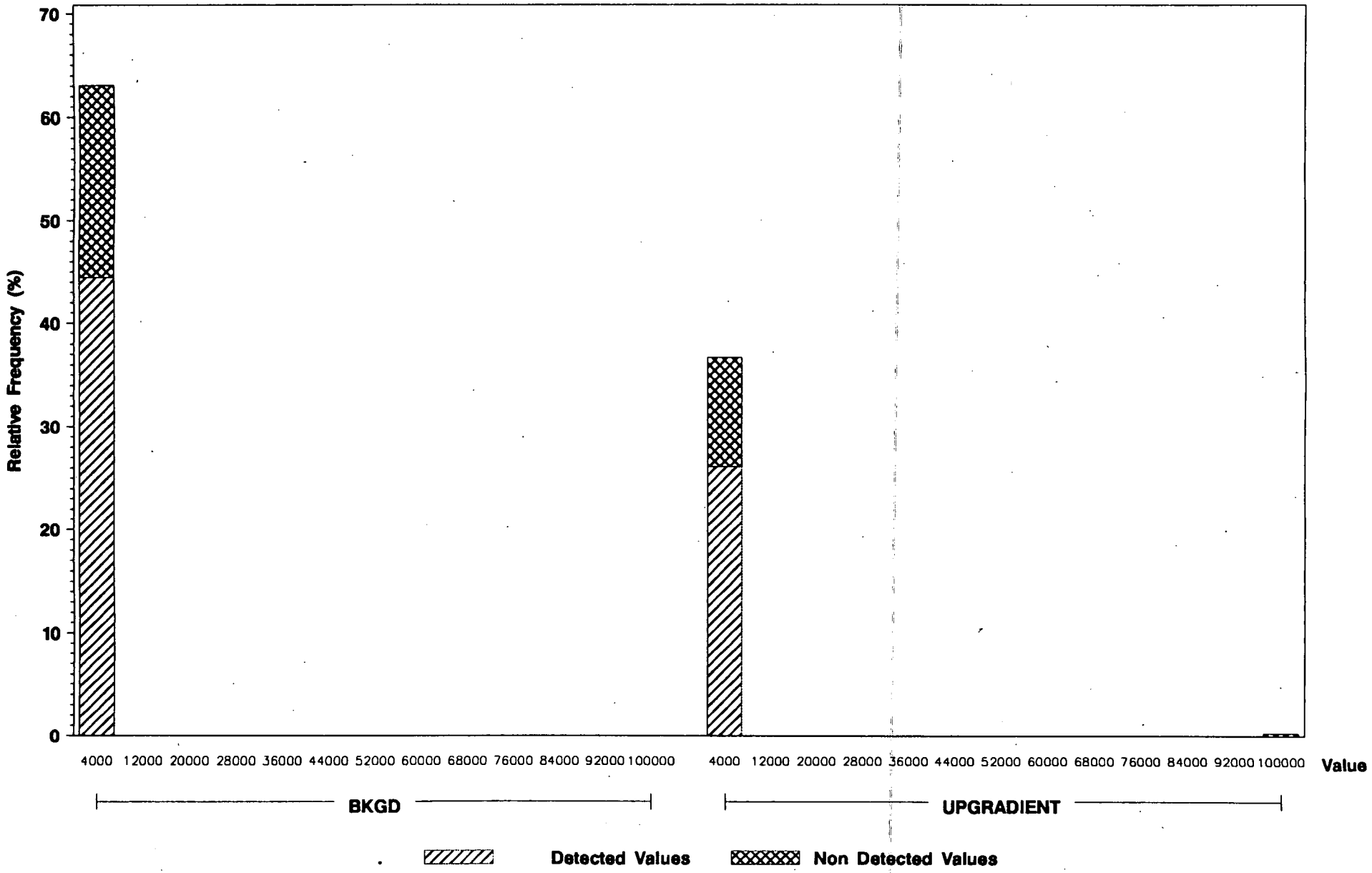
ANALYTE = POTASSIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Groundwater

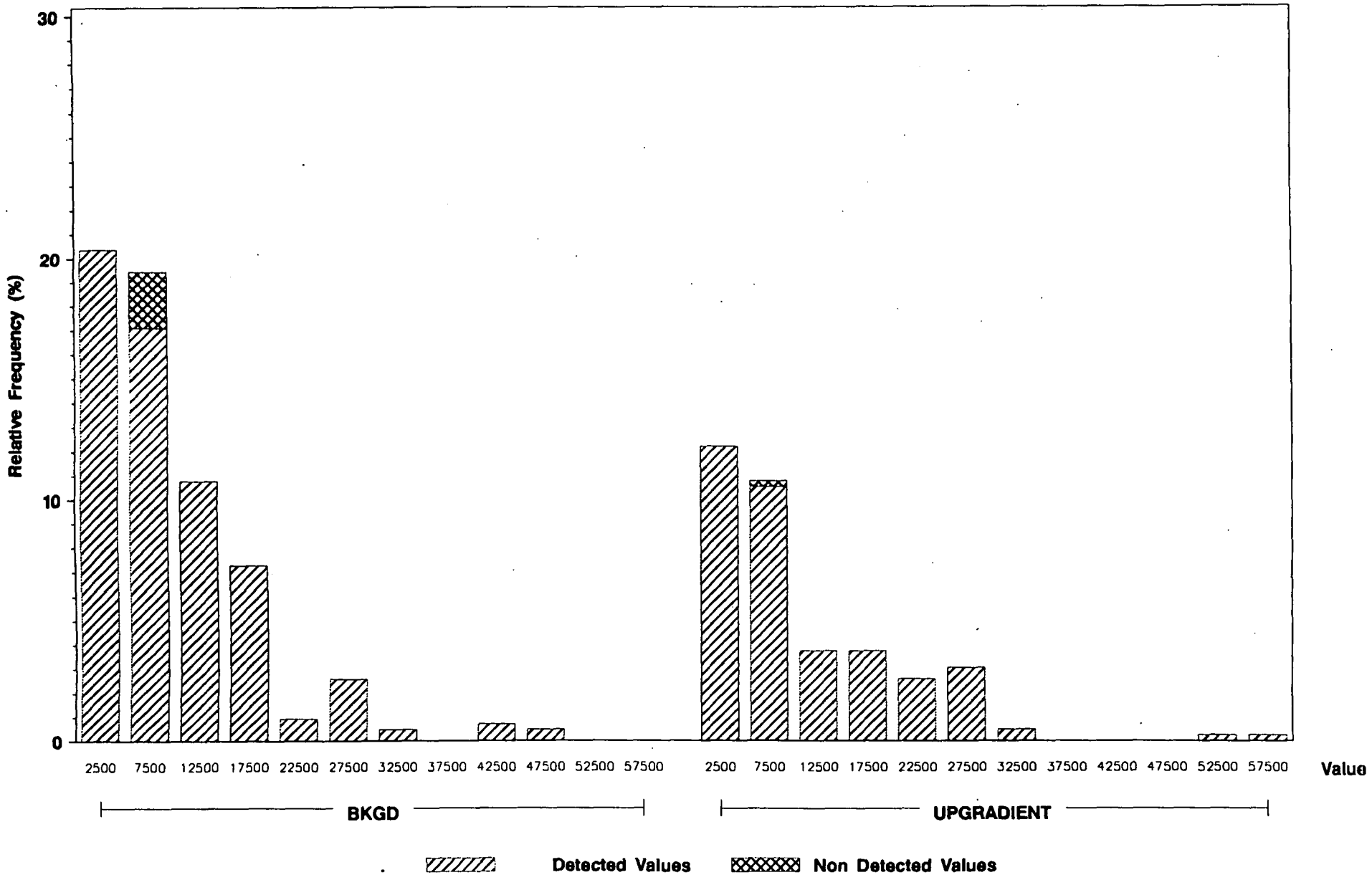
ANALYTE = LITHIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Groundwater

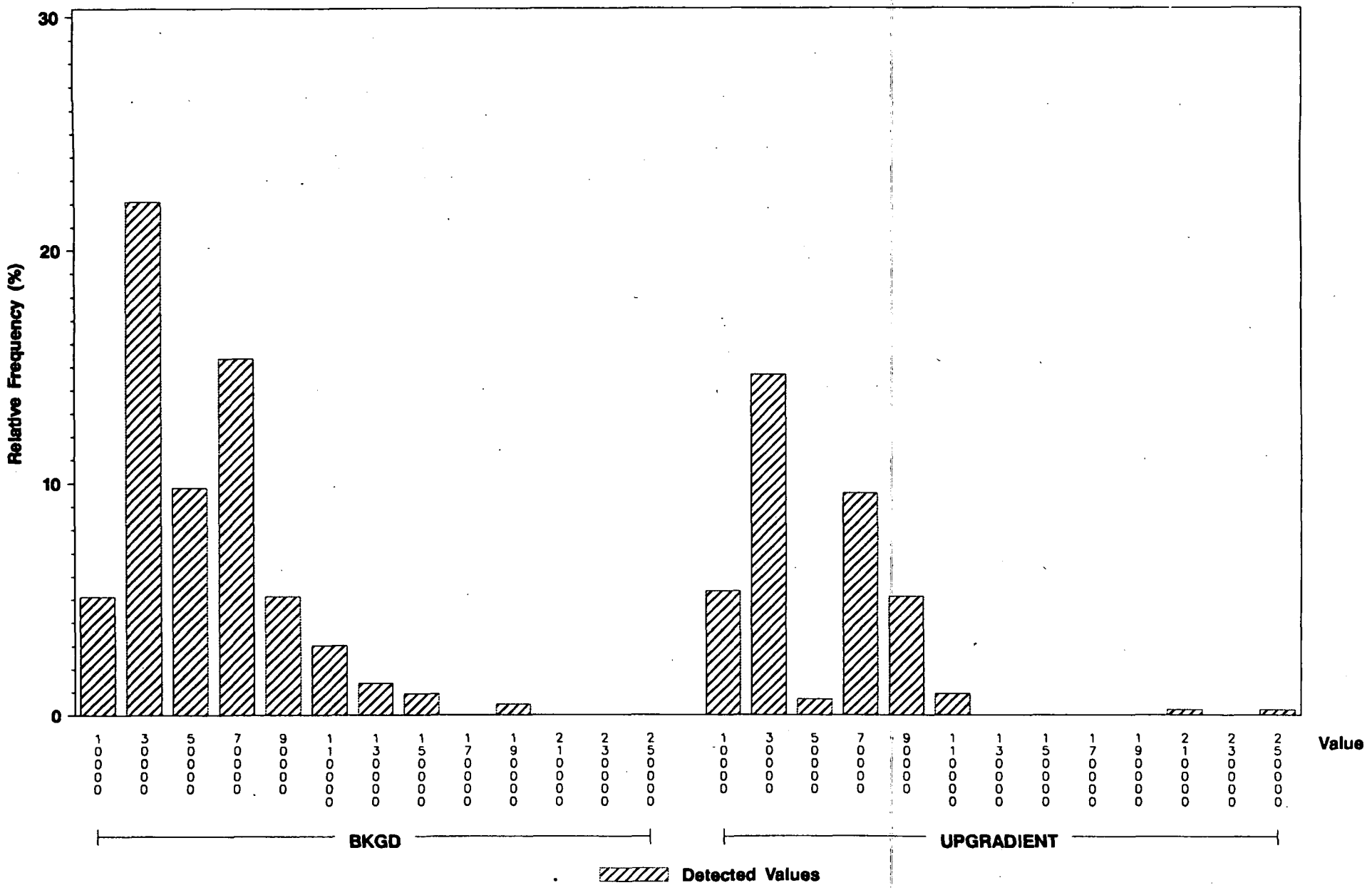
ANALYTE = MAGNESIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Groundwater

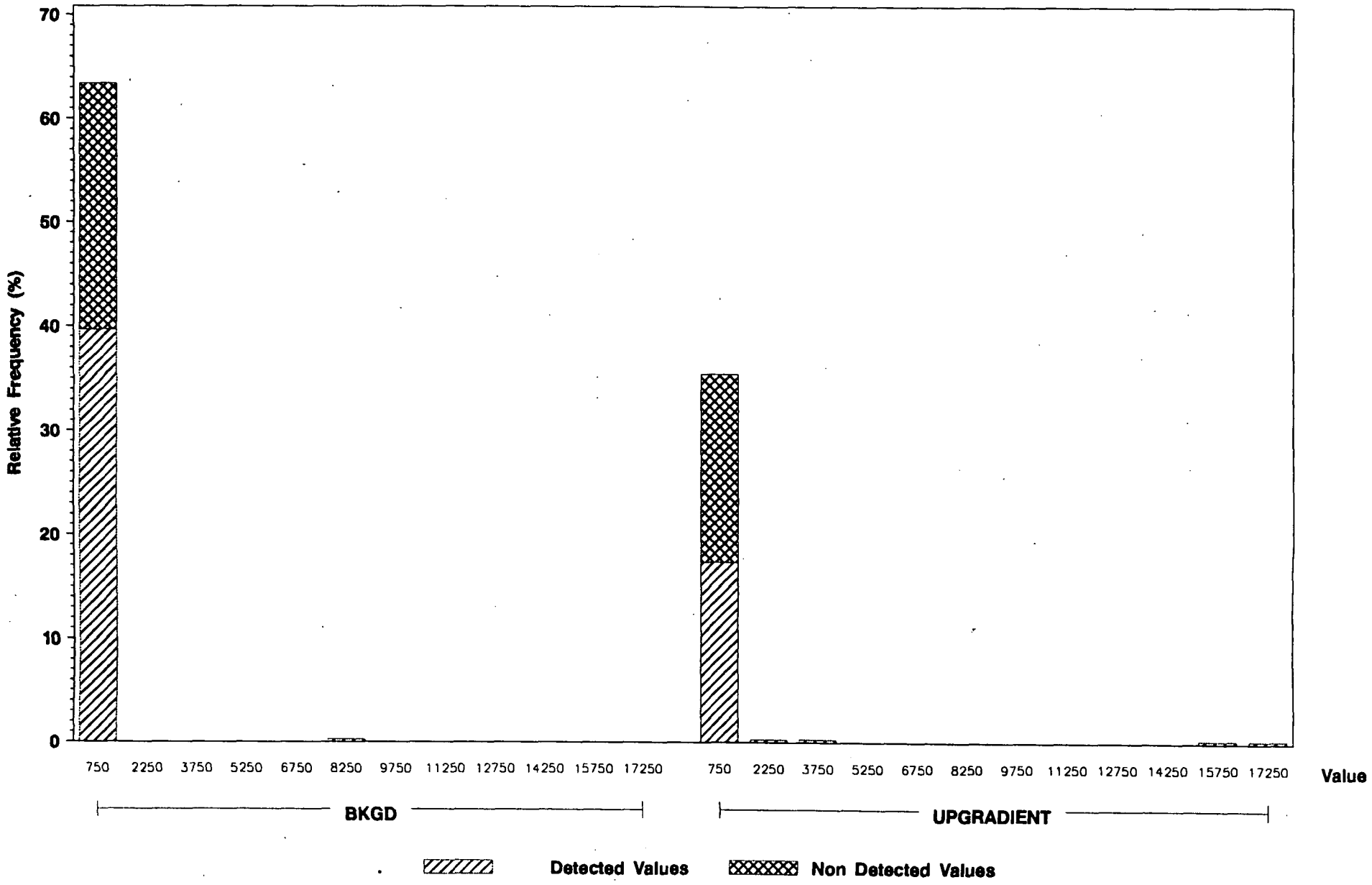
ANALYTE = CALCIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved IRON (ug/L) in Groundwater

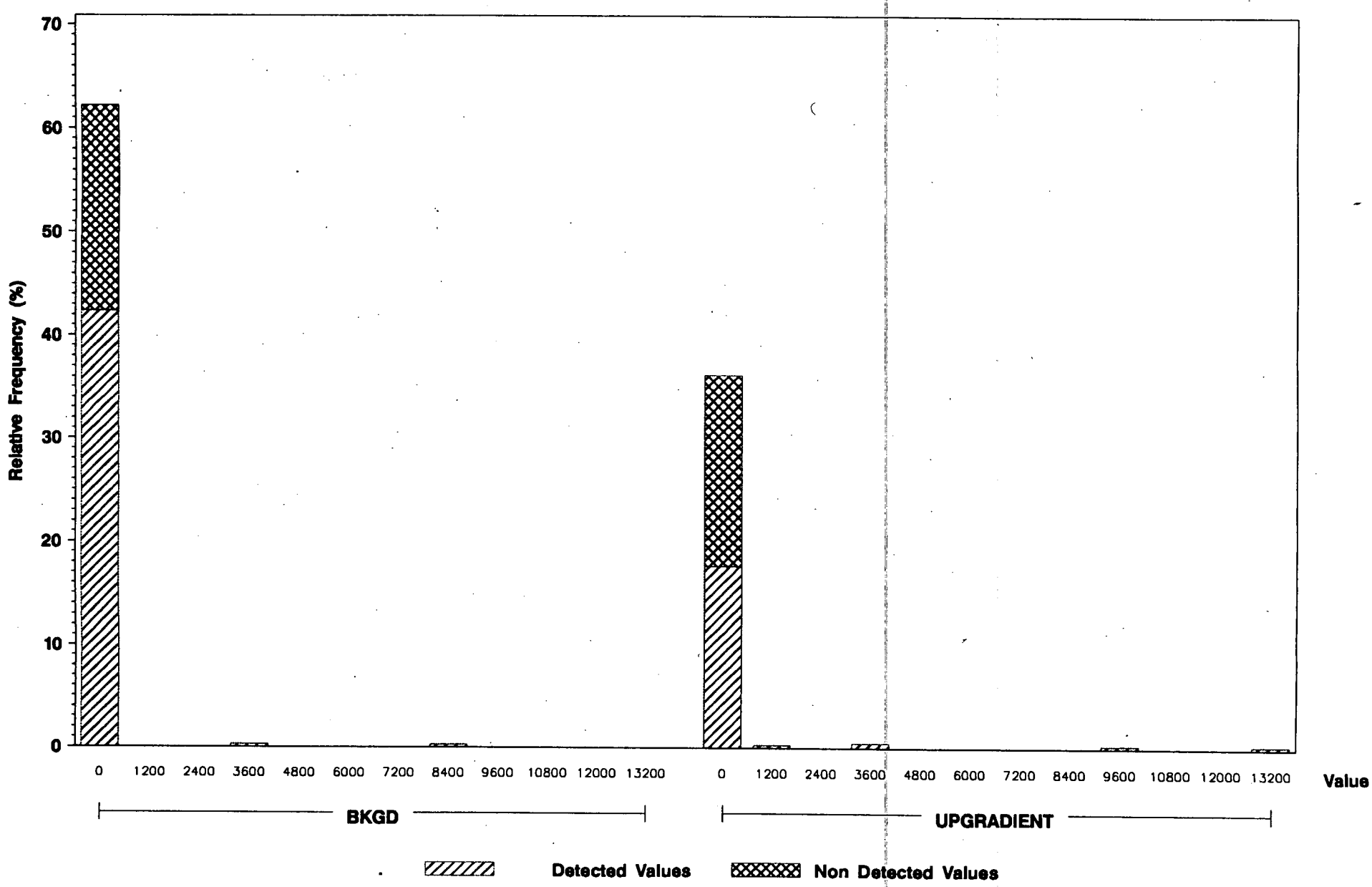
ANALYTE=IRON



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved ALUMINUM (ug/L) in Groundwater

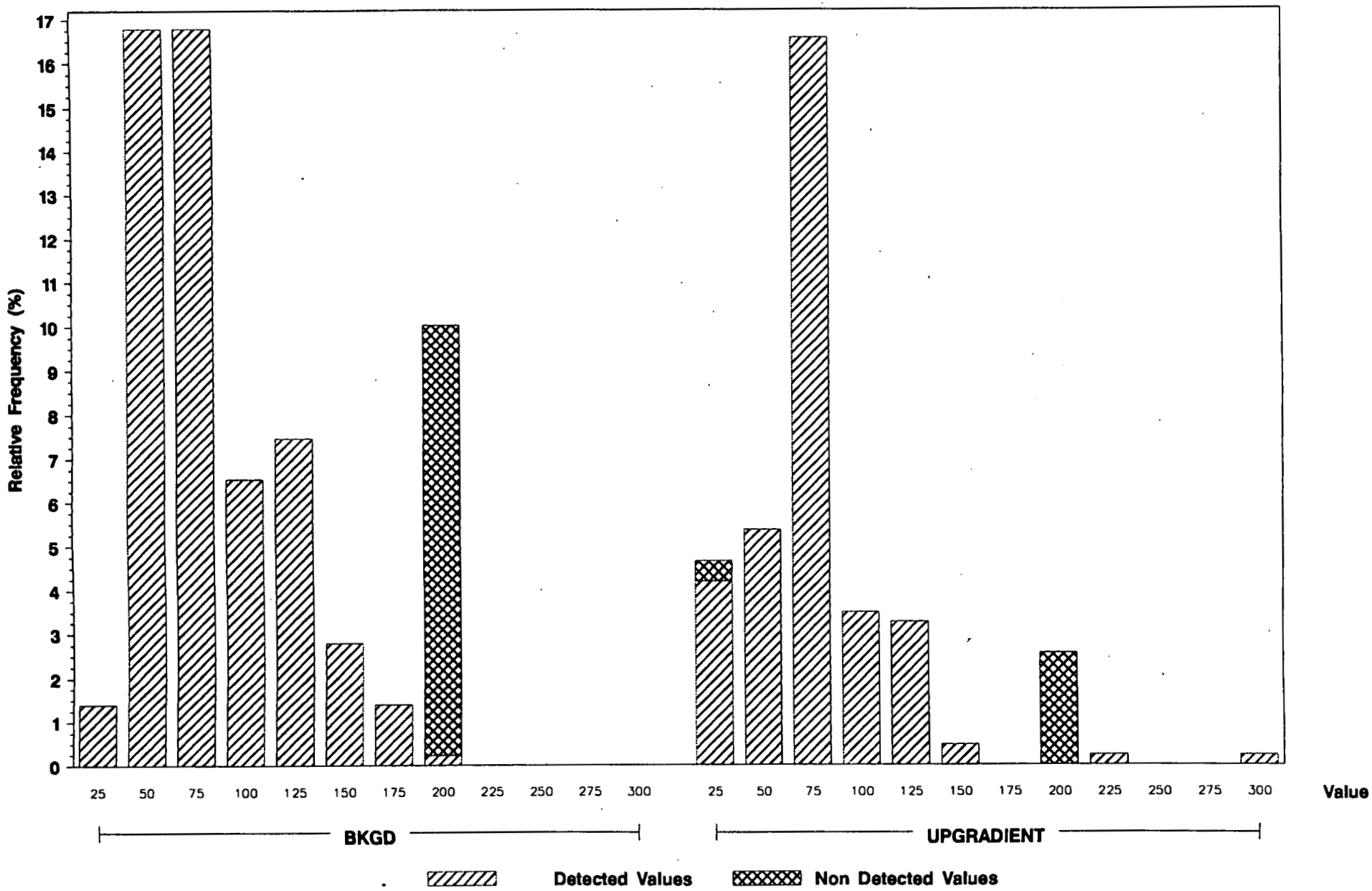
ANALYTE = ALUMINUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Dissolved BARIUM (ug/L) in Groundwater

ANALYTE = BARIUM



# Groundwater

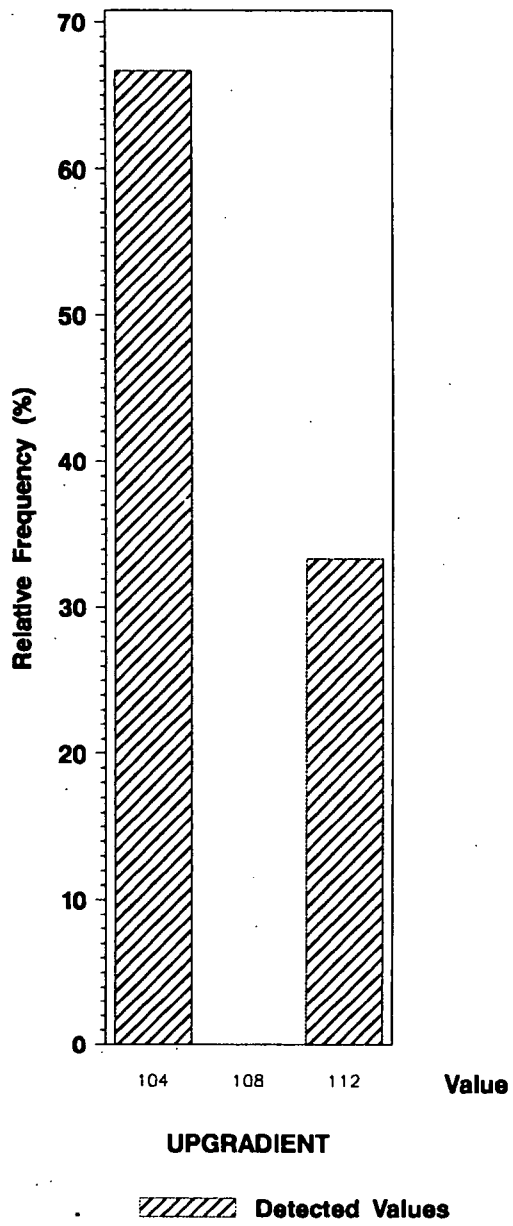
# (Total)

# Background vs. OU 7 Upgradient UHSU

# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total 1,2 DICHLOROETHANE –D4 (ug/L) in Groundwater

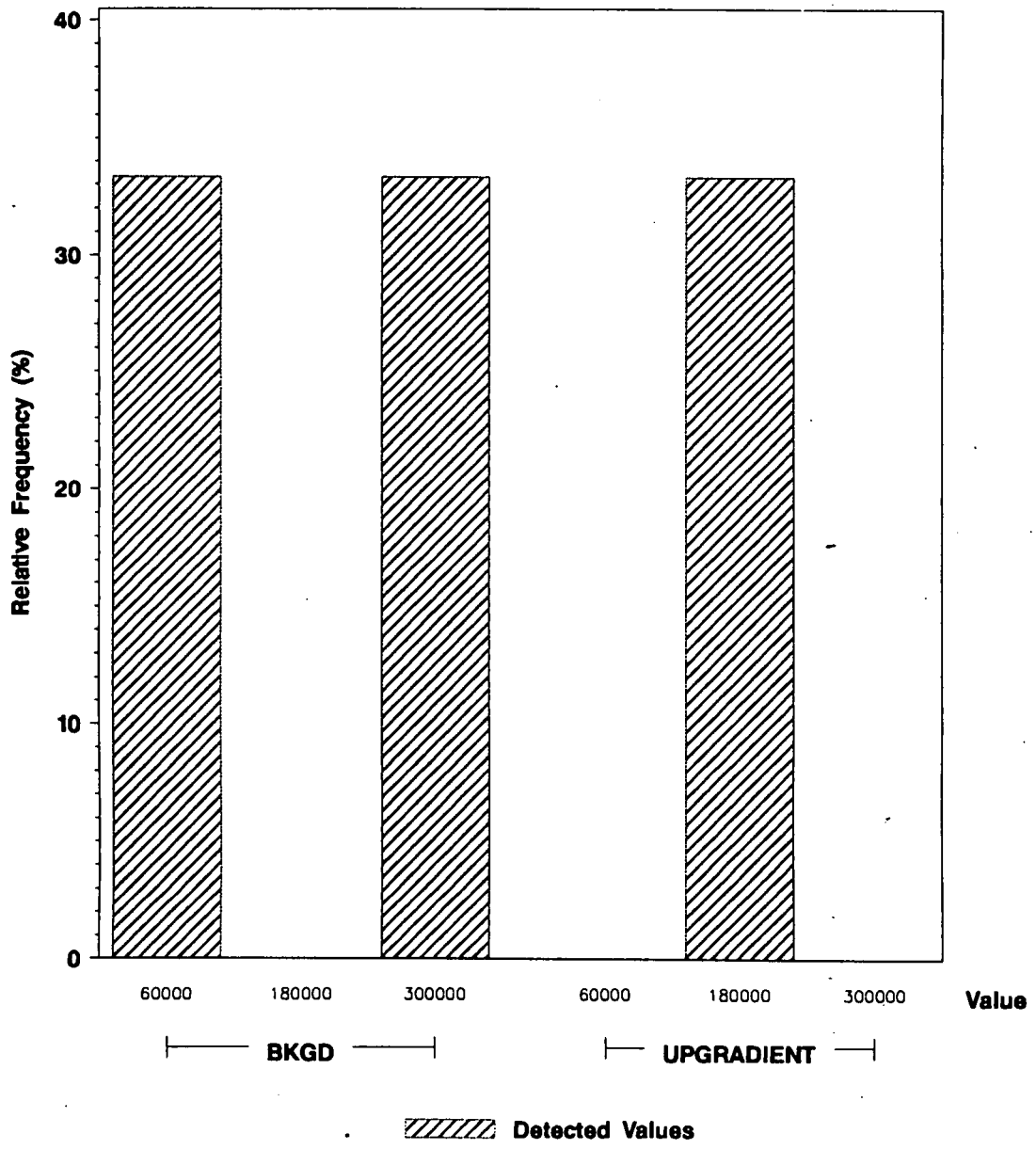
ANALYTE=1,2 DICHLOROETHANE –D4



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total ALKALINITY AS CACO3 (ug/L) in Groundwater

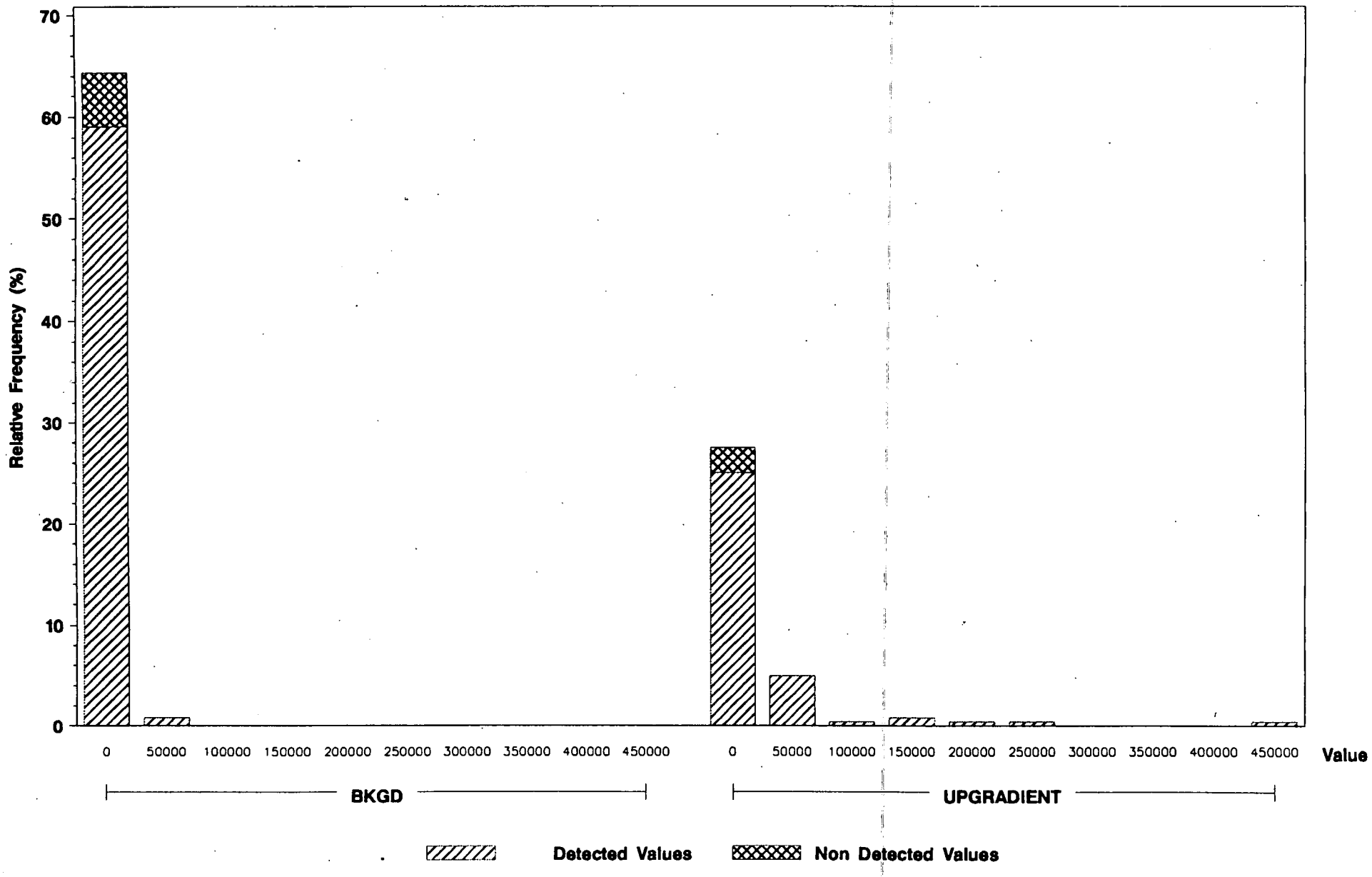
ANALYTE = ALKALINITY AS CACO3



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total ALUMINUM (ug/L) in Groundwater

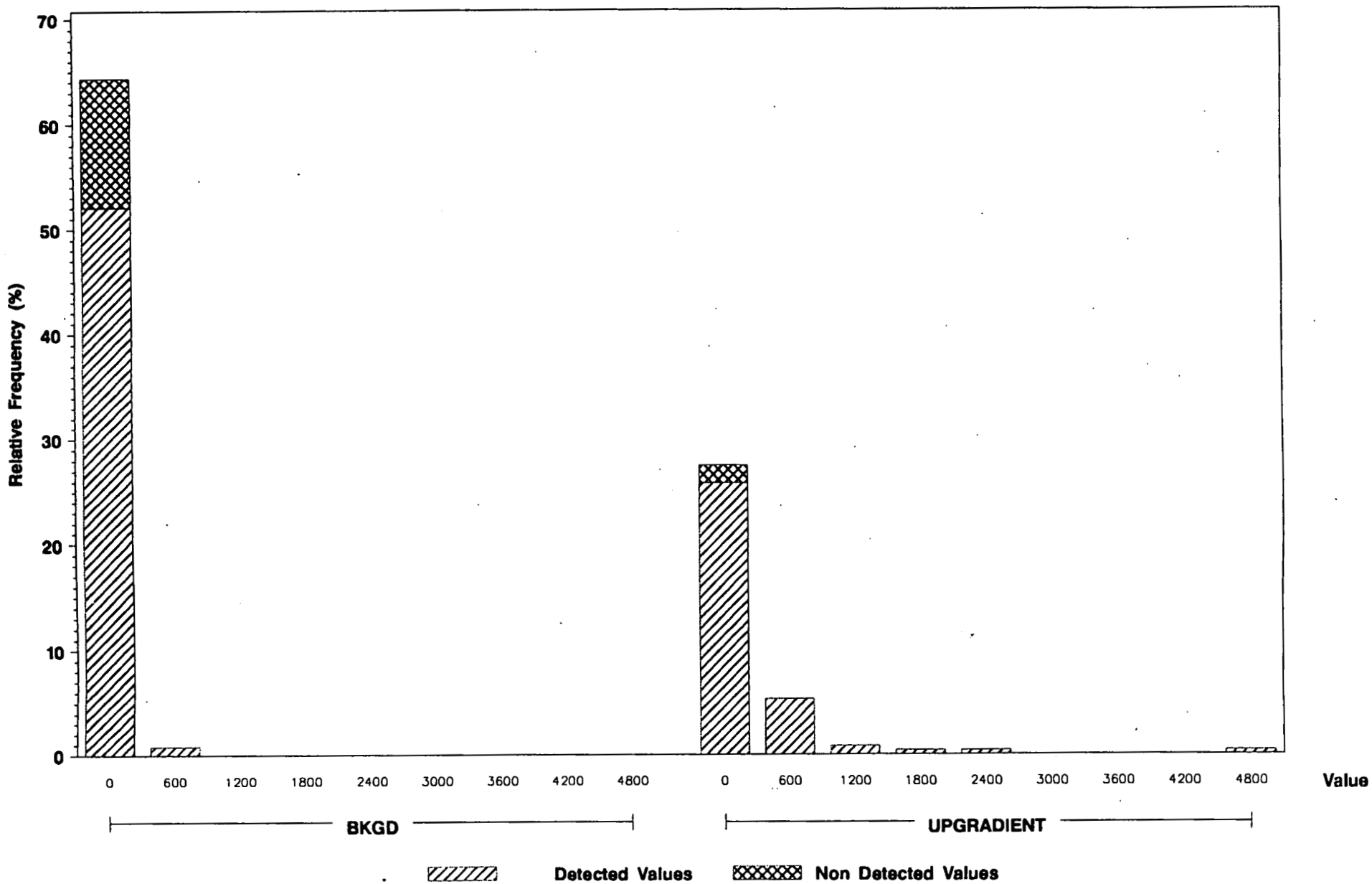
ANALYTE = ALUMINUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total BARIUM (ug/L) in Groundwater

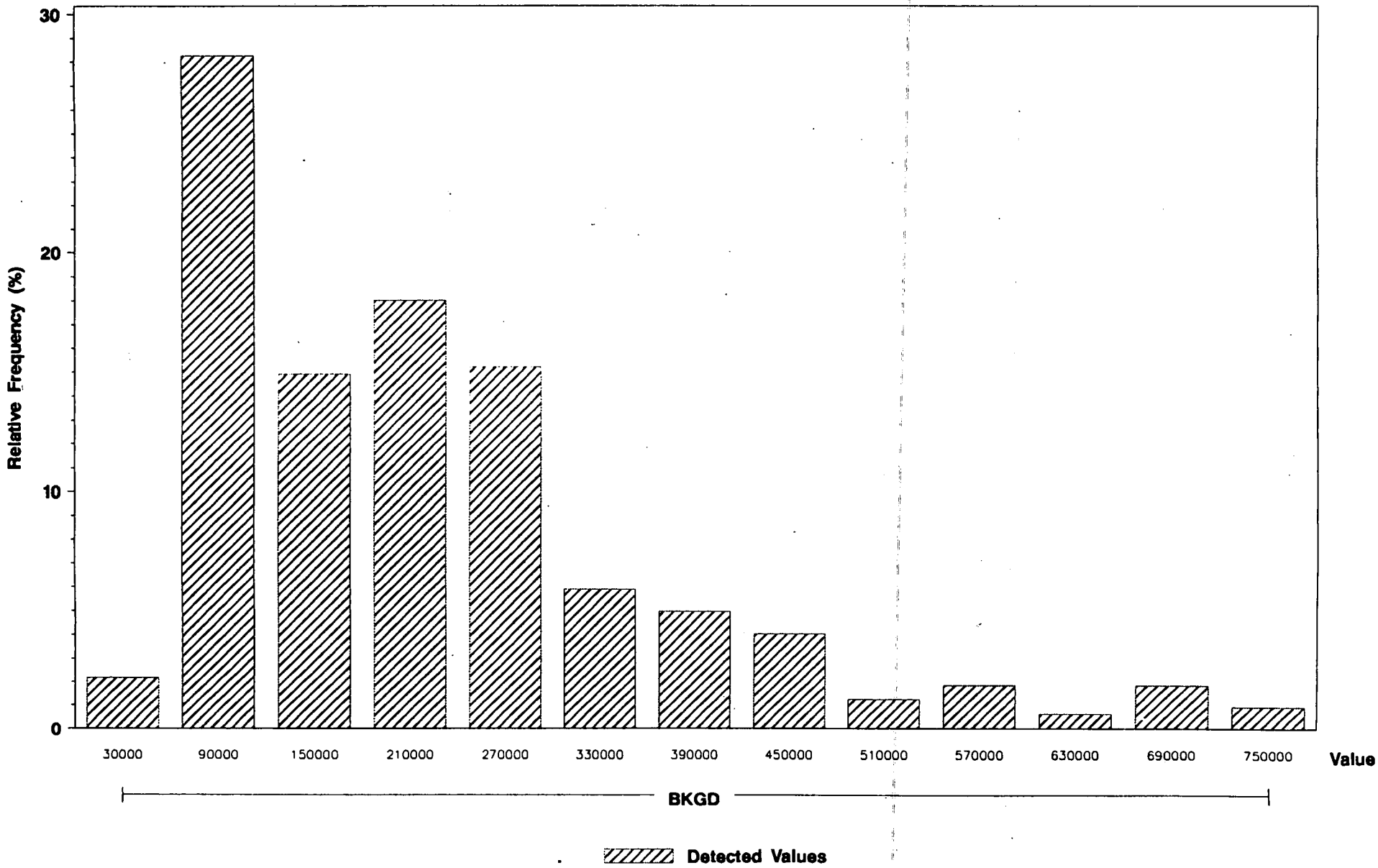
ANALYTE = BARIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total BICARBONATE (ug/L) in Groundwater

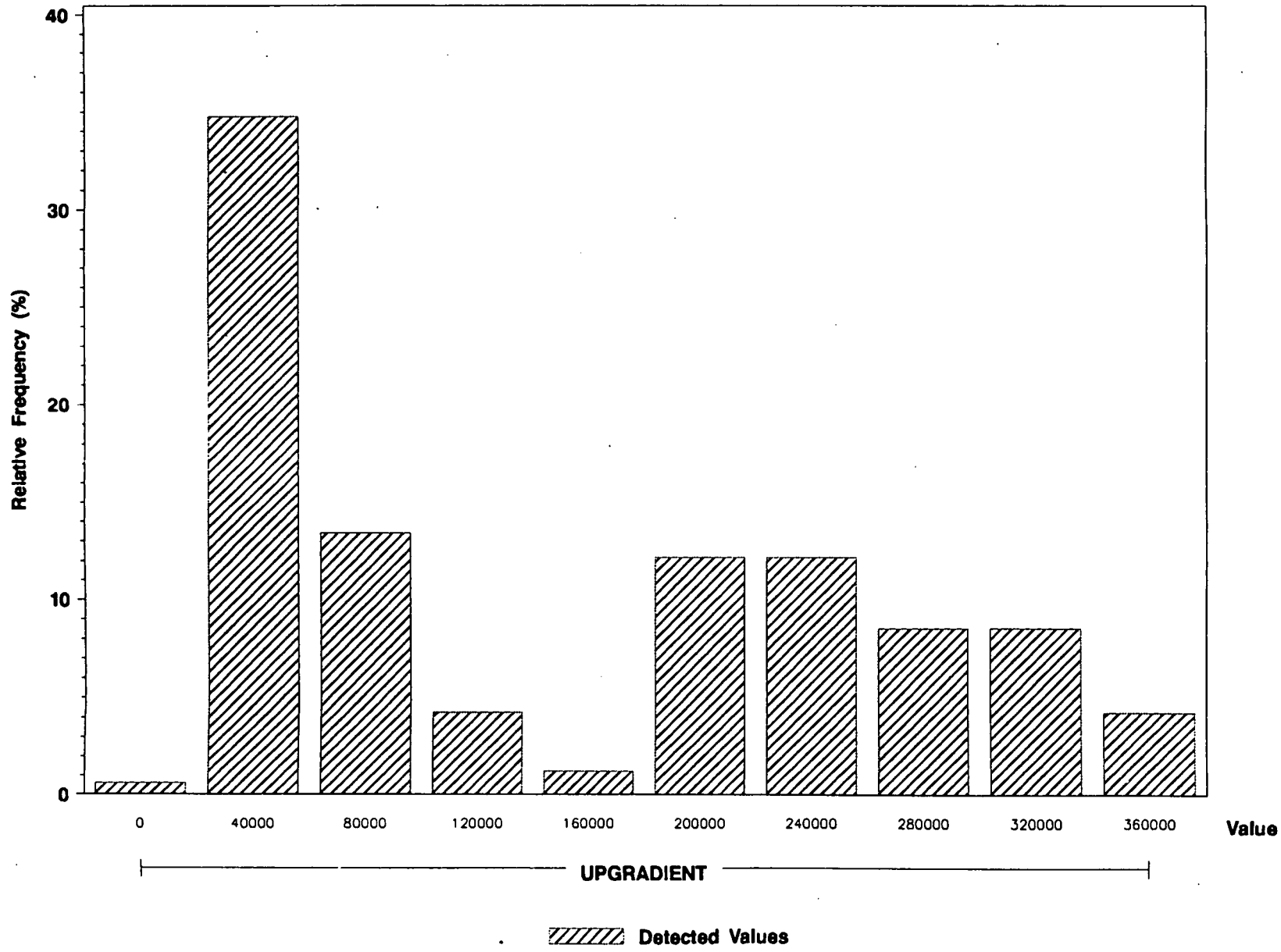
ANALYTE=BICARBONATE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Groundwater

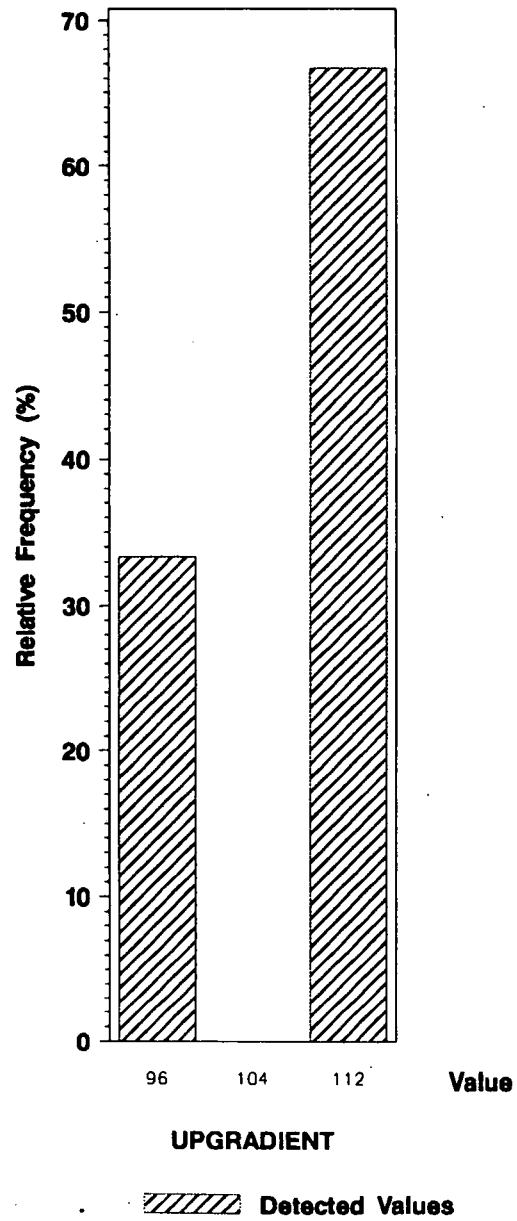
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total BROMOFLUOROBENZENE (ug/L) in Groundwater

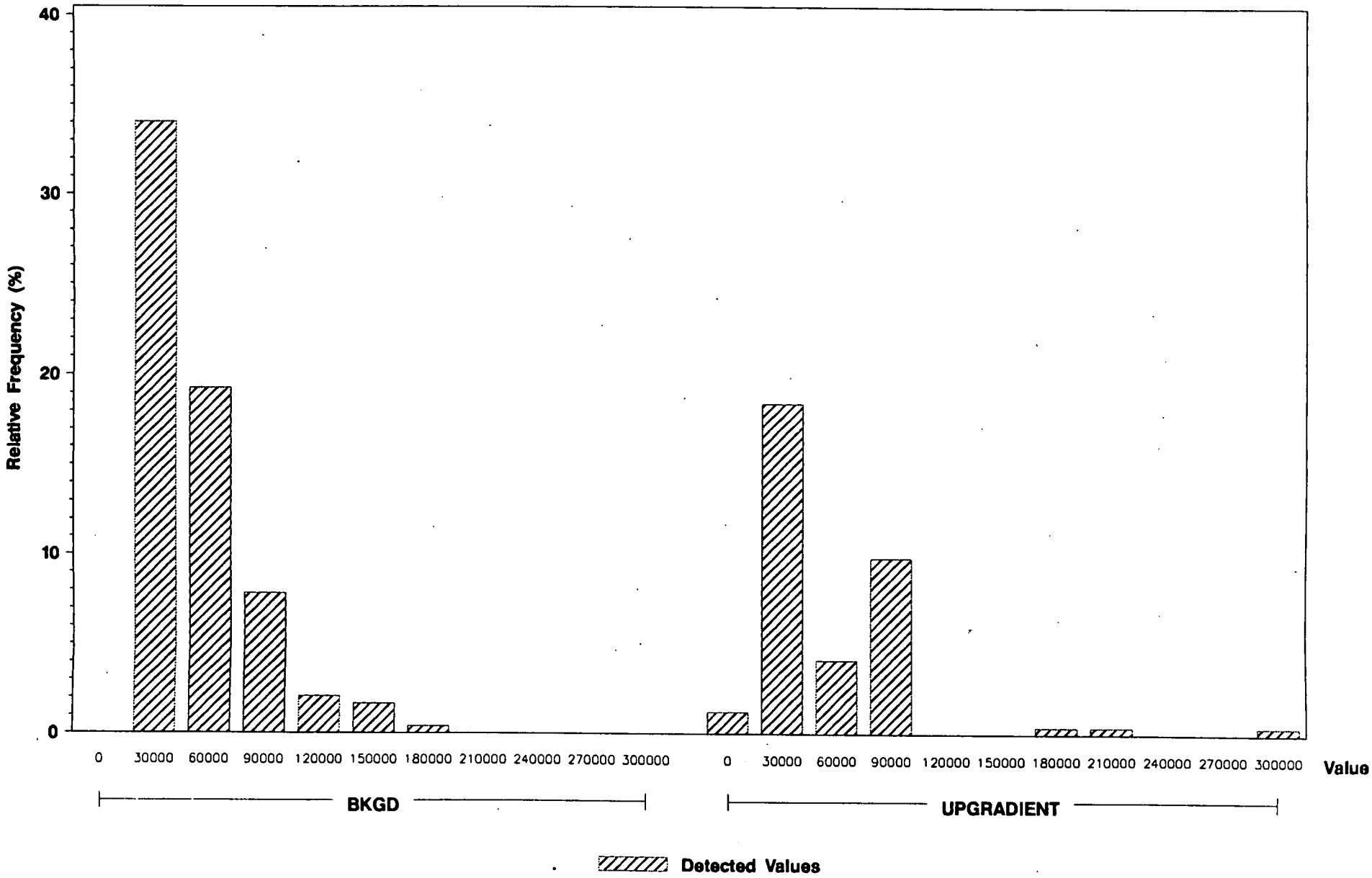
ANALYTE = BROMOFLUOROBENZENE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CALCIUM (ug/L) in Groundwater

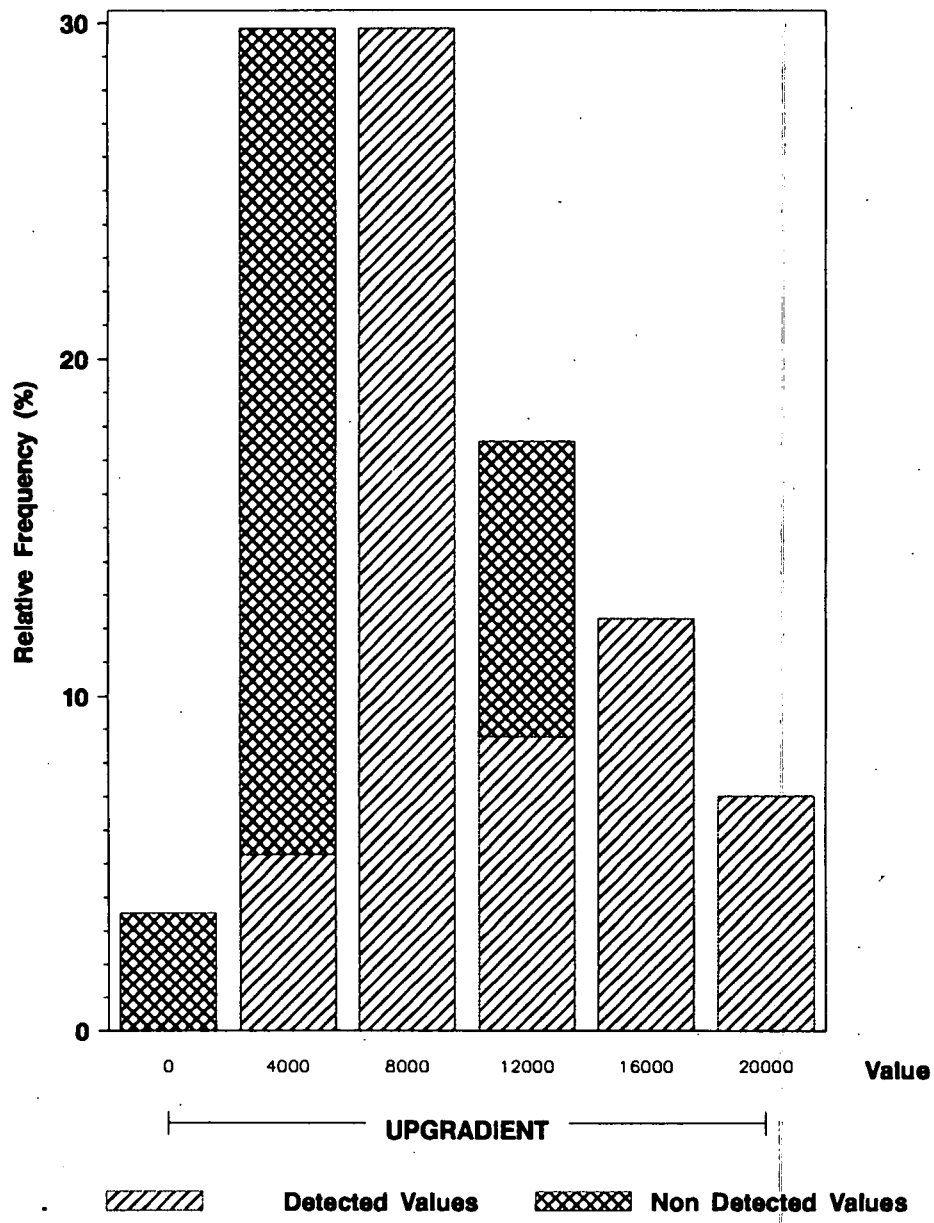
ANALYTE=CALCIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CHEMICAL OXYGEN DEMAND (ug/L) in Groundwater

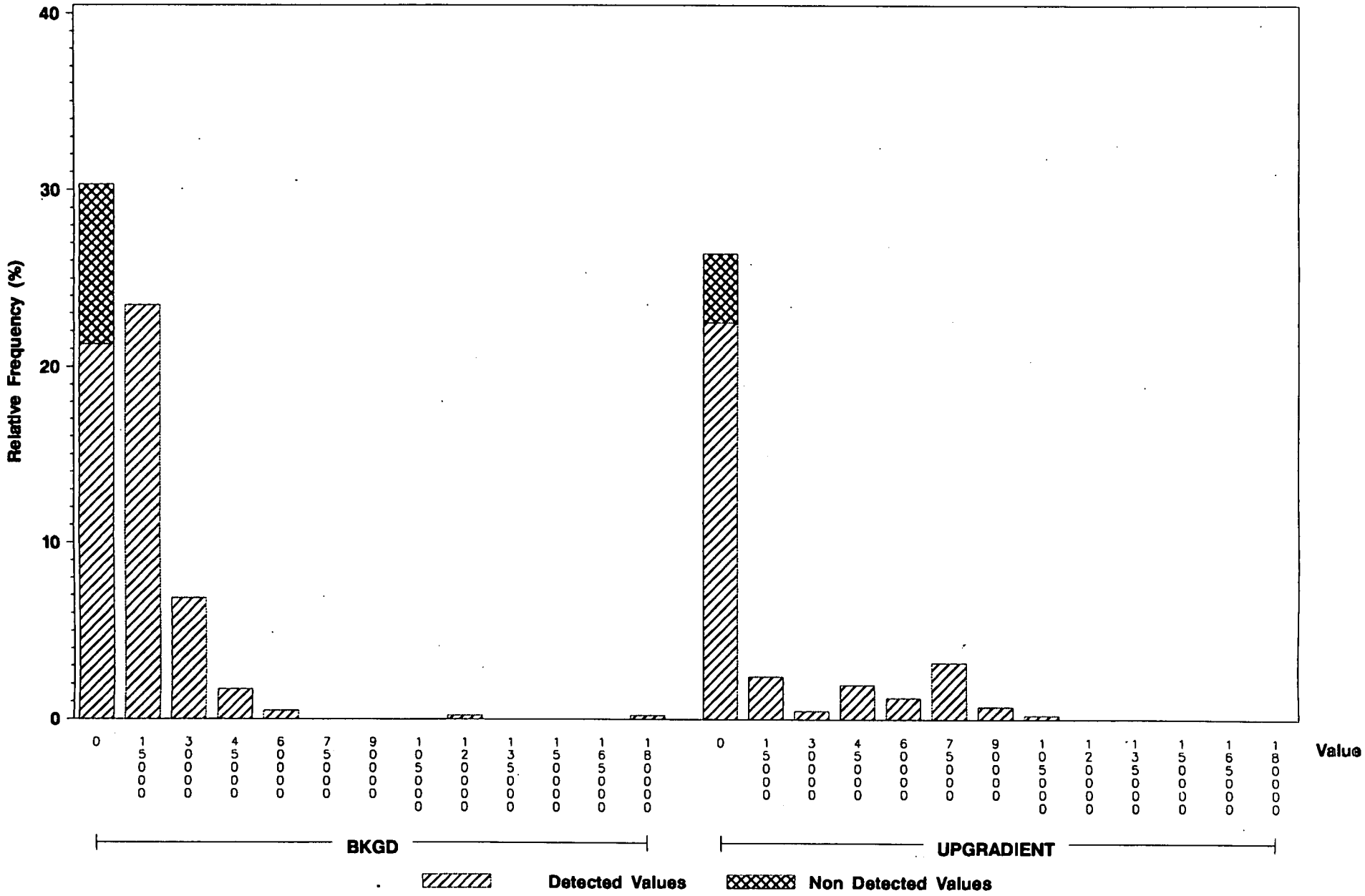
ANALYTE=CHEMICAL OXYGEN DEMAND



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CHLORIDE (ug/L) in Groundwater

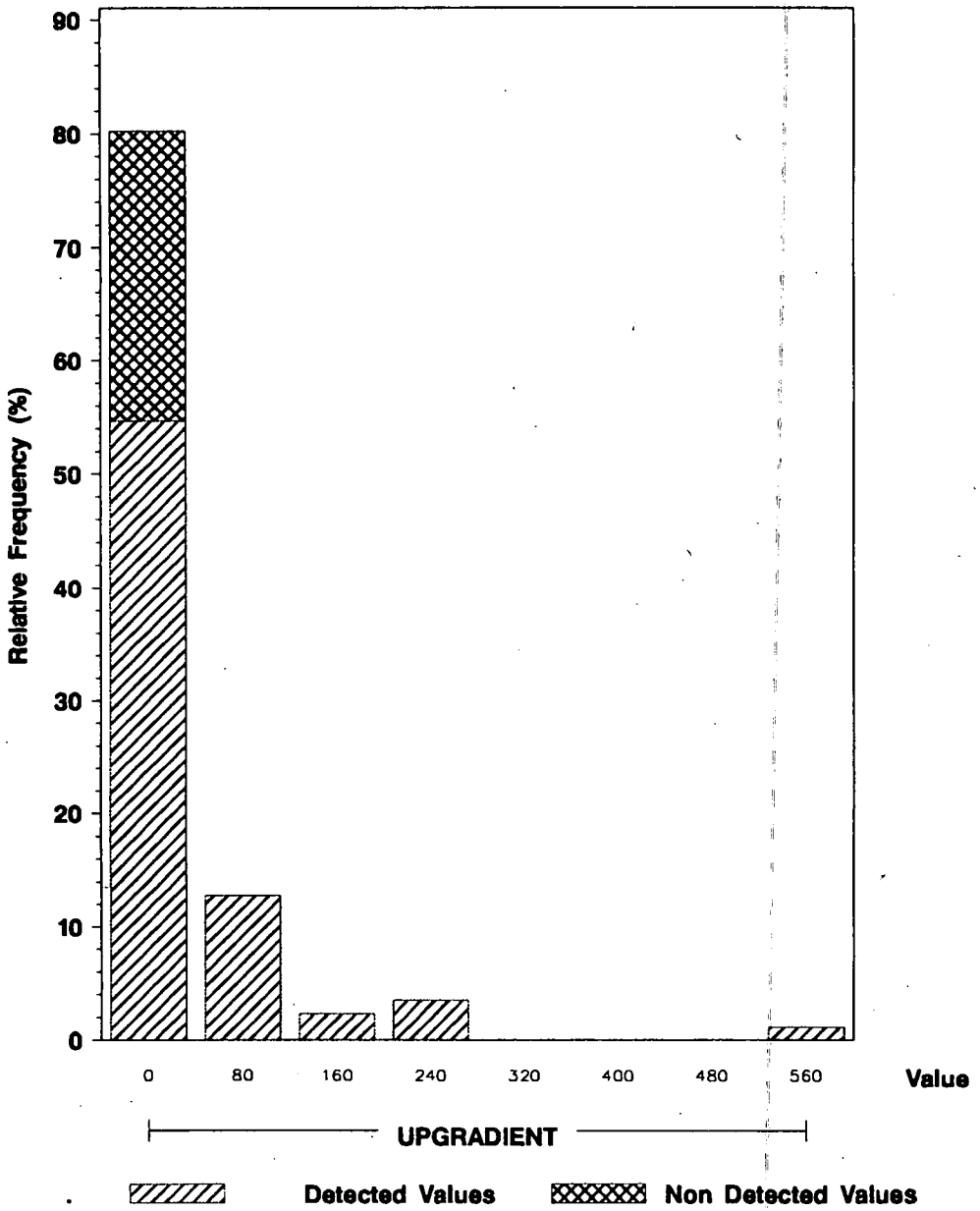
ANALYTE = CHLORIDE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CHROMIUM (ug/L) in Groundwater

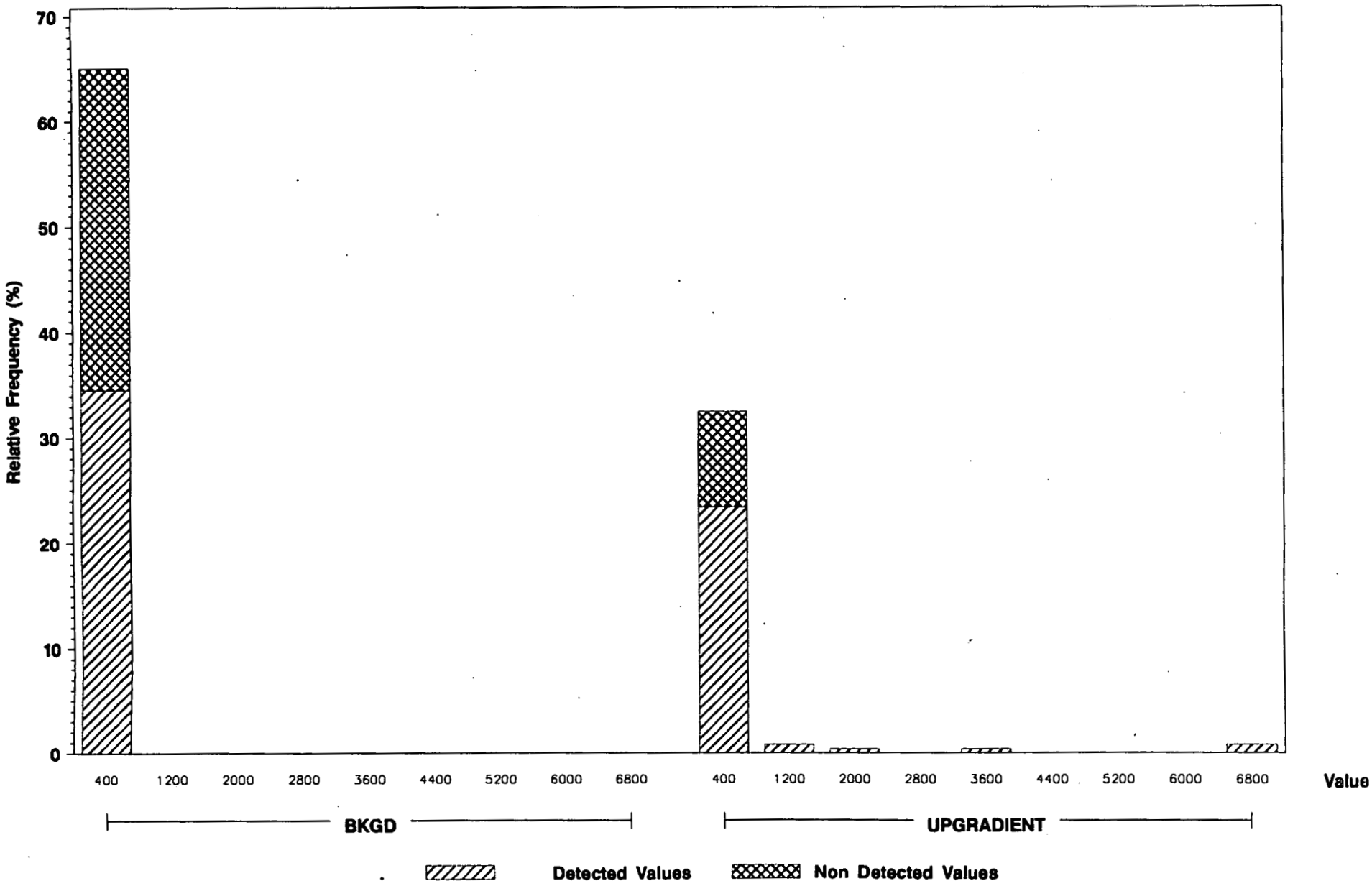
ANALYTE = CHROMIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total COPPER (ug/L) in Groundwater

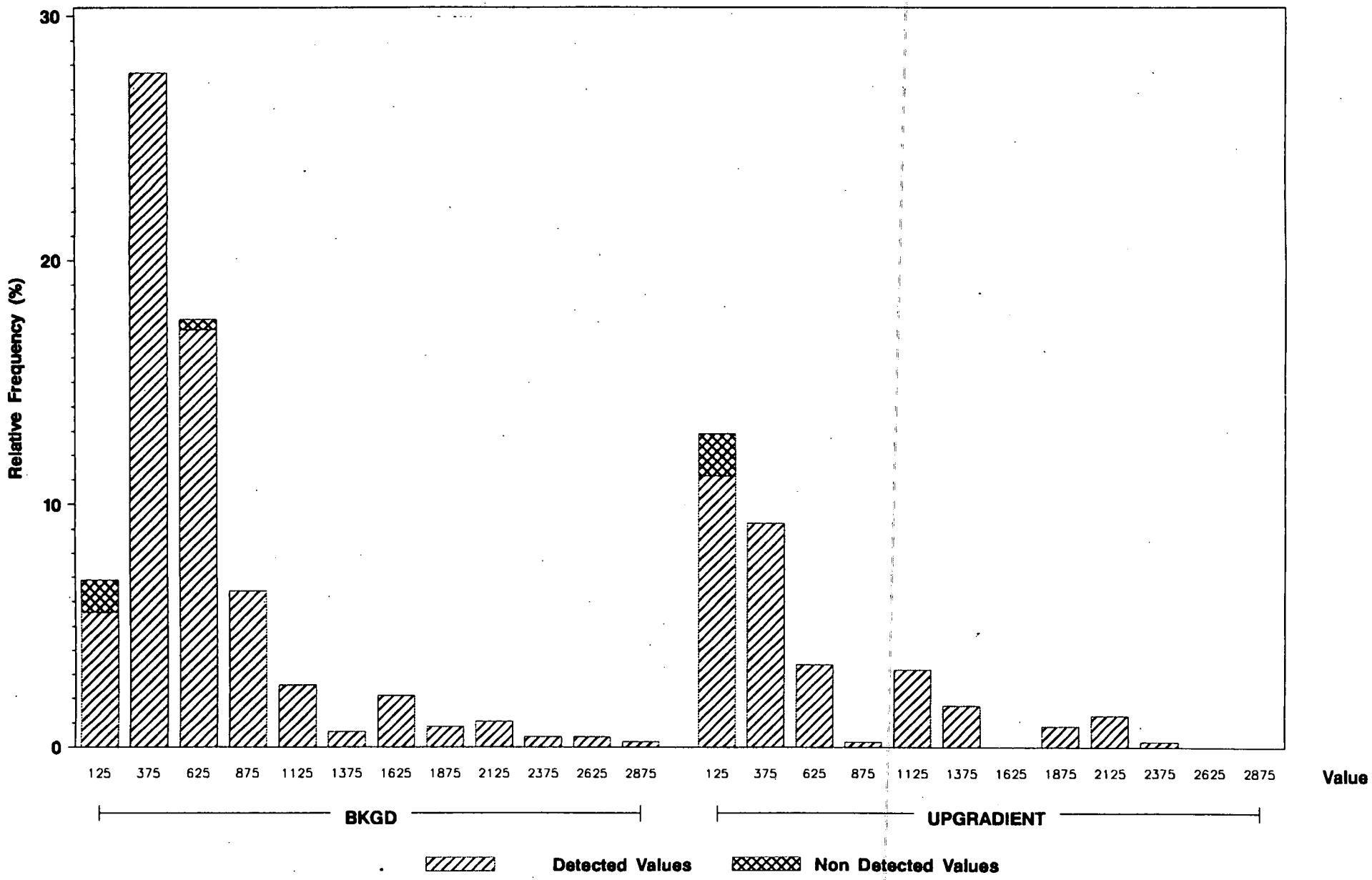
ANALYTE=COPPER



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total FLUORIDE (ug/L) in Groundwater

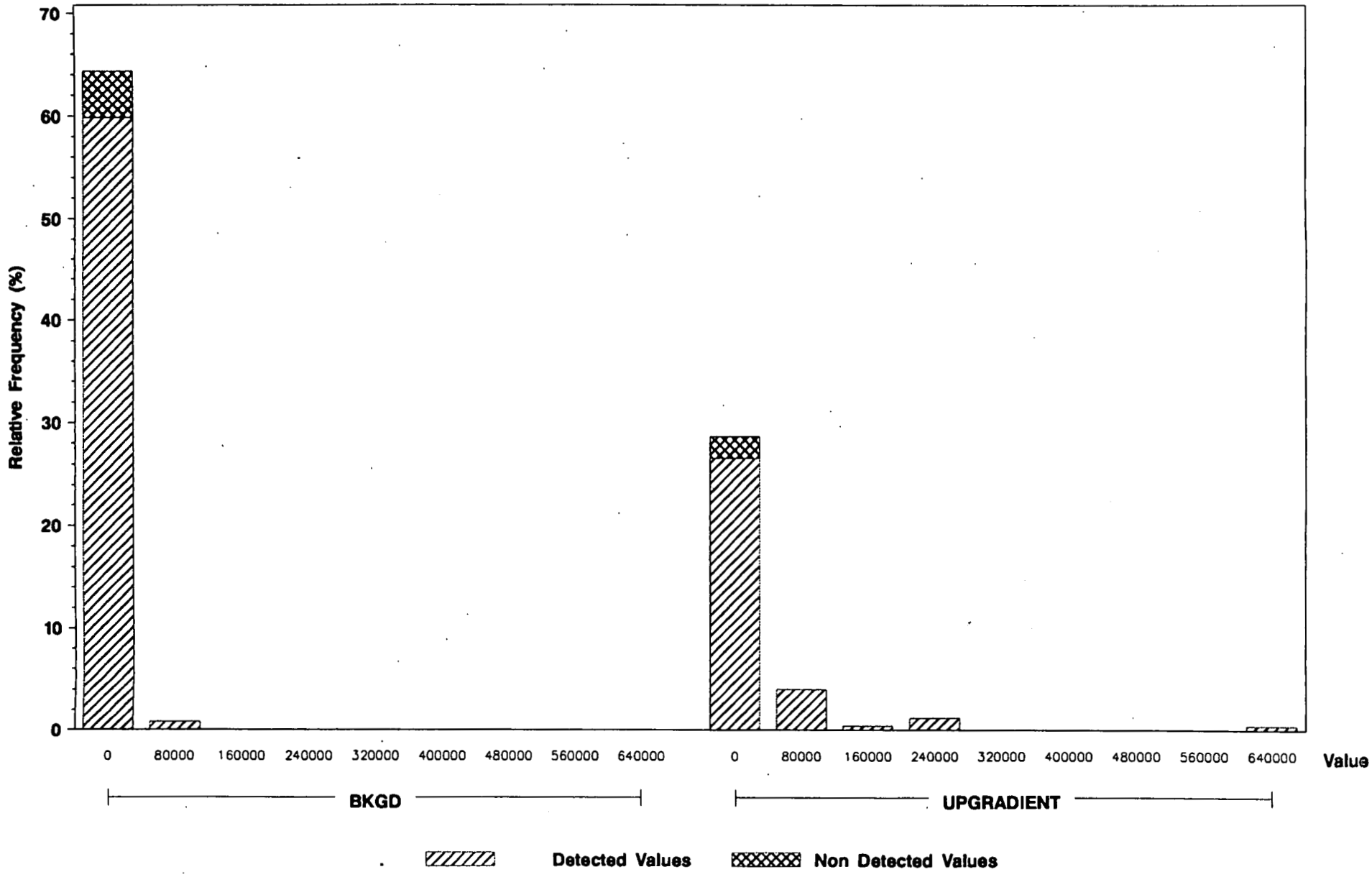
ANALYTE = FLUORIDE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total IRON (ug/L) in Groundwater

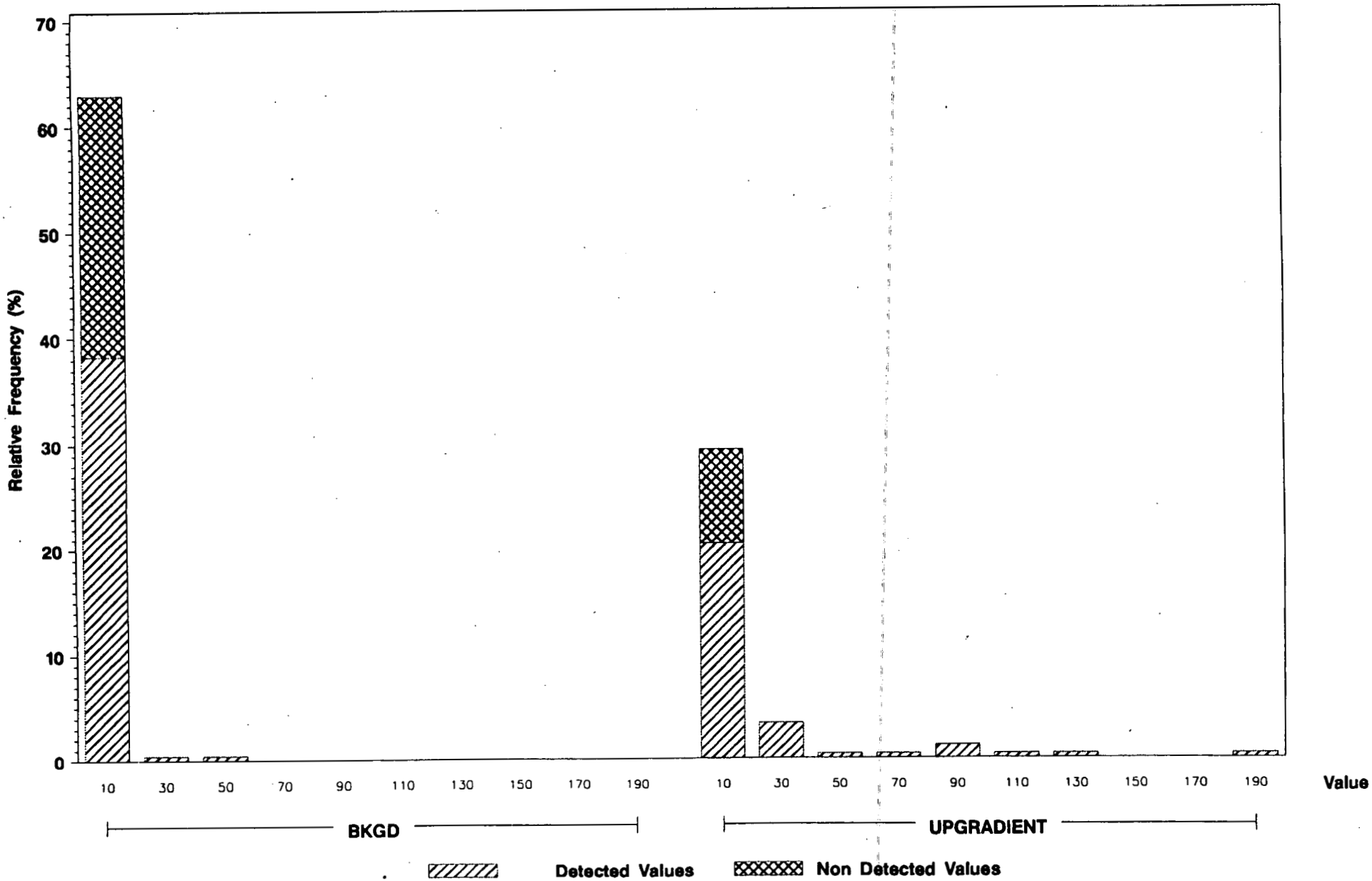
ANALYTE=IRON



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total LEAD (ug/L) in Groundwater

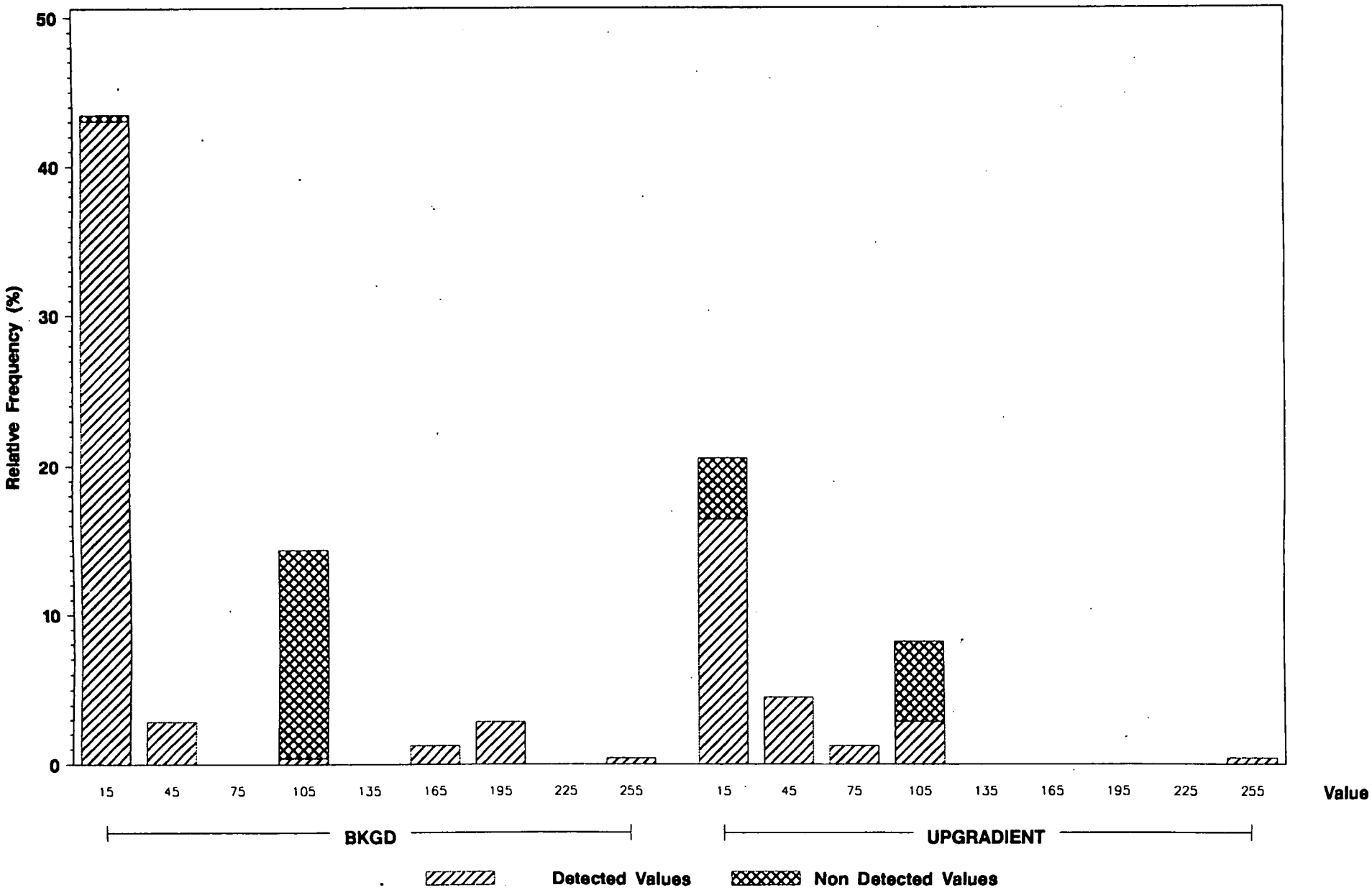
ANALYTE = LEAD



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total LITHIUM (ug/L) in Groundwater

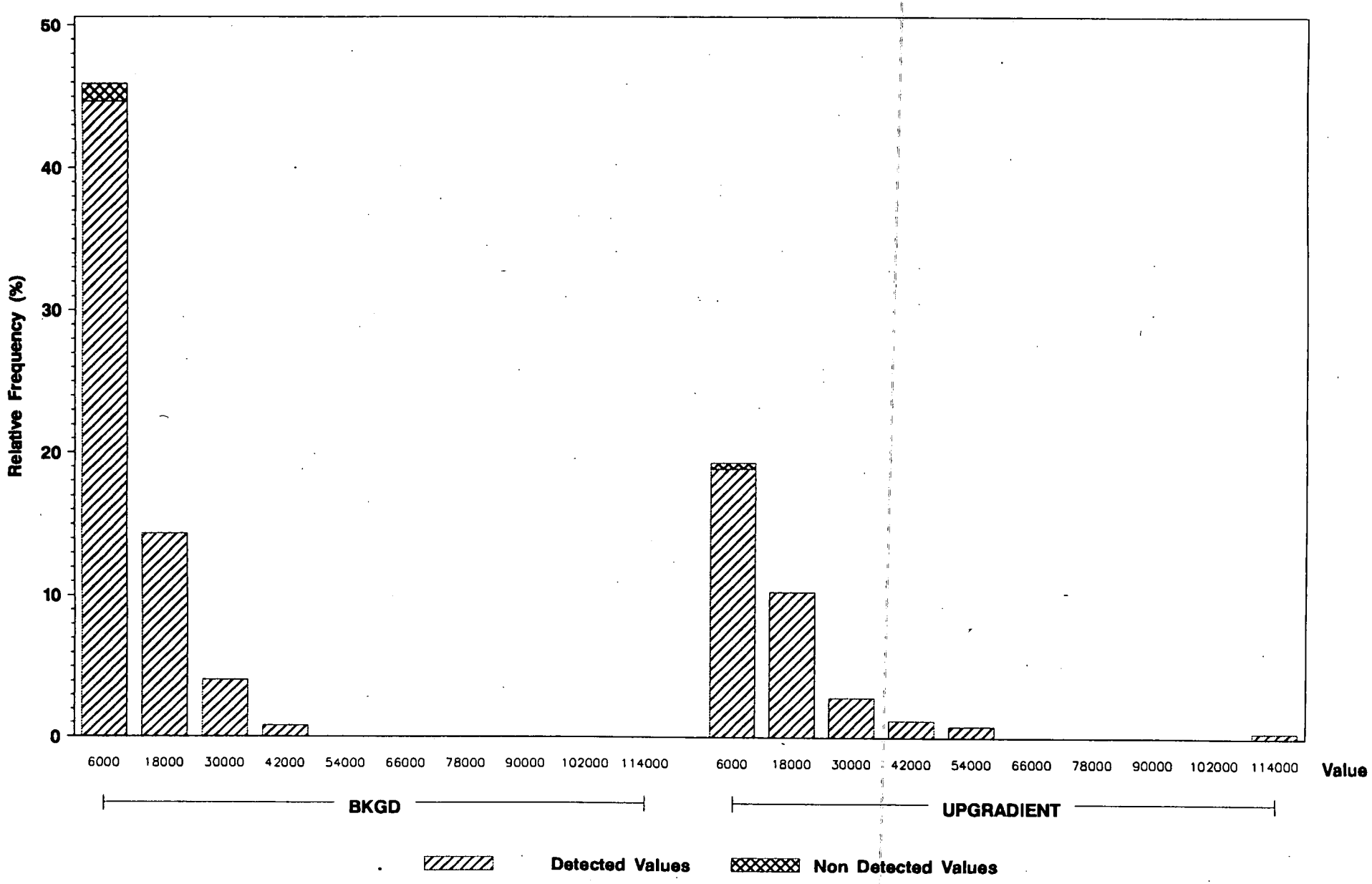
ANALYTE = LITHIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total MAGNESIUM (ug/L) in Groundwater

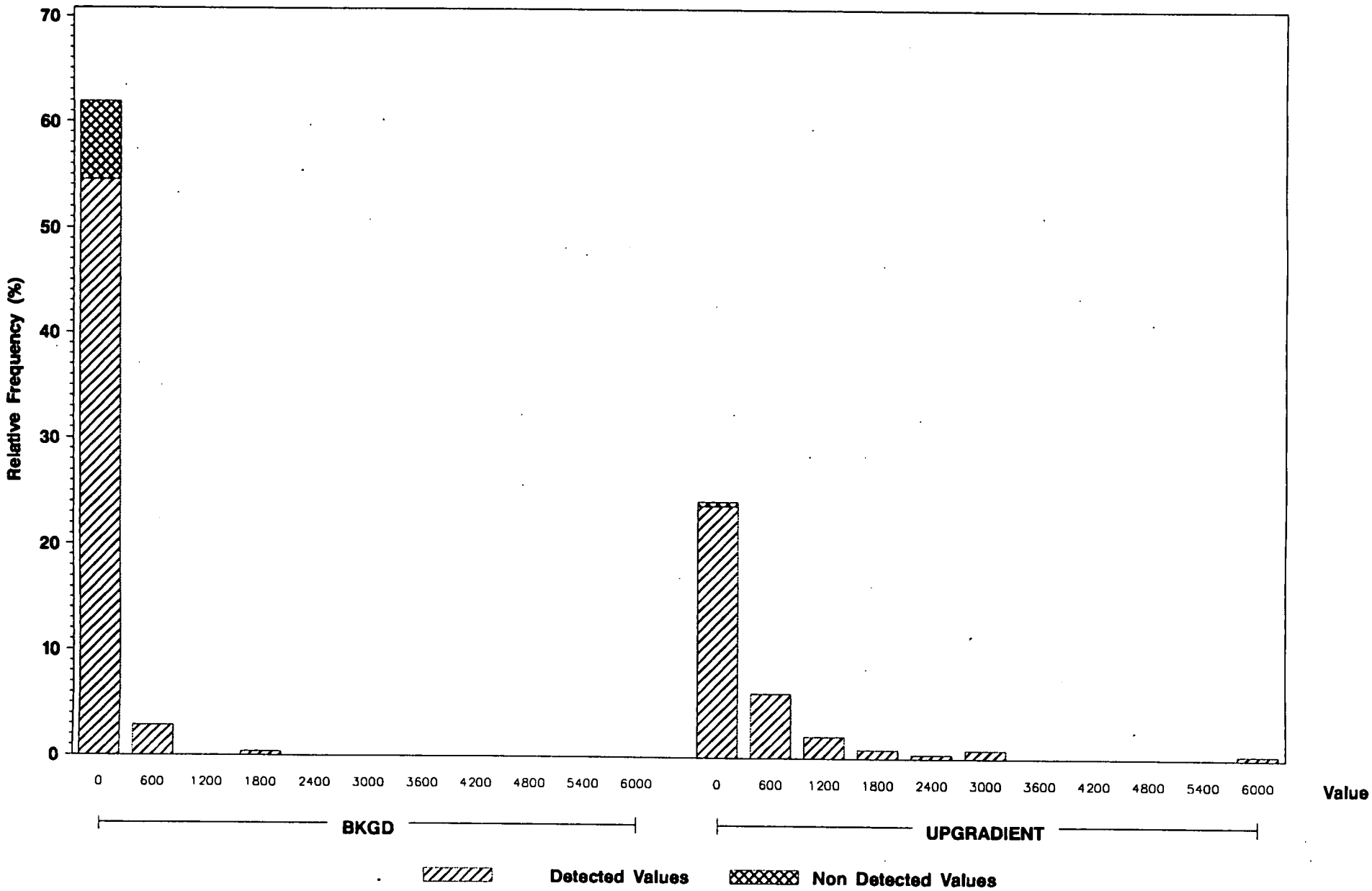
ANALYTE = MAGNESIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total MANGANESE (ug/L) in Groundwater

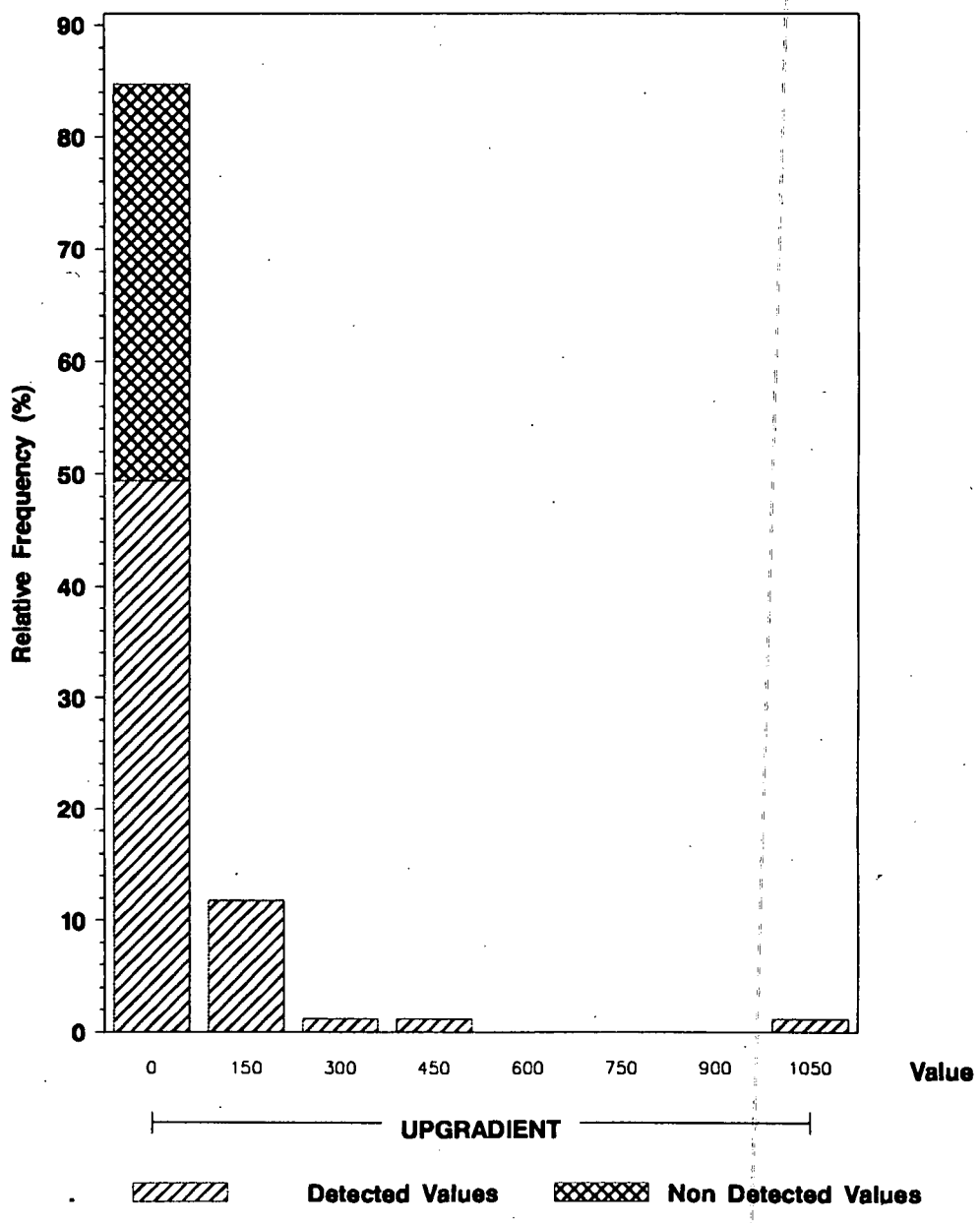
ANALYTE = MANGANESE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total NICKEL (ug/L) in Groundwater

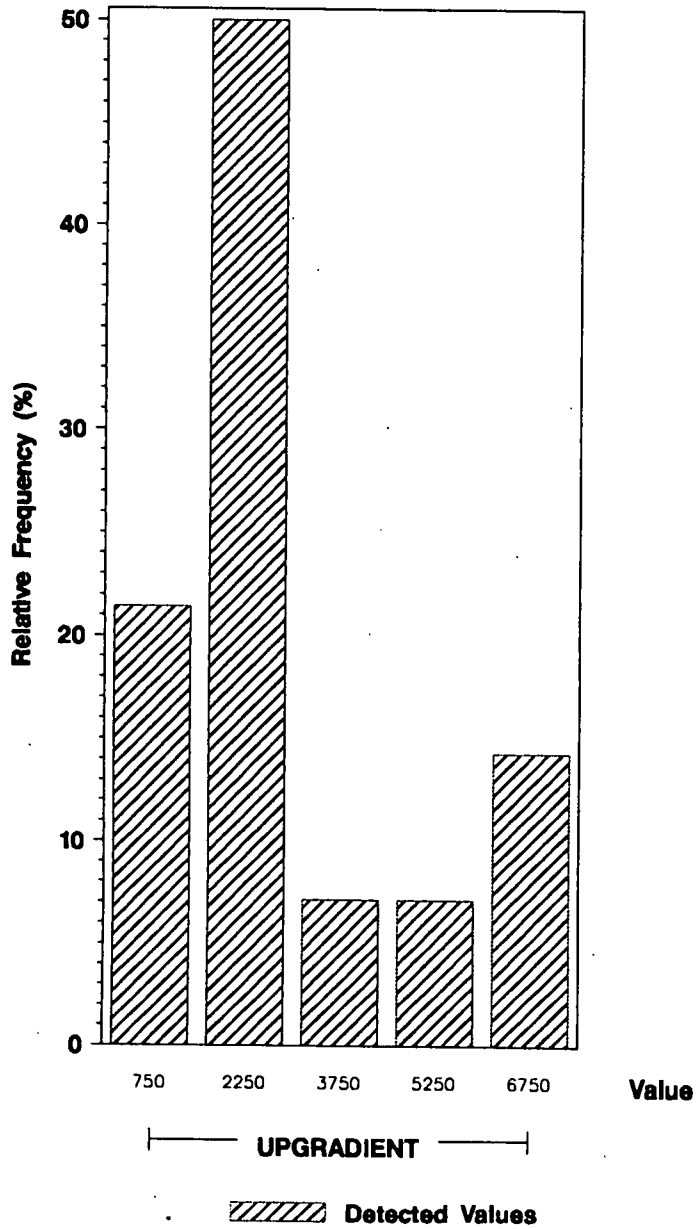
ANALYTE=NICKEL



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total NITRATE (ug/L) in Groundwater

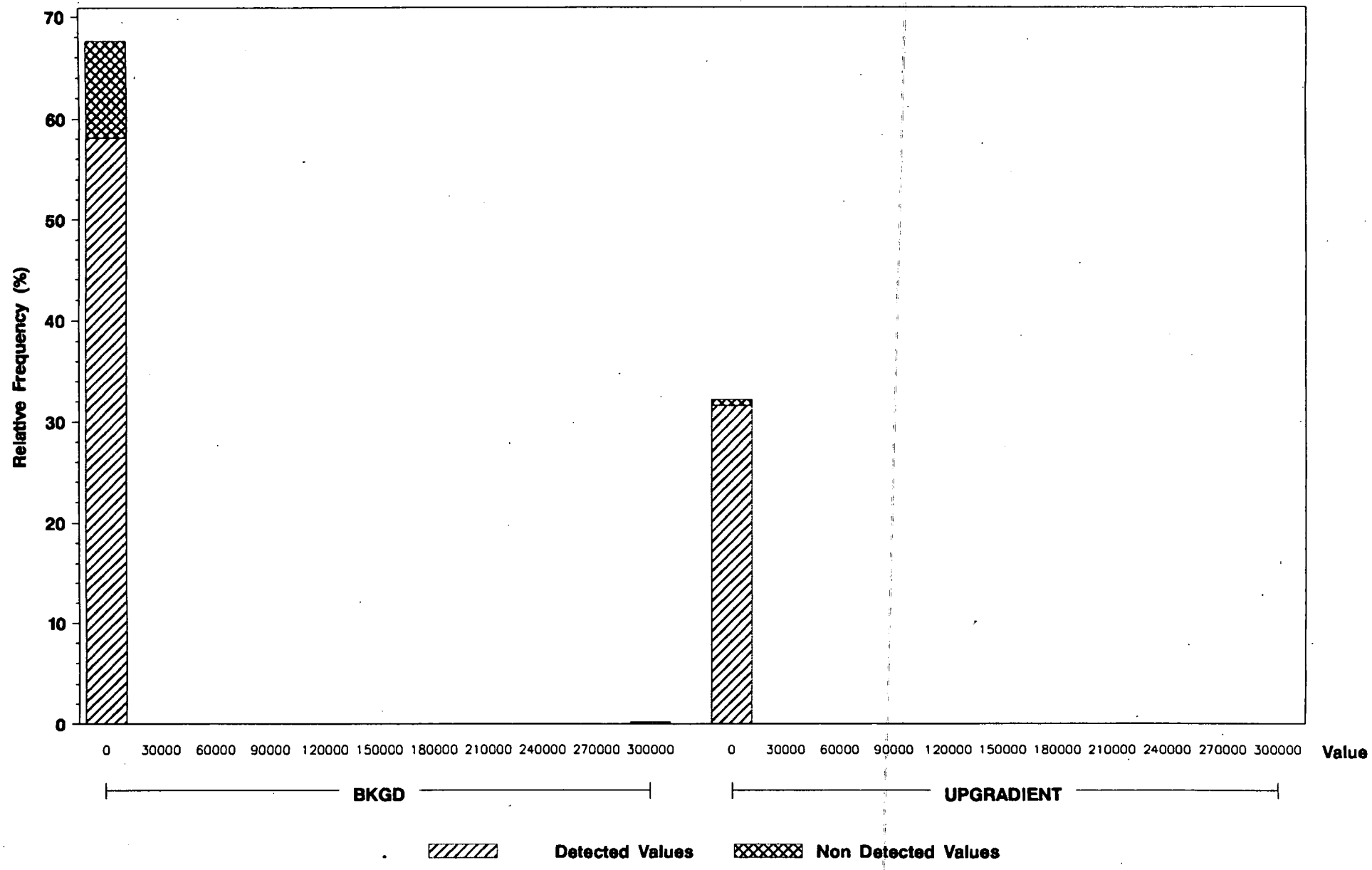
ANALYTE = NITRATE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Groundwater

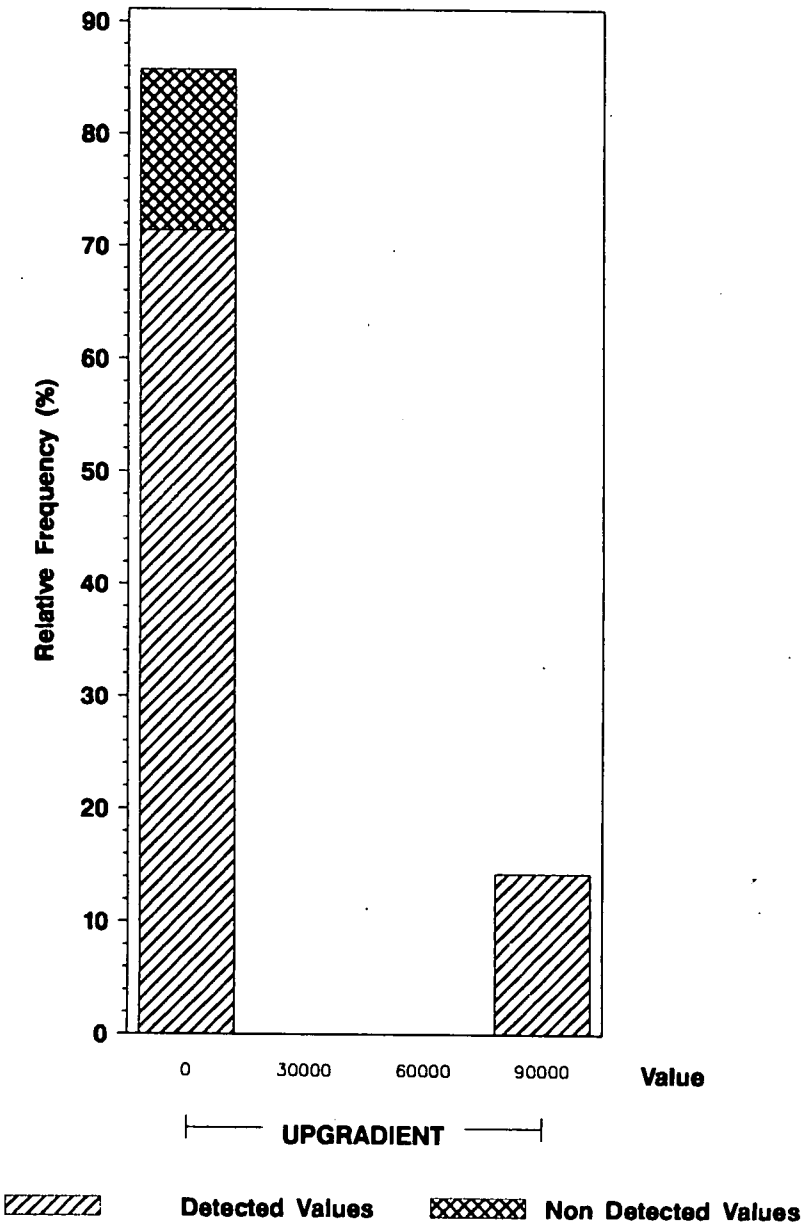
ANALYTE=NITRATE/NITRITE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total PHOSPHORUS (ug/L) in Groundwater

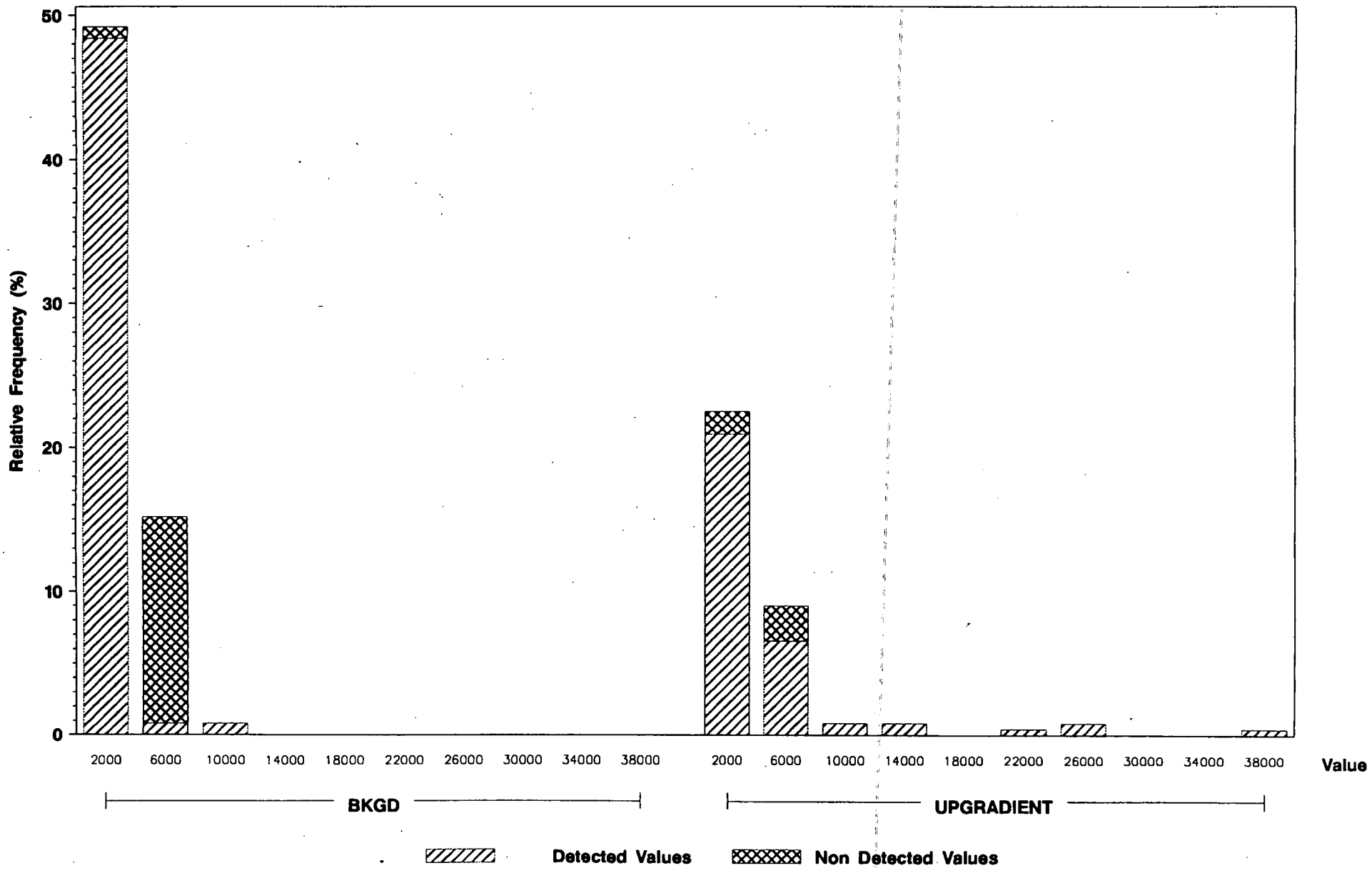
ANALYTE = PHOSPHORUS



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total POTASSIUM (ug/L) in Groundwater

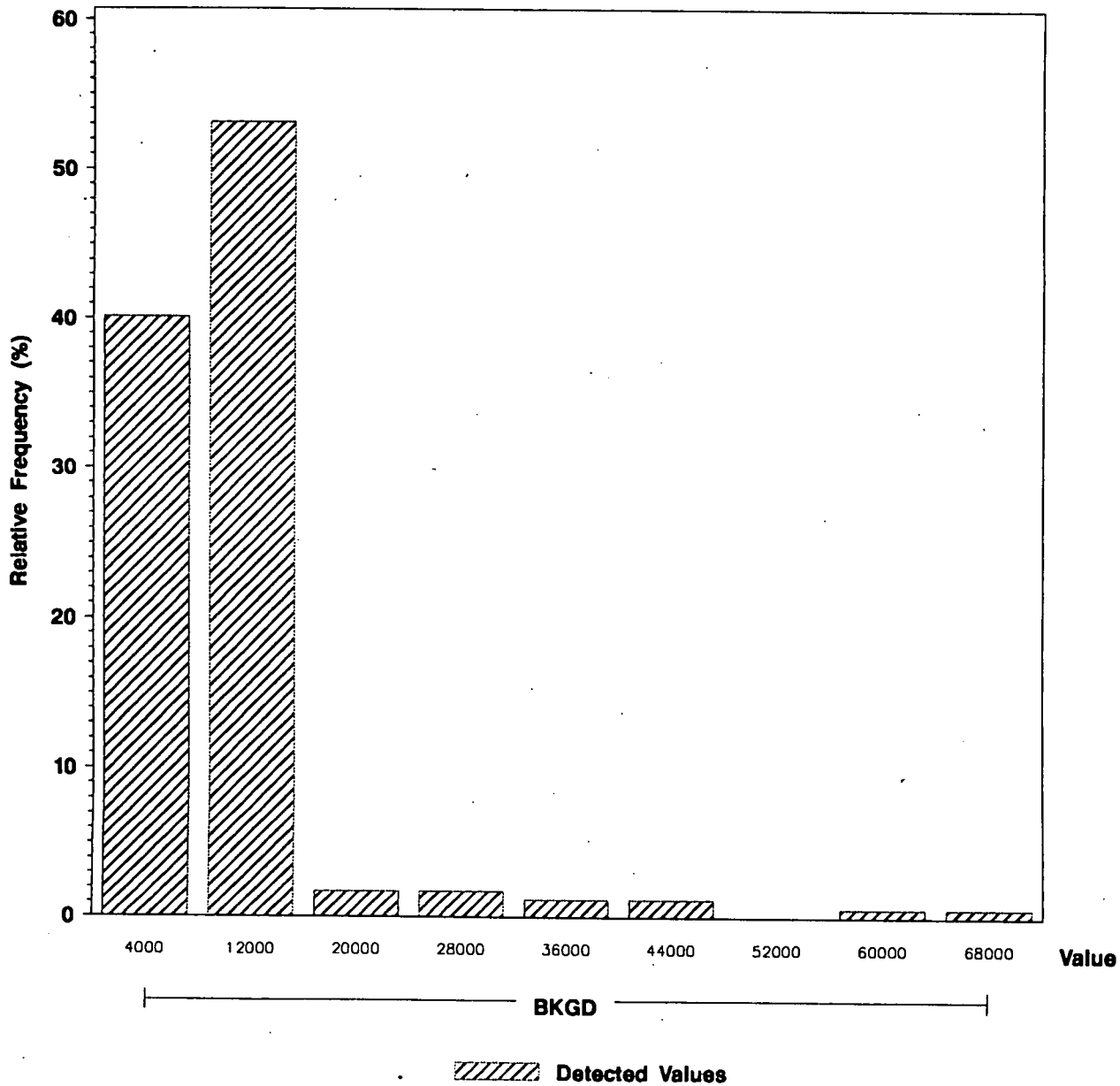
ANALYTE = POTASSIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SILICA (ug/L) in Groundwater

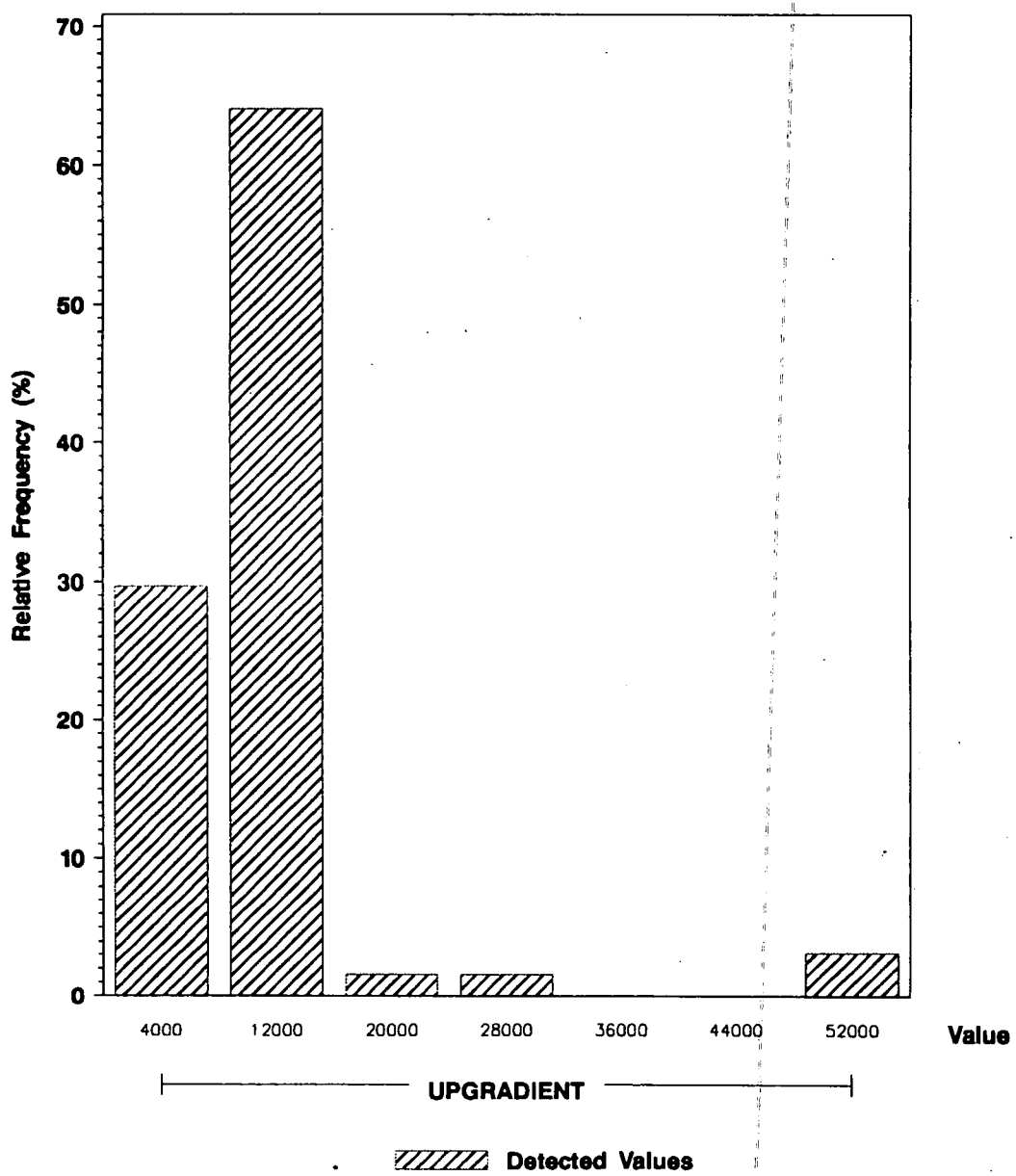
ANALYTE = SILICA



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SILICA, DISSOLVED (ug/L) in Groundwater

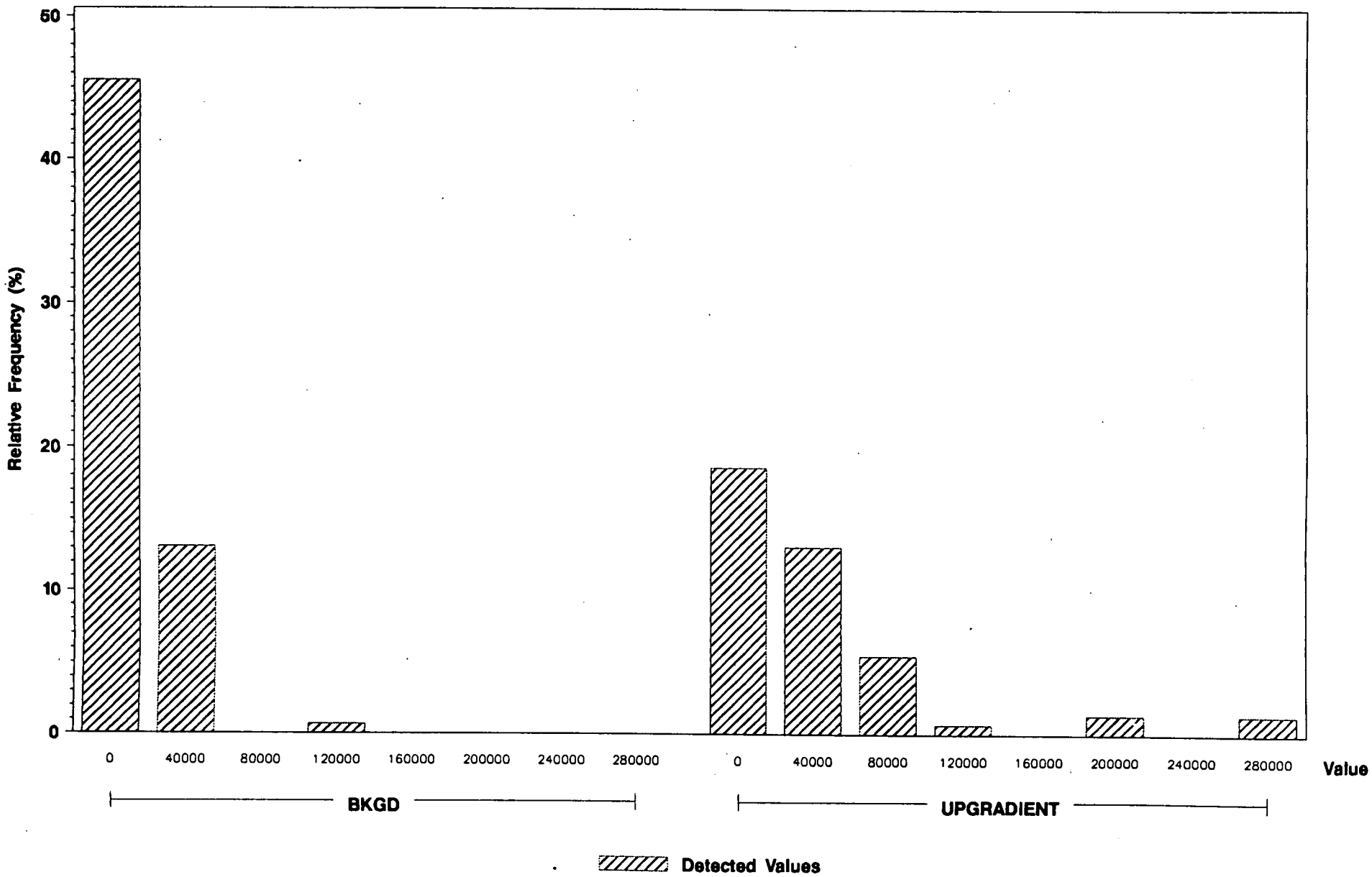
ANALYTE = SILICA, DISSOLVED



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SILICON (ug/L) in Groundwater

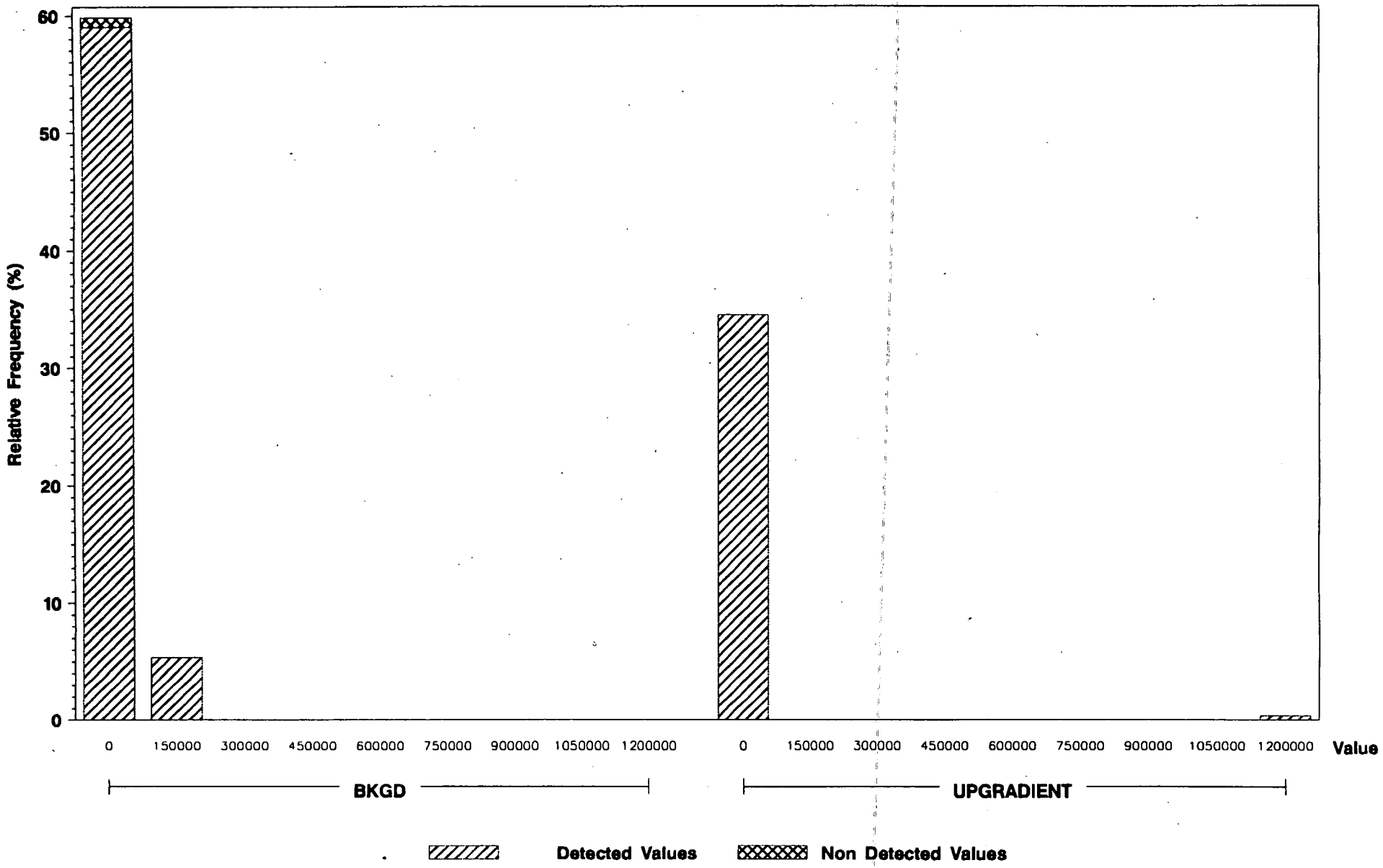
ANALYTE = SILICON



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SODIUM (ug/L) in Groundwater

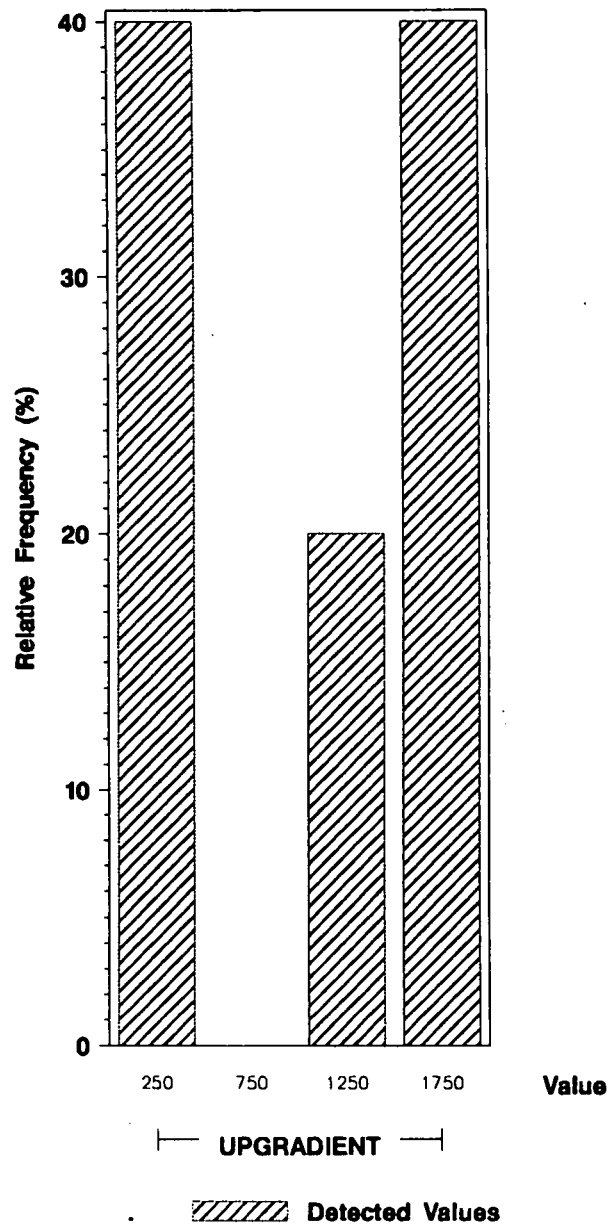
ANALYTE = SODIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SODIUM FLUORIDE (ug/L) in Groundwater

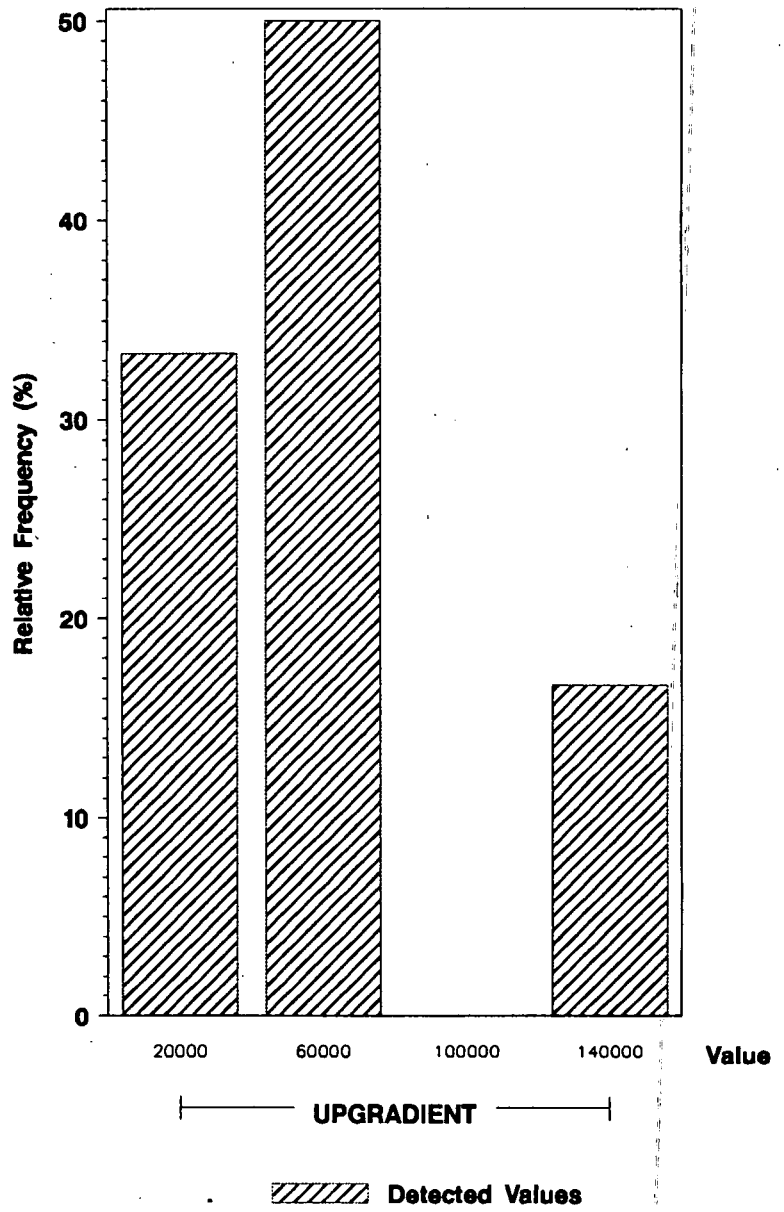
ANALYTE = SODIUM FLUORIDE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SODIUM SULFATE (ug/L) in Groundwater

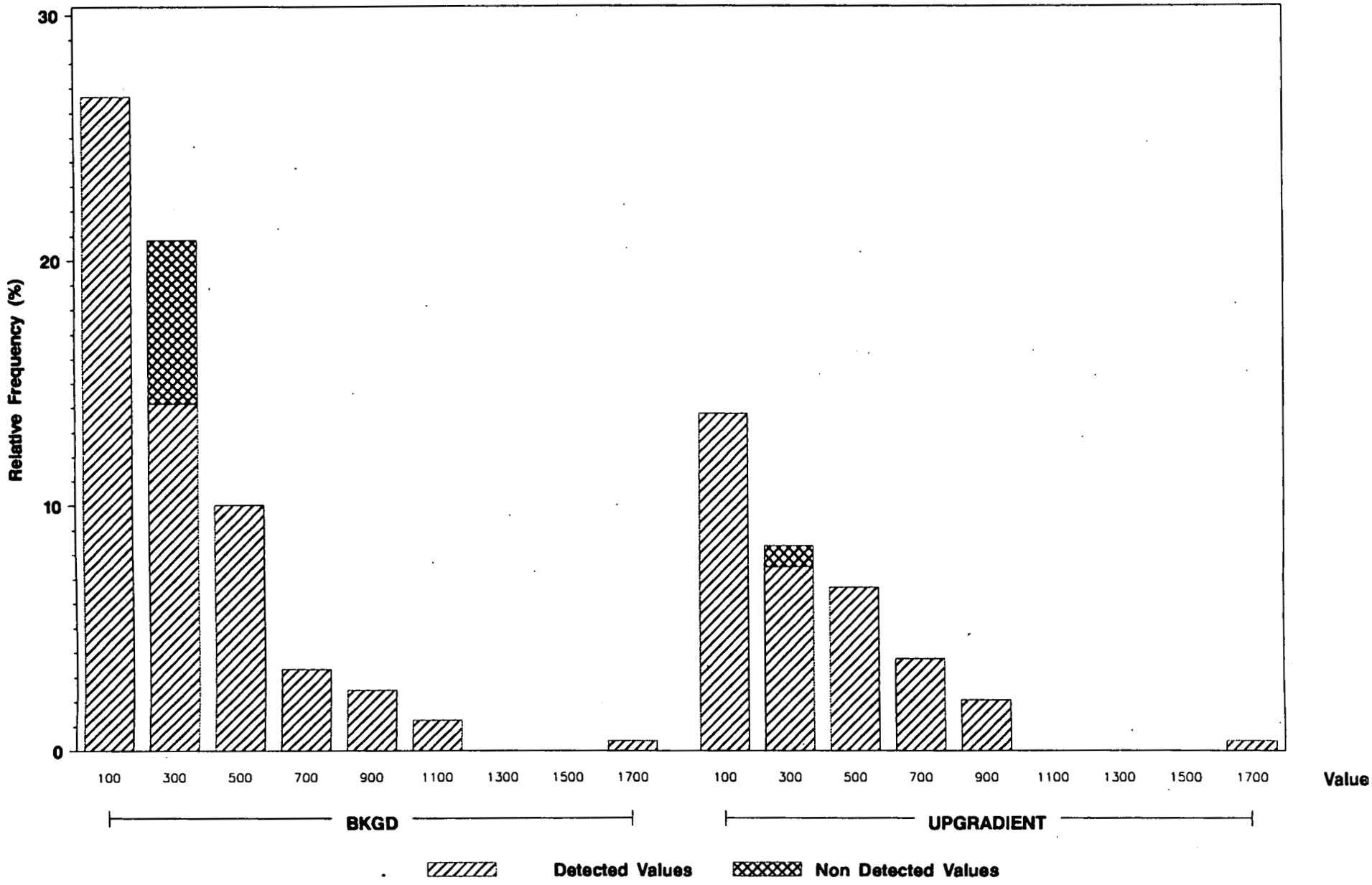
ANALYTE = SODIUM SULFATE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total STRONTIUM (ug/L) in Groundwater

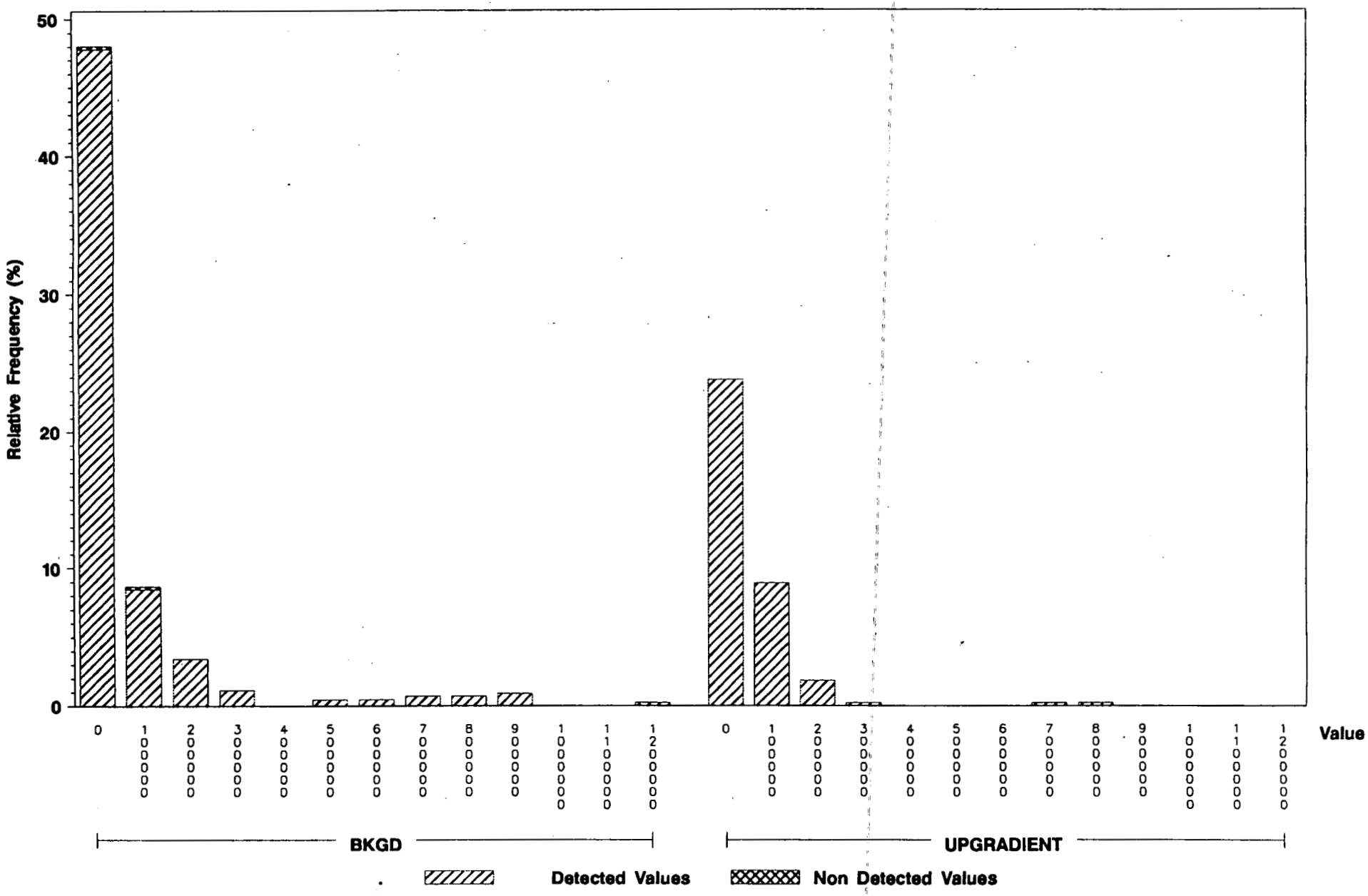
ANALYTE = STRONTIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total SULFATE (ug/L) in Groundwater

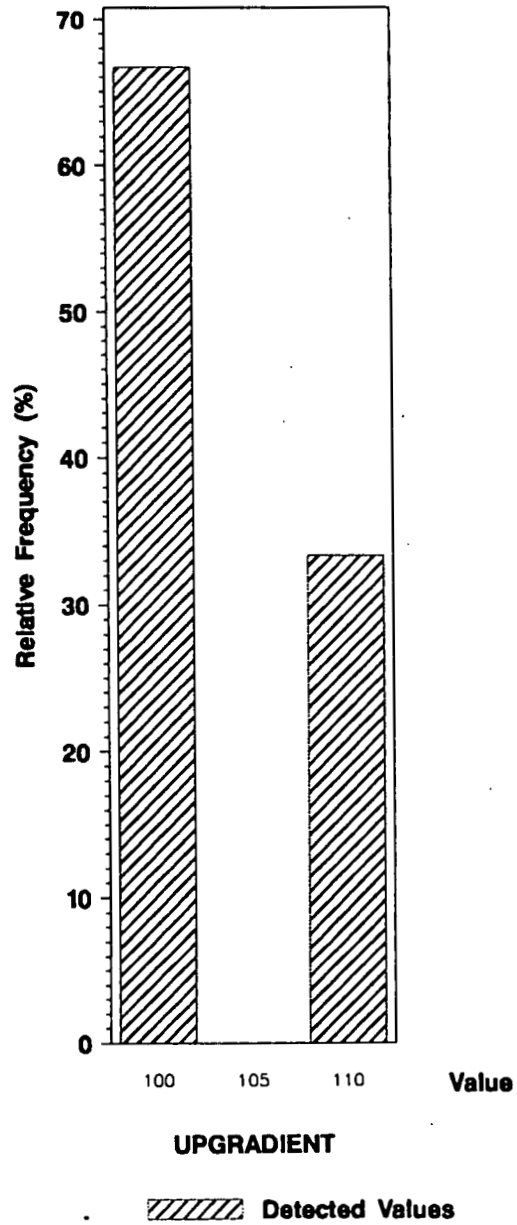
ANALYTE = SULFATE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total TOLUENE – D8 (ug/L) in Groundwater

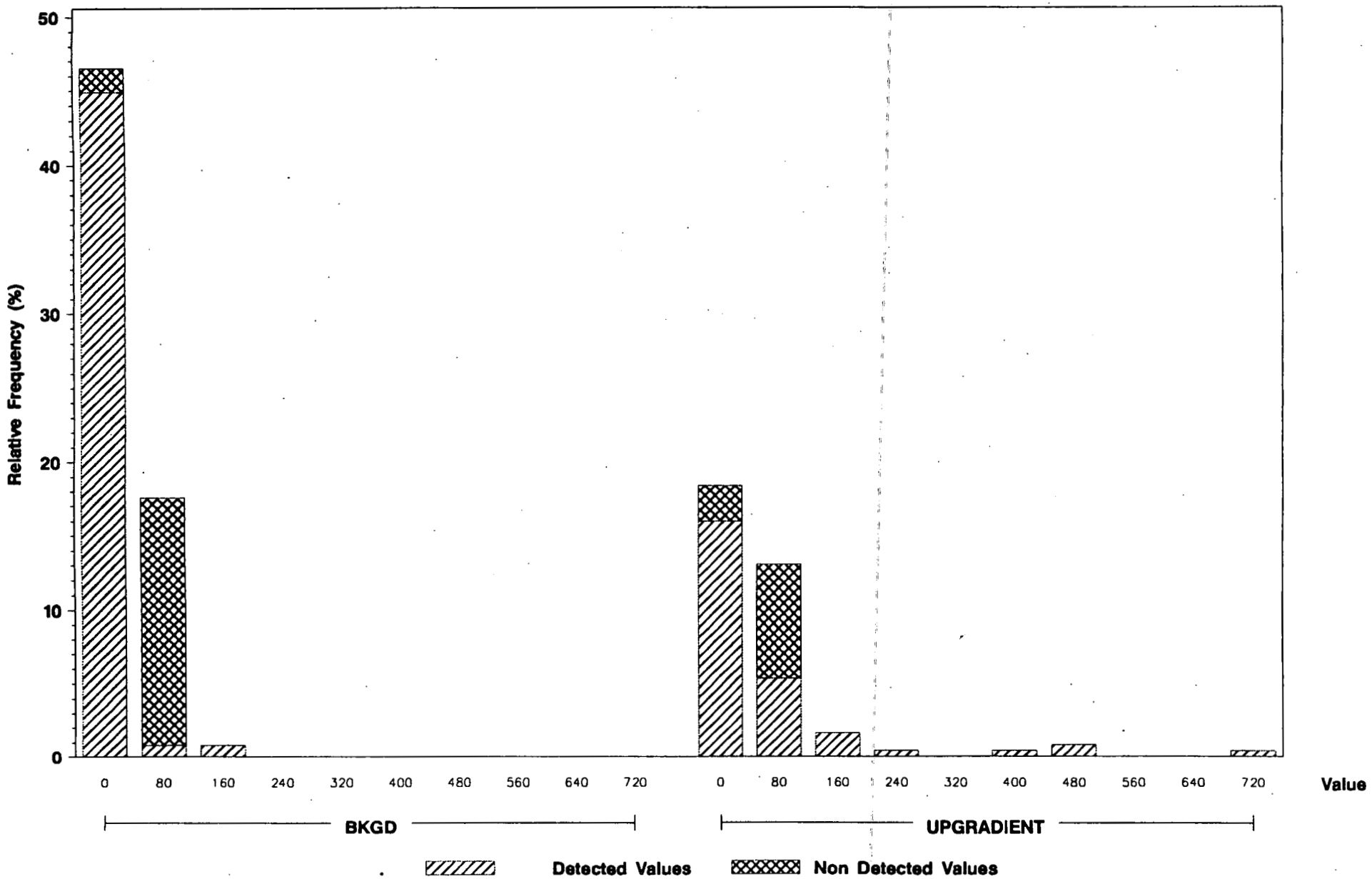
ANALYTE = TOLUENE – D8



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total VANADIUM (ug/L) in Groundwater

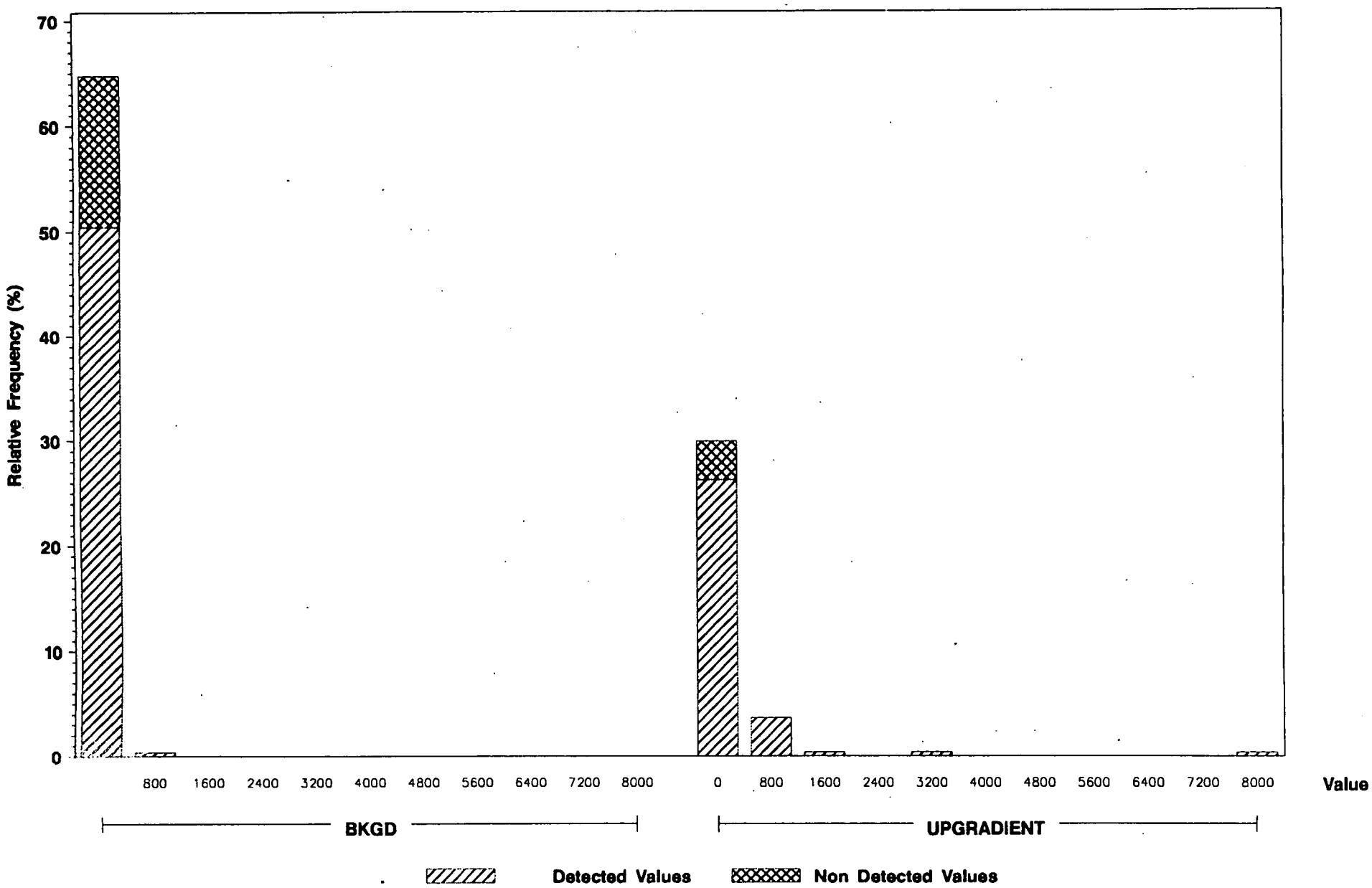
ANALYTE = VANADIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total ZINC (ug/L) in Groundwater

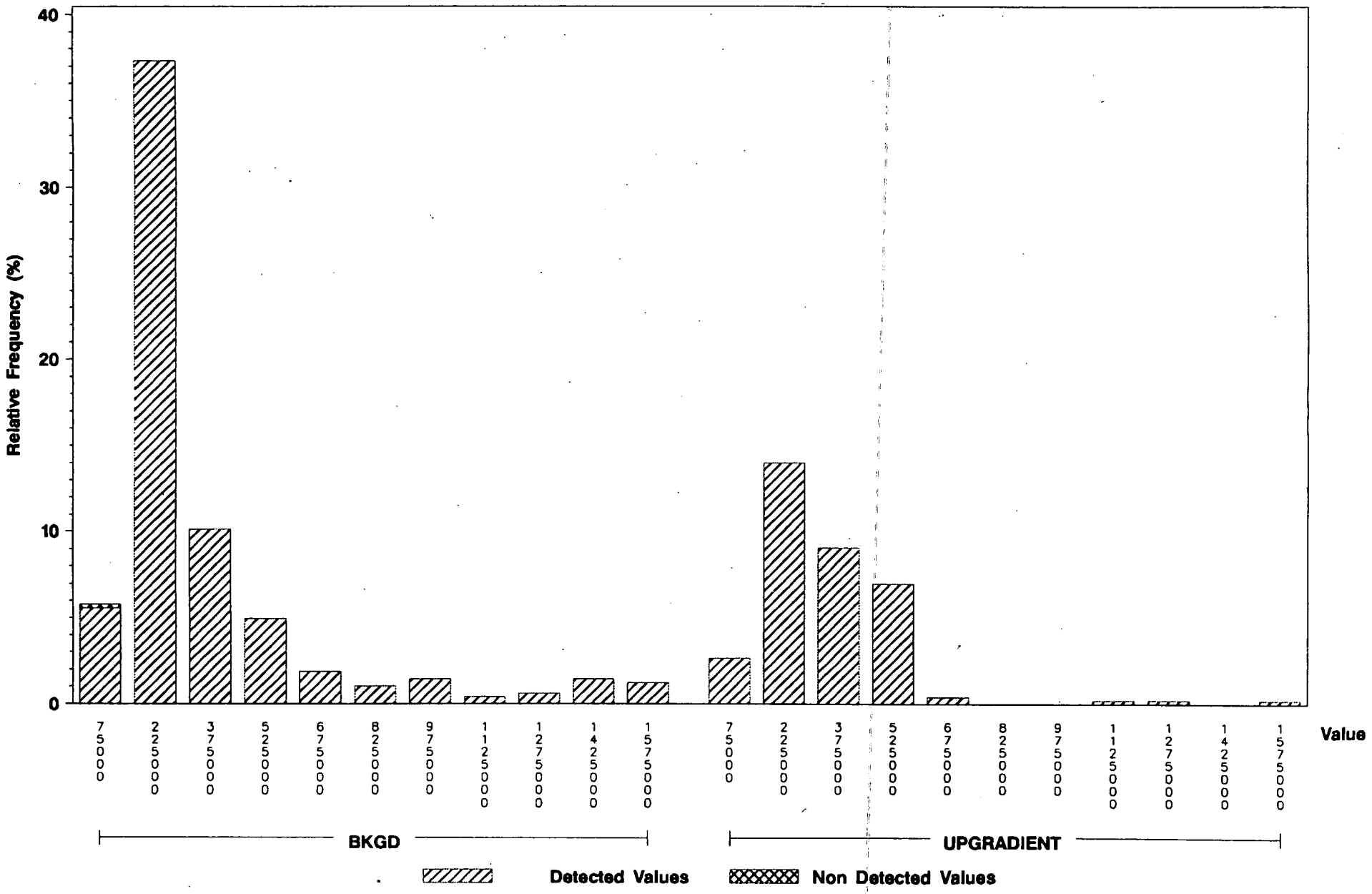
ANALYTE=ZINC



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## TOTAL DISSOLVED SOLIDS (ug/L) in Groundwater

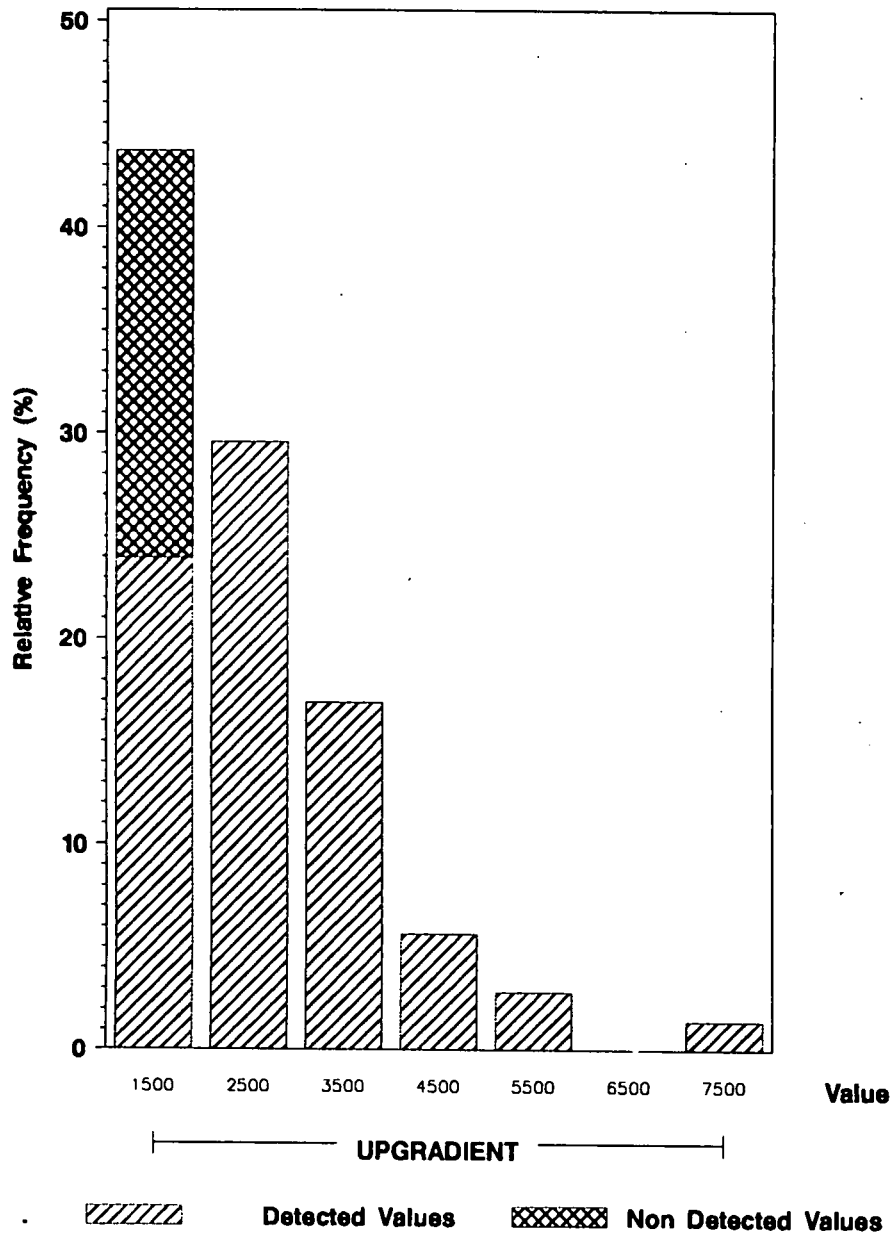
ANALYTE=TOTAL DISSOLVED SOLIDS



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## TOTAL ORGANIC CARBON (ug/L) in Groundwater

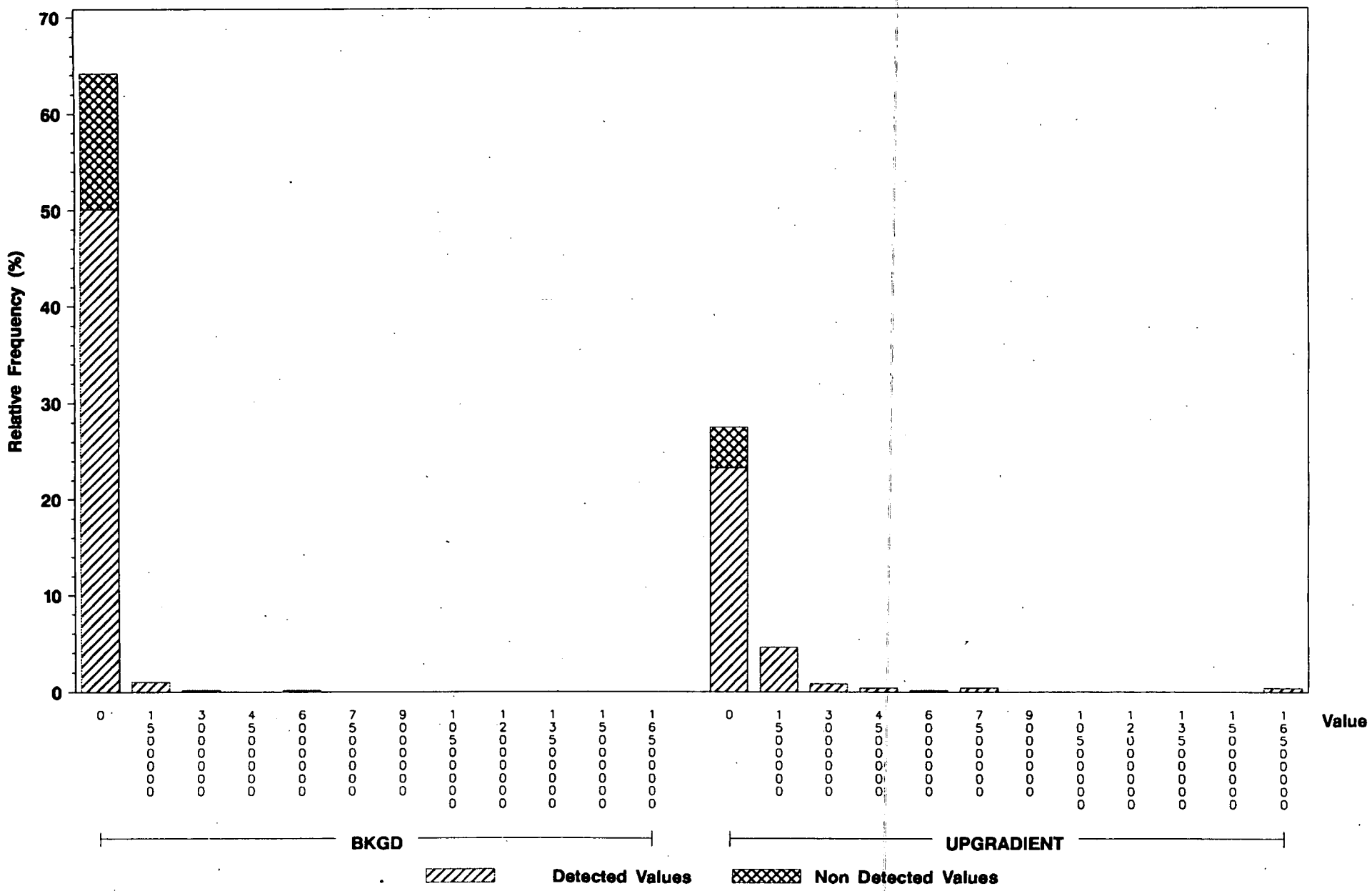
ANALYTE = TOTAL ORGANIC CARBON



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## TOTAL SUSPENDED SOLIDS (ug/L) in Groundwater

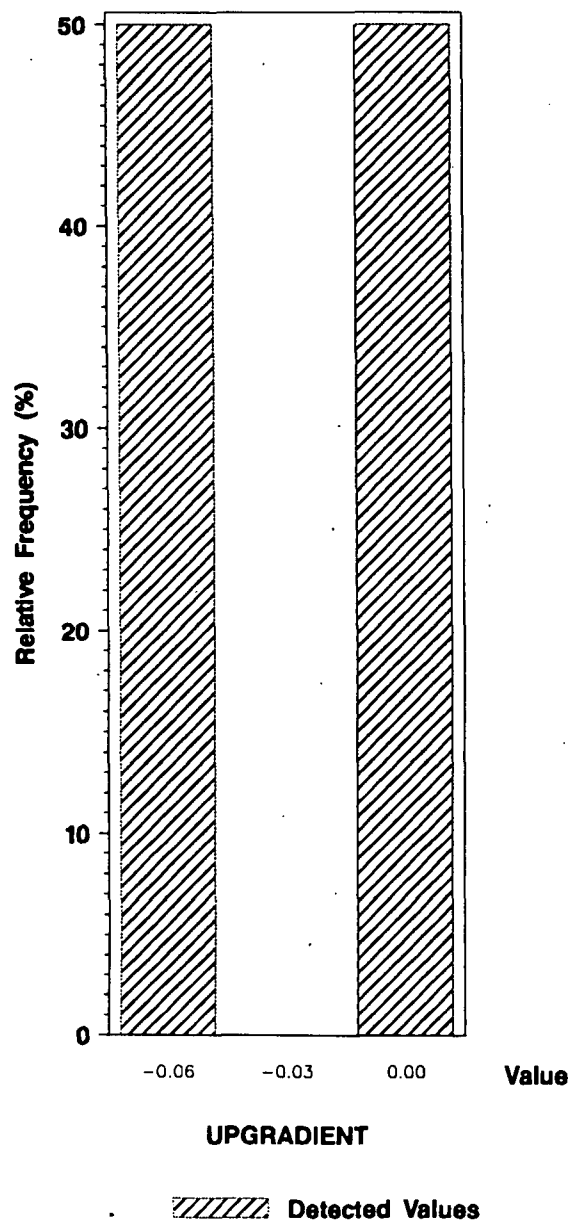
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CESIUM RADIOACTIVE UNKN ISOTOPE (pCi/L) in Groundwater

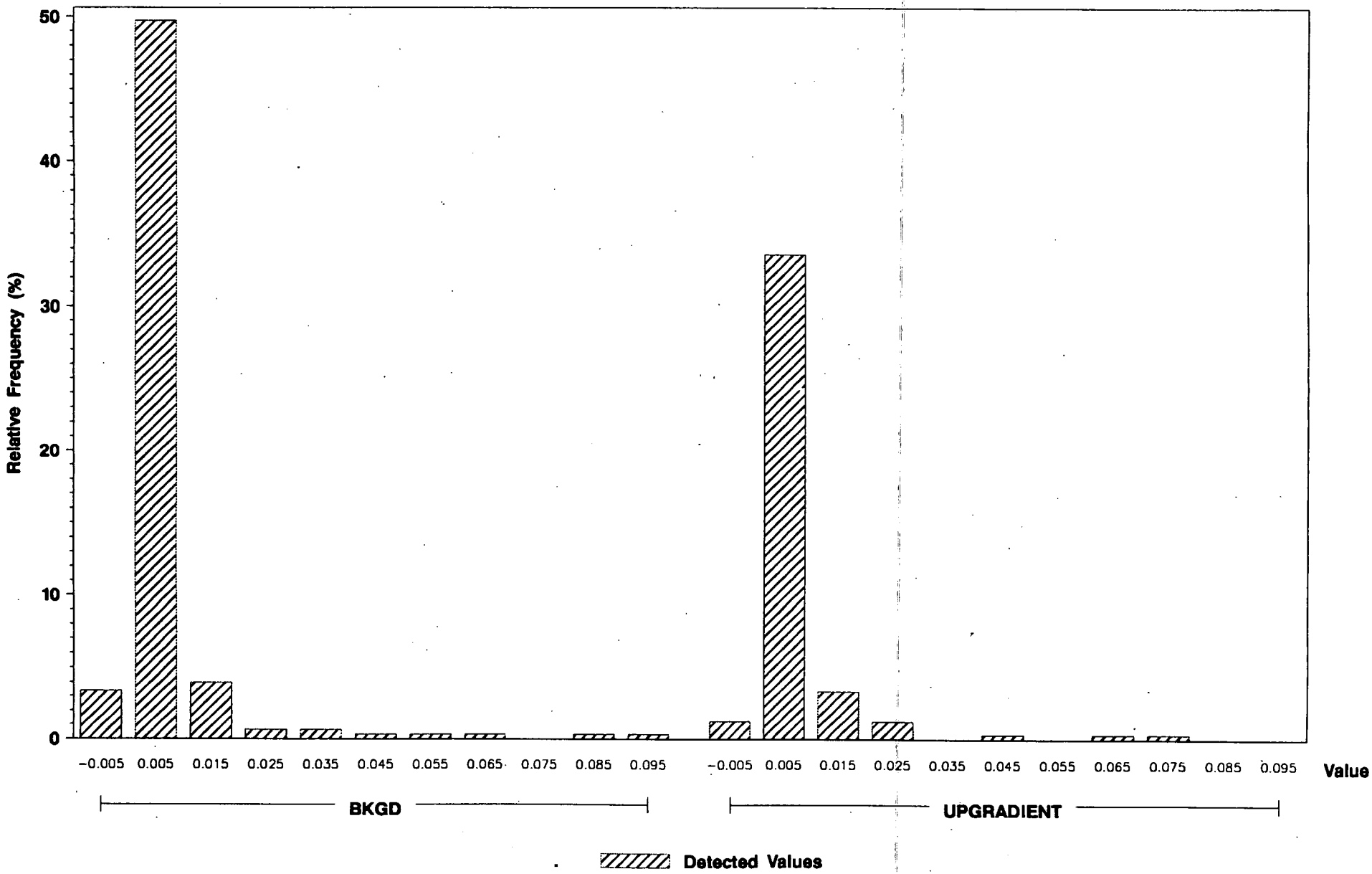
ANALYTE = CESIUM RADIOACTIVE UNKN ISOTOPE



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total AMERICIUM – 241 (pCi/L) in Groundwater

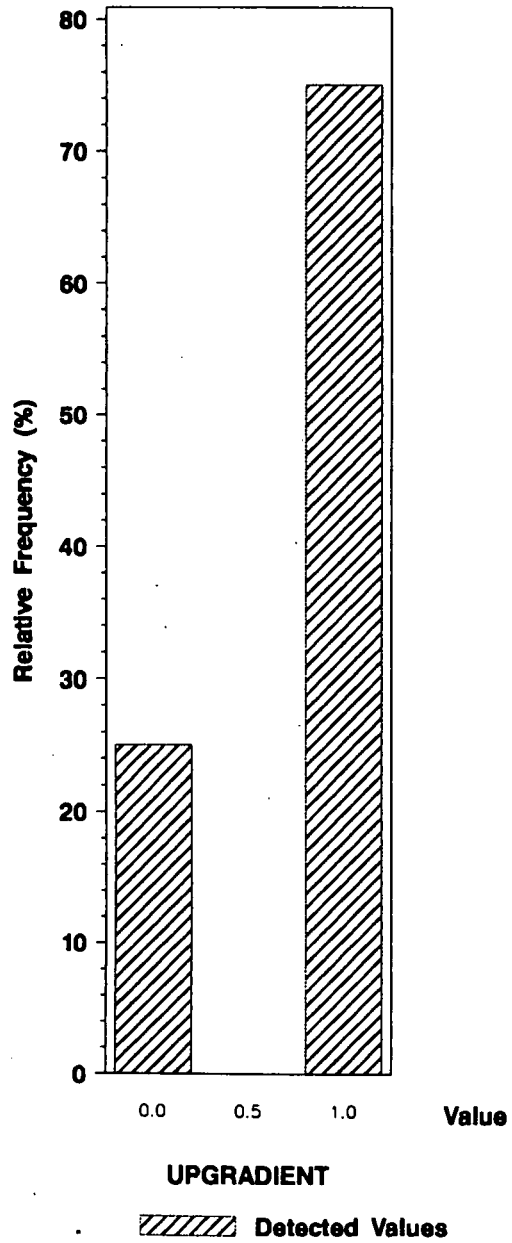
ANALYTE = AMERICIUM – 241



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Groundwater

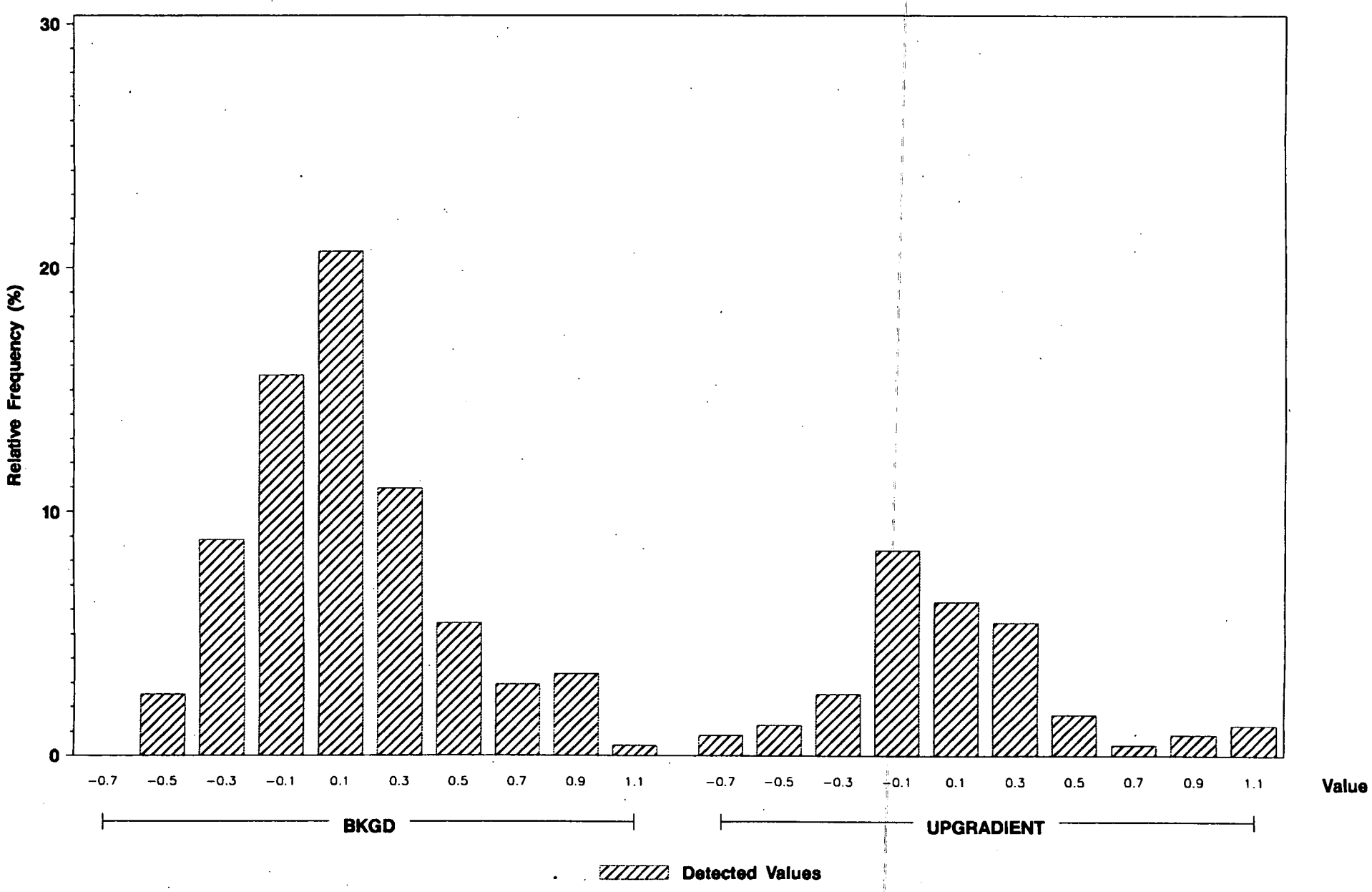
ANALYTE = CESIUM-134



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Groundwater

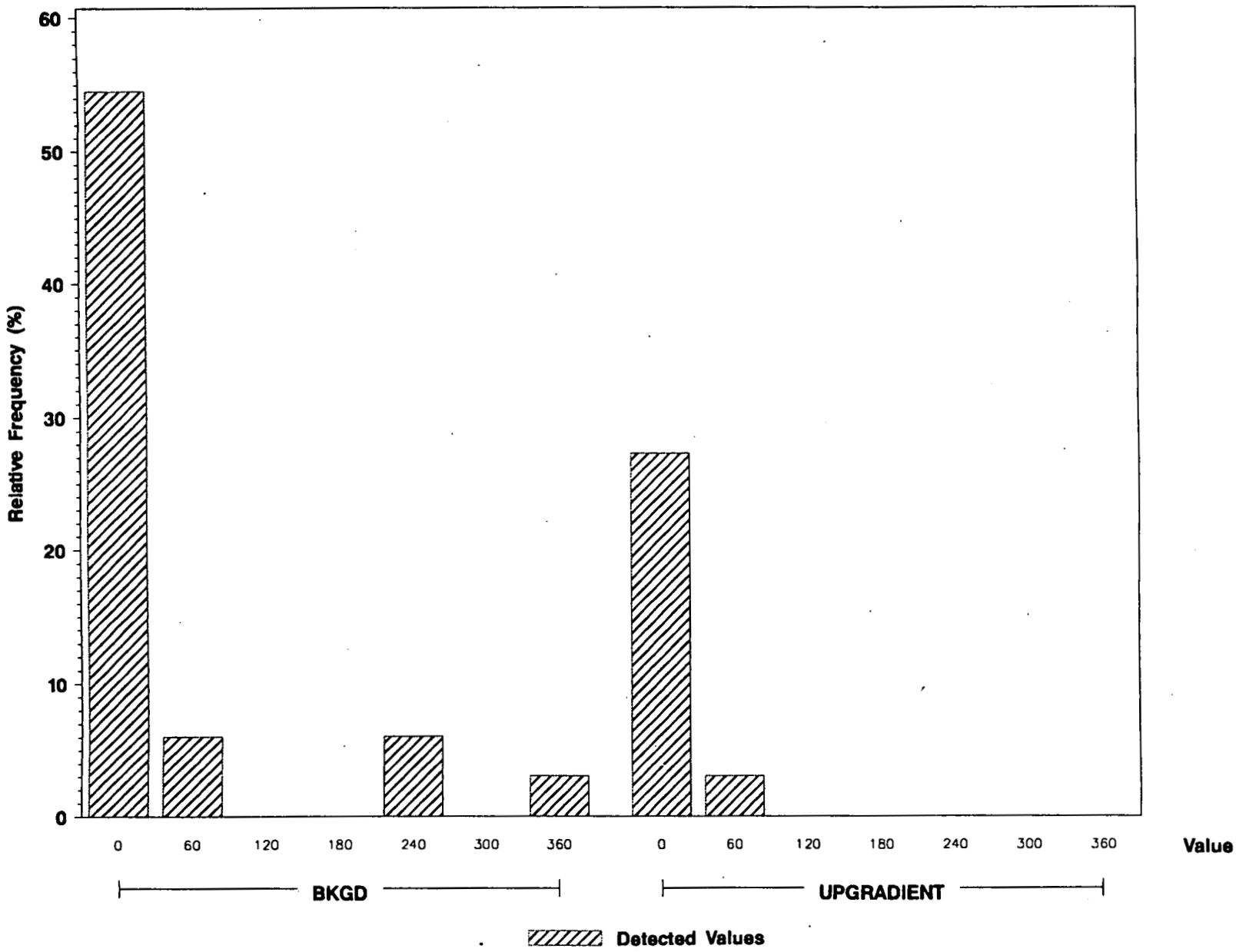
ANALYTE = CESIUM-137



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Groundwater

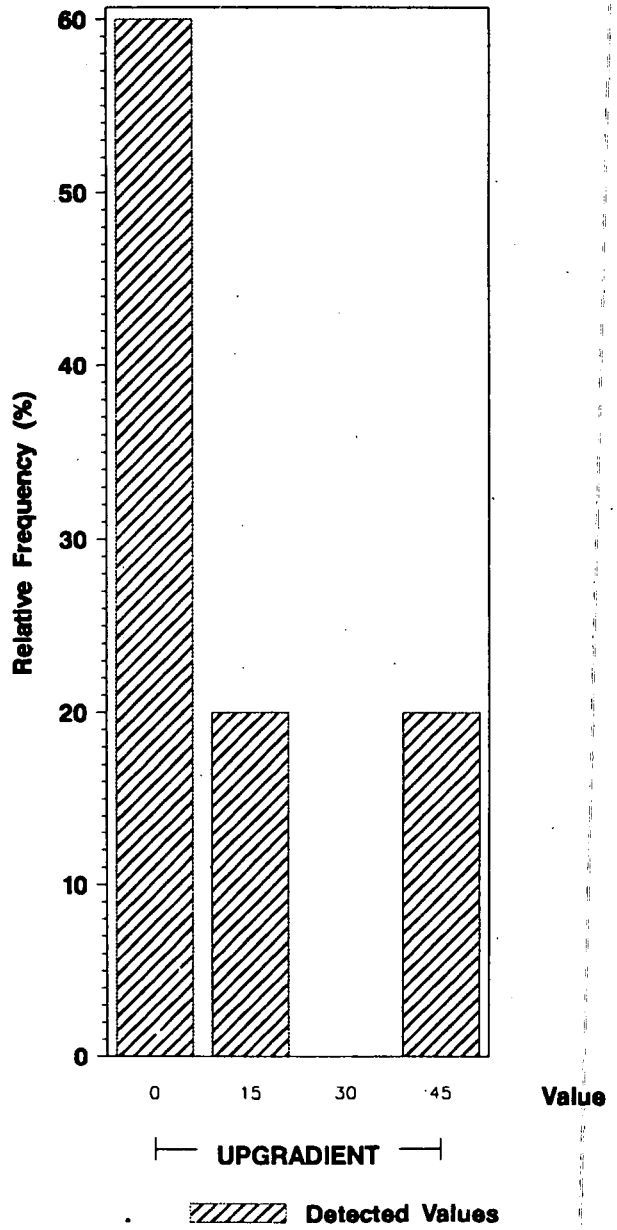
ANALYTE = GROSS ALPHA



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS ALPHA – DISSOLVED (pCi/L) in Groundwater

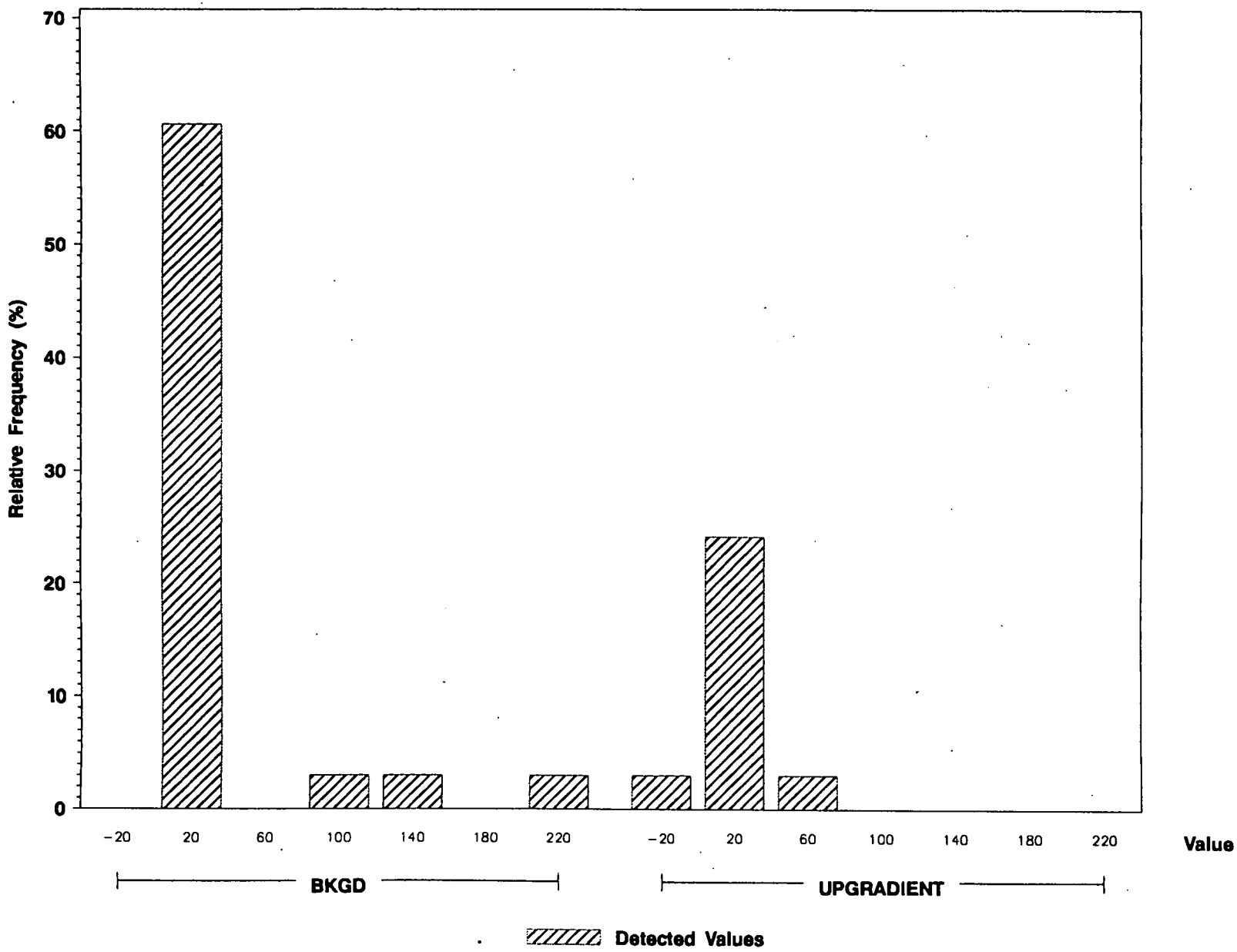
ANALYTE=GROSS ALPHA – DISSOLVED



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS BETA (pCi/L) in Groundwater

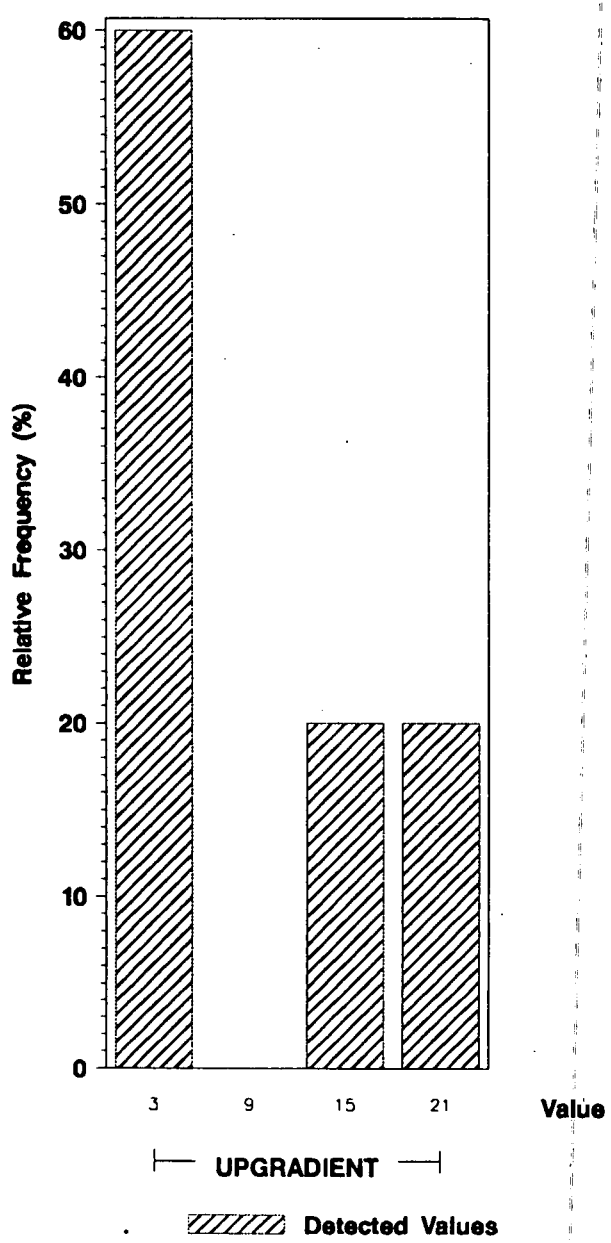
ANALYTE=GROSS BETA



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS BETA – DISSOLVED (pCi/L) in Groundwater

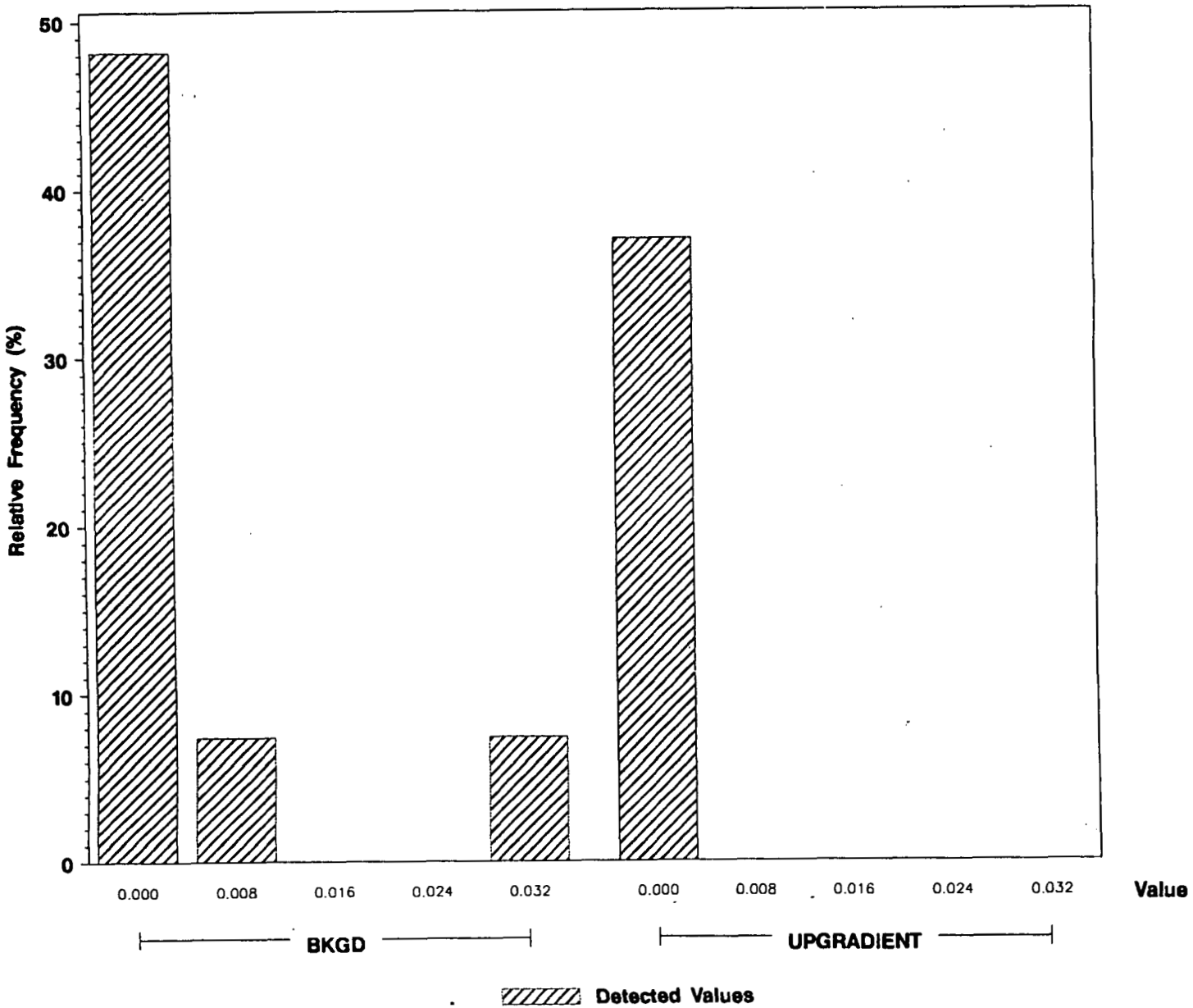
ANALYTE=GROSS BETA – DISSOLVED



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total PLUTONIUM-238 (pCi/L) in Groundwater

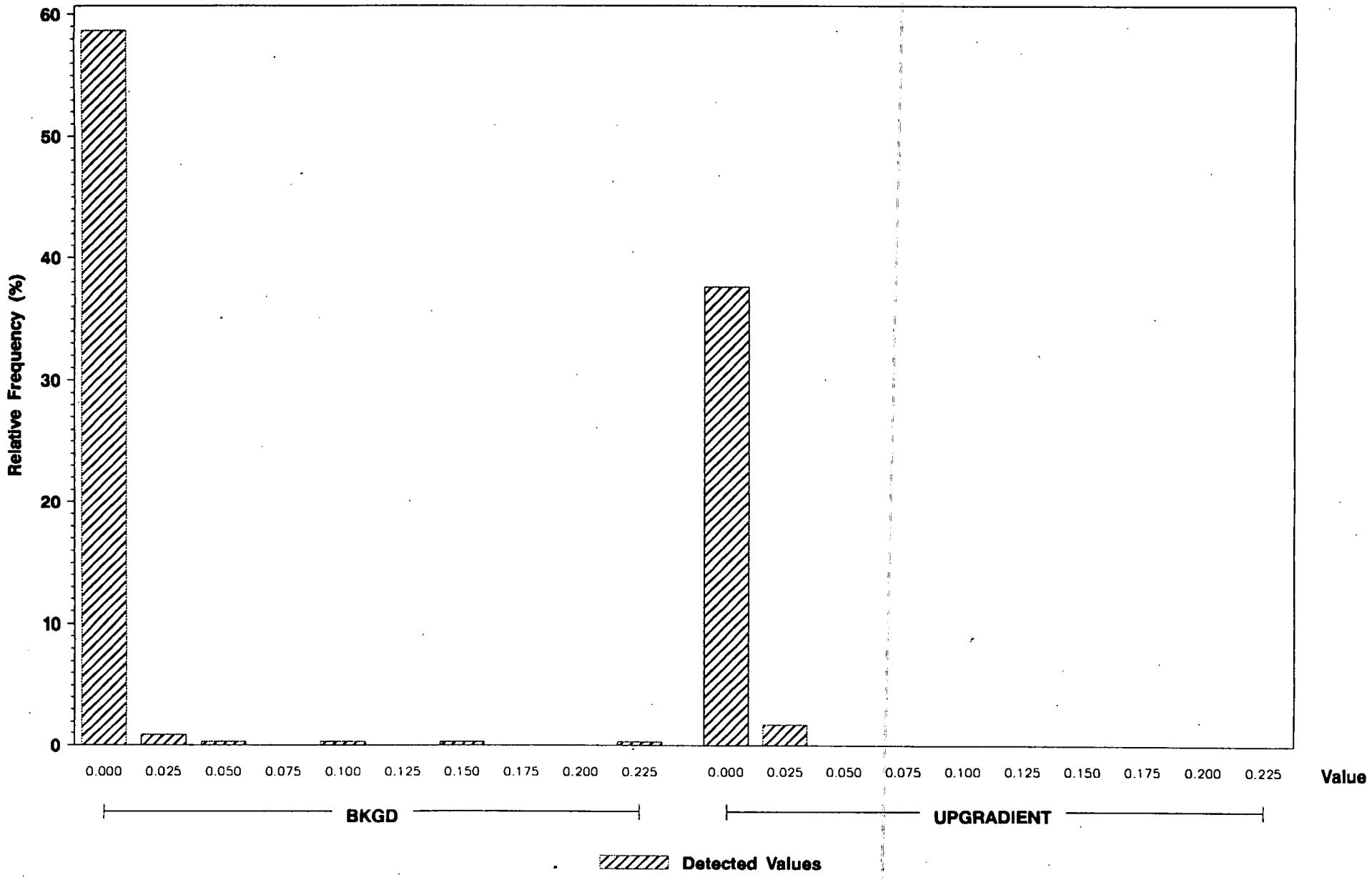
ANALYTE = PLUTONIUM-238



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Groundwater

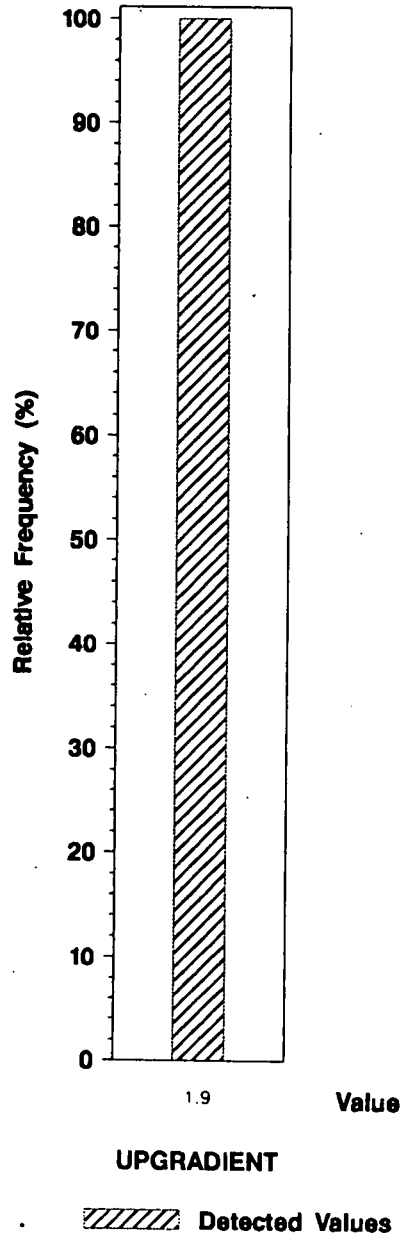
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total TOTAL RADIOCESIUM (pCi/L) in Groundwater

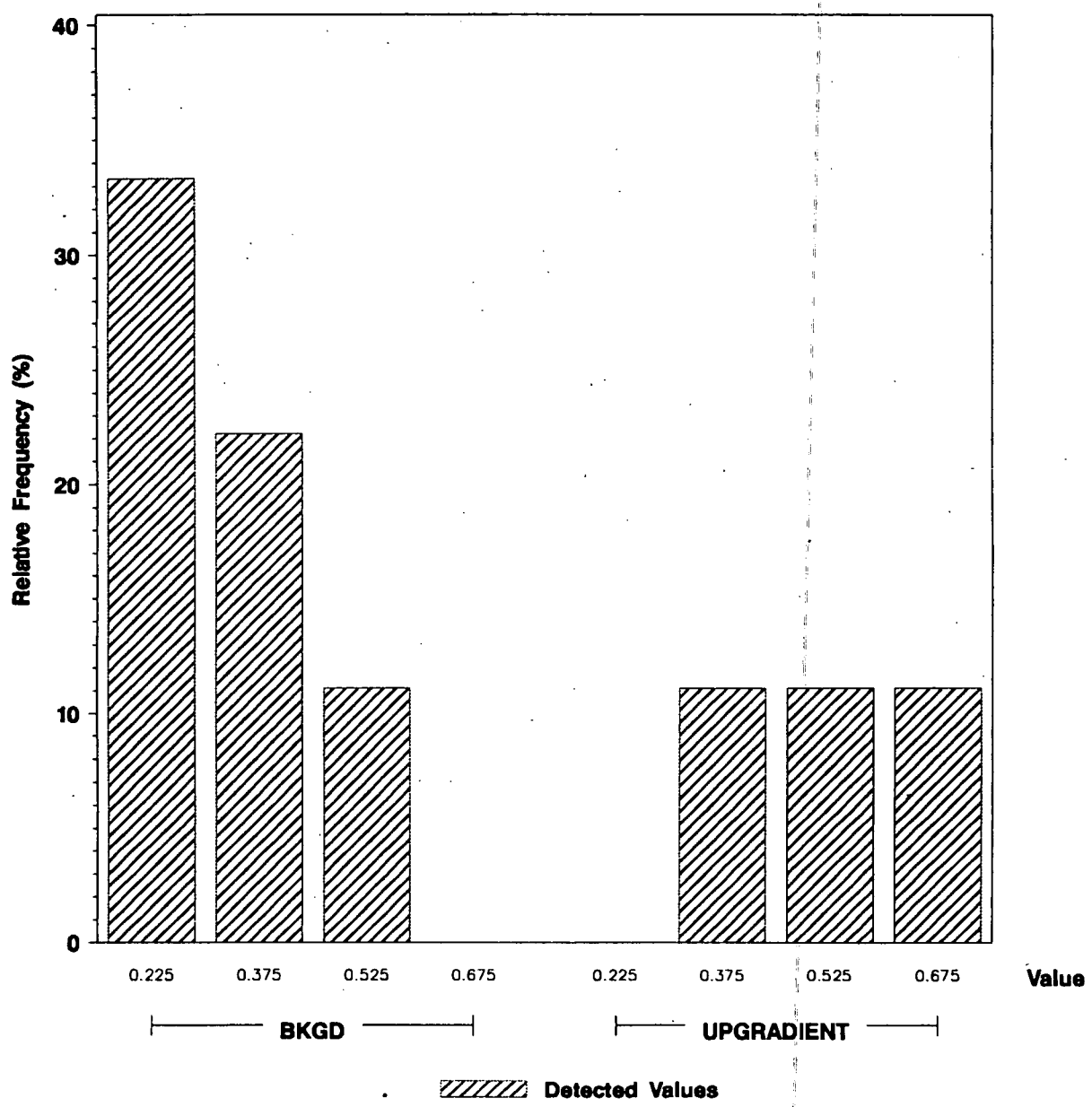
ANALYTE = TOTAL RADIOCESIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total RADIUM – 226 (pCi/L) in Groundwater

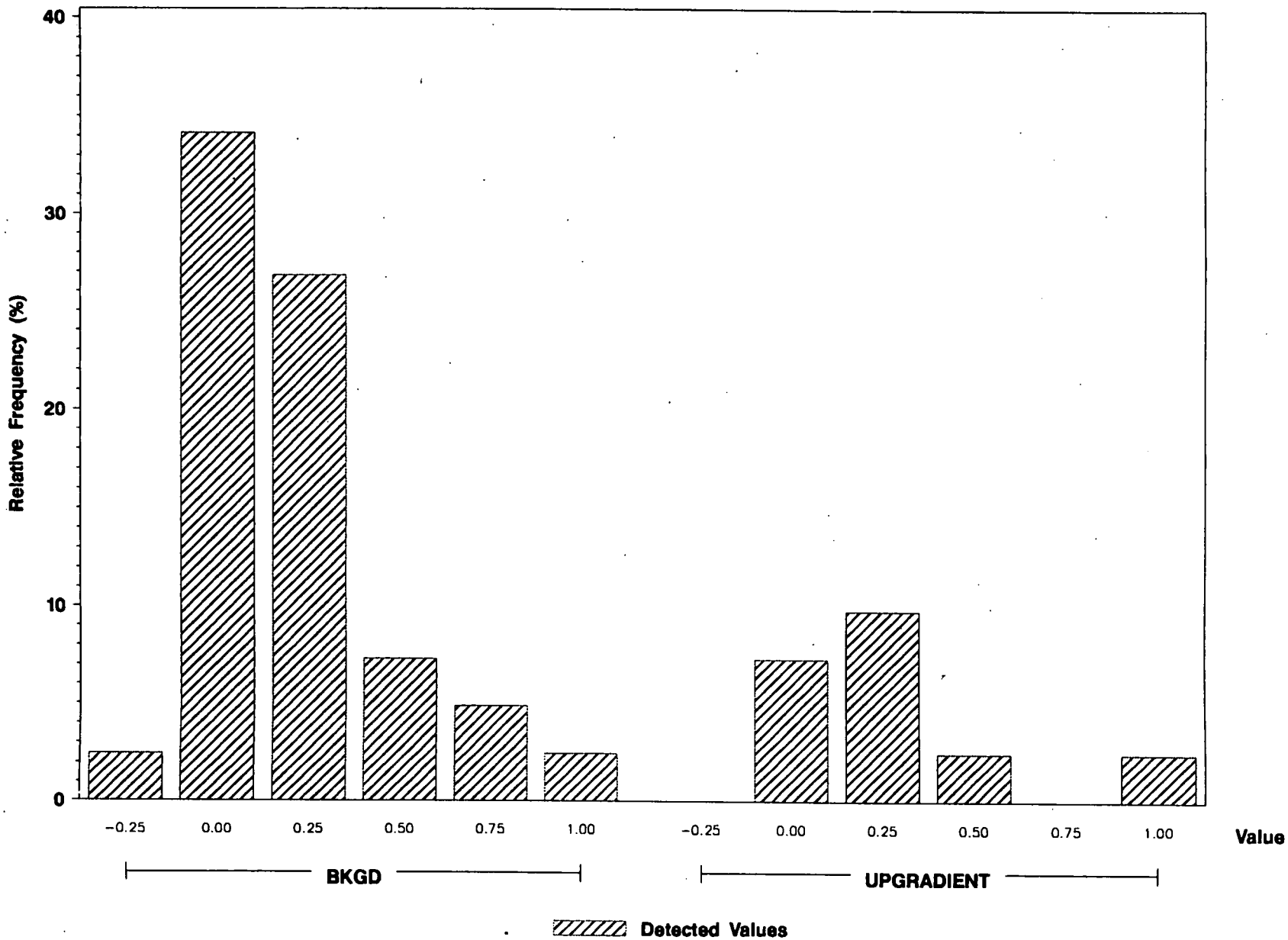
ANALYTE = RADIUM – 226



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Groundwater

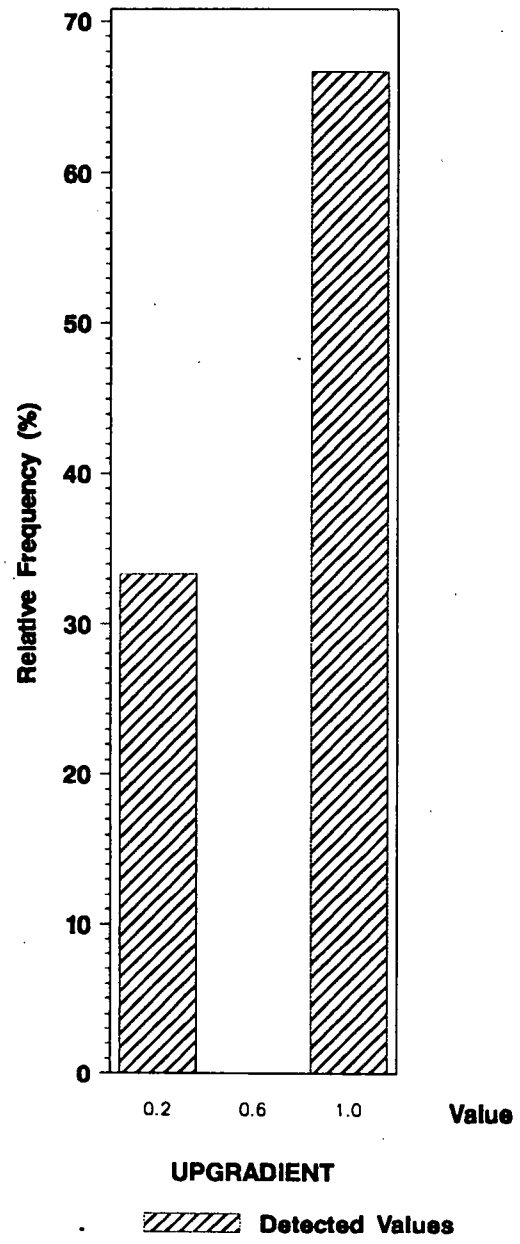
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Groundwater

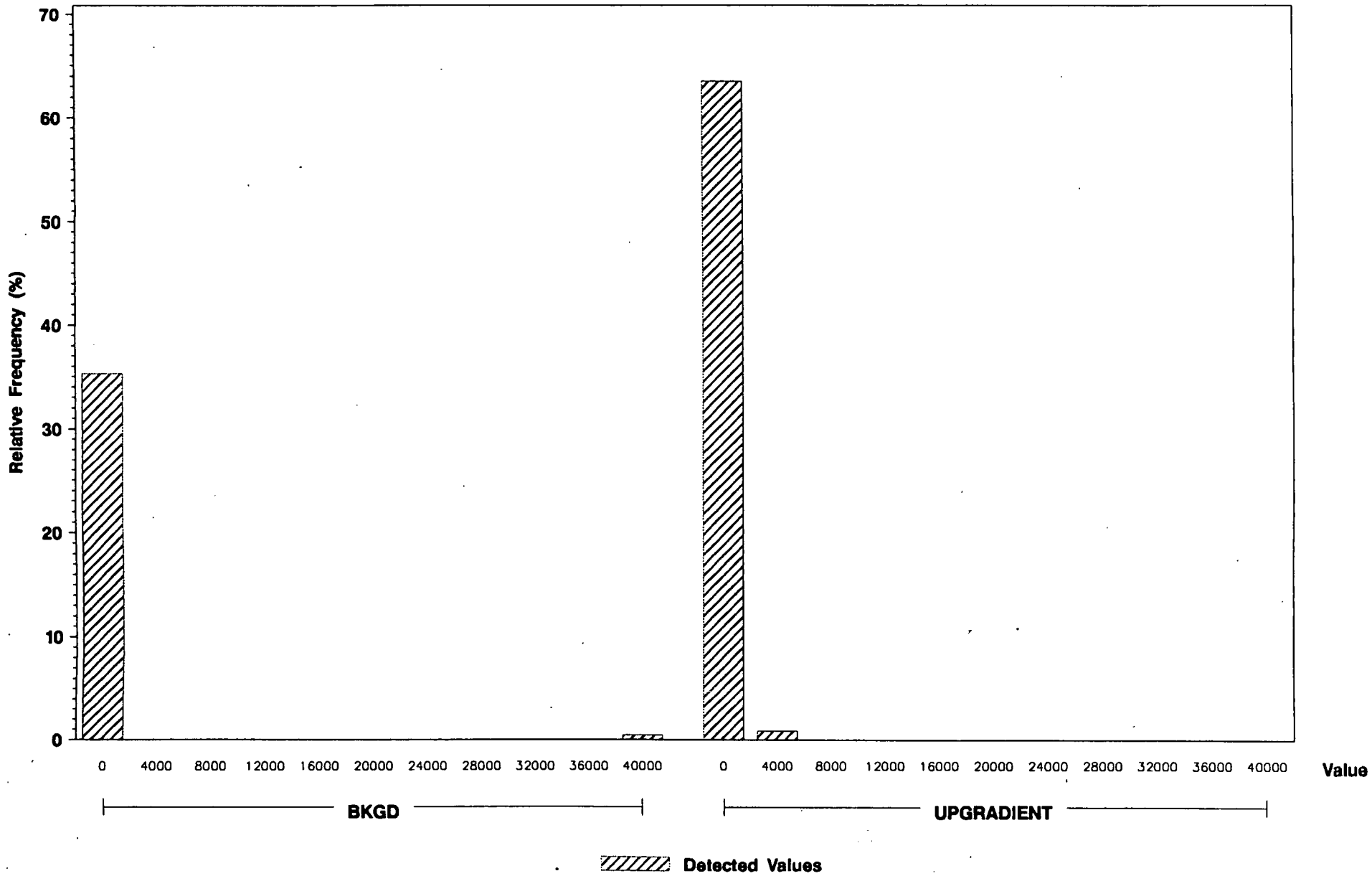
ANALYTE=STRONTIUM-90



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total TRITIUM (pCi/L) in Groundwater

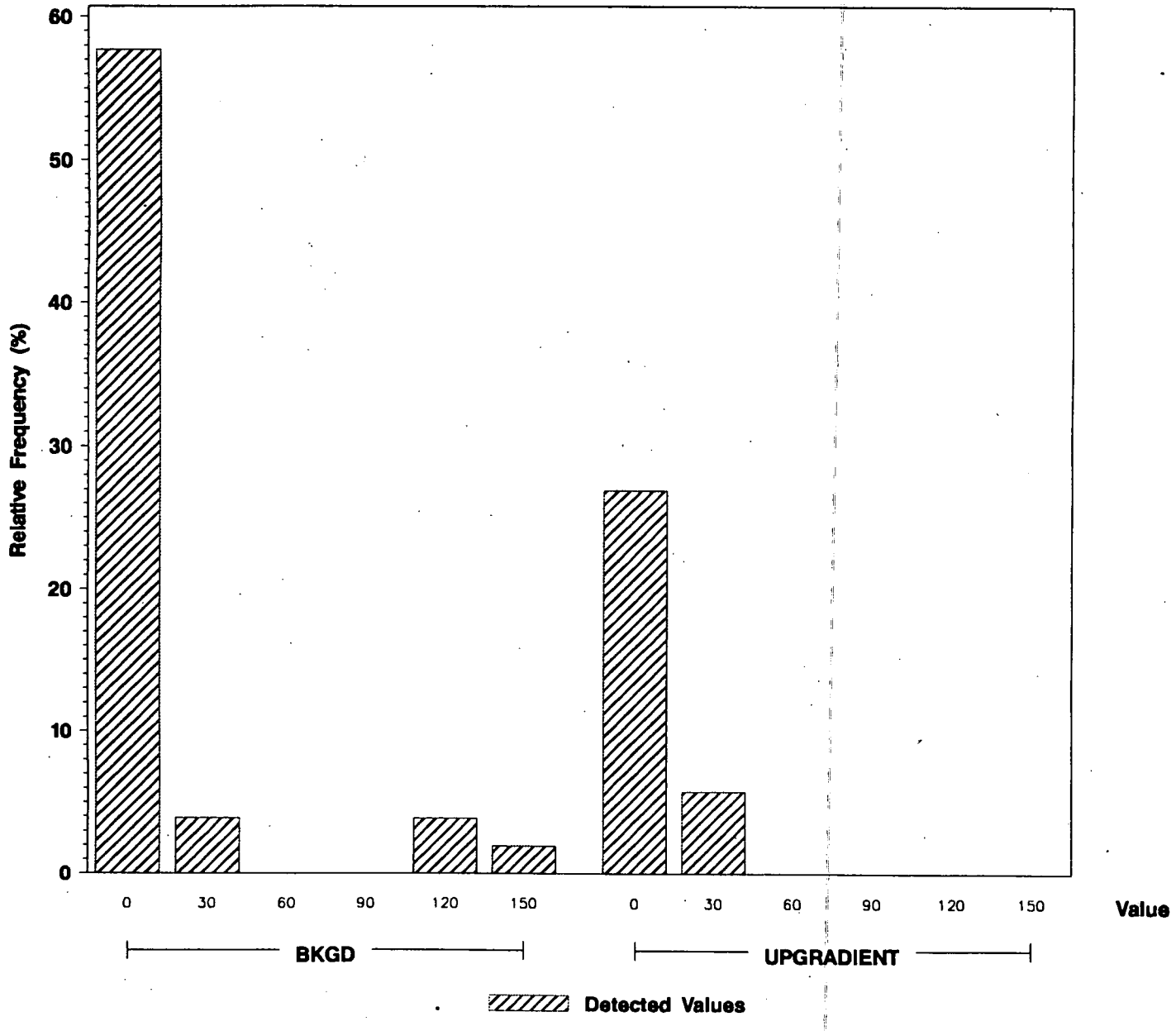
ANALYTE = TRITIUM



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Groundwater

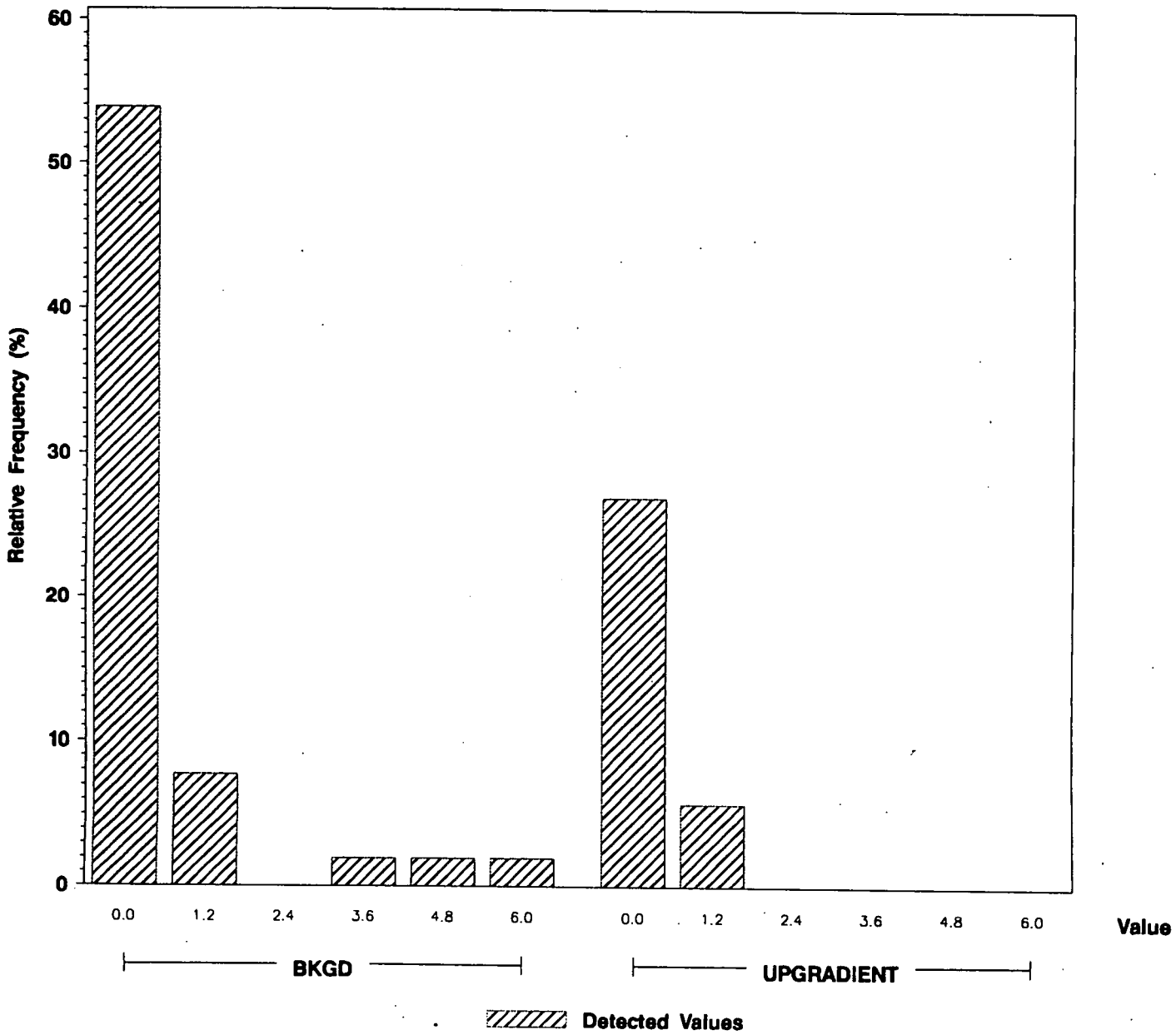
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total URANIUM – 235 (pCi/L) in Groundwater

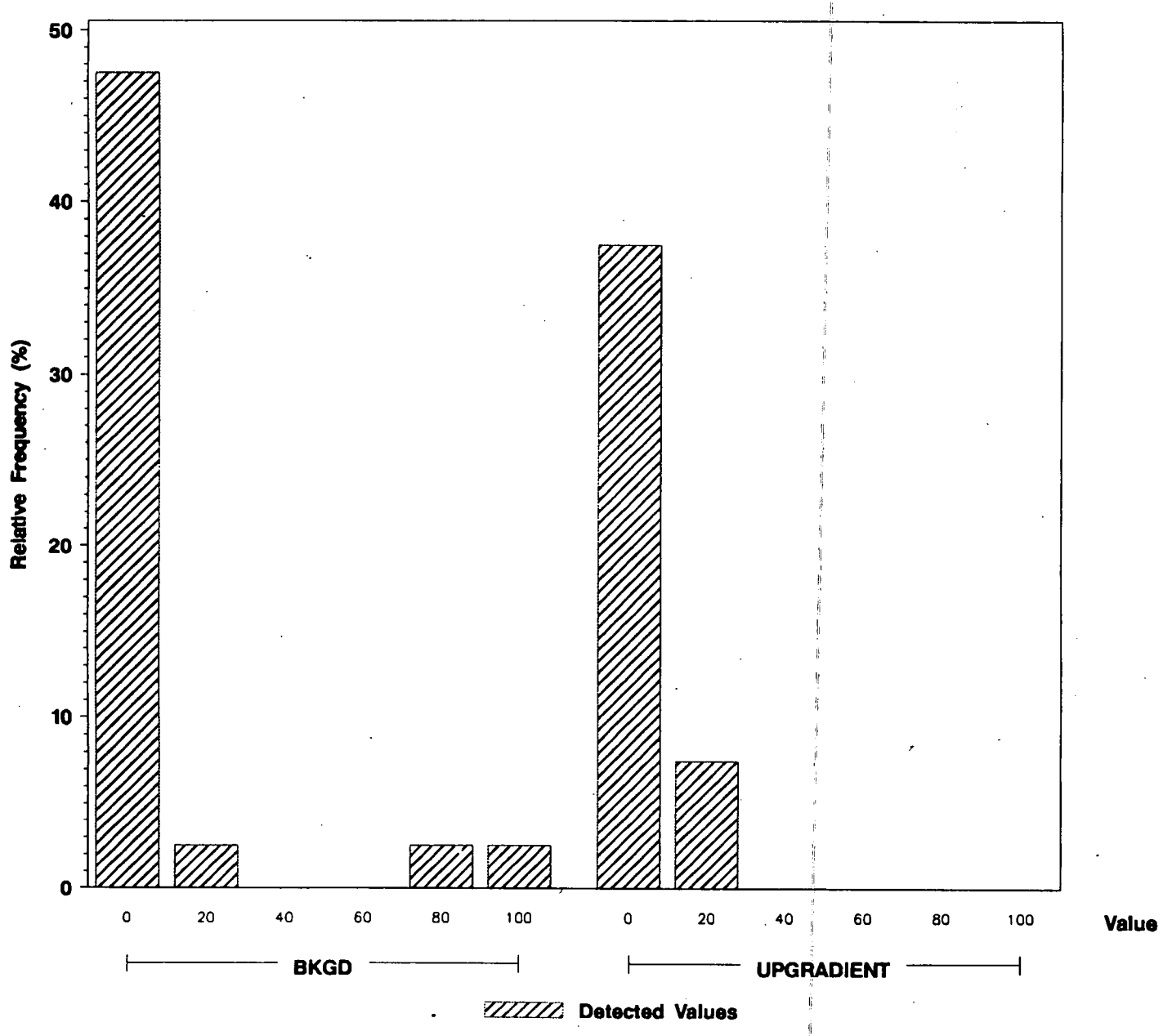
ANALYTE = URANIUM – 235



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Groundwater

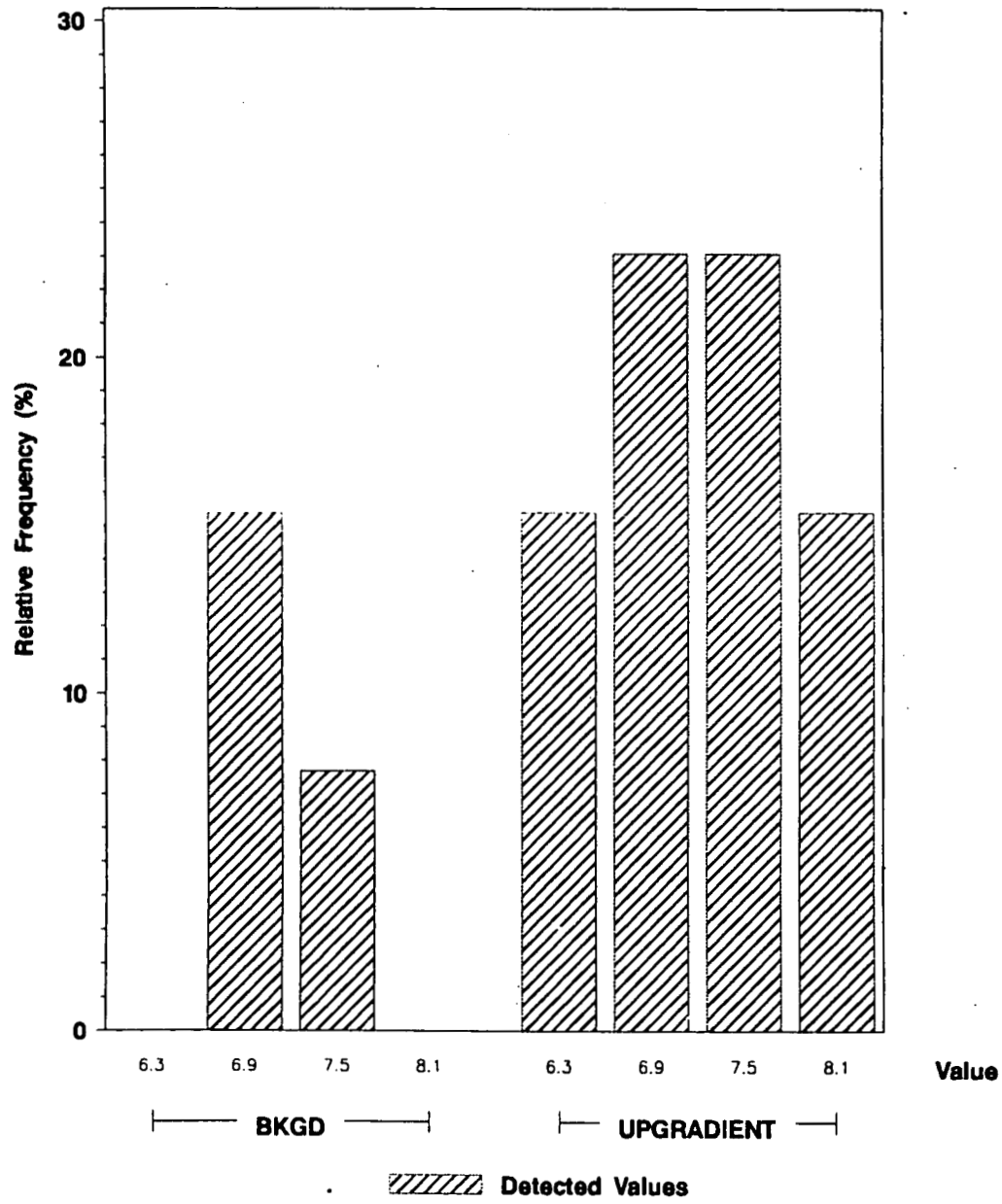
ANALYTE = URANIUM-238



# Background vs OU7 Upgradient Groundwater (UHSU) Frequency Histogram

## pH (Standard Units) in Groundwater

ANALYTE = pH



# Groundwater

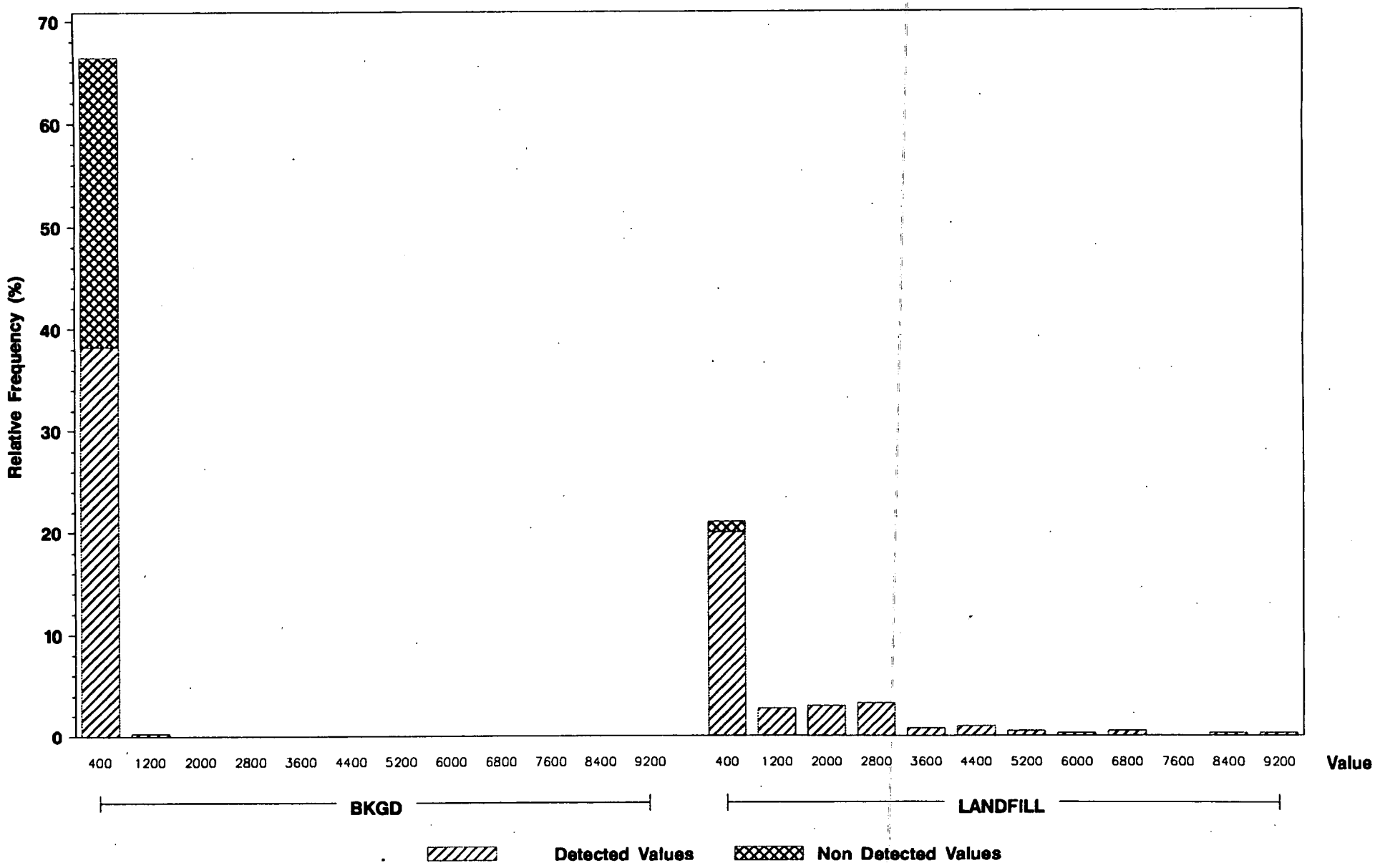
# (Dissolved)

# Background vs. OU 7 Downgradient UHSU

# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Groundwater

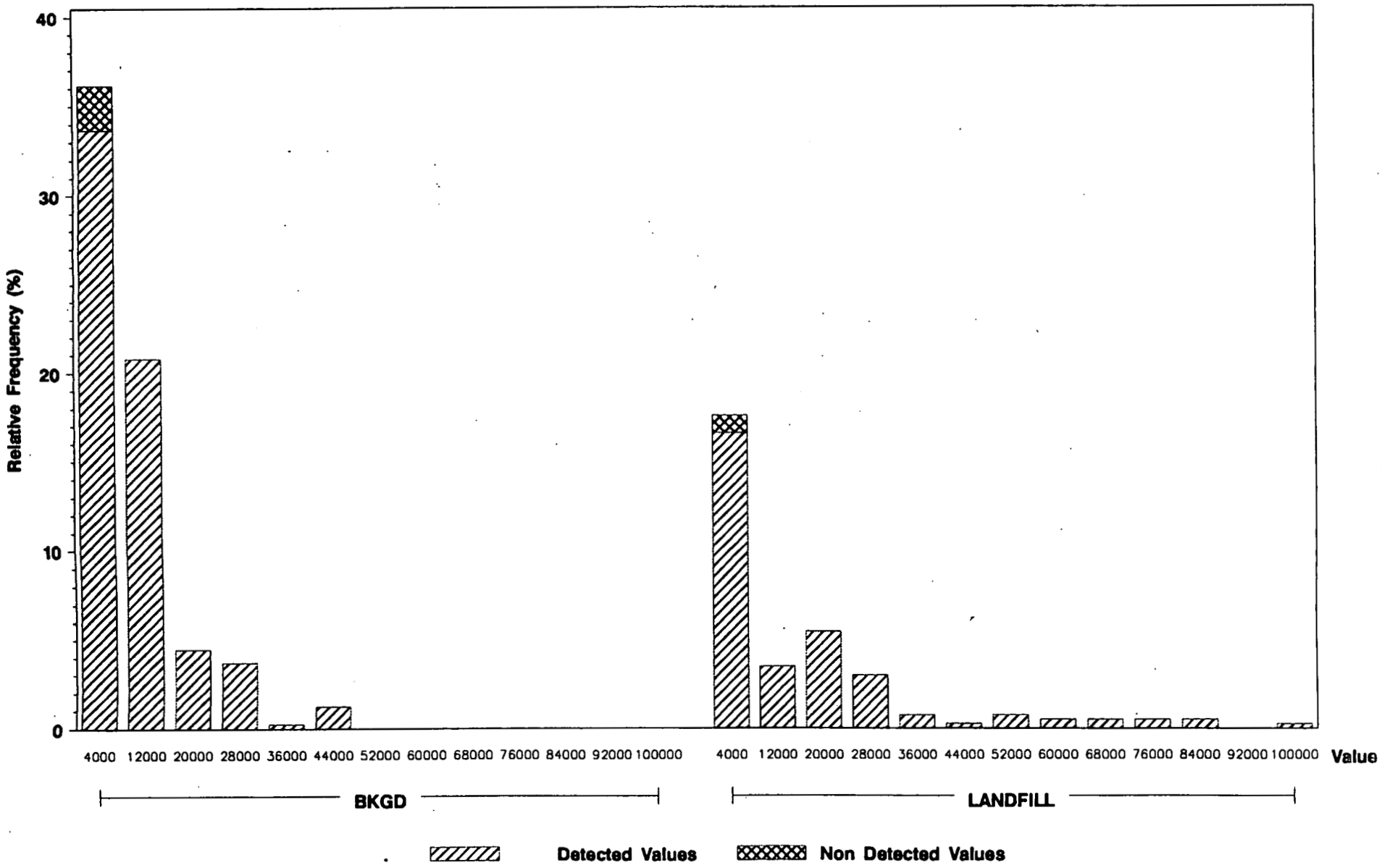
ANALYTE = MANGANESE



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Groundwater

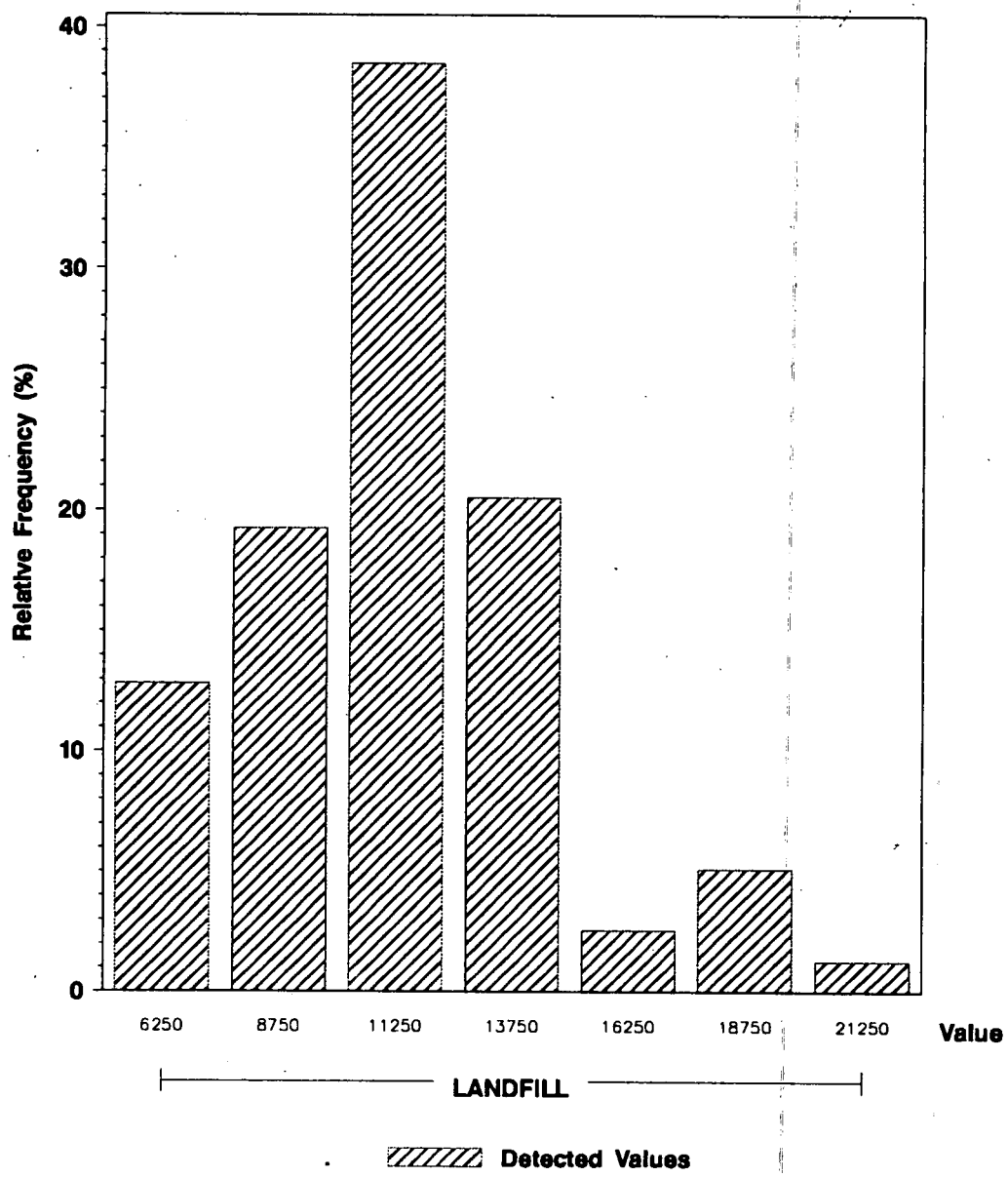
ANALYTE = MAGNESIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved SILICON (ug/L) in Groundwater

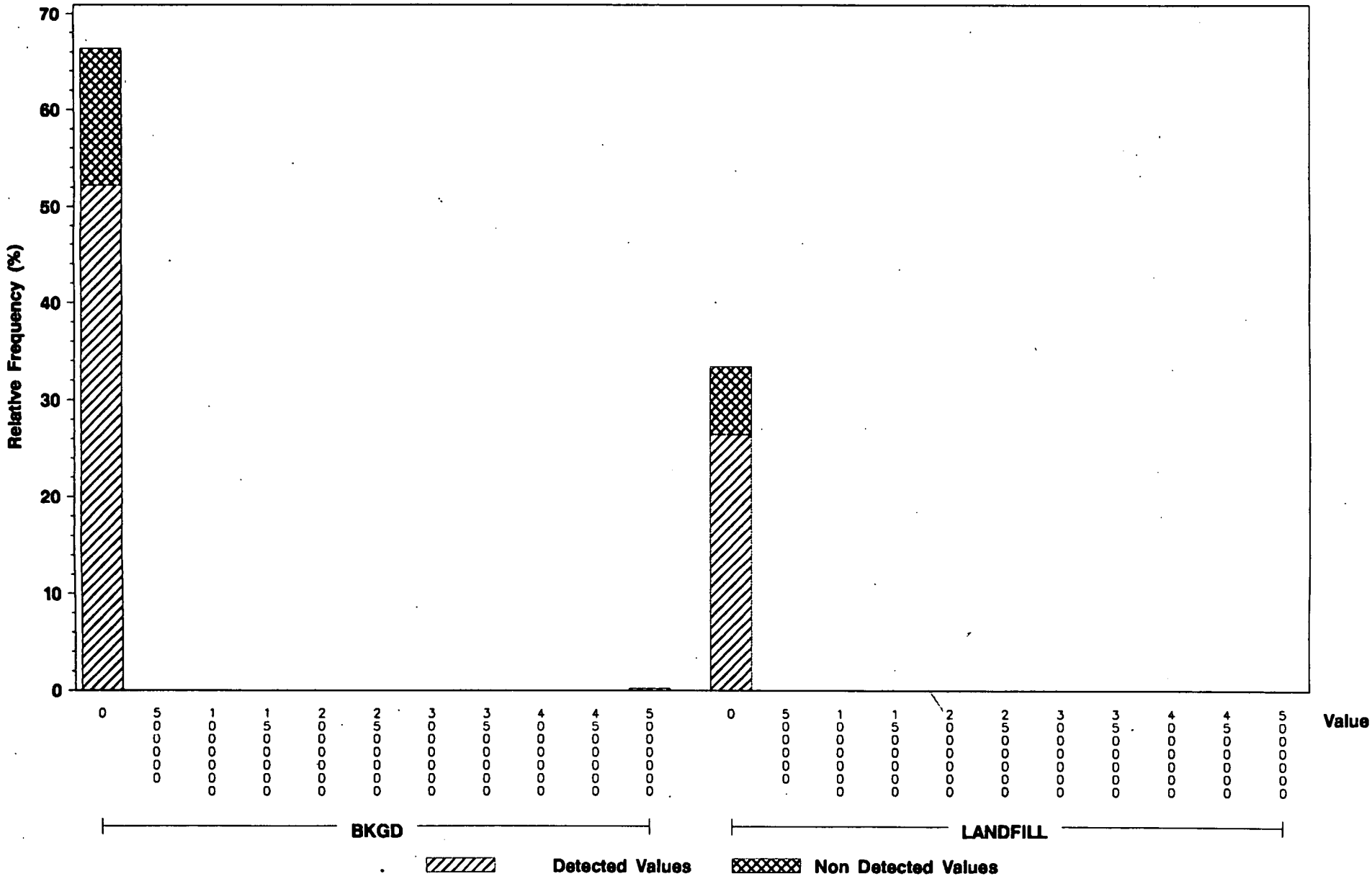
ANALYTE=SILICON



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Groundwater

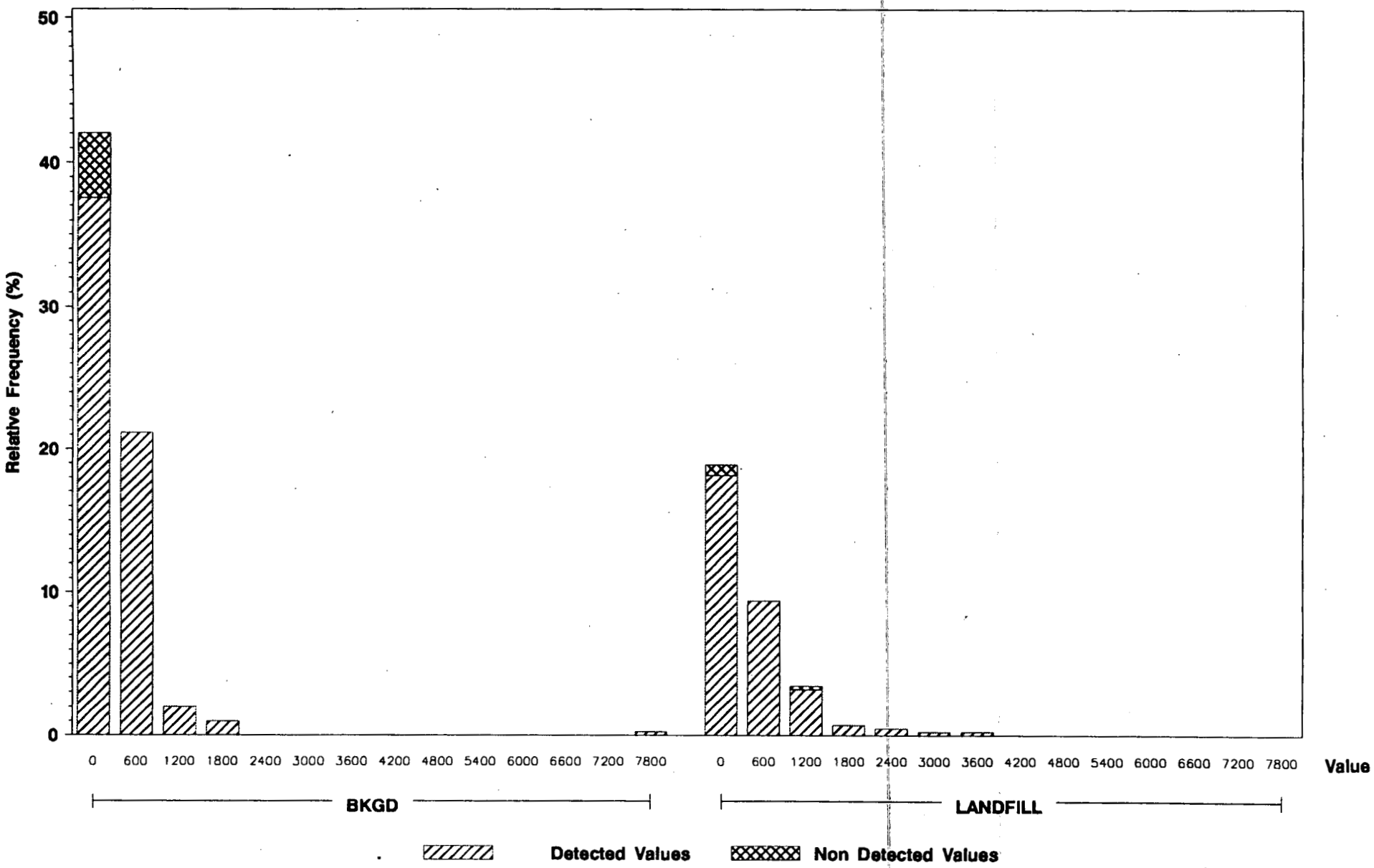
ANALYTE = POTASSIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Groundwater

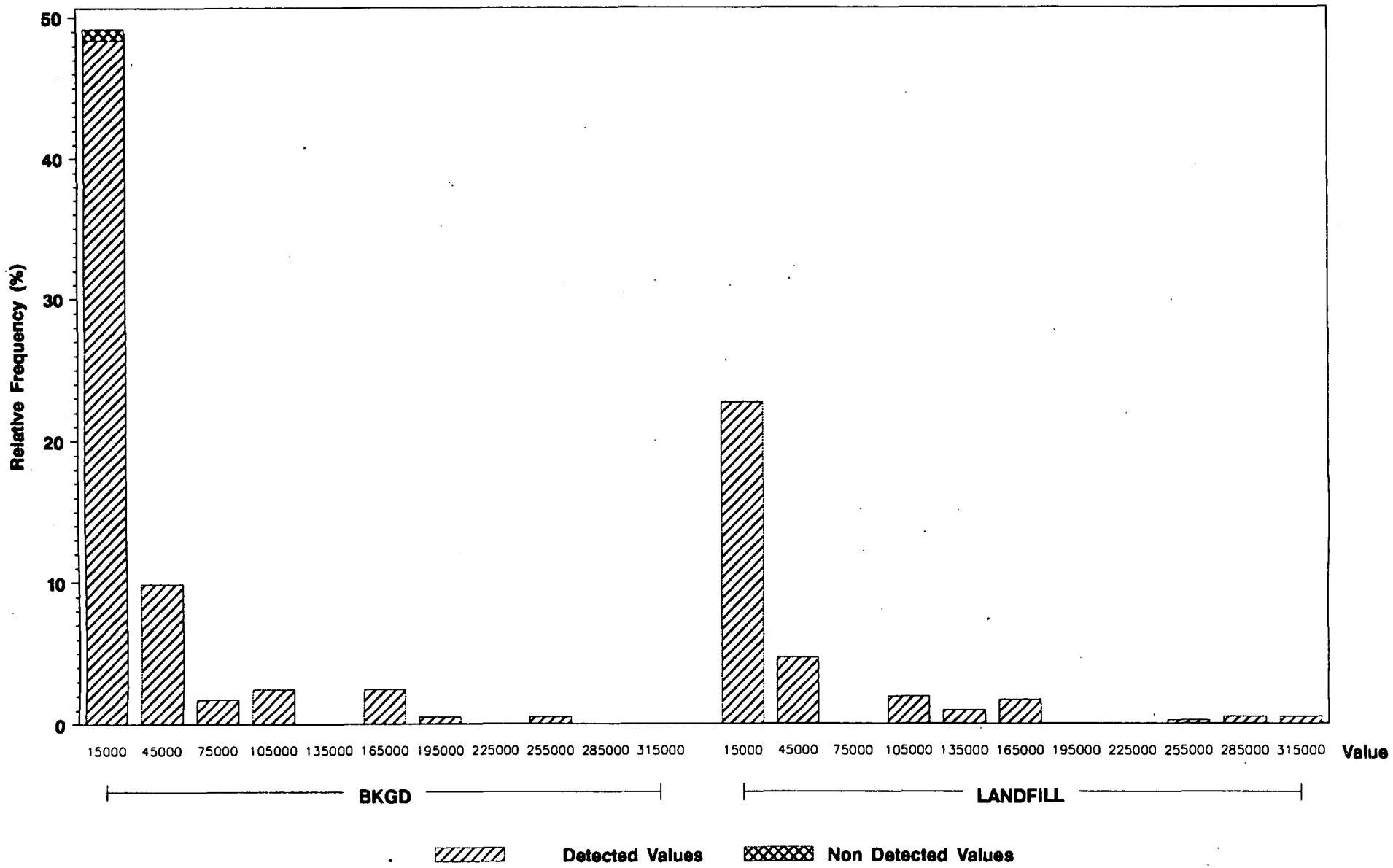
ANALYTE = STRONTIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved SODIUM (ug/L) in Groundwater

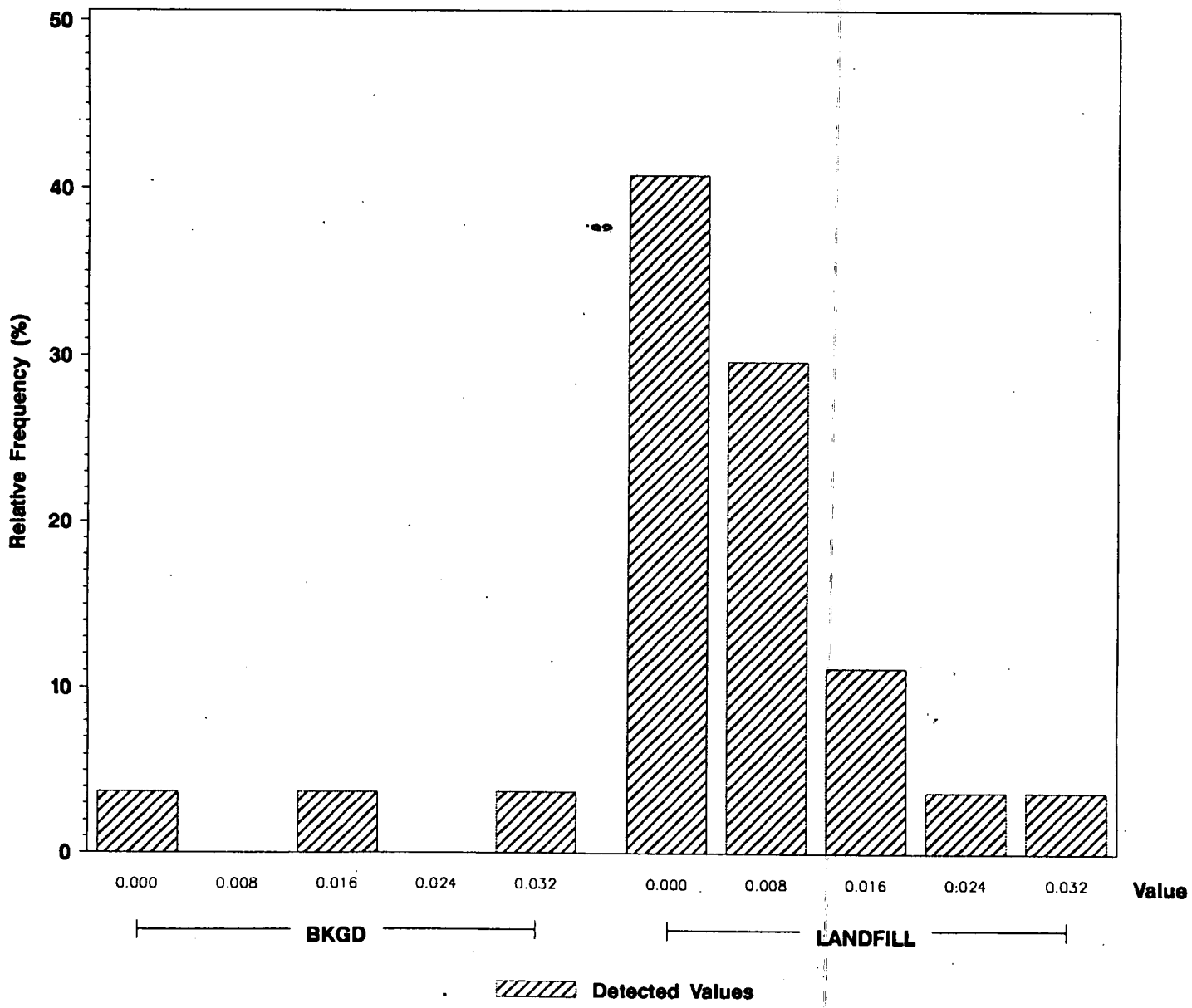
ANALYTE=SODIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Groundwater

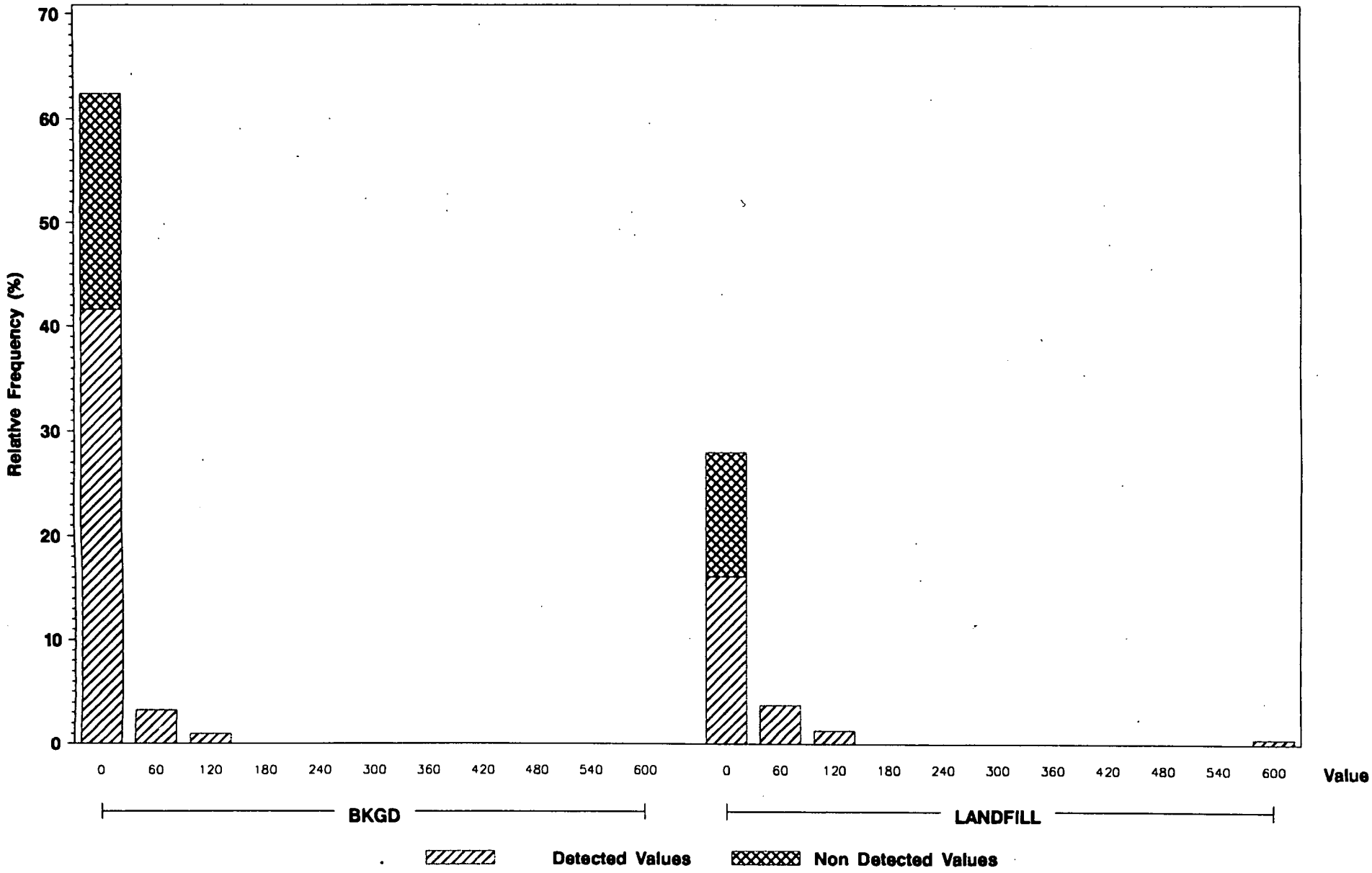
ANALYTE = AMERICIUM – 241



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved ZINC (ug/L) in Groundwater

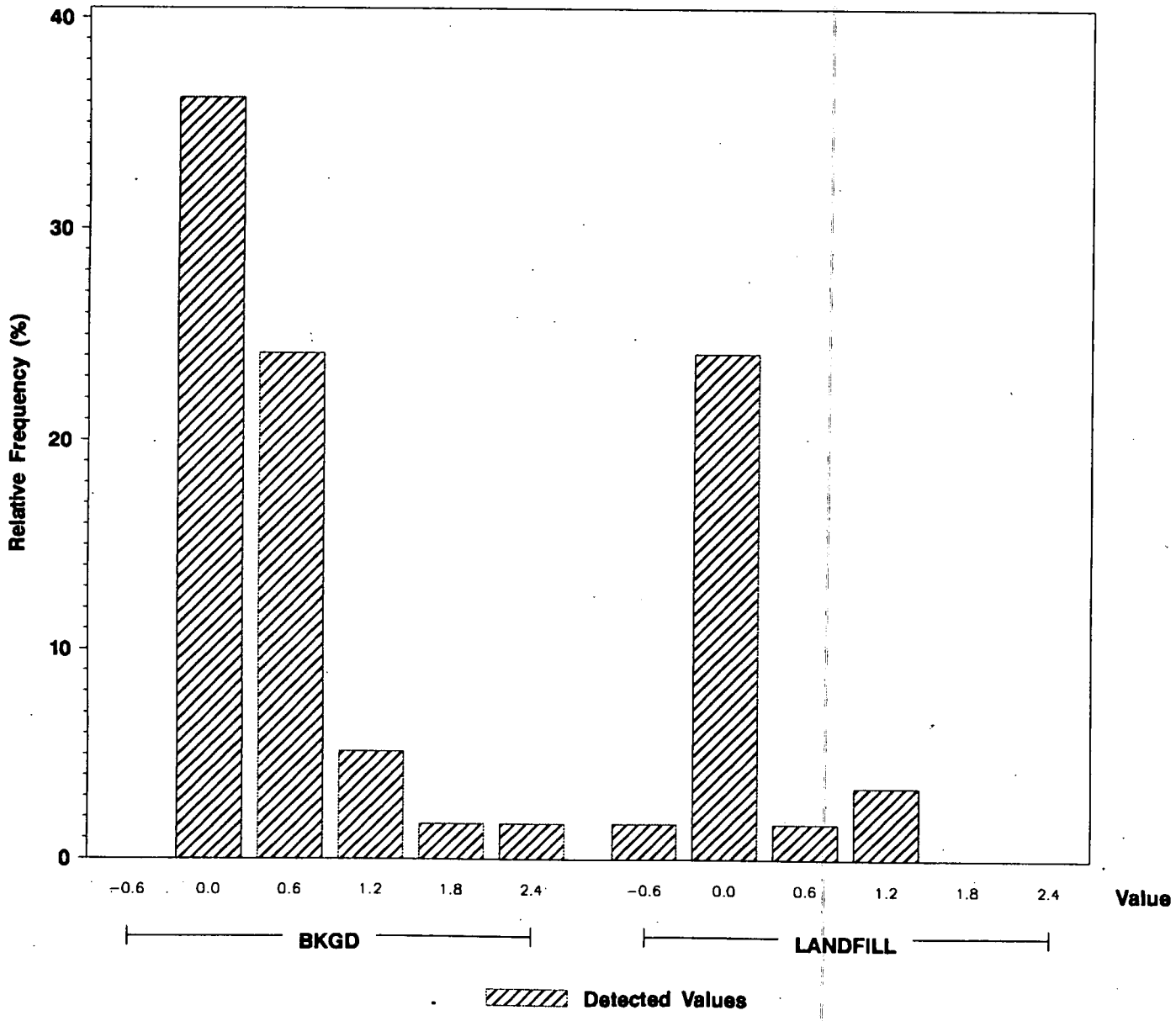
ANALYTE=ZINC



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Groundwater

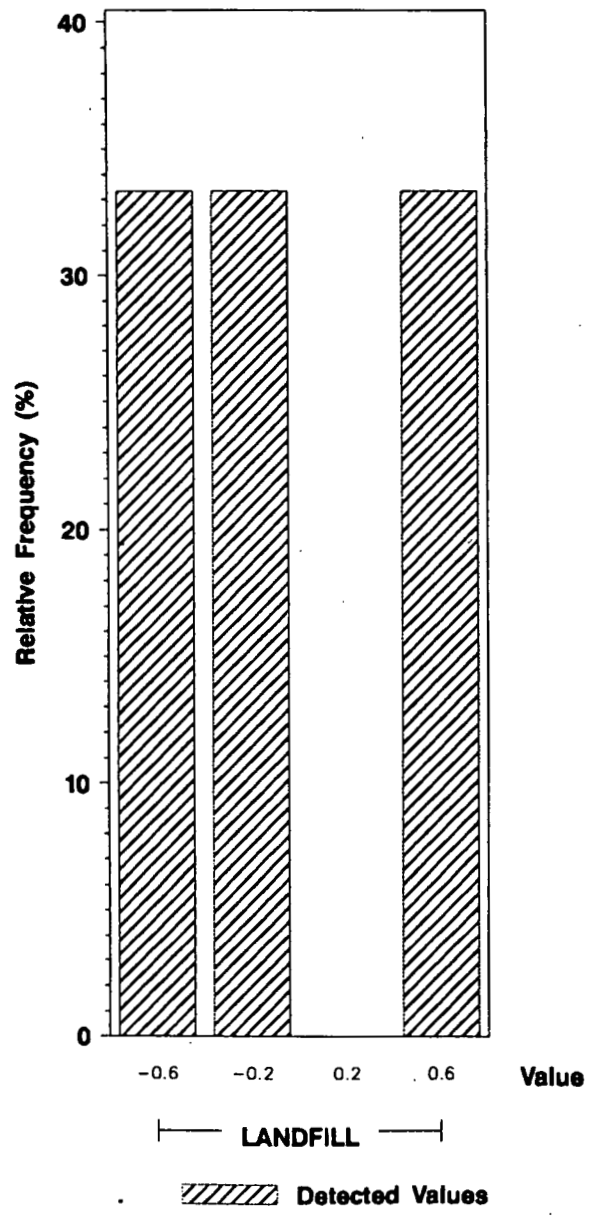
ANALYTE = CESIUM-137



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Groundwater

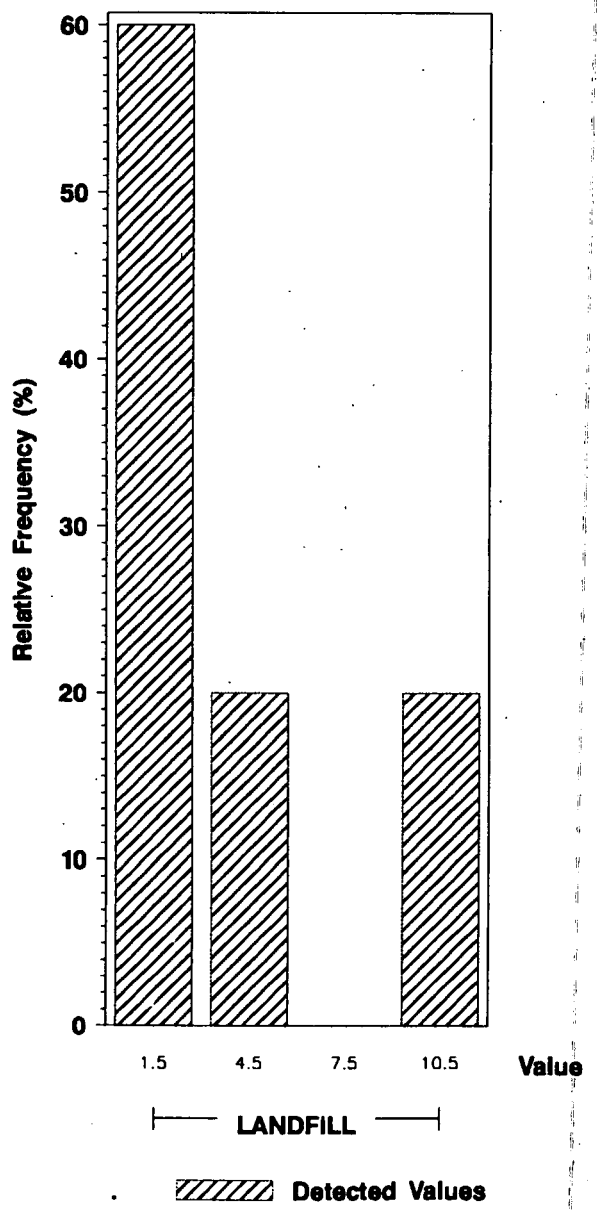
ANALYTE = CESIUM – 134



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA – SUSPENDED (pCi/L) in Groundwater

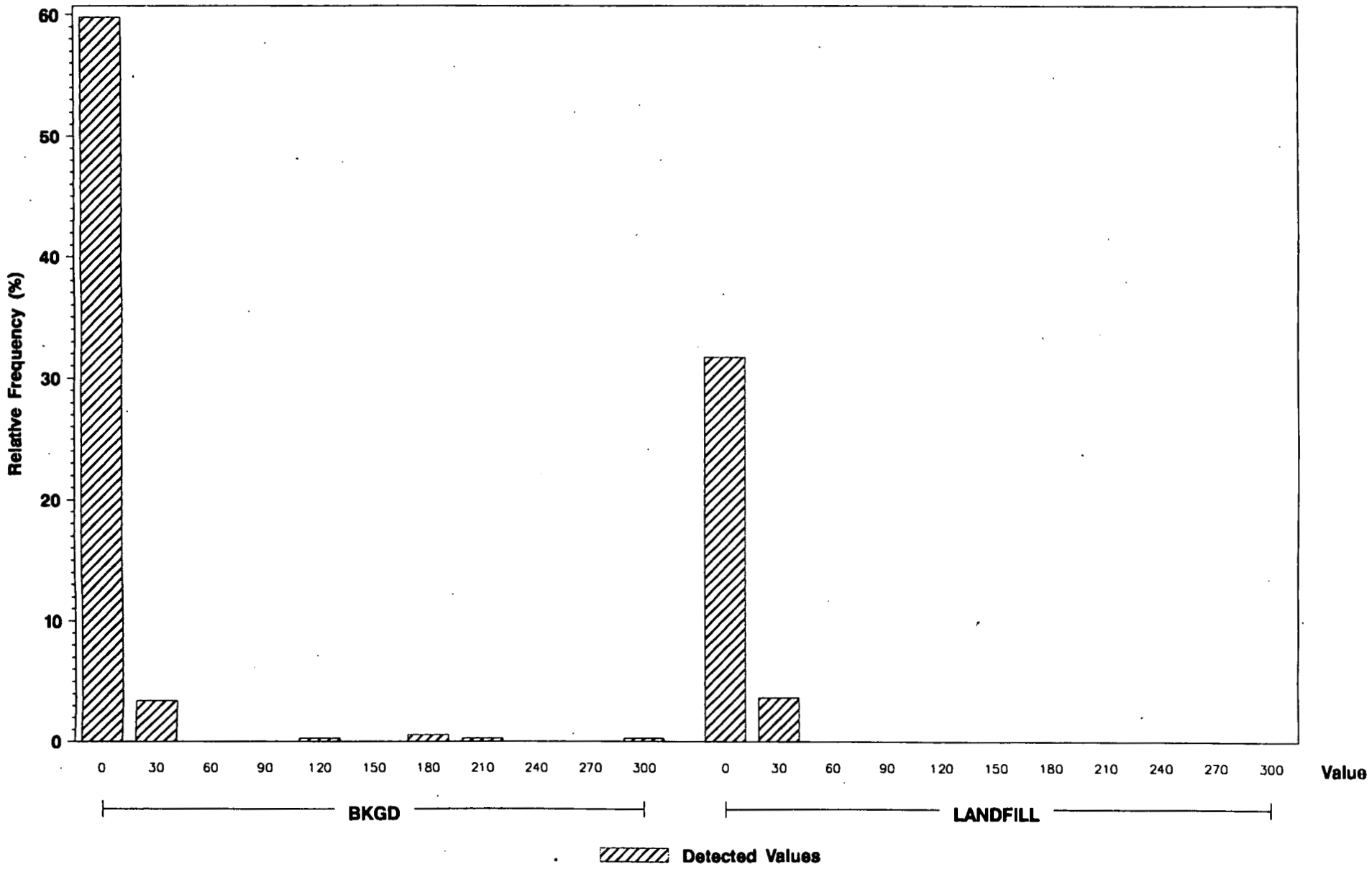
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Groundwater

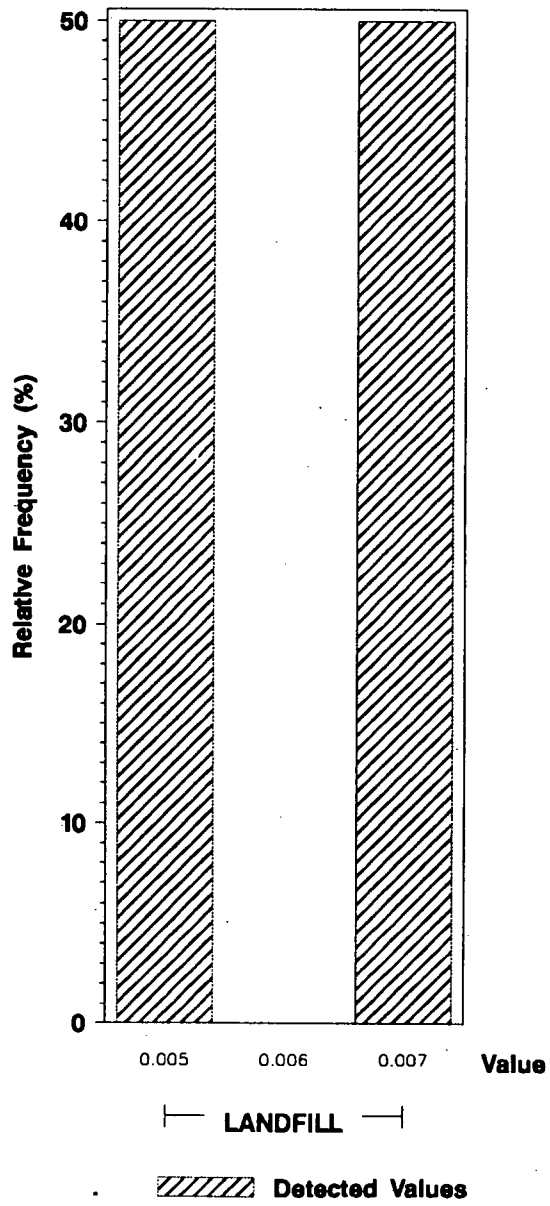
ANALYTE = GROSS ALPHA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved PLUTONIUM – 239 (pCi/L) in Groundwater

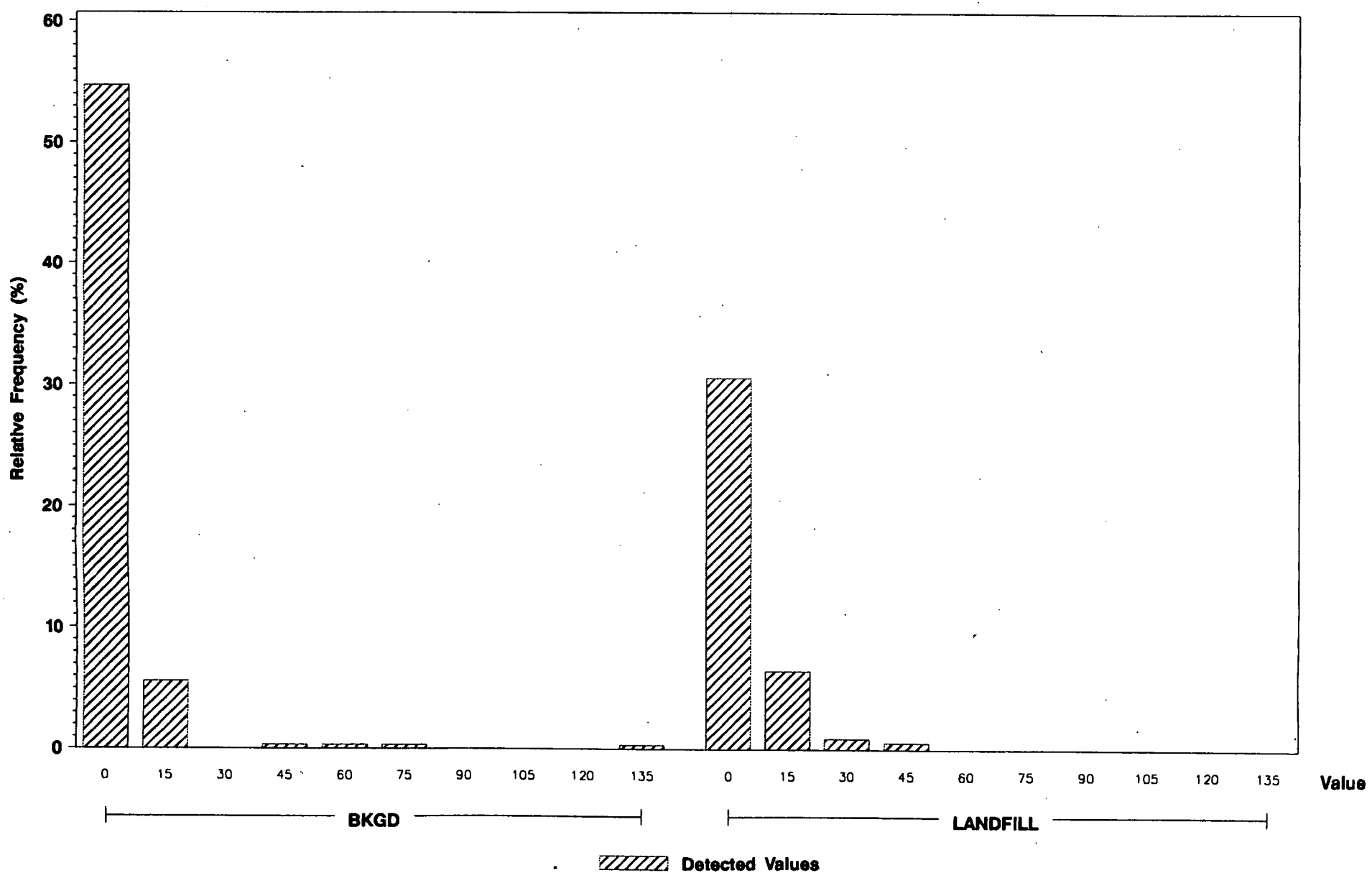
ANALYTE = PLUTONIUM – 239



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Groundwater

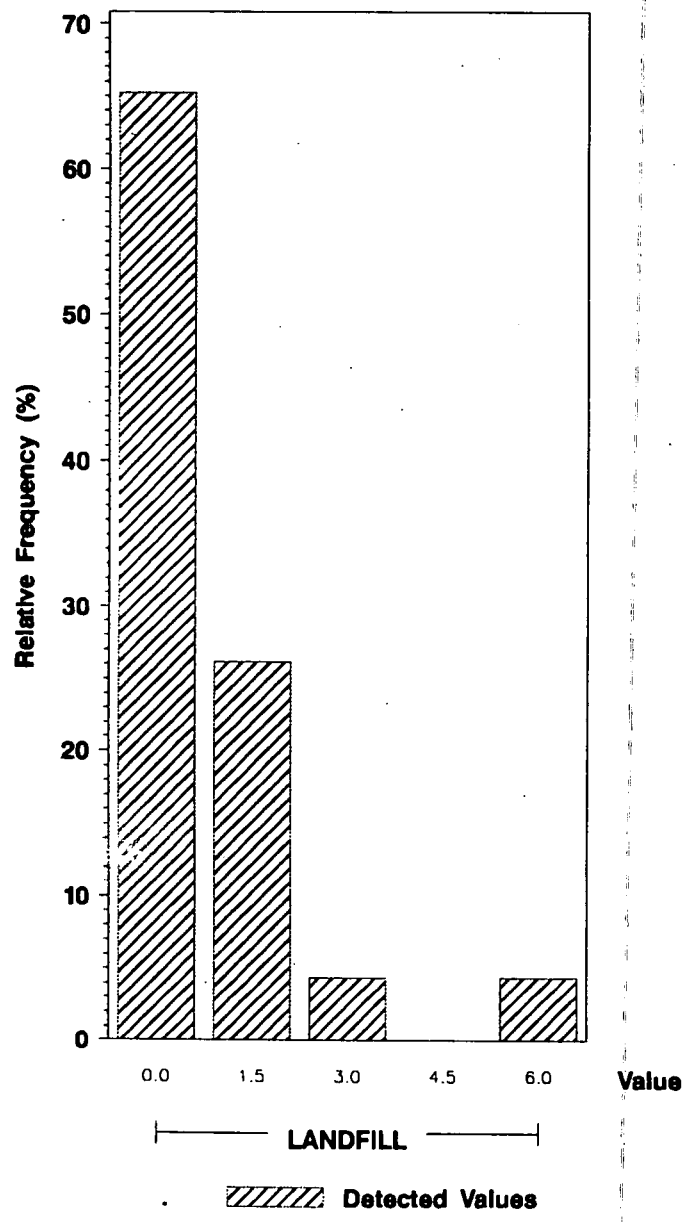
ANALYTE=GROSS BETA



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved TOTAL RADIOCESIUM (pCi/L) in Groundwater

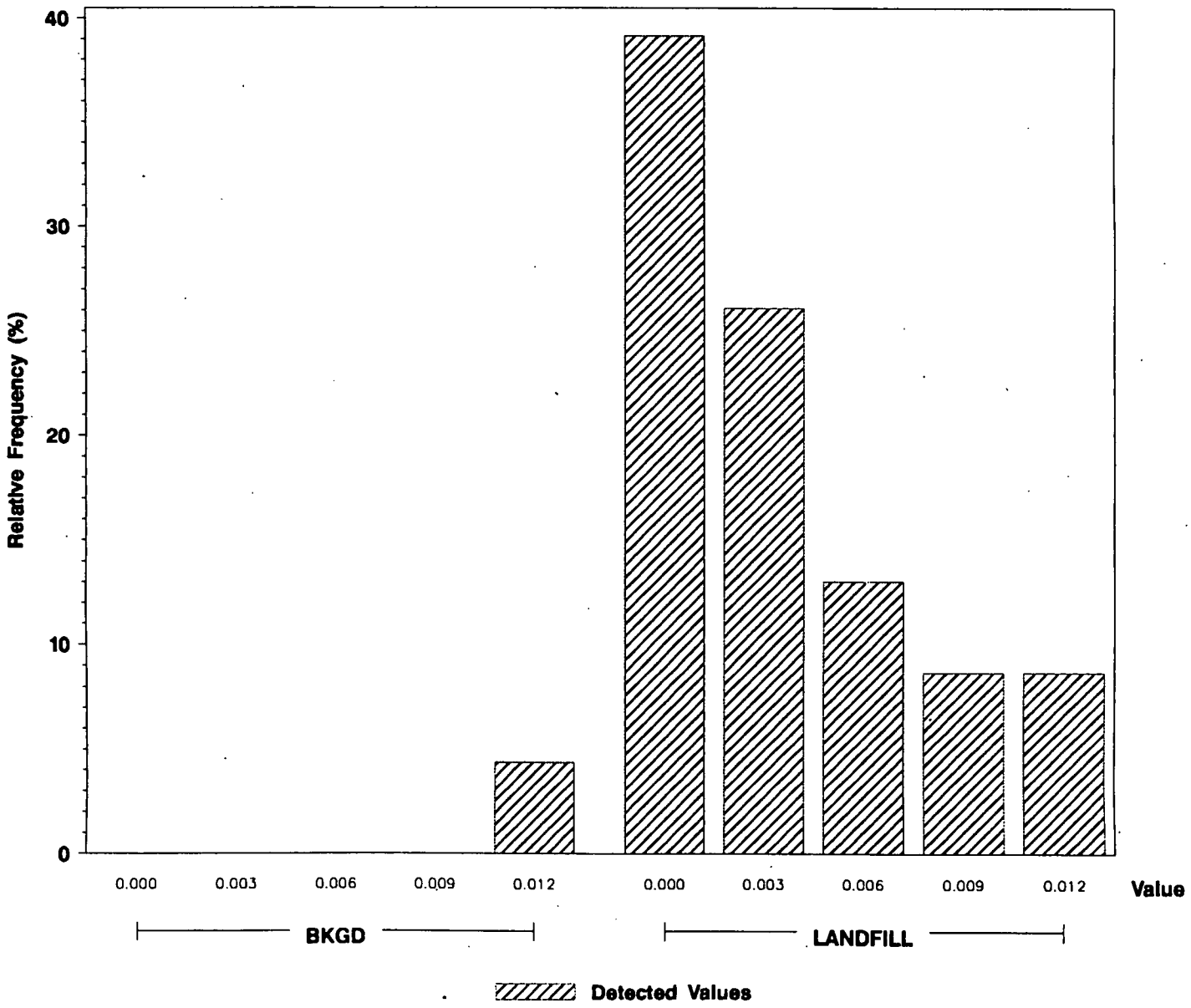
ANALYTE=TOTAL RADIOCESIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved PLUTONIUM – 239/240 (pCi/L) in Groundwater

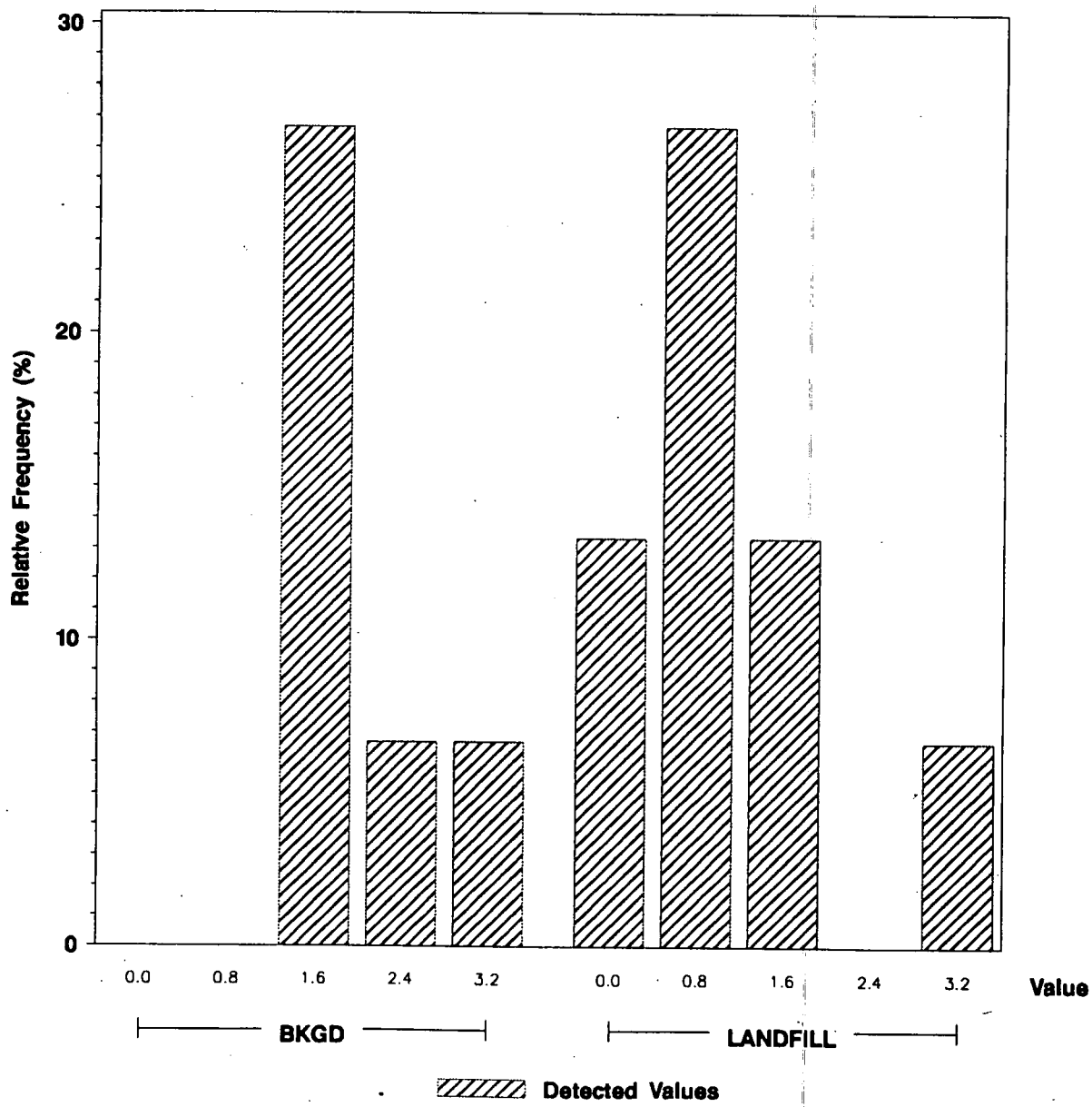
ANALYTE = PLUTONIUM – 239/240



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved RADIUM – 228 (pCi/L) in Groundwater

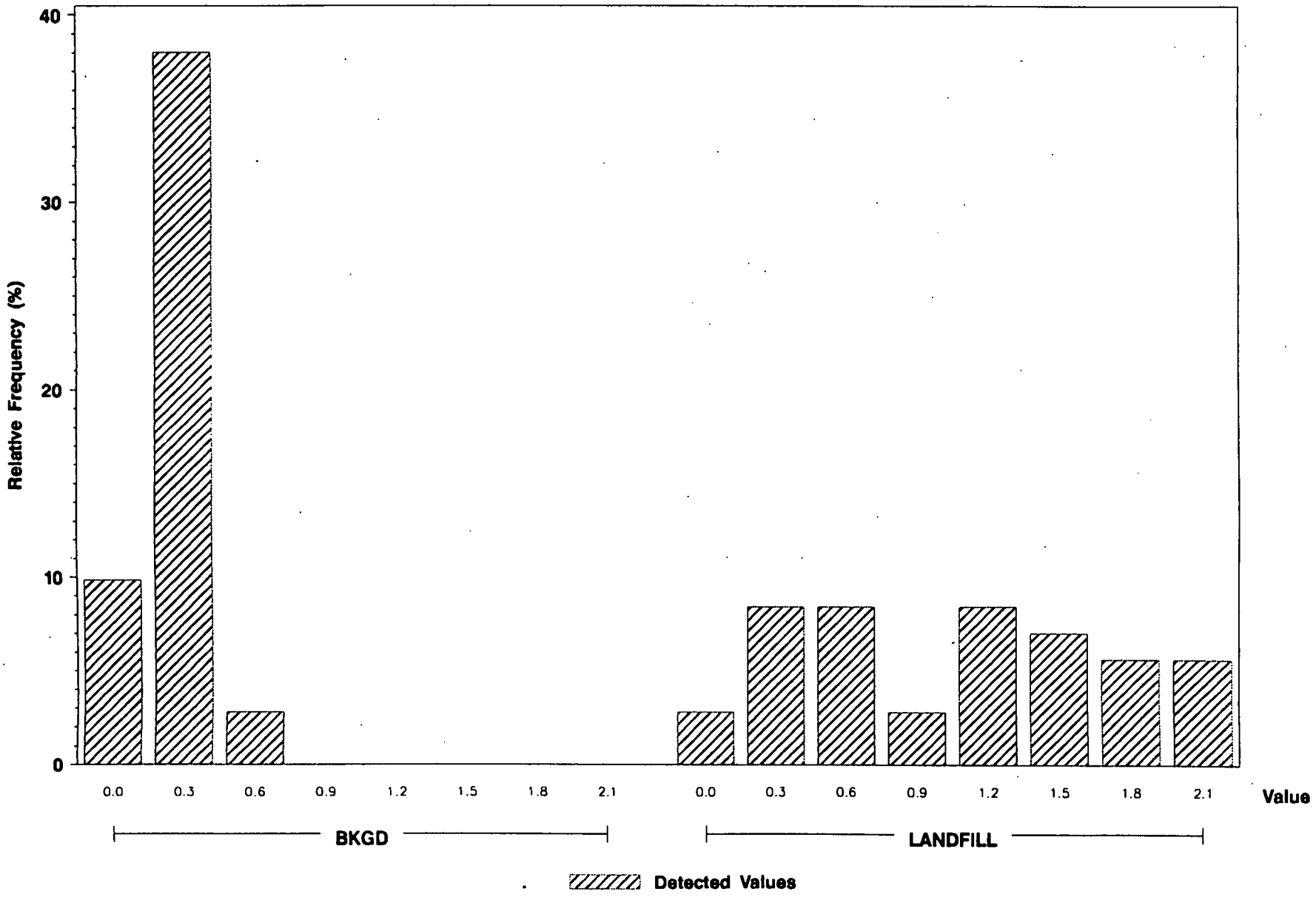
ANALYTE = RADIUM – 228



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved RADIUM – 226 (pCi/L) in Groundwater

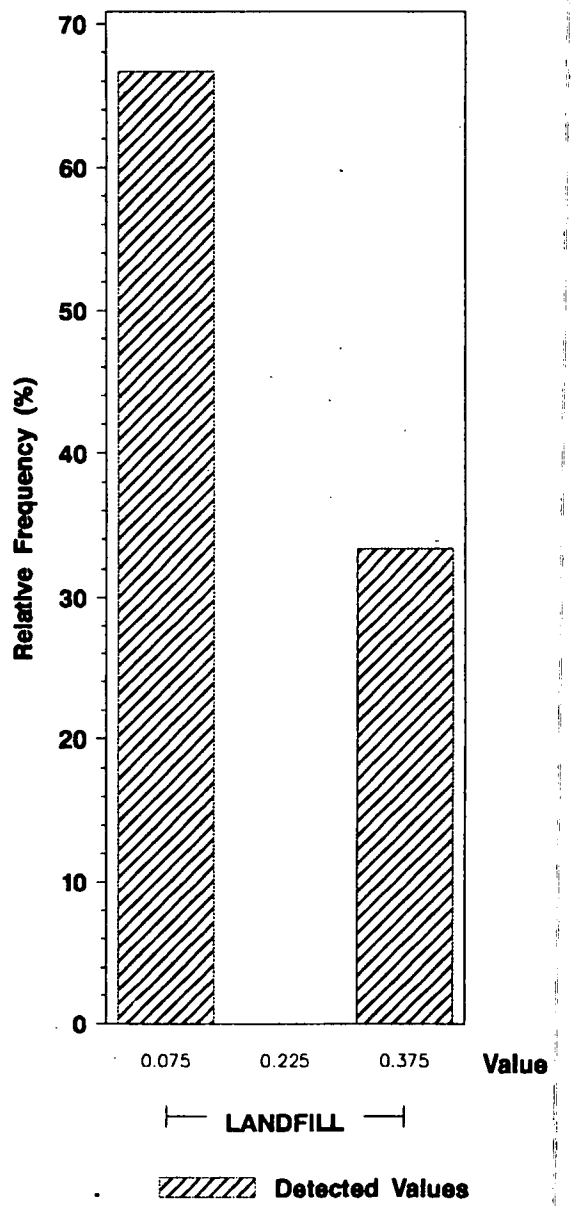
ANALYTE = RADIUM – 226



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved STRONTIUM-90 (pCi/L) in Groundwater

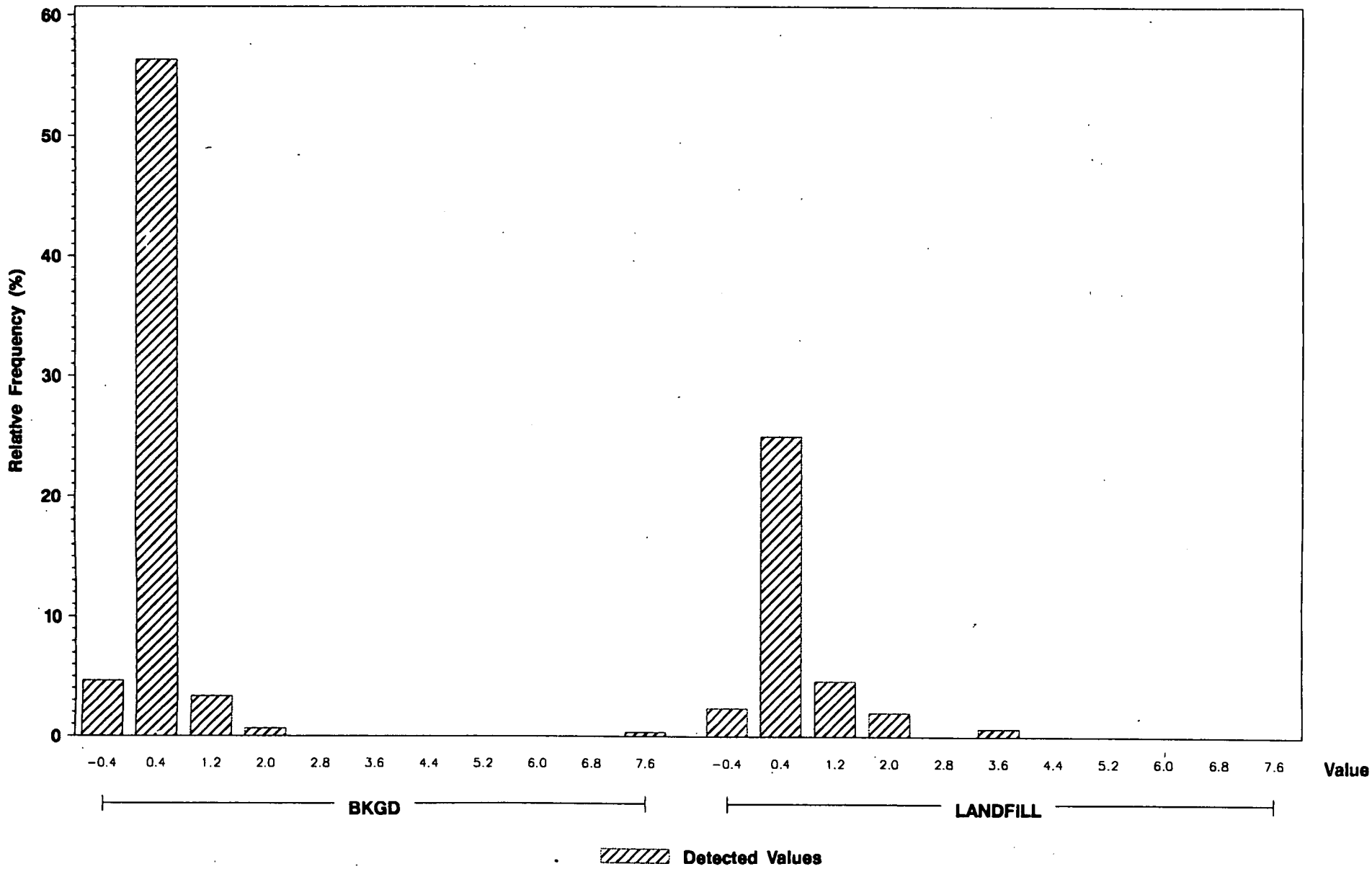
ANALYTE = STRONTIUM-90



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Groundwater

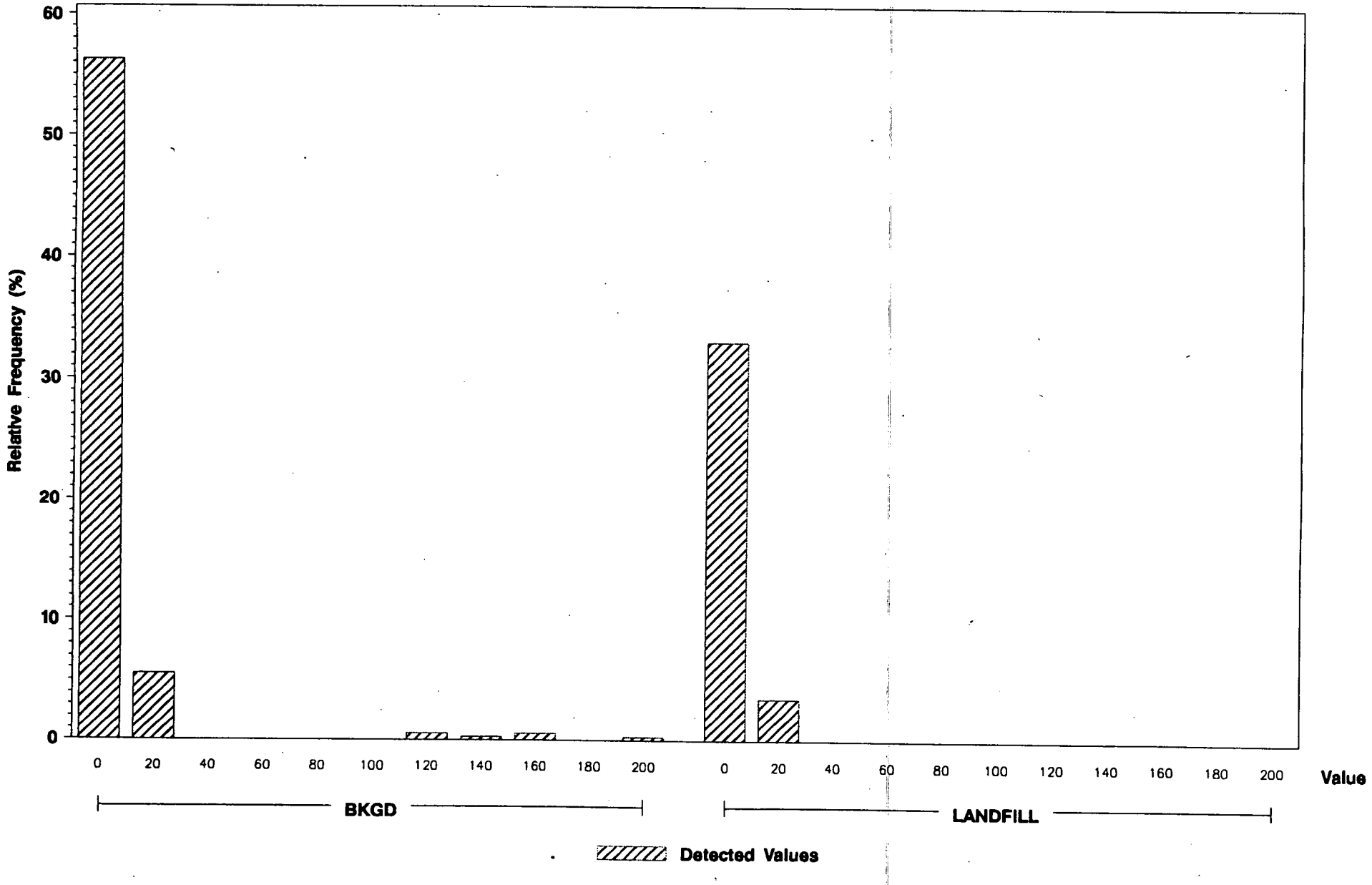
ANALYTE = STRONTIUM – 89,90



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Groundwater

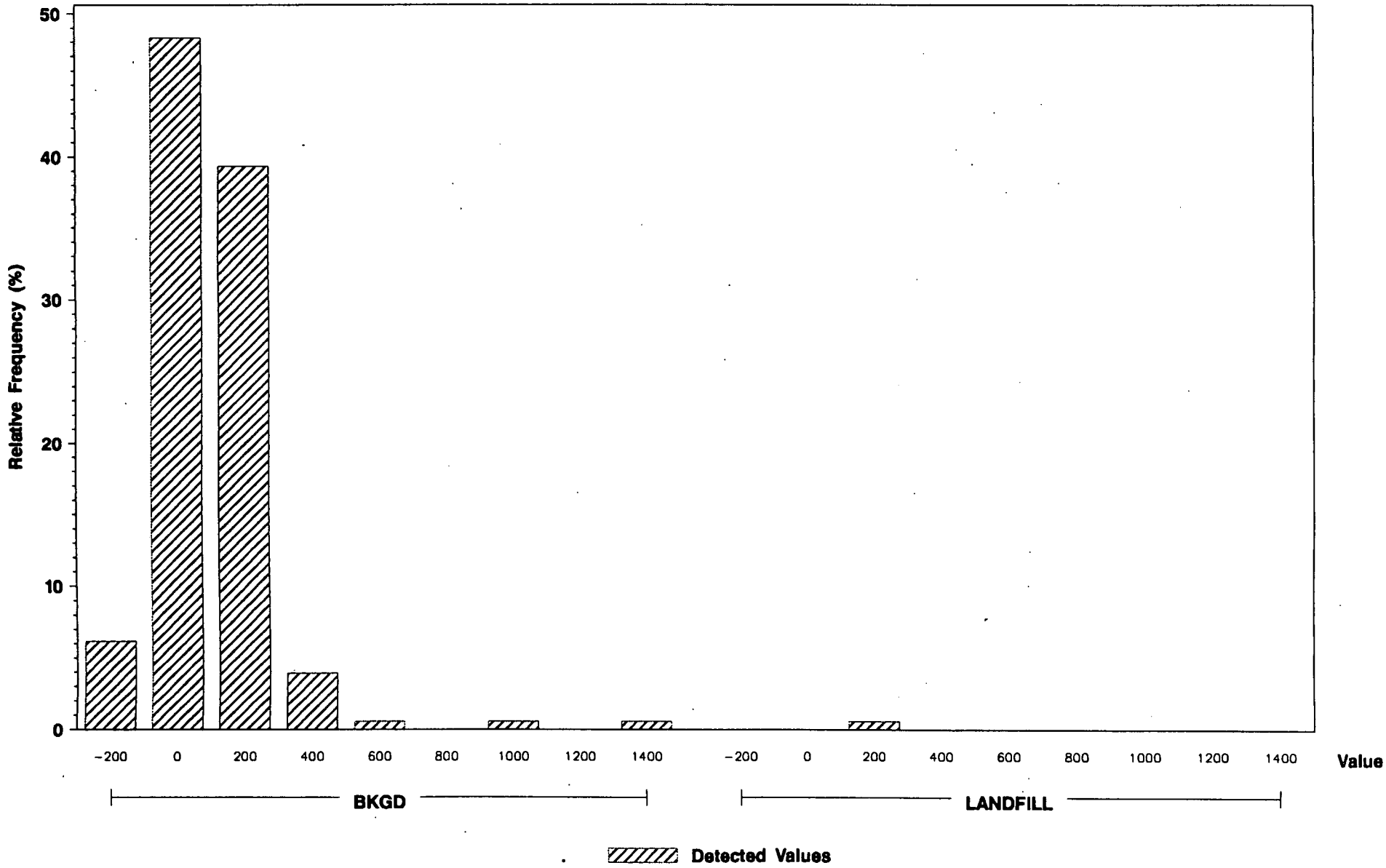
ANALYTE = URANIUM-233,-234



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Groundwater

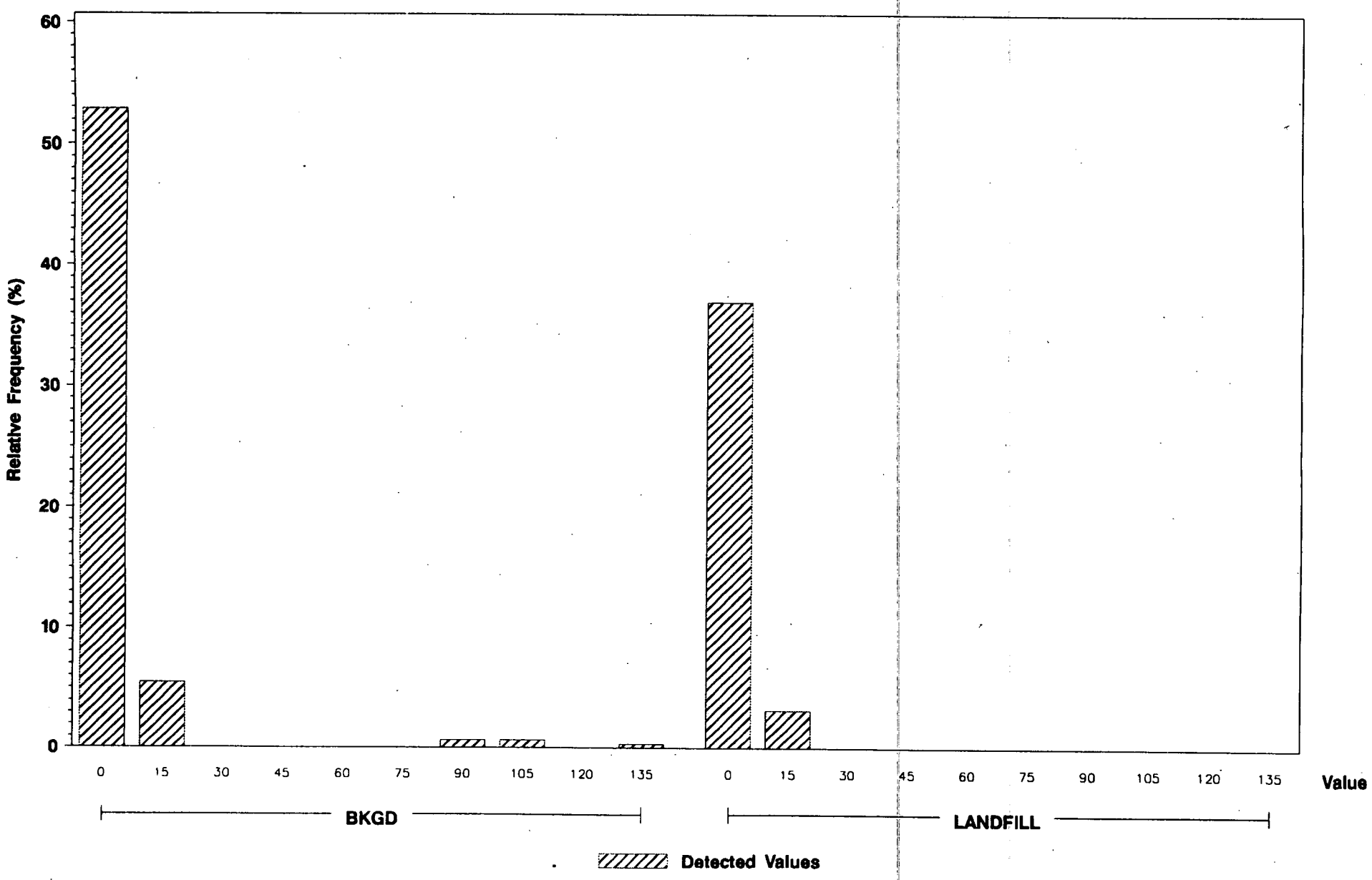
ANALYTE = TRITIUM



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved URANIUM – 238 (pCi/L) in Groundwater

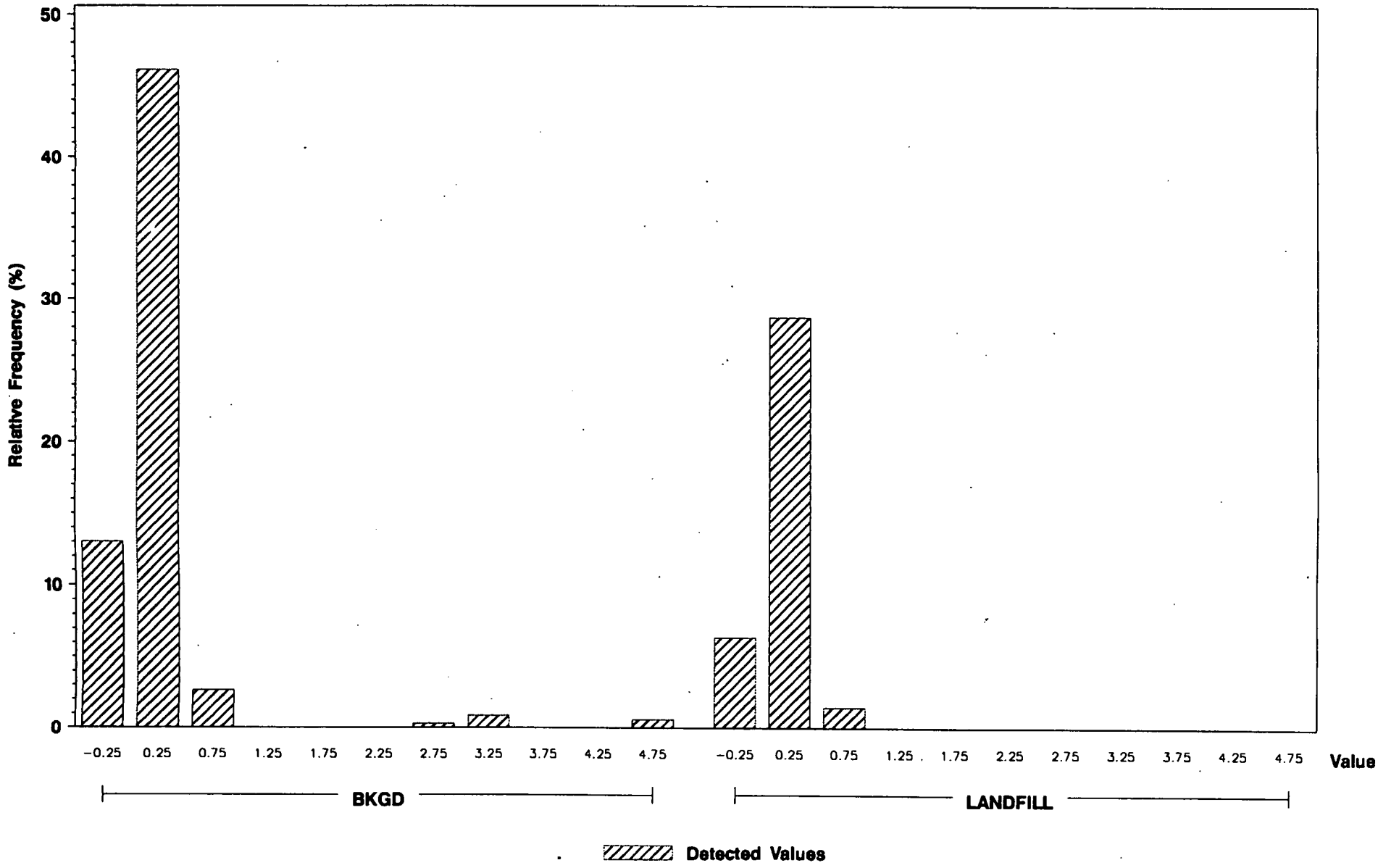
ANALYTE = URANIUM – 238



# Background vs Landfill Leachate (UHSU) Frequency Histogram

## Dissolved URANIUM – 235 (pCi/L) in Groundwater

ANALYTE = URANIUM – 235



**Leachate**

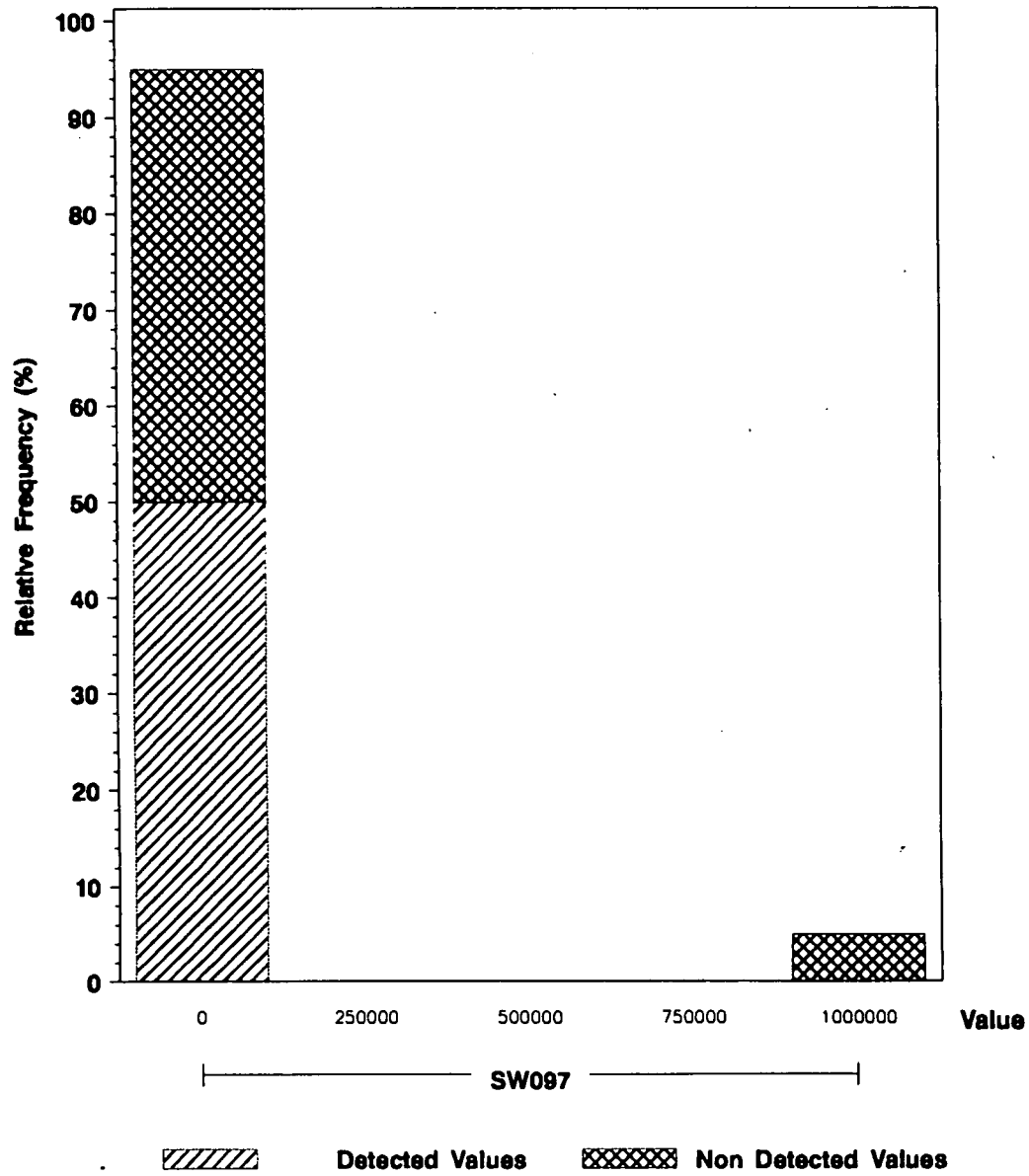
**(Dissolved)**

**Background vs. OU 7 (Landfill) UHSU**

# Background vs OU7 Seep Water Frequency Histogram

## Dissolved TIN (ug/L) in Seep Water

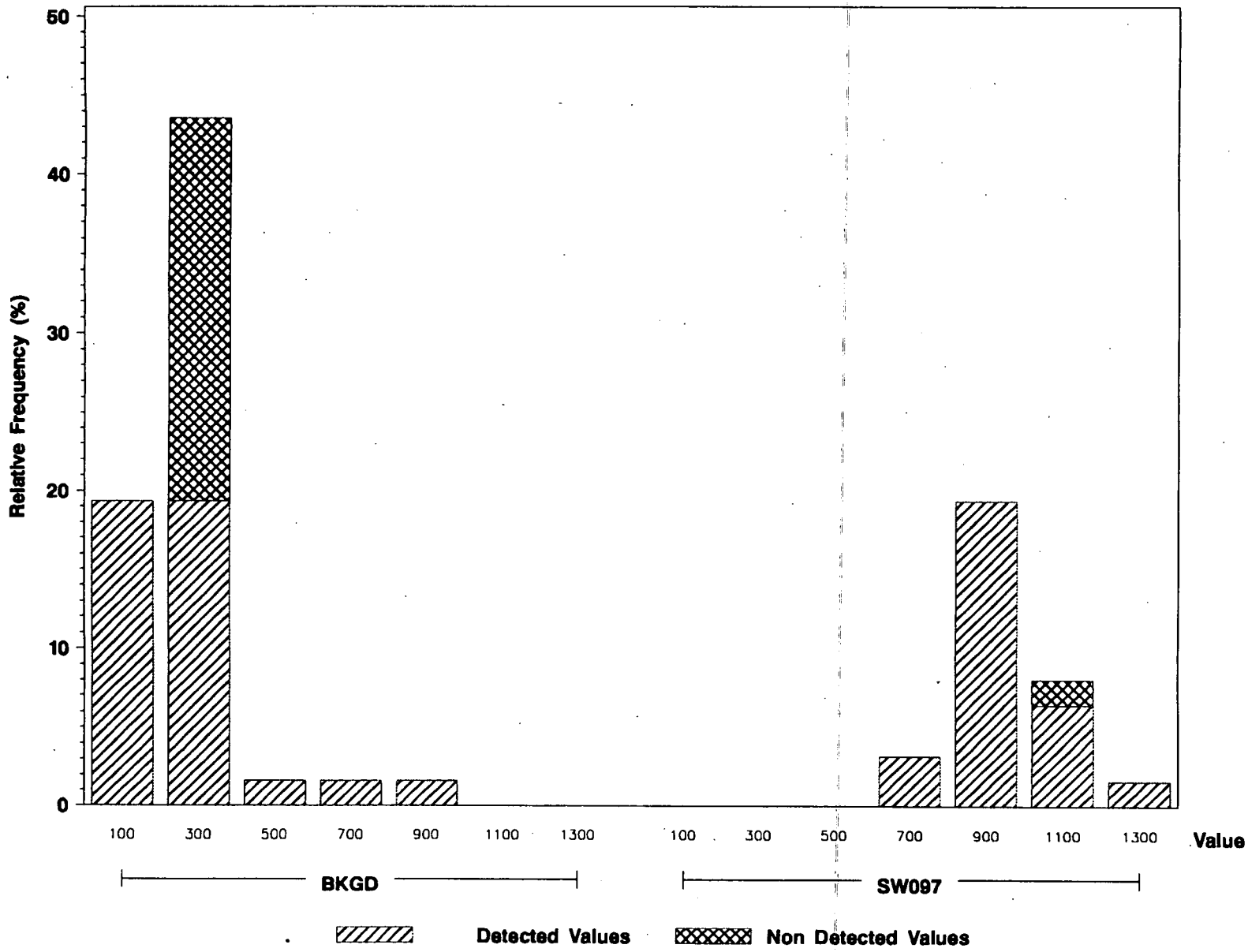
ANALYTE = TIN



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Seep Water

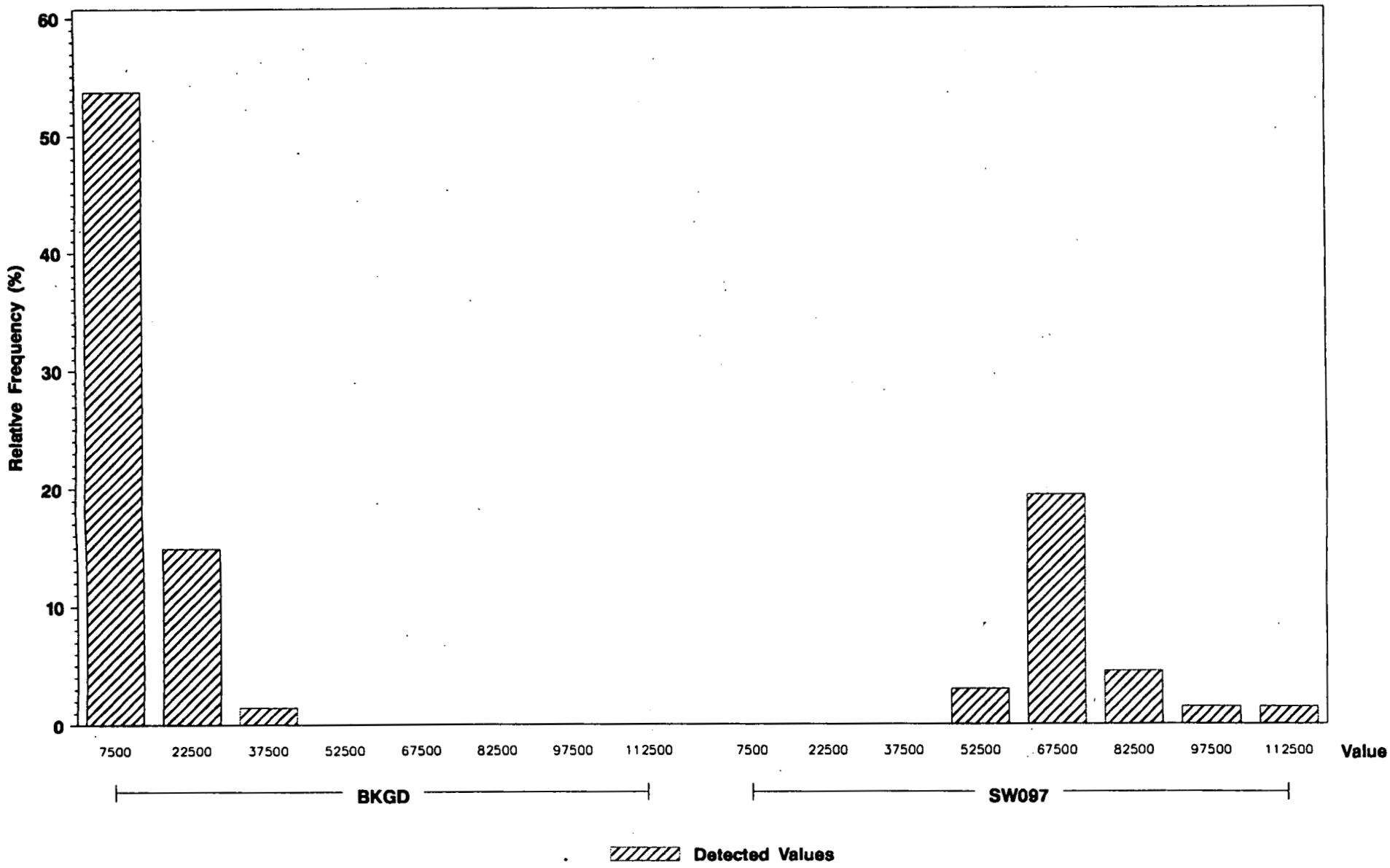
ANALYTE = STRONTIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved SODIUM (ug/L) in Seep Water

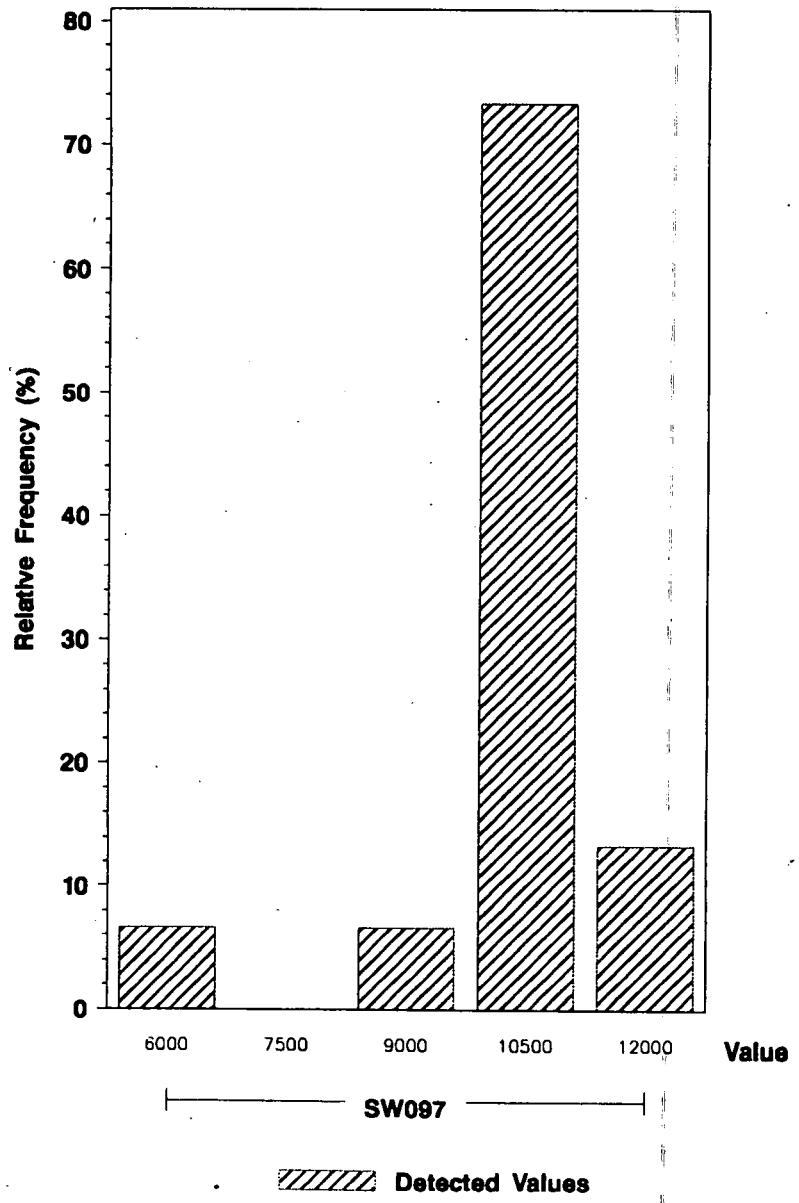
ANALYTE = SODIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved SILICON (ug/L) in Seep Water

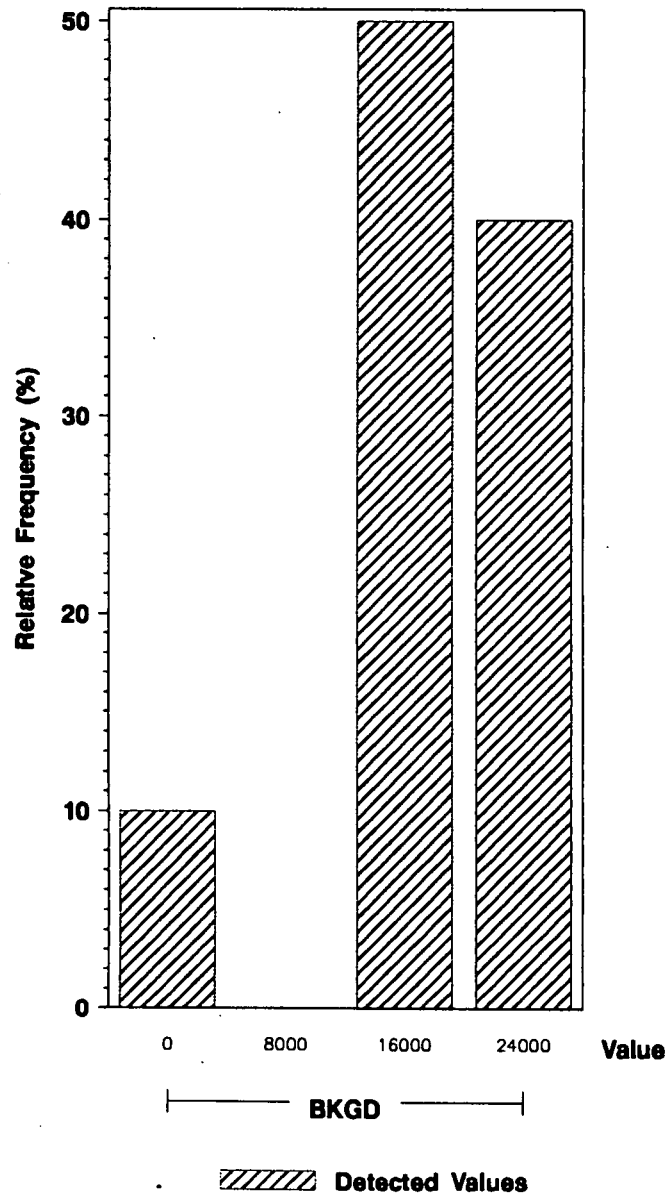
ANALYTE = SILICON



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved SILICA (ug/L) in Seep Water

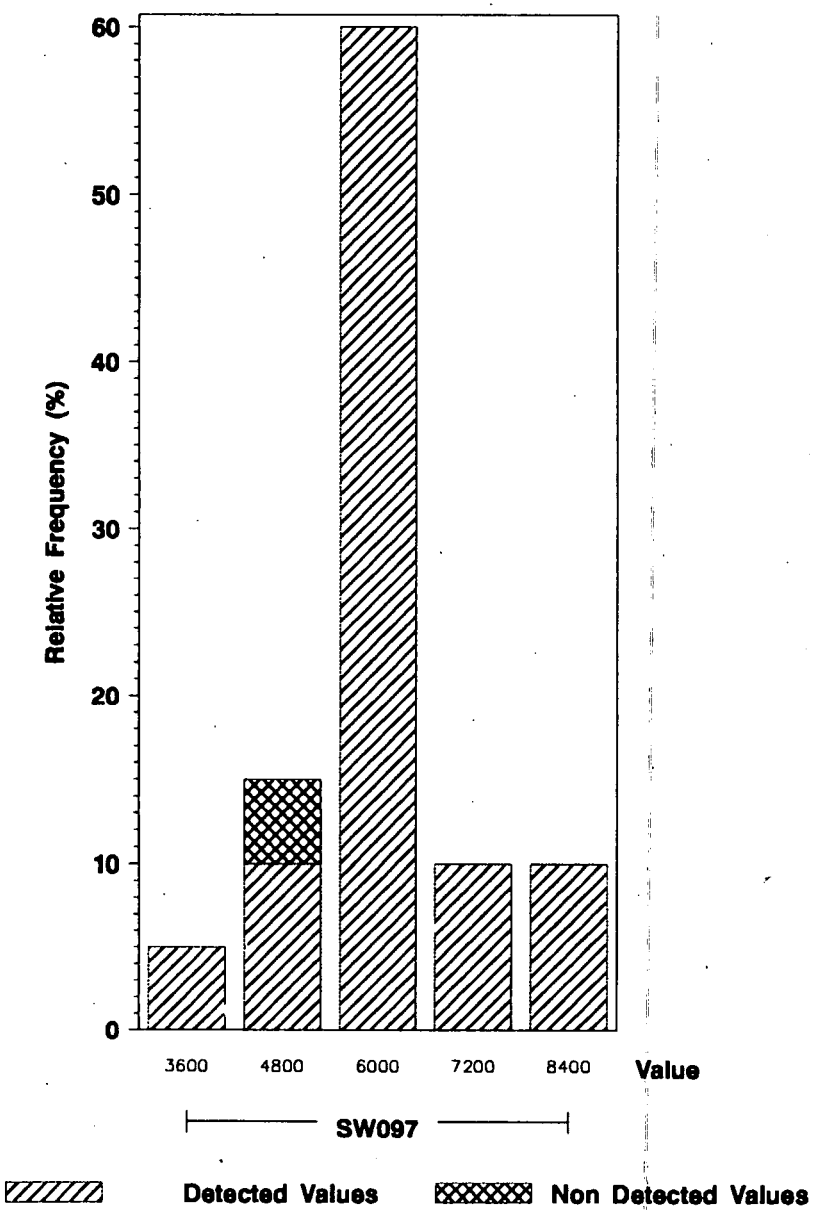
ANALYTE = SILICA



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Seep Water

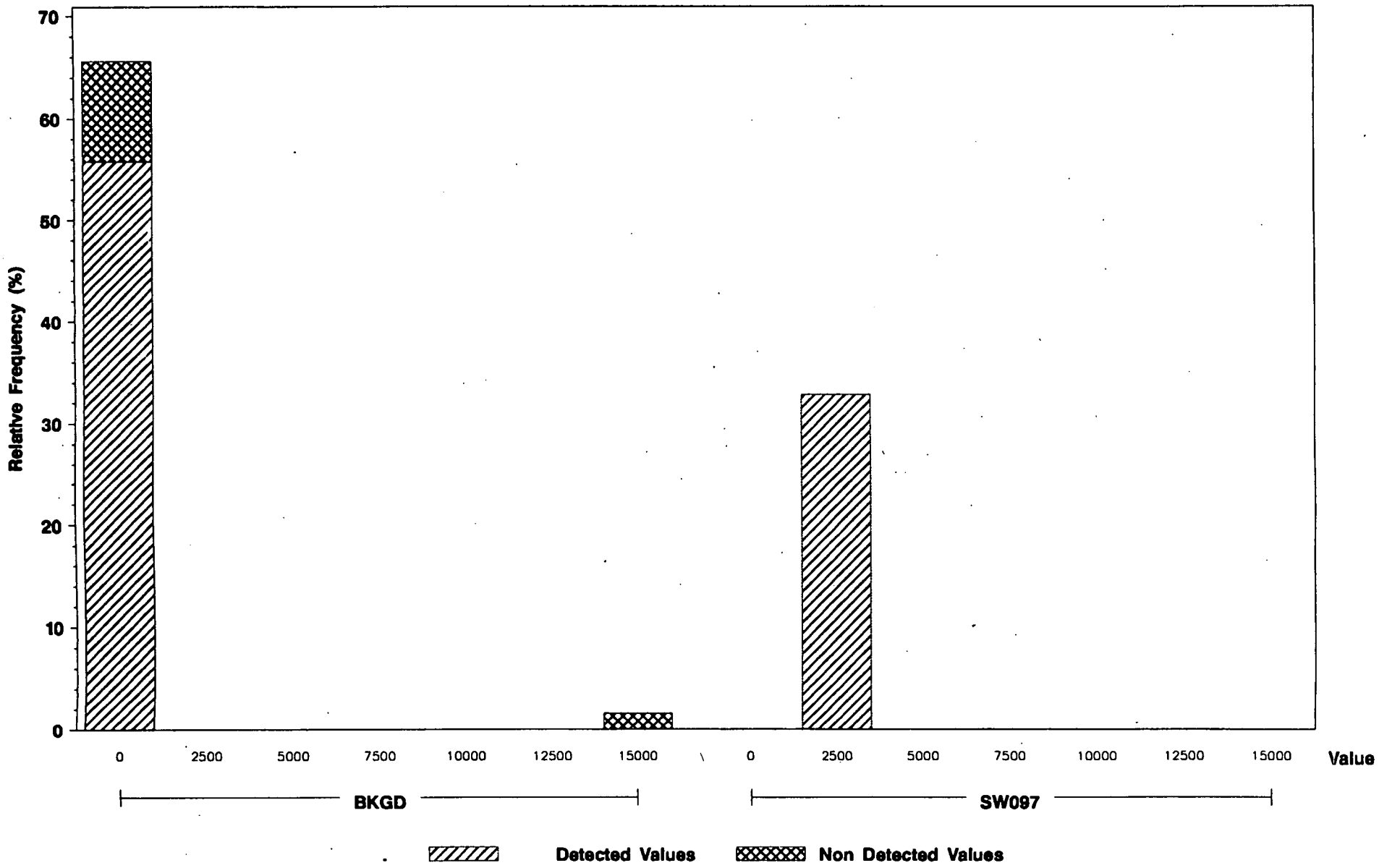
ANALYTE = POTASSIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved MANGANESE (ug/L) in Seep Water

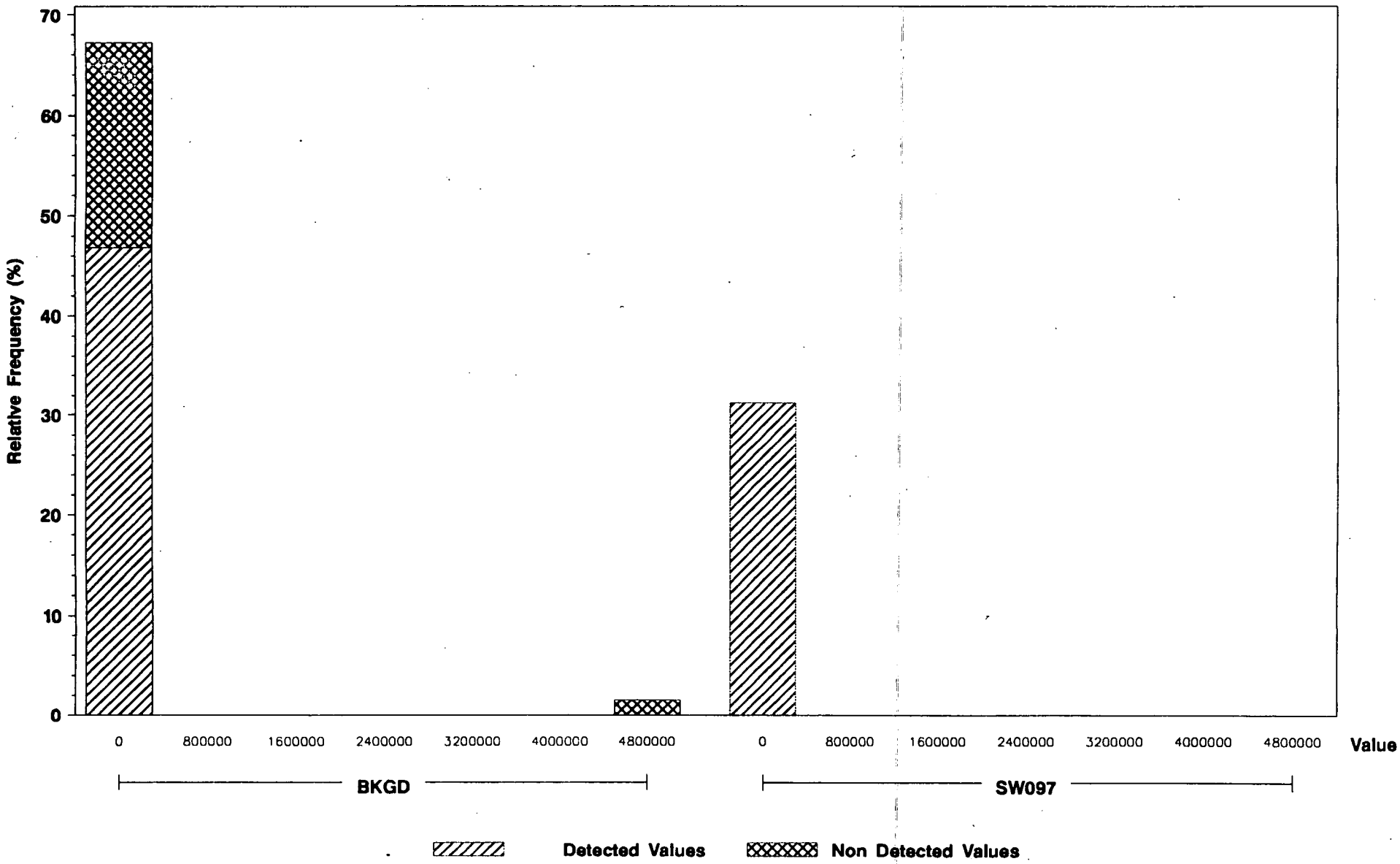
ANALYTE = MANGANESE



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Seep Water

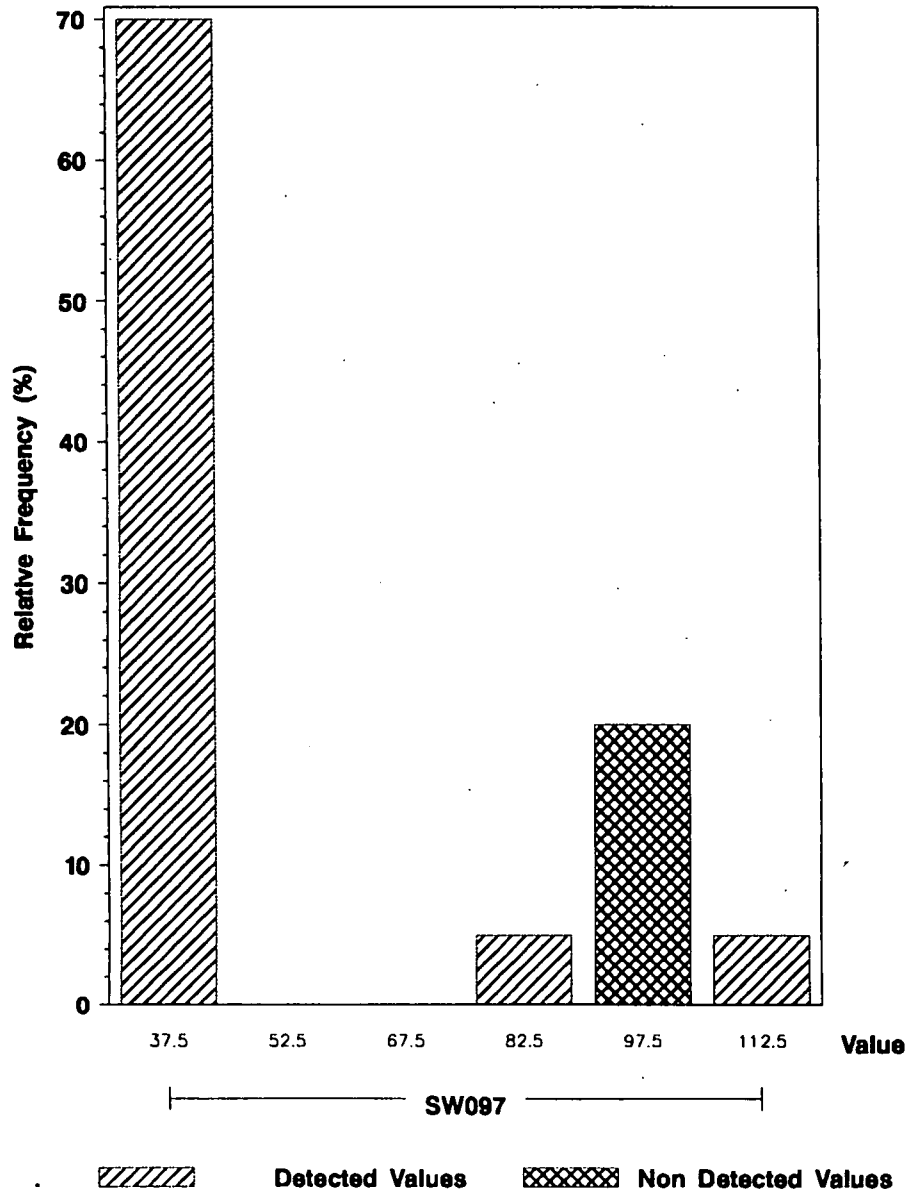
ANALYTE = MAGNESIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved LITHIUM (ug/L) in Seep Water

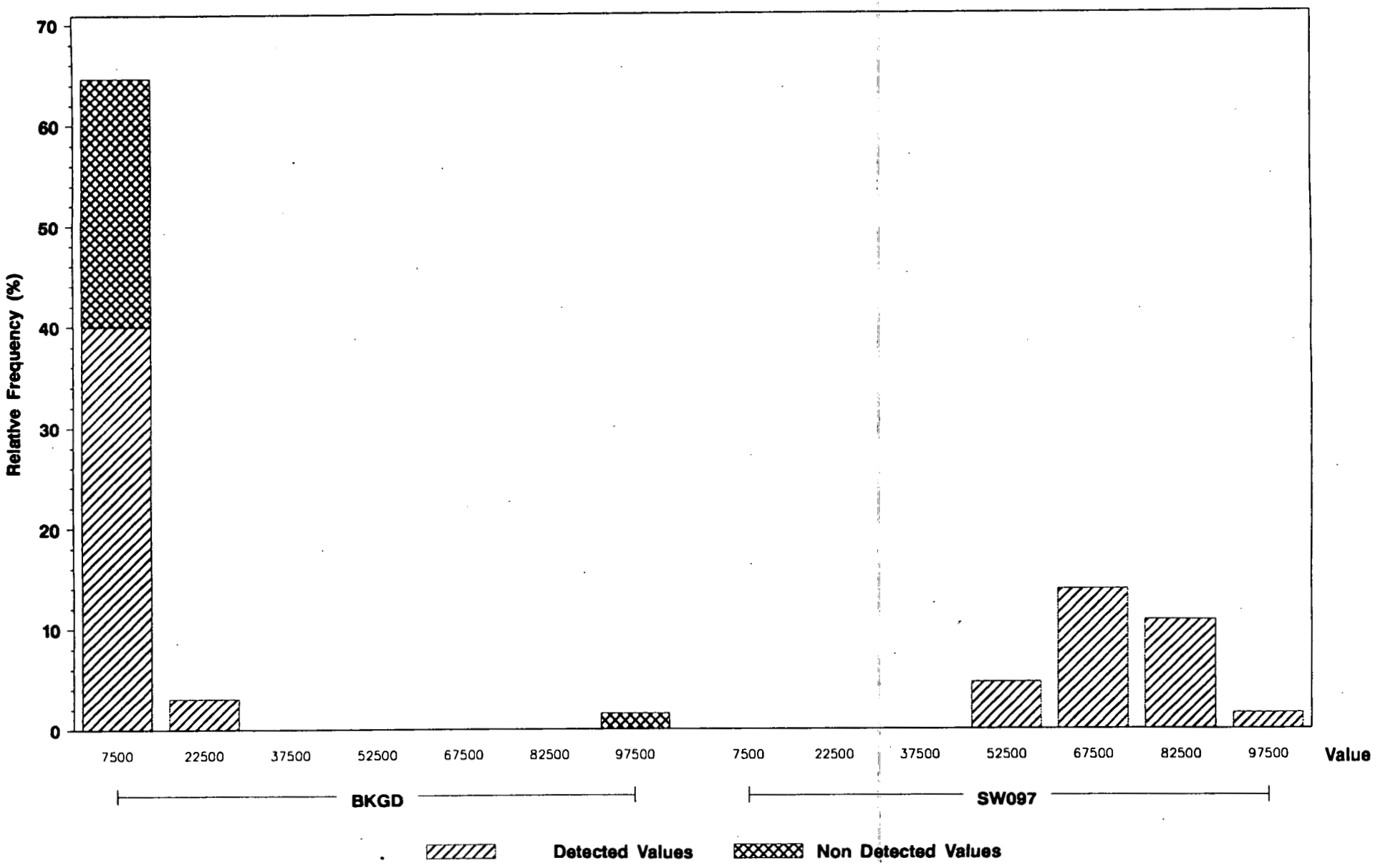
ANALYTE = LITHIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved IRON (ug/L) in Seep Water

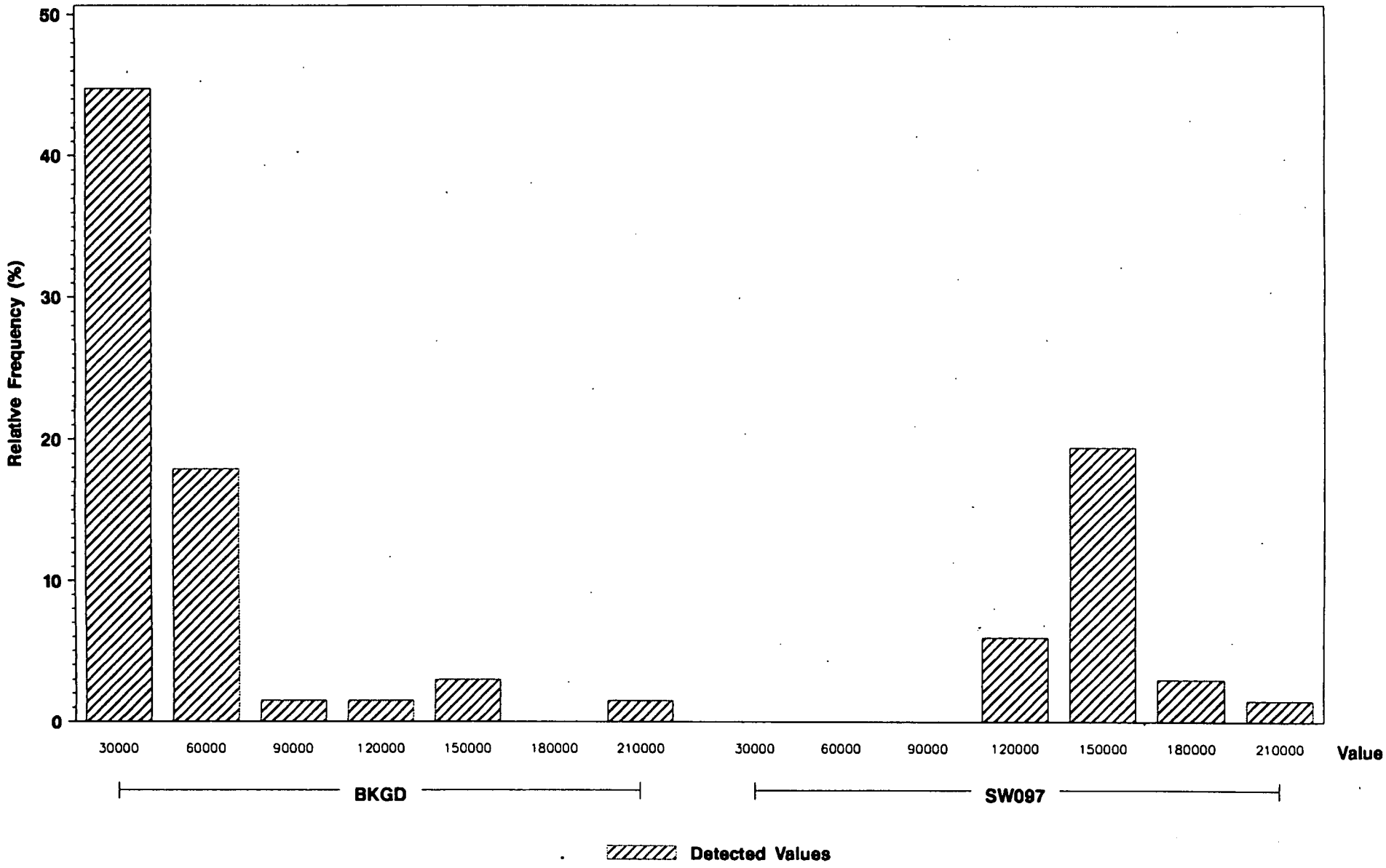
ANALYTE = IRON



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved CALCIUM (ug/L) in Seep Water

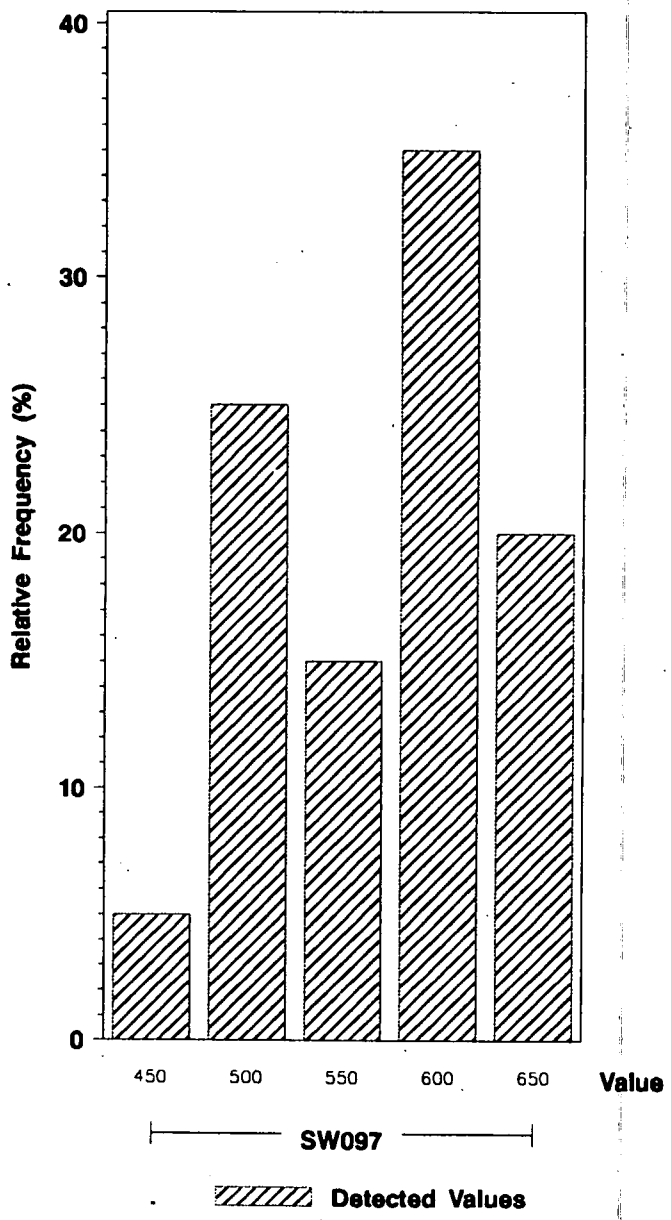
ANALYTE=CALCIUM



# Background vs OU7 Seep Water Frequency Histogram

## Dissolved BARIUM (ug/L) in Seep Water

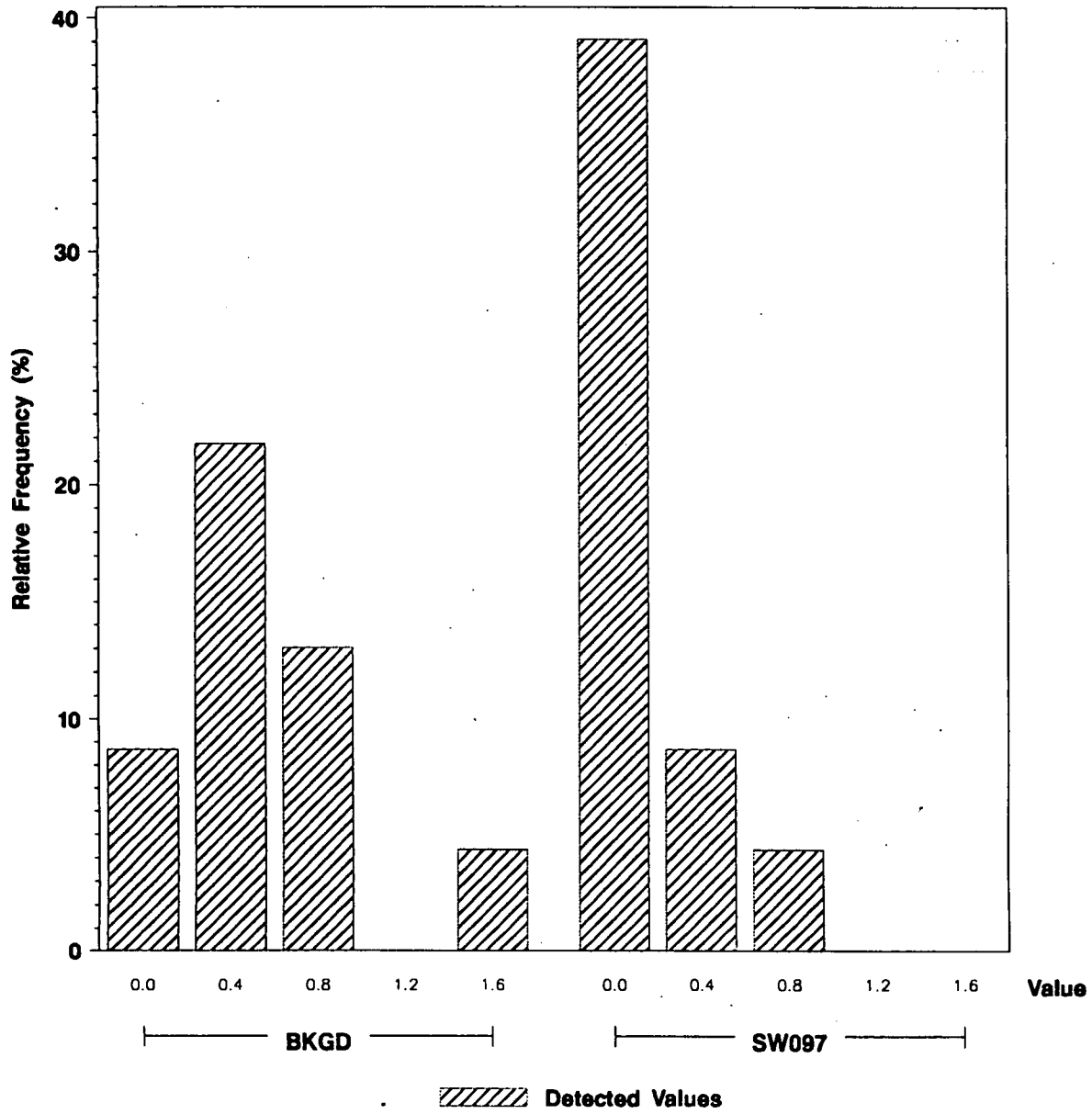
ANALYTE = BARIUM



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-238 (pCi/L) in Seep Water

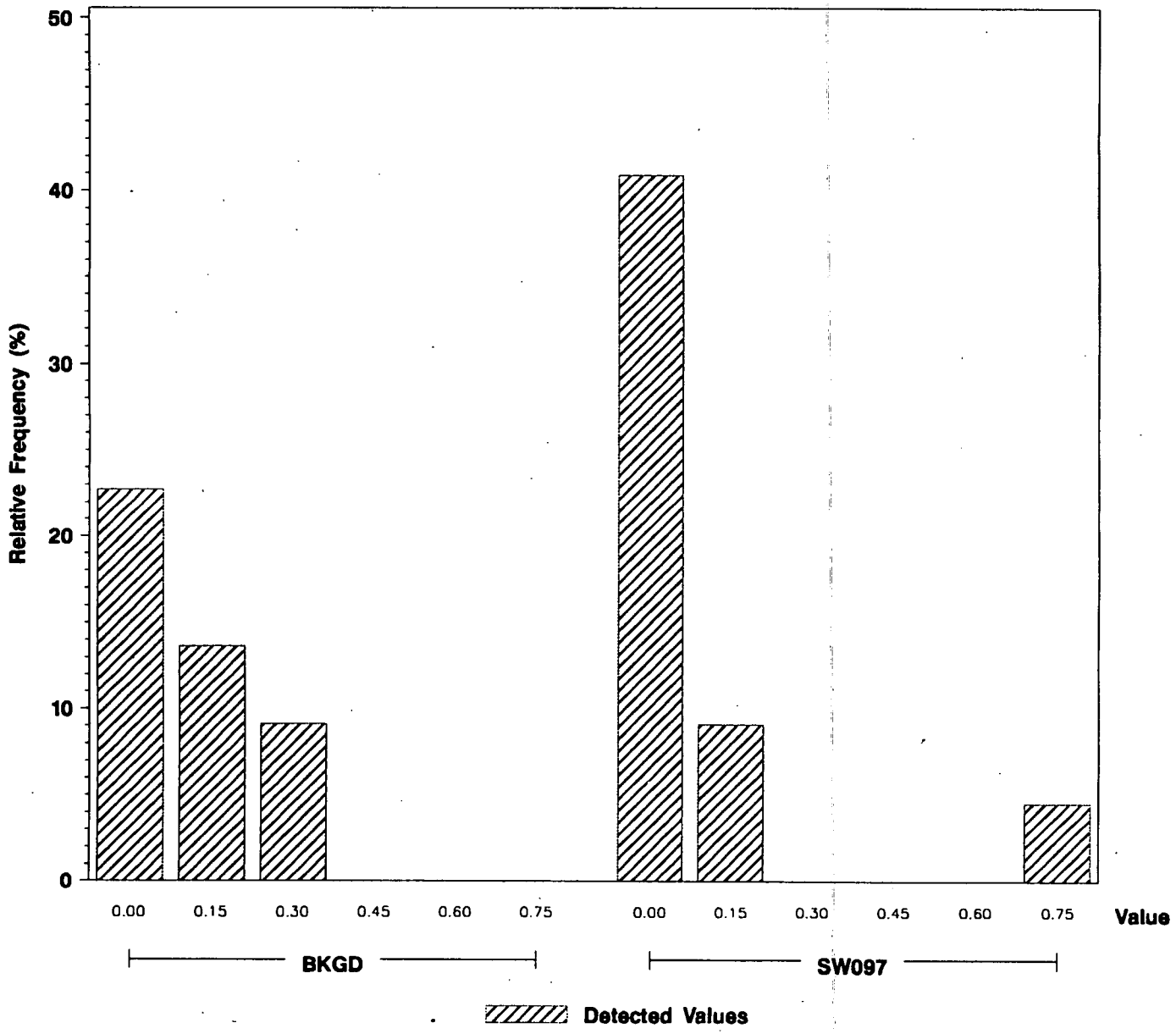
ANALYTE=URANIUM-238



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-235 (pCi/L) in Seep Water

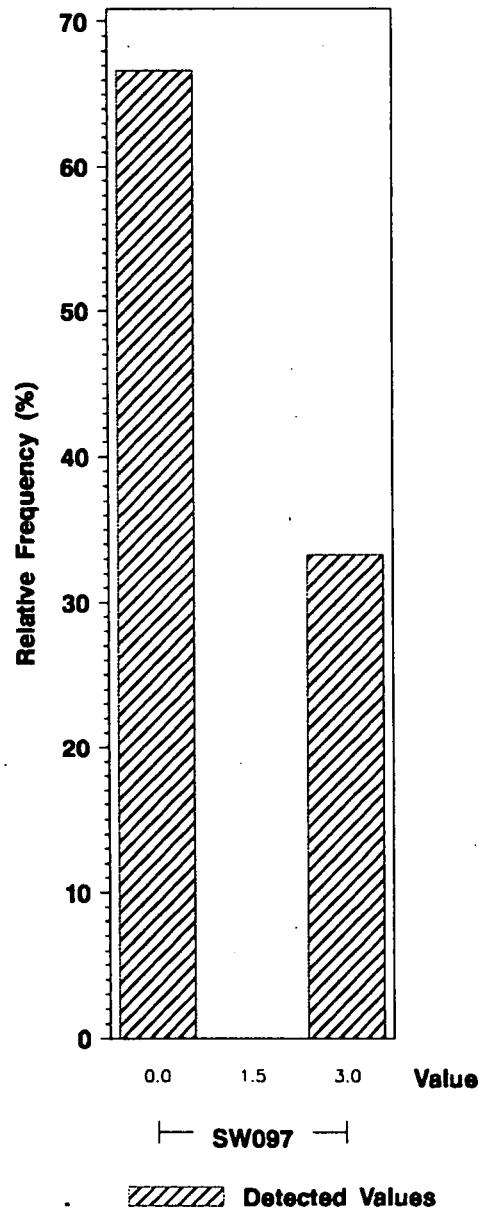
ANALYTE=URANIUM-235



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-234 (pCi/L) in Seep Water

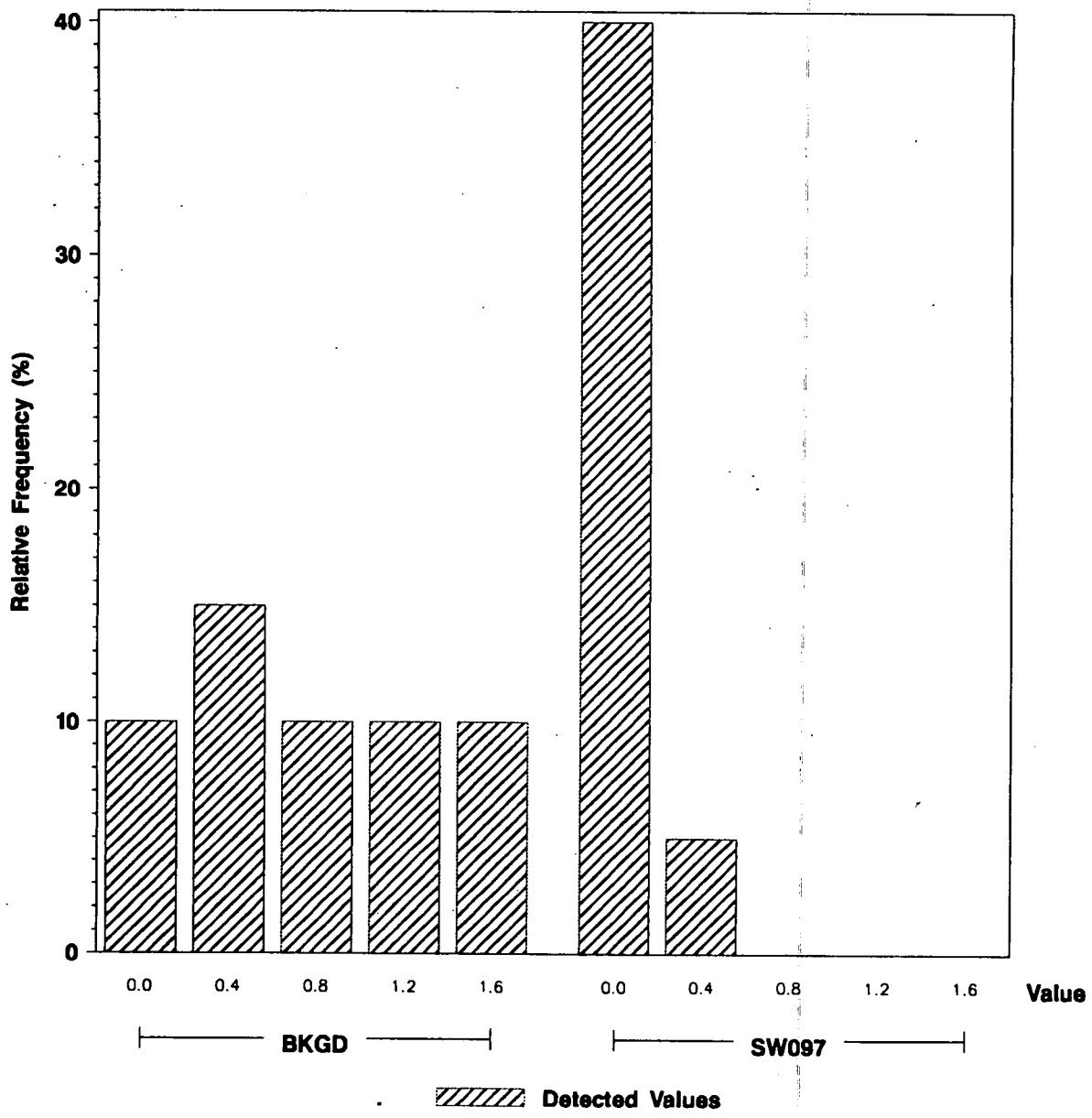
ANALYTE=URANIUM-234



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Seep Water

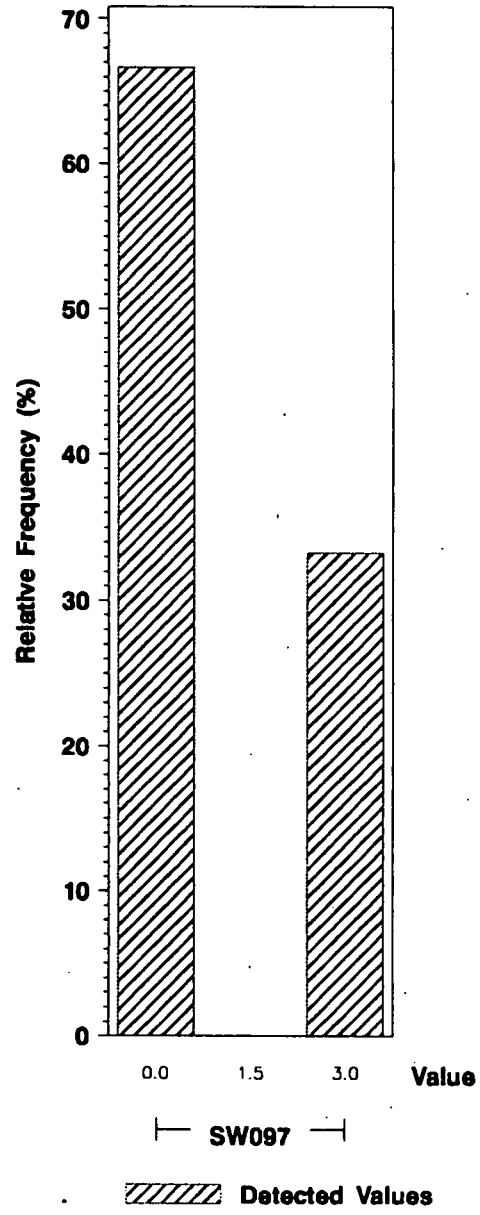
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM-234 (pCi/L) in Seep Water

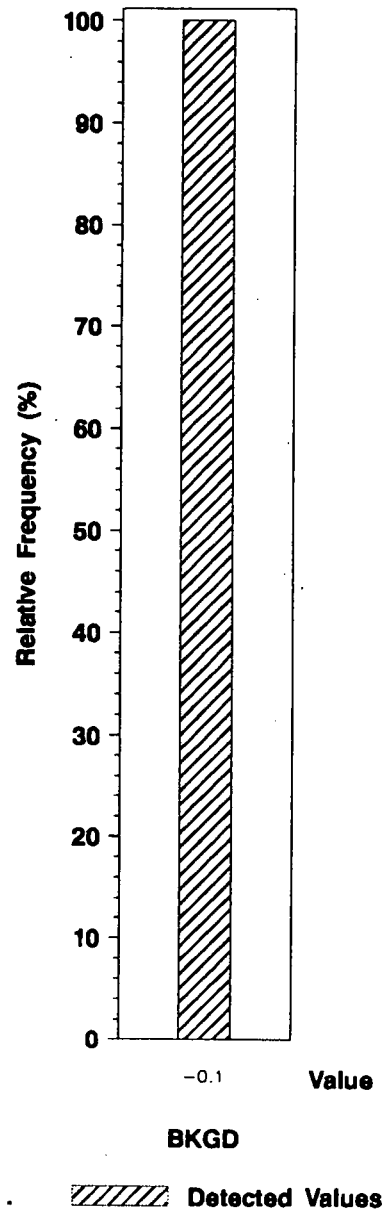
ANALYTE=URANIUM-234



# Background vs OU7 Seep Water Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Seep Water

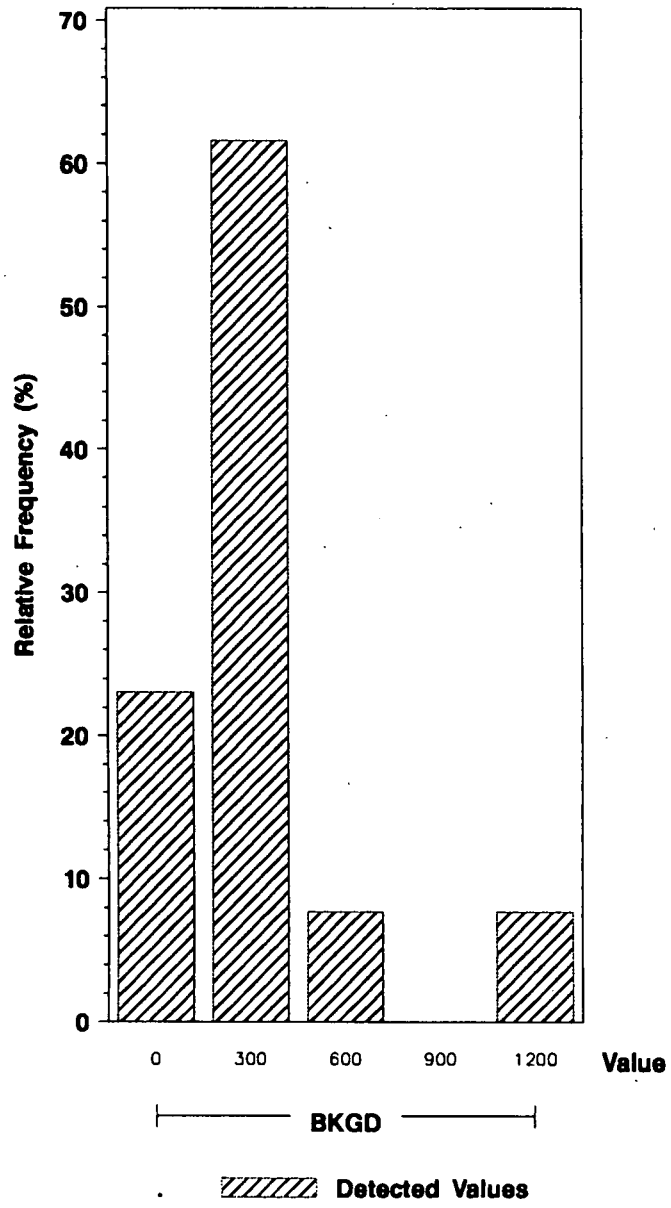
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Seep Water Frequency Histogram

## Total TRITIUM (pCi/L) in Seep Water

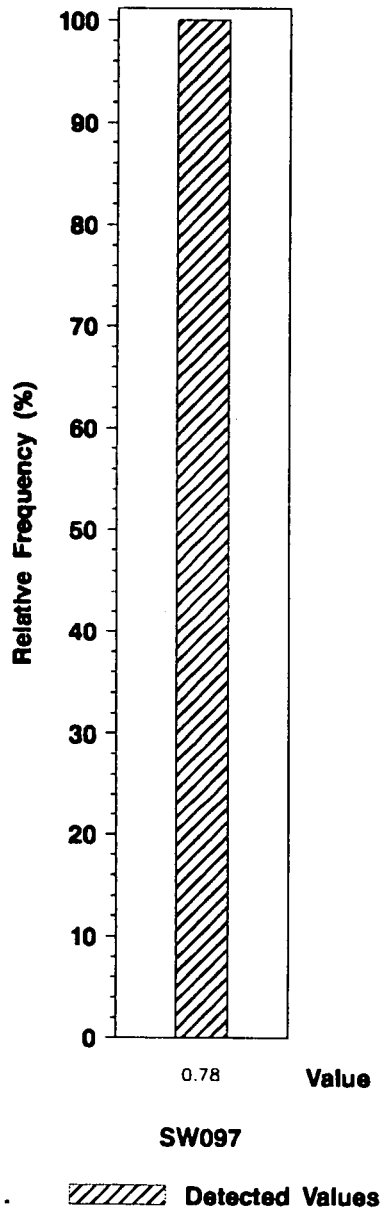
ANALYTE = TRITIUM



# Background vs OU7 Seep Water Frequency Histogram

## Total TOTAL RADIOCESIUM (pCi/L) in Seep Water

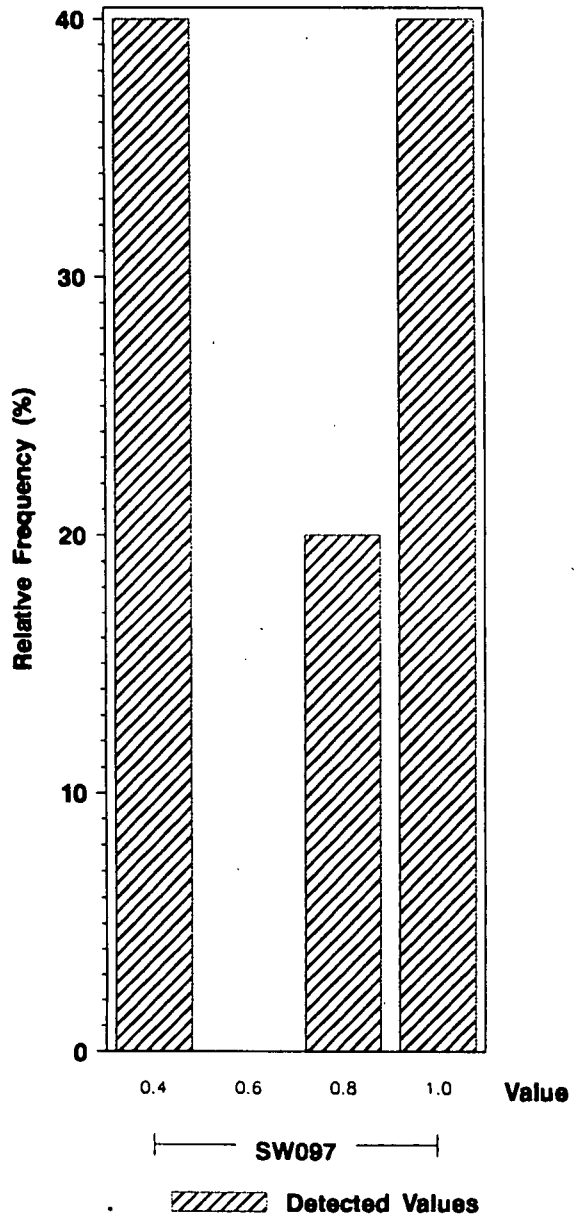
ANALYTE=TOTAL RADIOCESIUM



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Seep Water

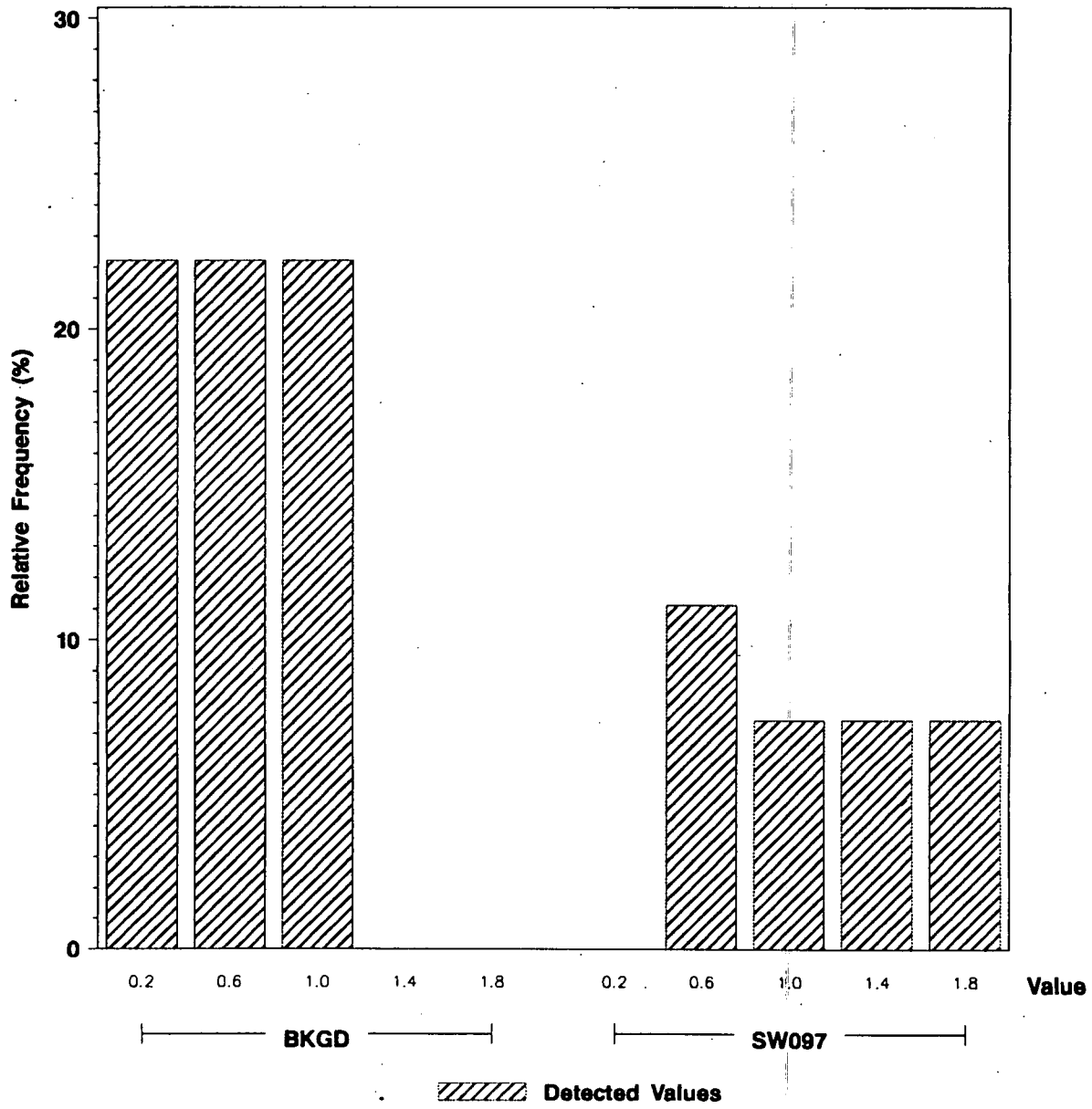
ANALYTE=STRONTIUM-90



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Seep Water

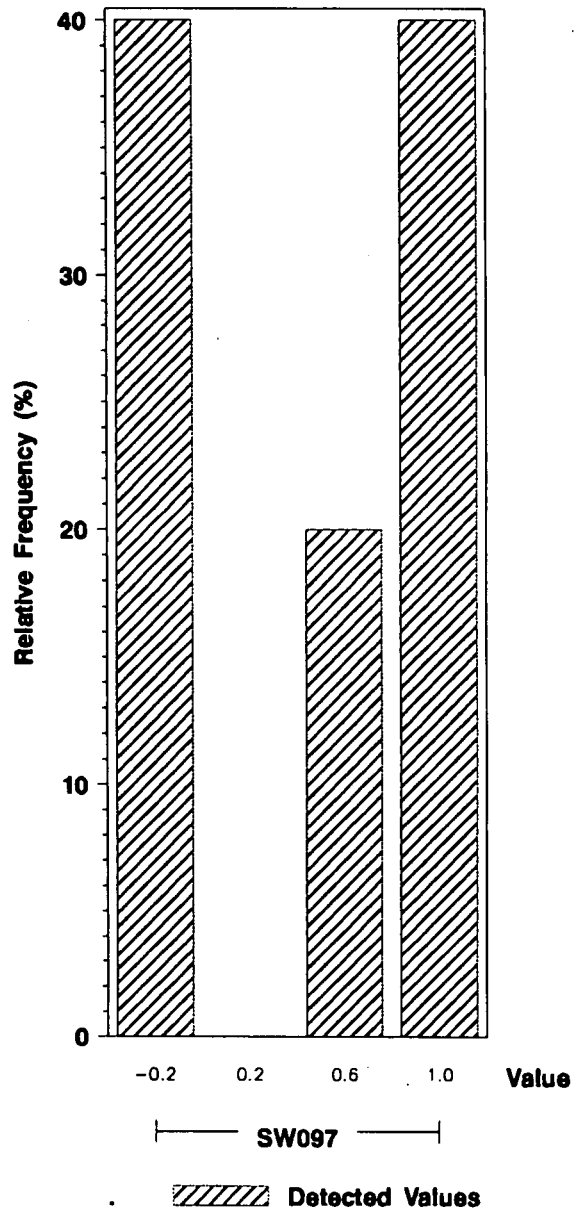
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM – 89 (pCi/L) in Seep Water

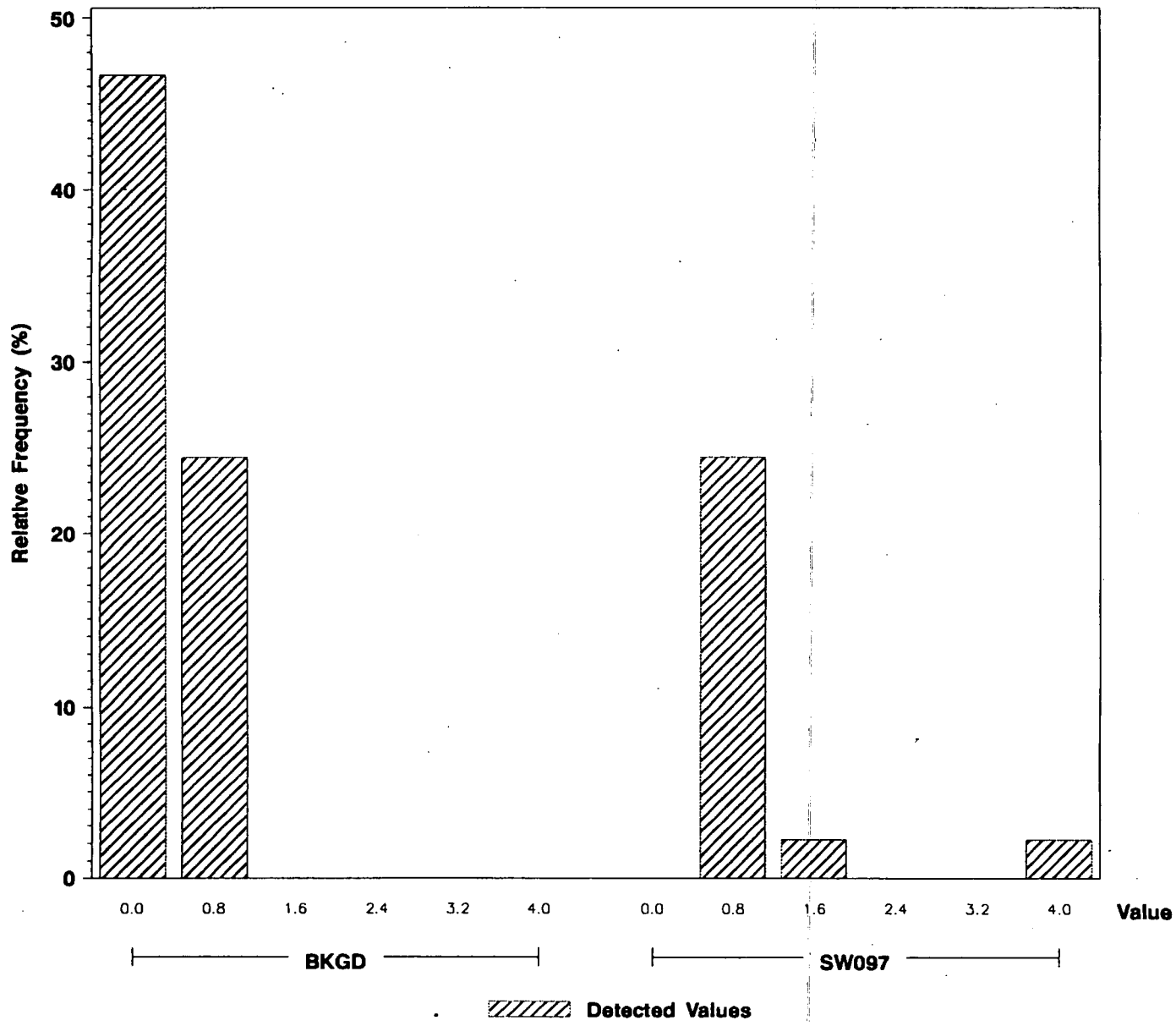
ANALYTE = STRONTIUM – 89



# Background vs OU7 Seep Water Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Seep Water

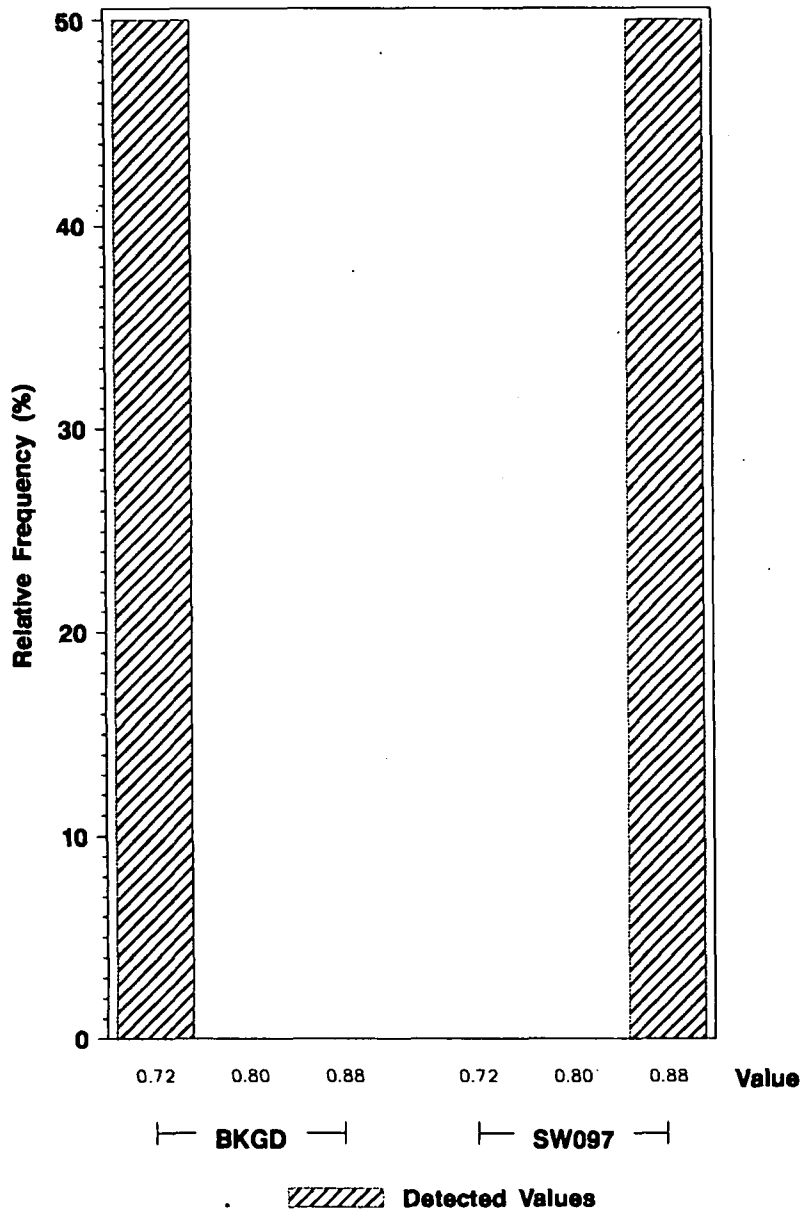
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Seep Water Frequency Histogram

## Total RADIUM – 228 (pCi/L) in Seep Water

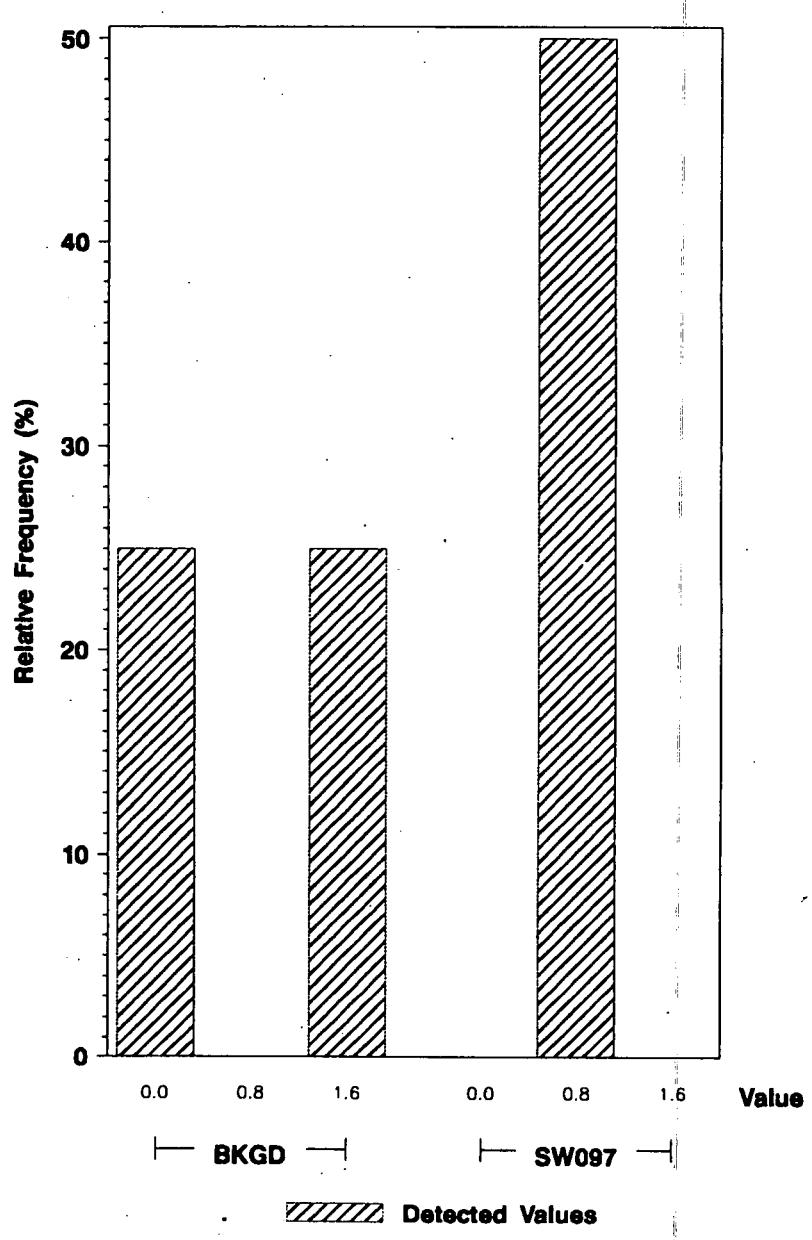
ANALYTE = RADIUM – 228



# Background vs OU7 Seep Water Frequency Histogram

## Total RADIUM-226 (pCi/L) in Seep Water

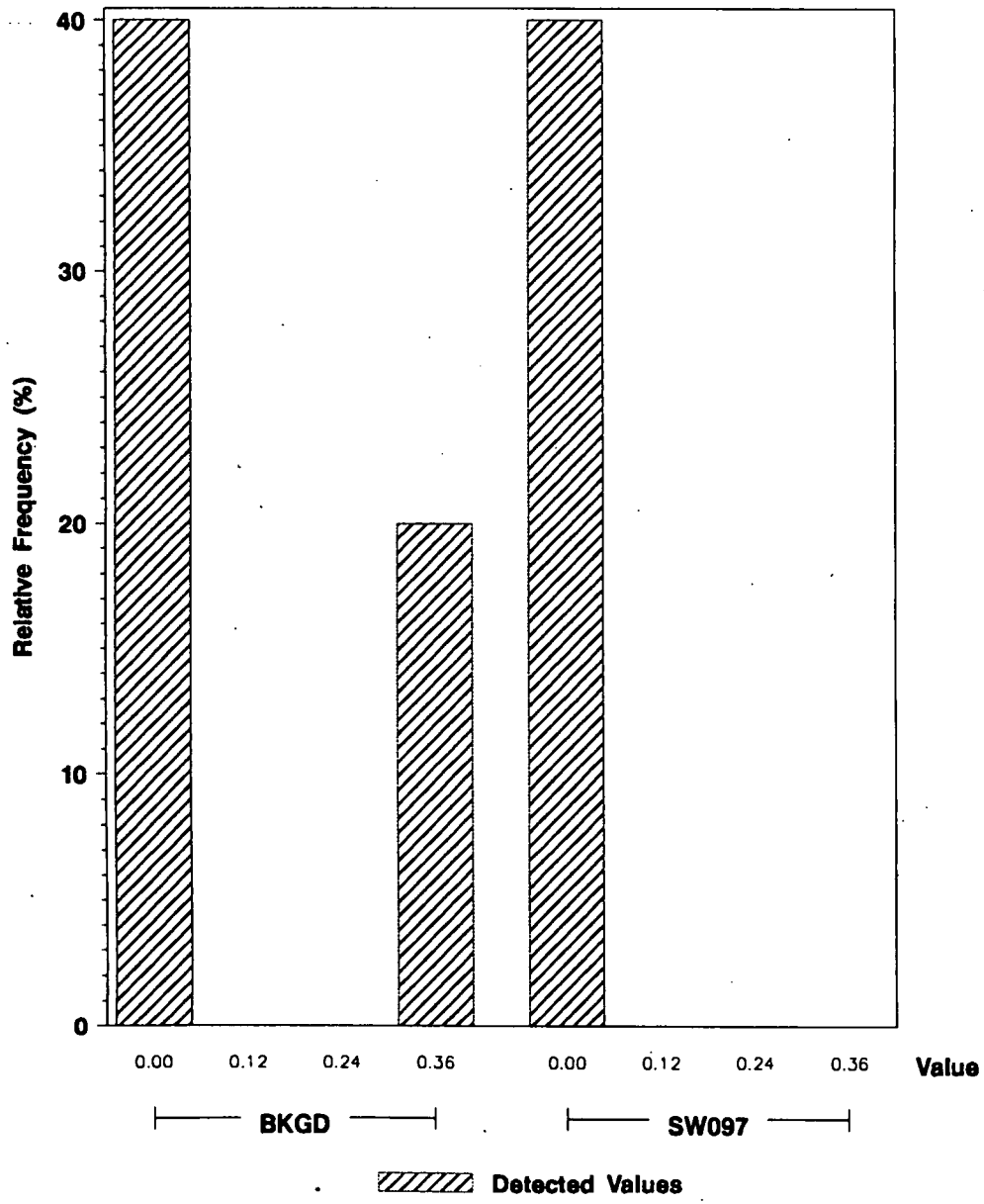
ANALYTE = RADIUM-226



# Background vs OU7 Seep Water Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Seep Water

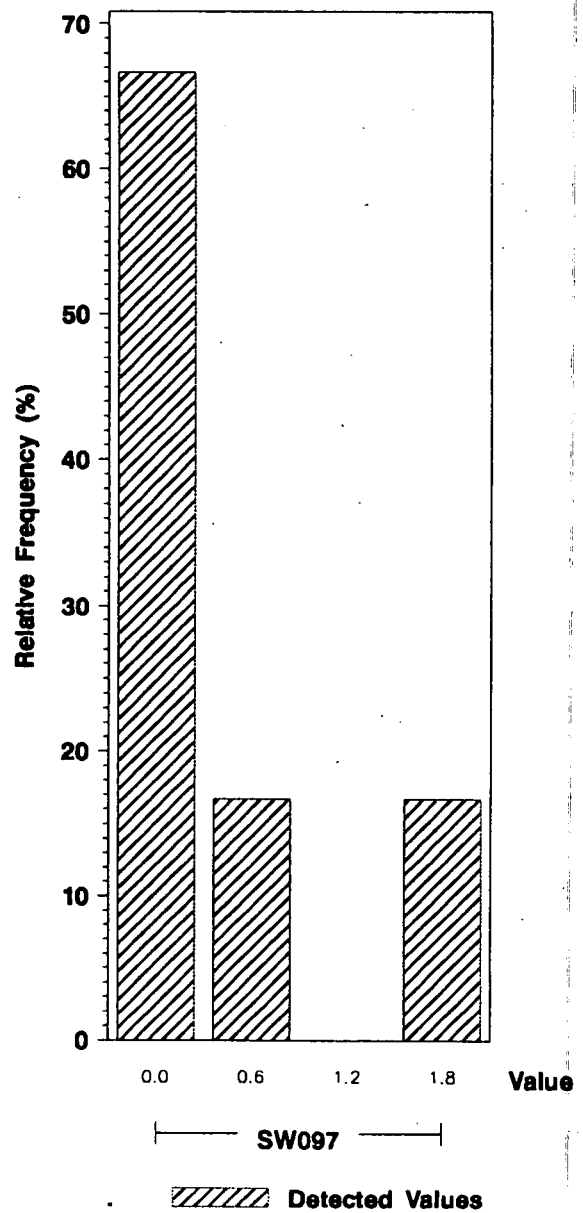
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Seep Water Frequency Histogram

## Total PLUTONIUM-239 (pCi/L) in Seep Water

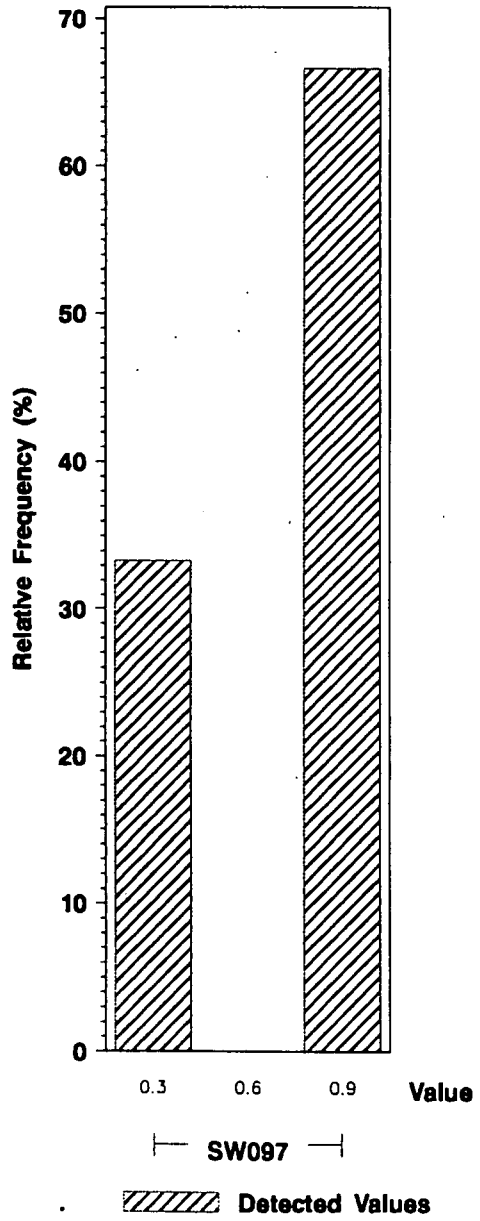
ANALYTE = PLUTONIUM-239



# Background vs OU7 Seep Water Frequency Histogram

## Total NEPTUNIUM-237 (pCi/L) in Seep Water

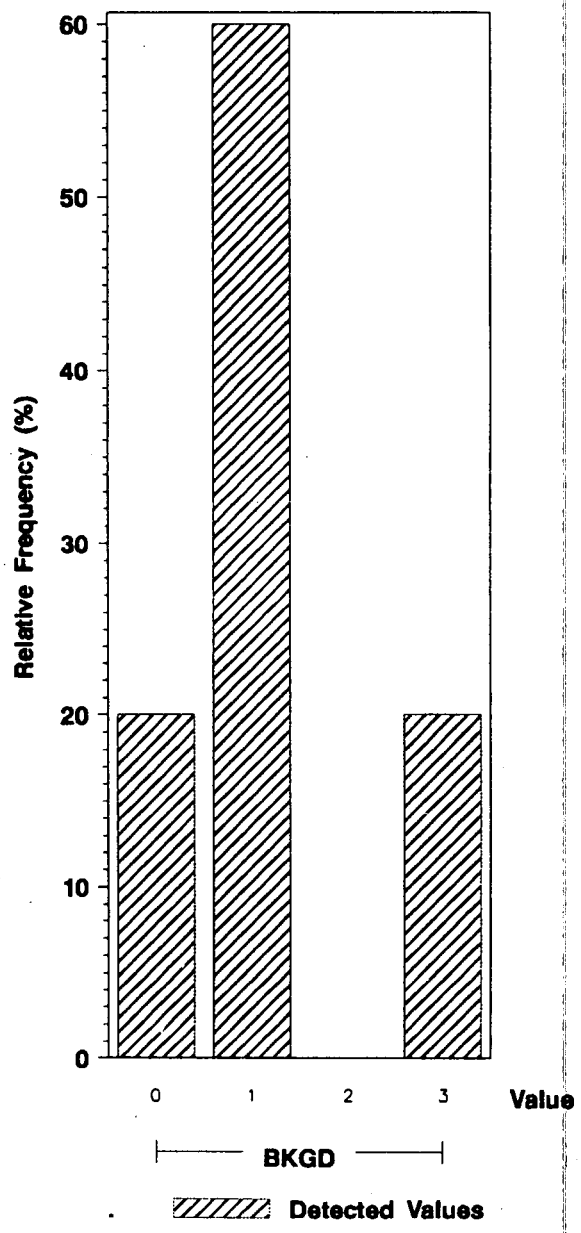
ANALYTE = NEPTUNIUM-237



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS GAMMA (pCi/L) in Seep Water

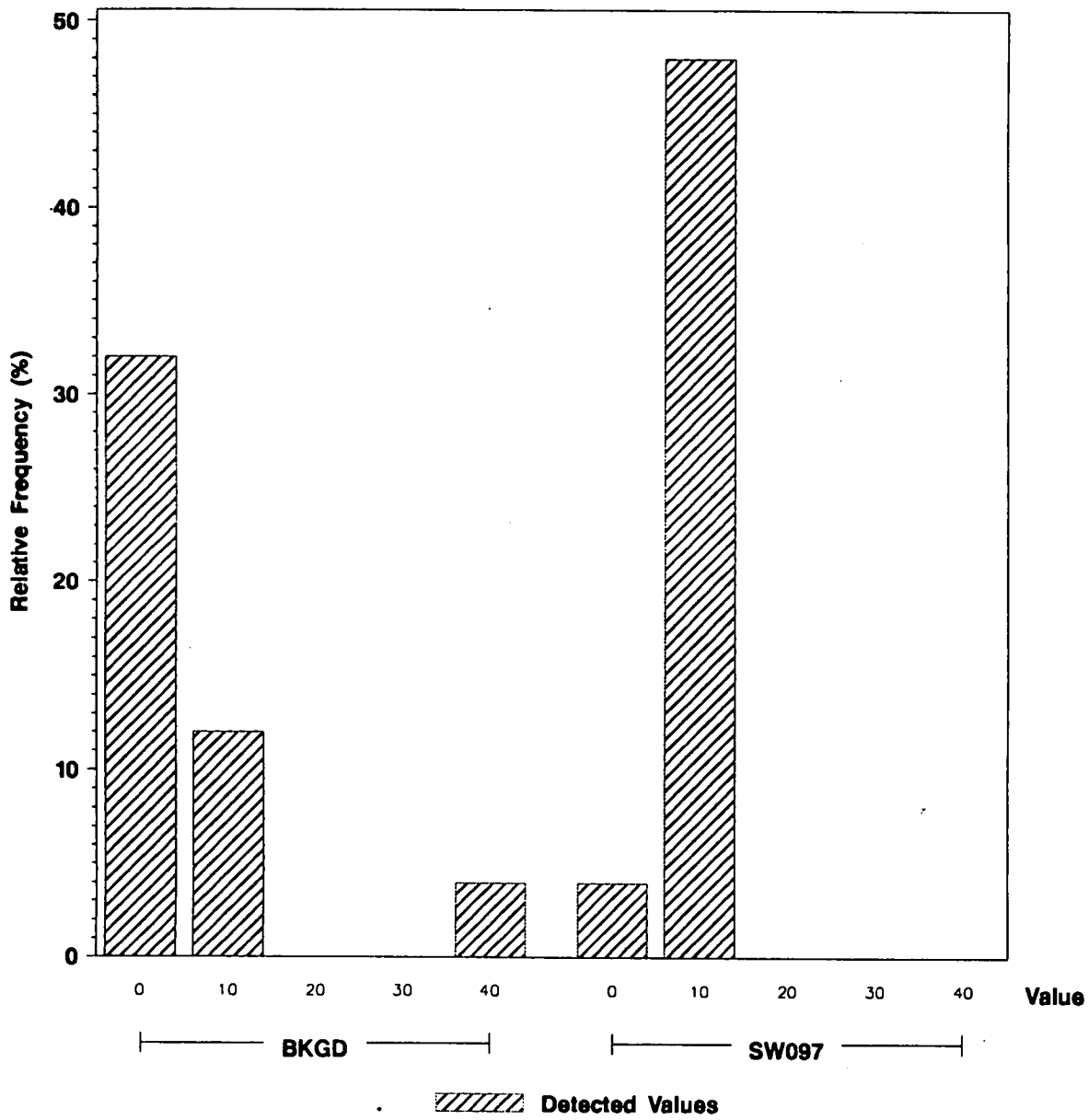
ANALYTE=GROSS GAMMA



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS BETA (pCi/L) in Seep Water

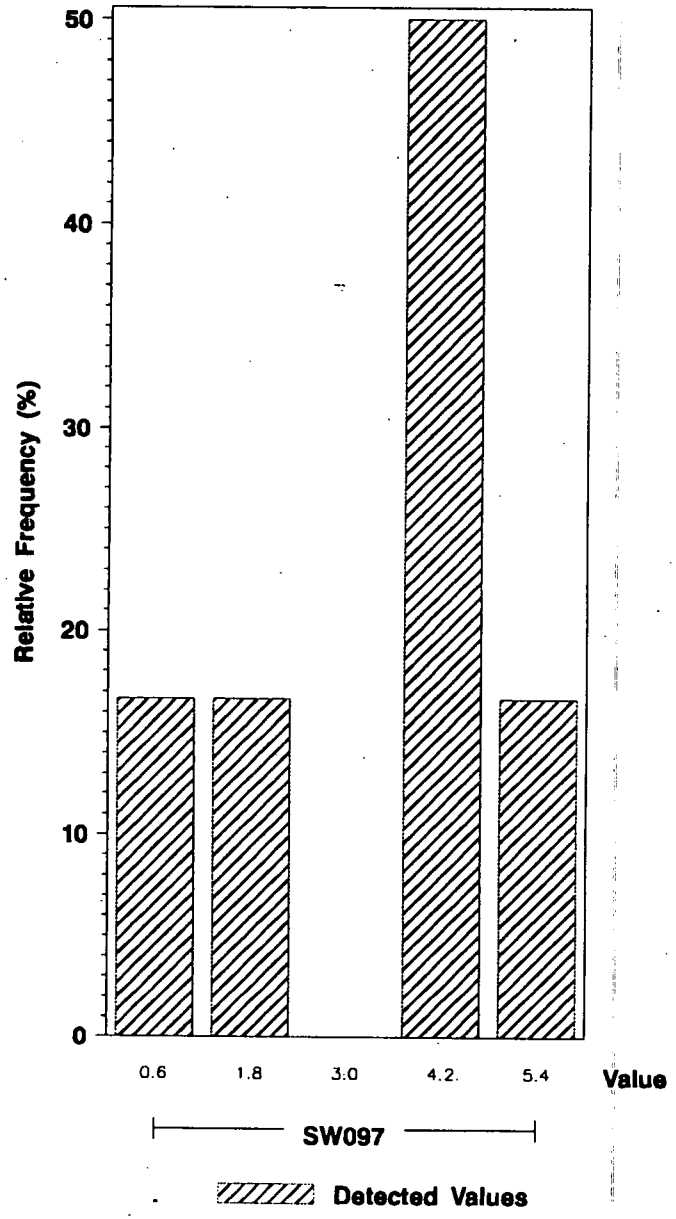
ANALYTE=GROSS BETA



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS ALPHA – SUSPENDED (pCi/L) in Seep Water

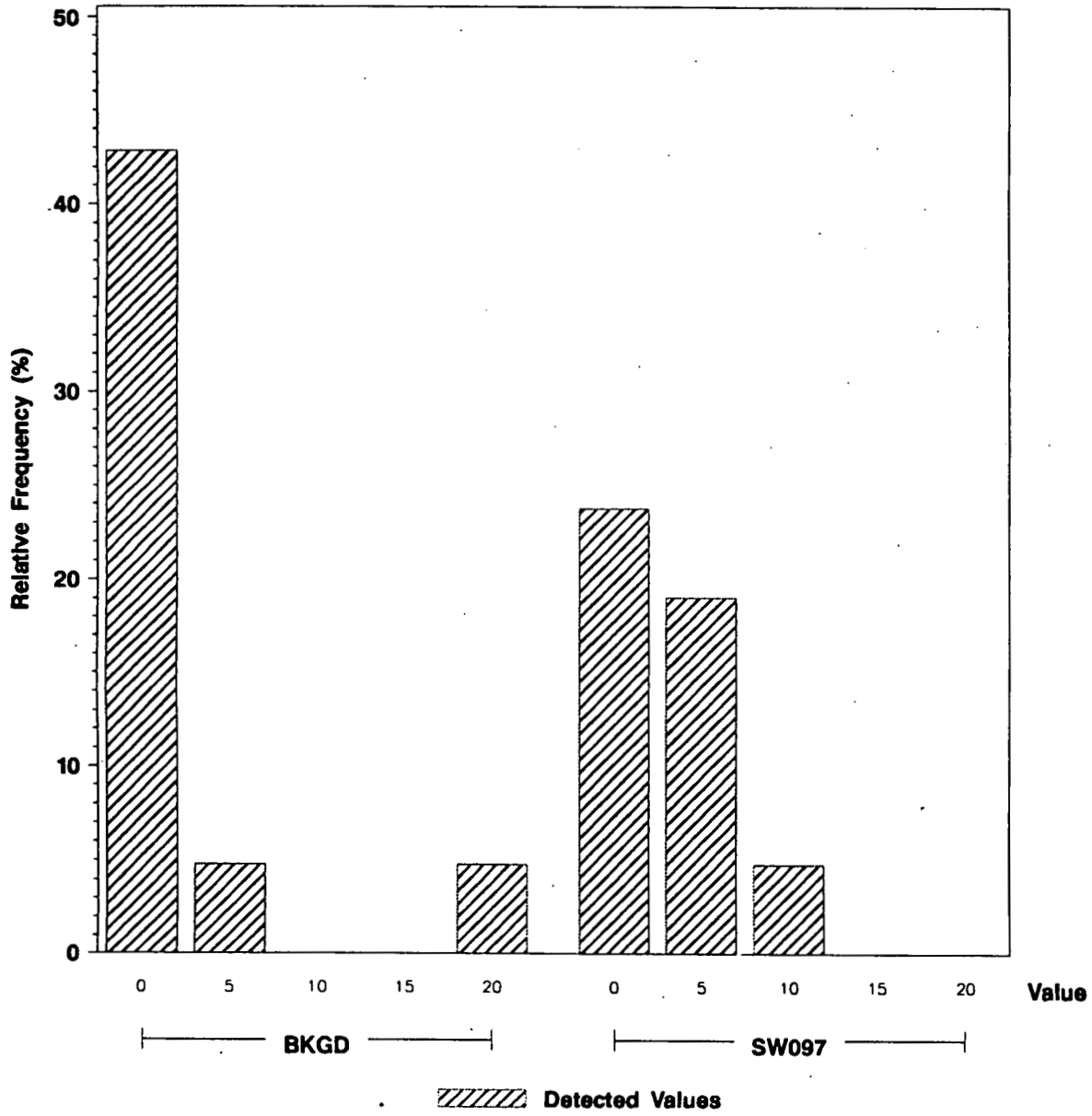
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs OU7 Seep Water Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Seep Water

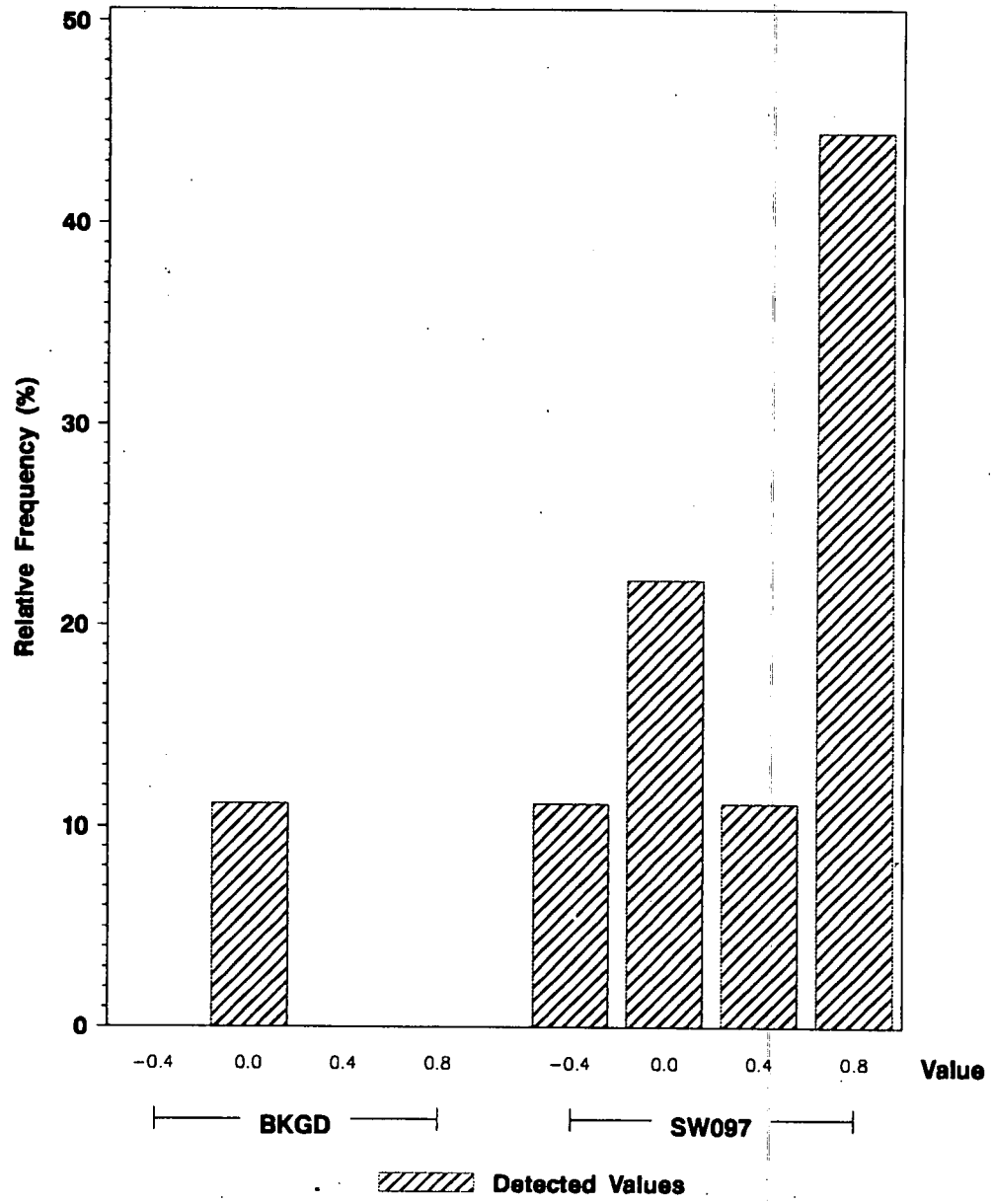
ANALYTE=GROSS ALPHA



# Background vs OU7 Seep Water Frequency Histogram

## Total CESIUM-137 (pCi/L) in Seep Water

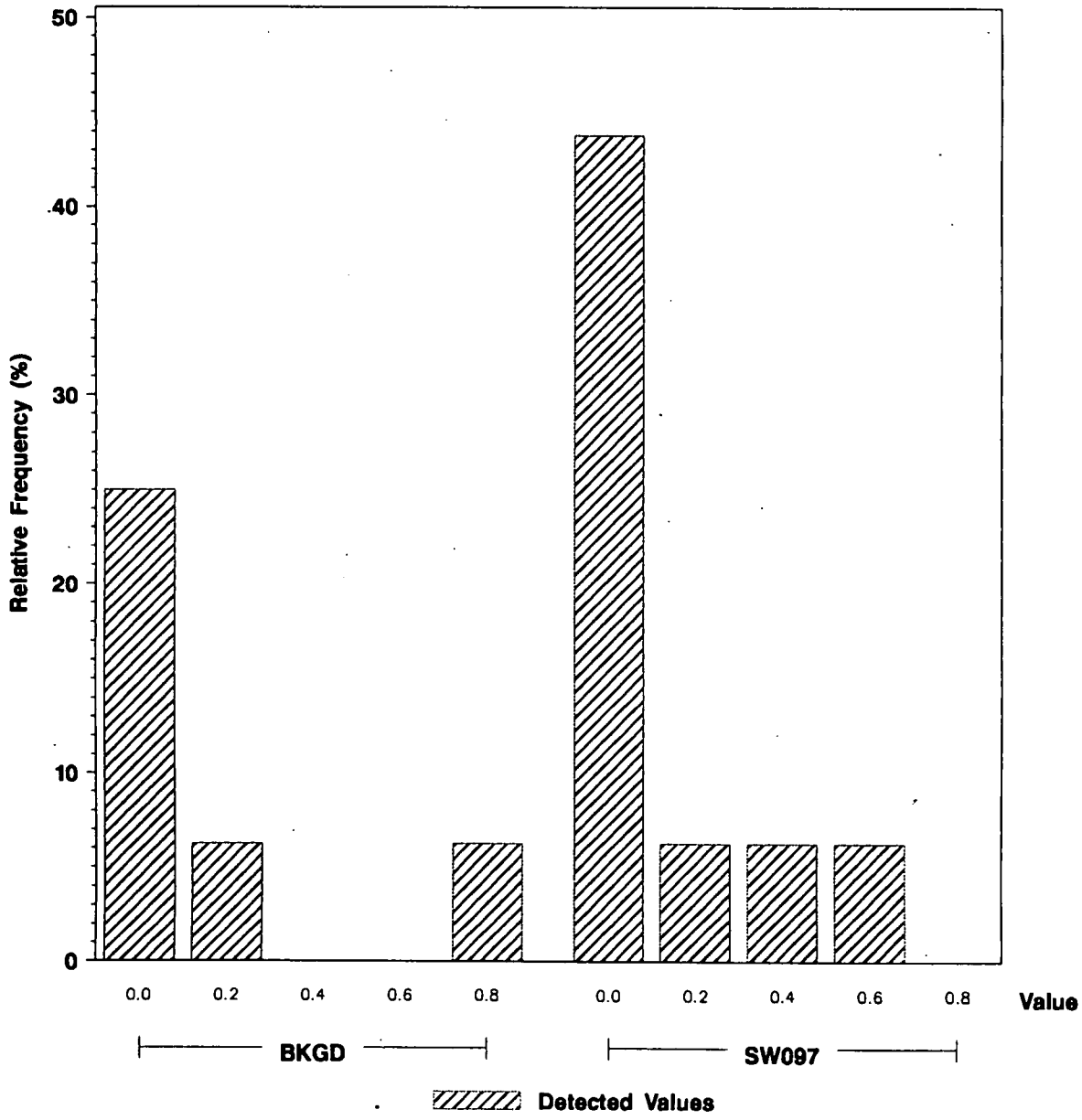
ANALYTE = CESIUM-137



# Background vs OU7 Seep Water Frequency Histogram

## Total AMERICIUM – 241 (pCi/L) in Seep Water

ANALYTE = AMERICIUM – 241



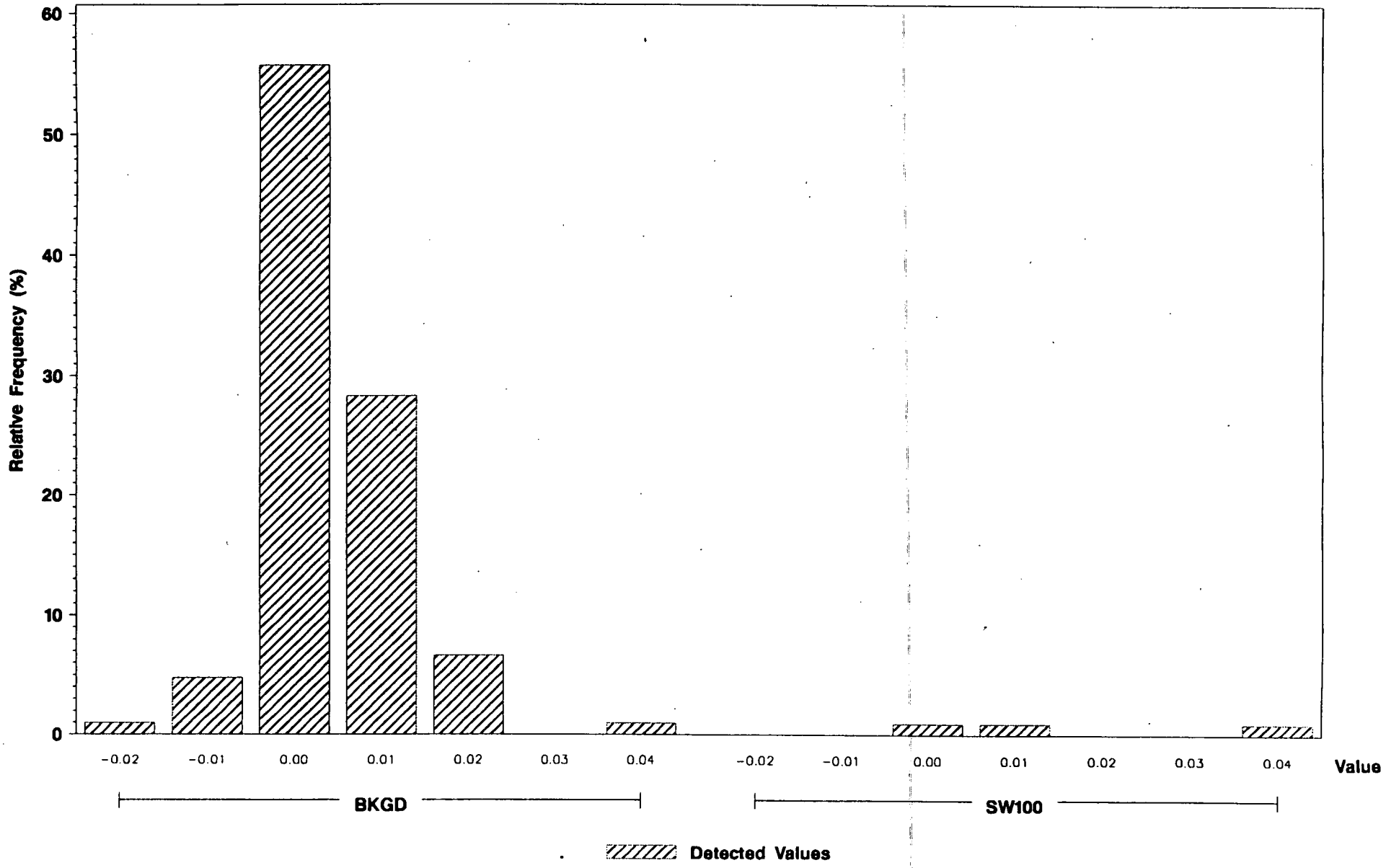
# Seep Water

# Background vs. OU 7

# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Surface Water

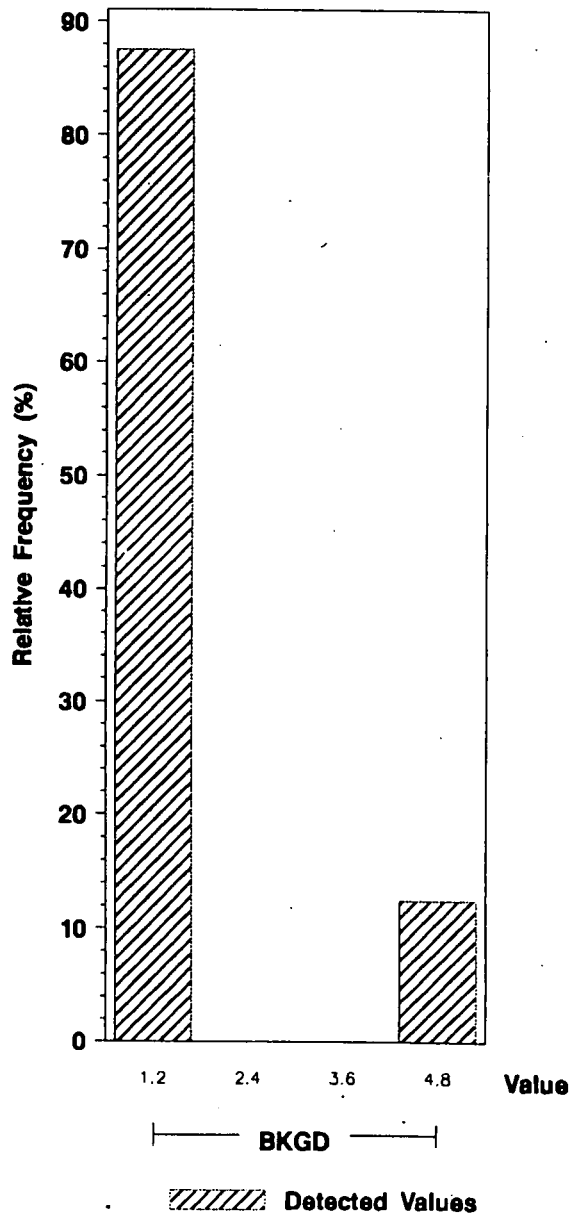
ANALYTE = AMERICIUM-241



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Surface Water

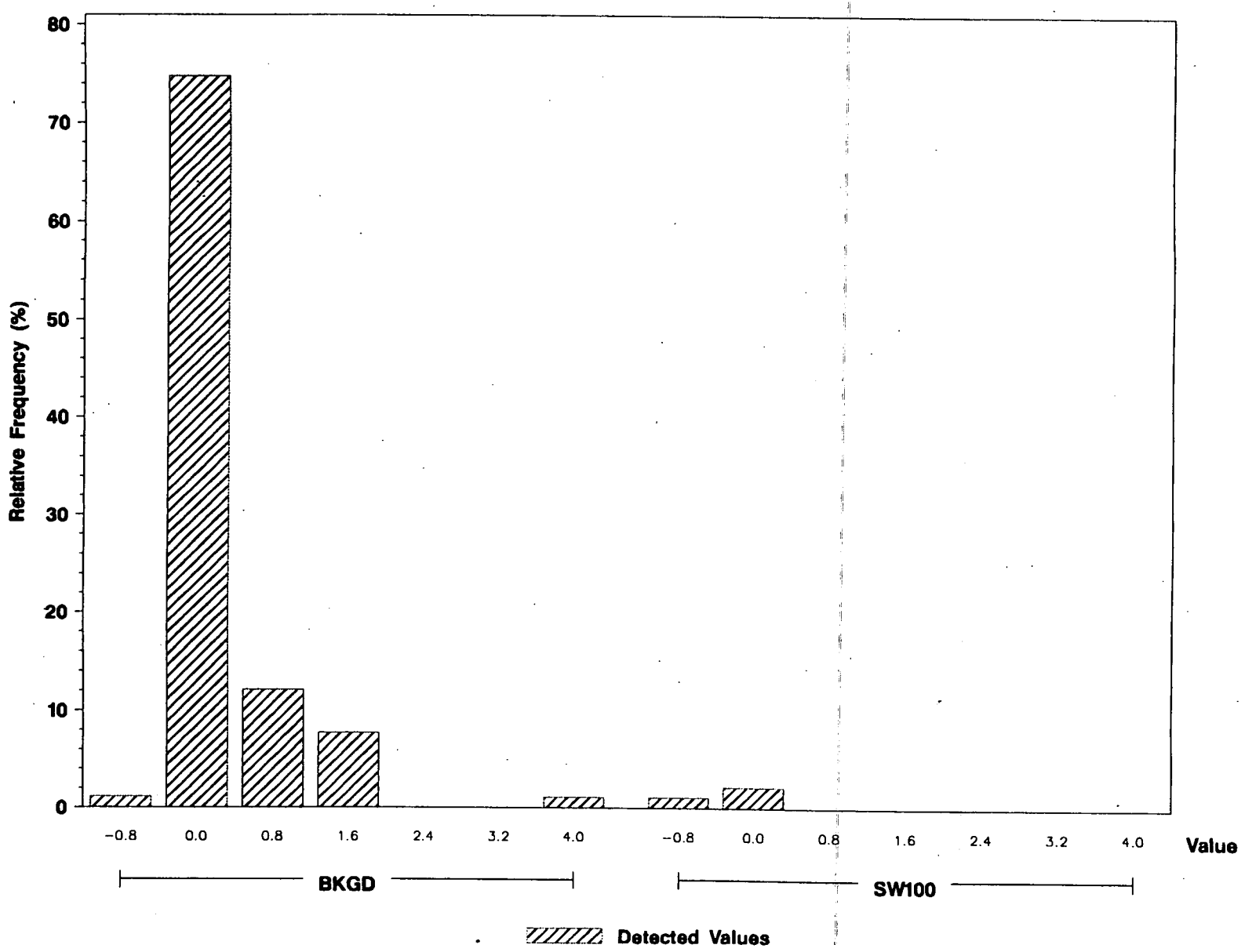
ANALYTE = CESIUM-134



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Surface Water

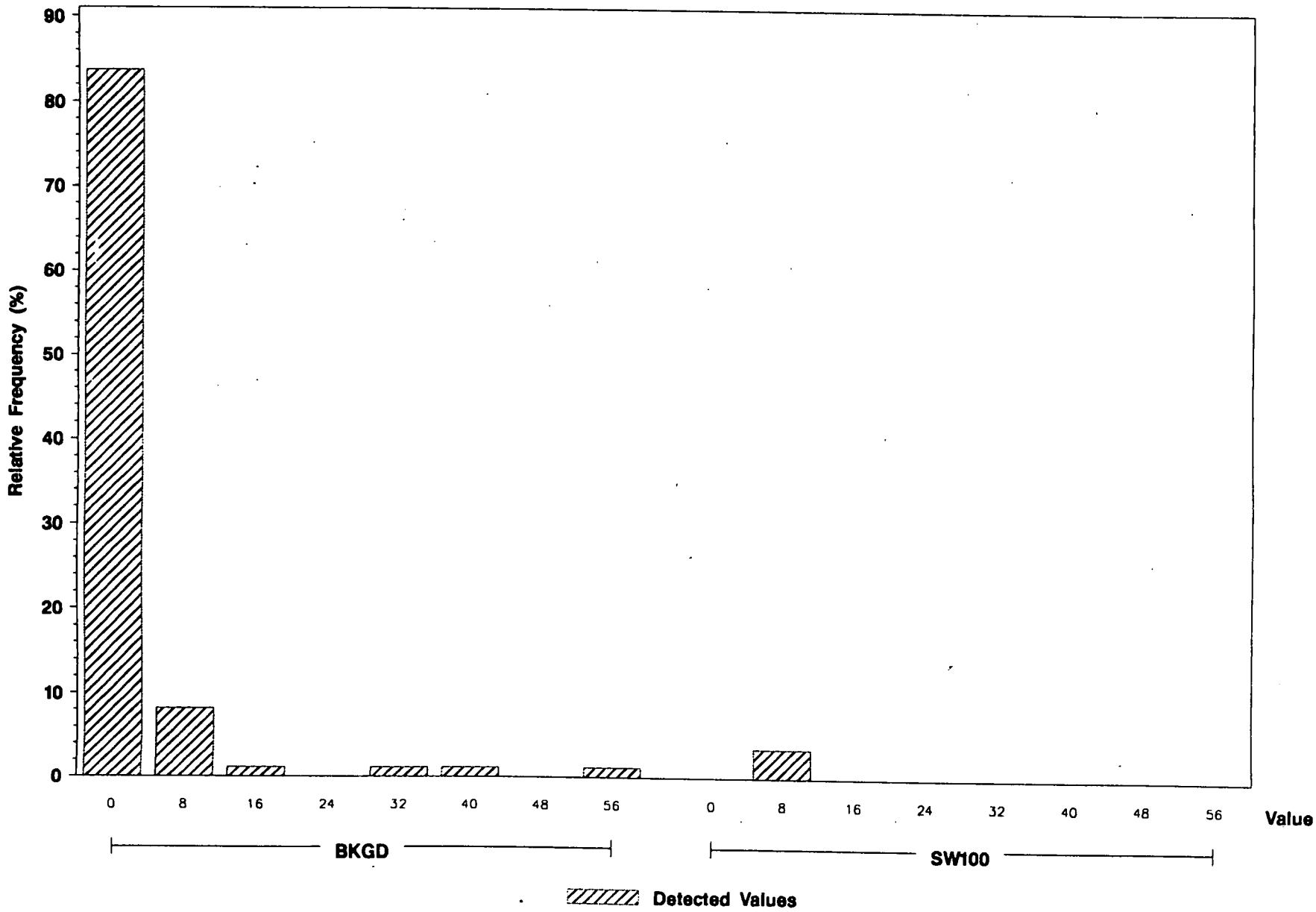
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Surface Water

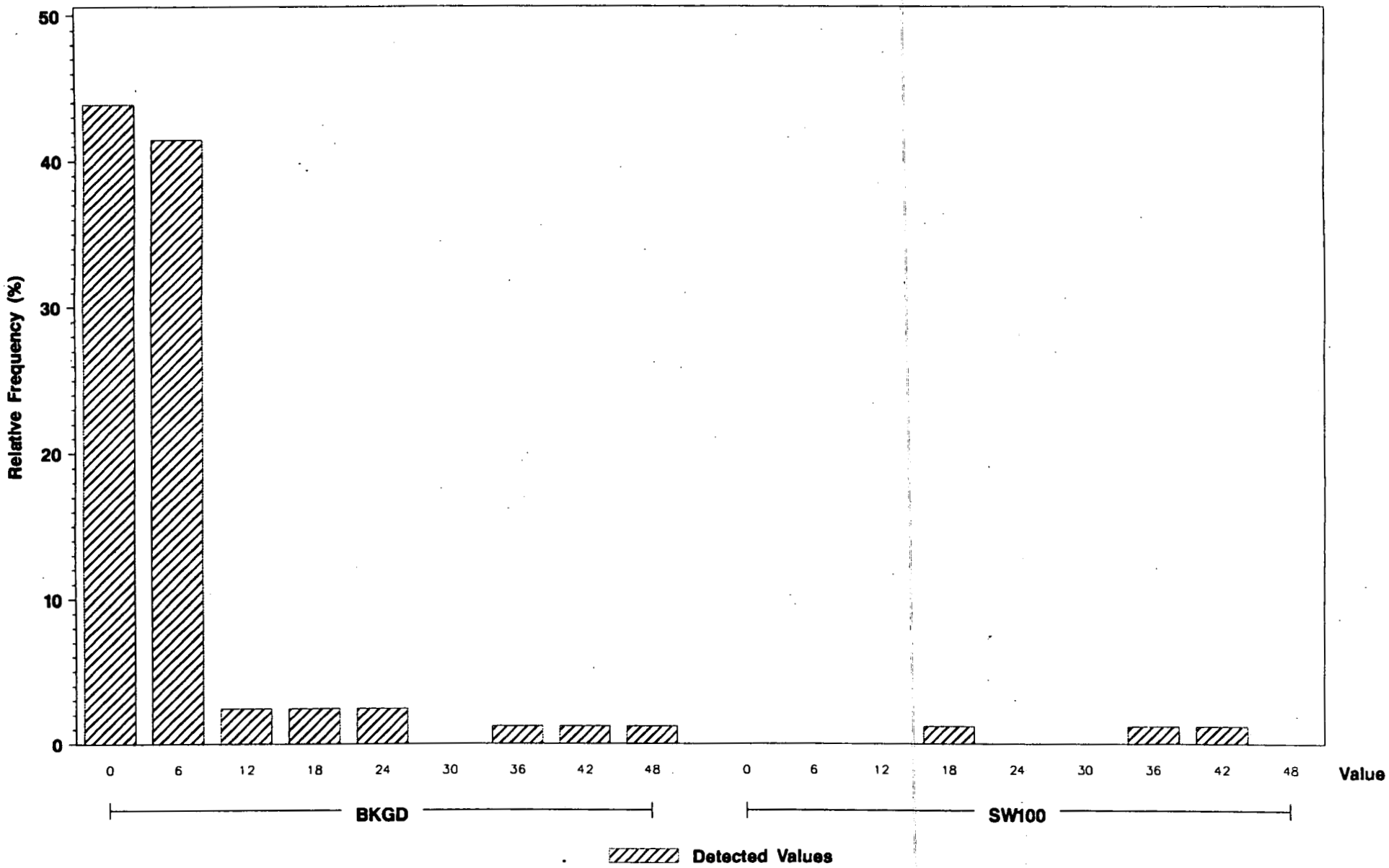
ANALYTE = GROSS ALPHA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS BETA (pCi/L) in Surface Water

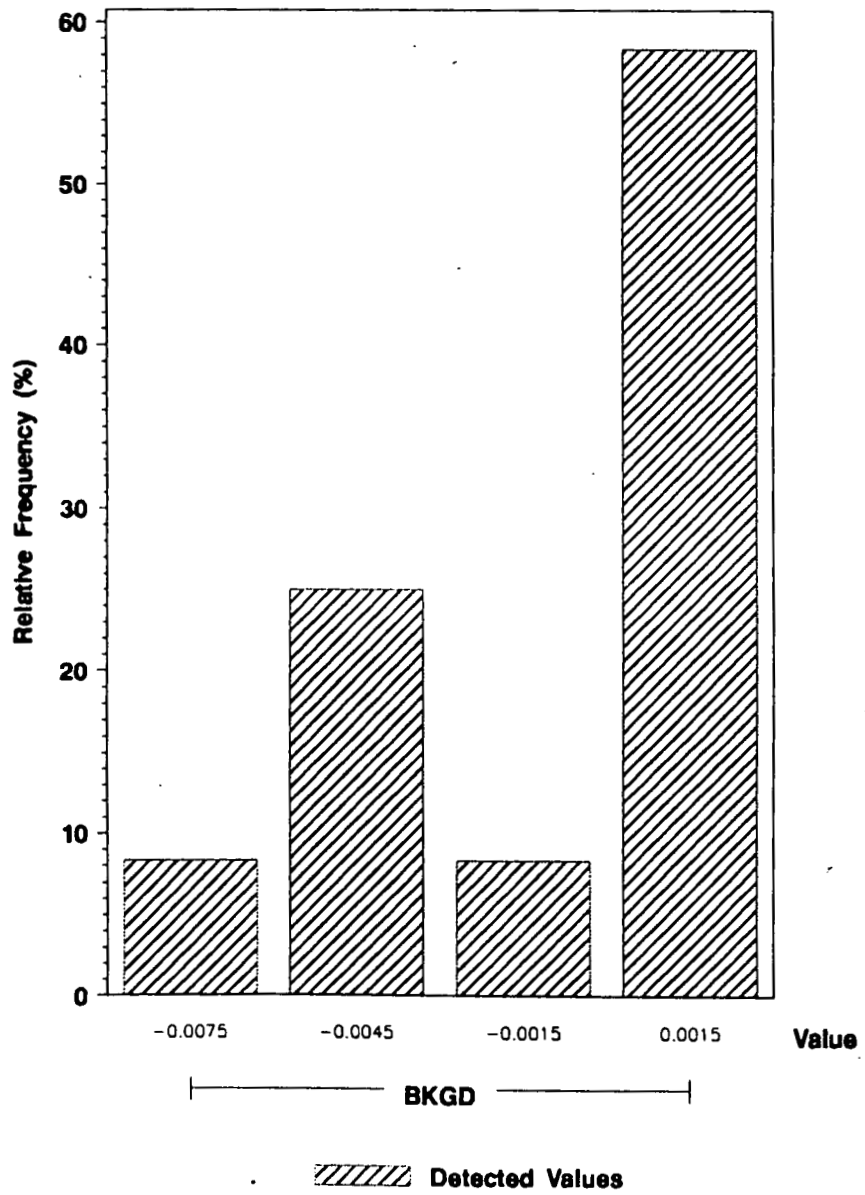
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 236 (pCi/L) in Surface Water

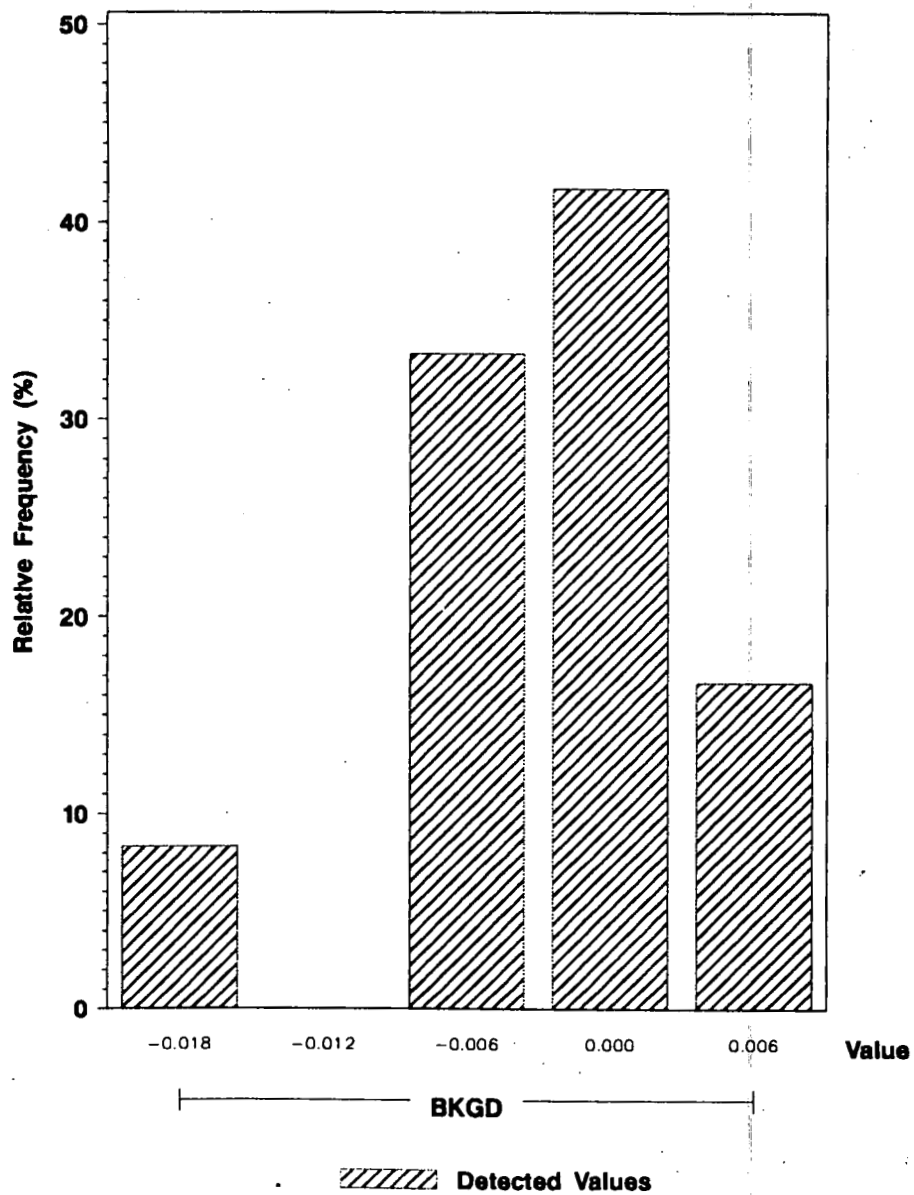
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 238 (pCi/L) in Surface Water

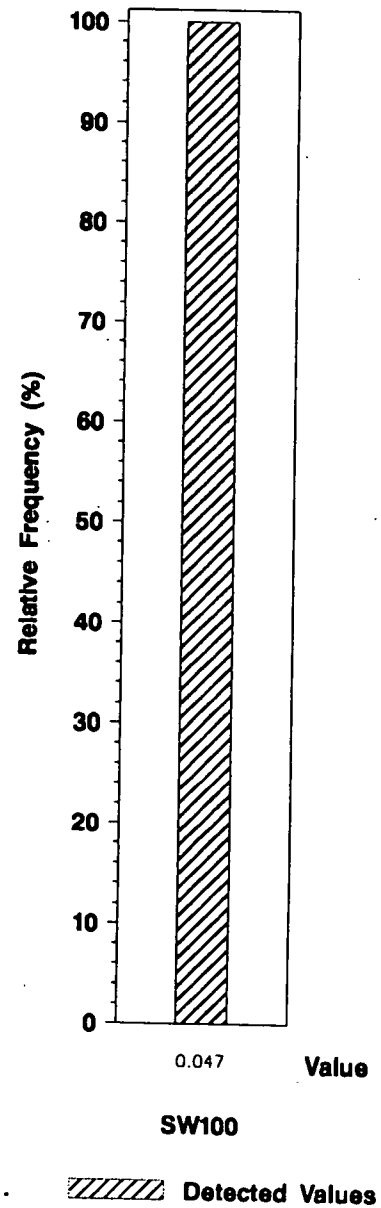
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM-239 (pCi/L) in Surface Water

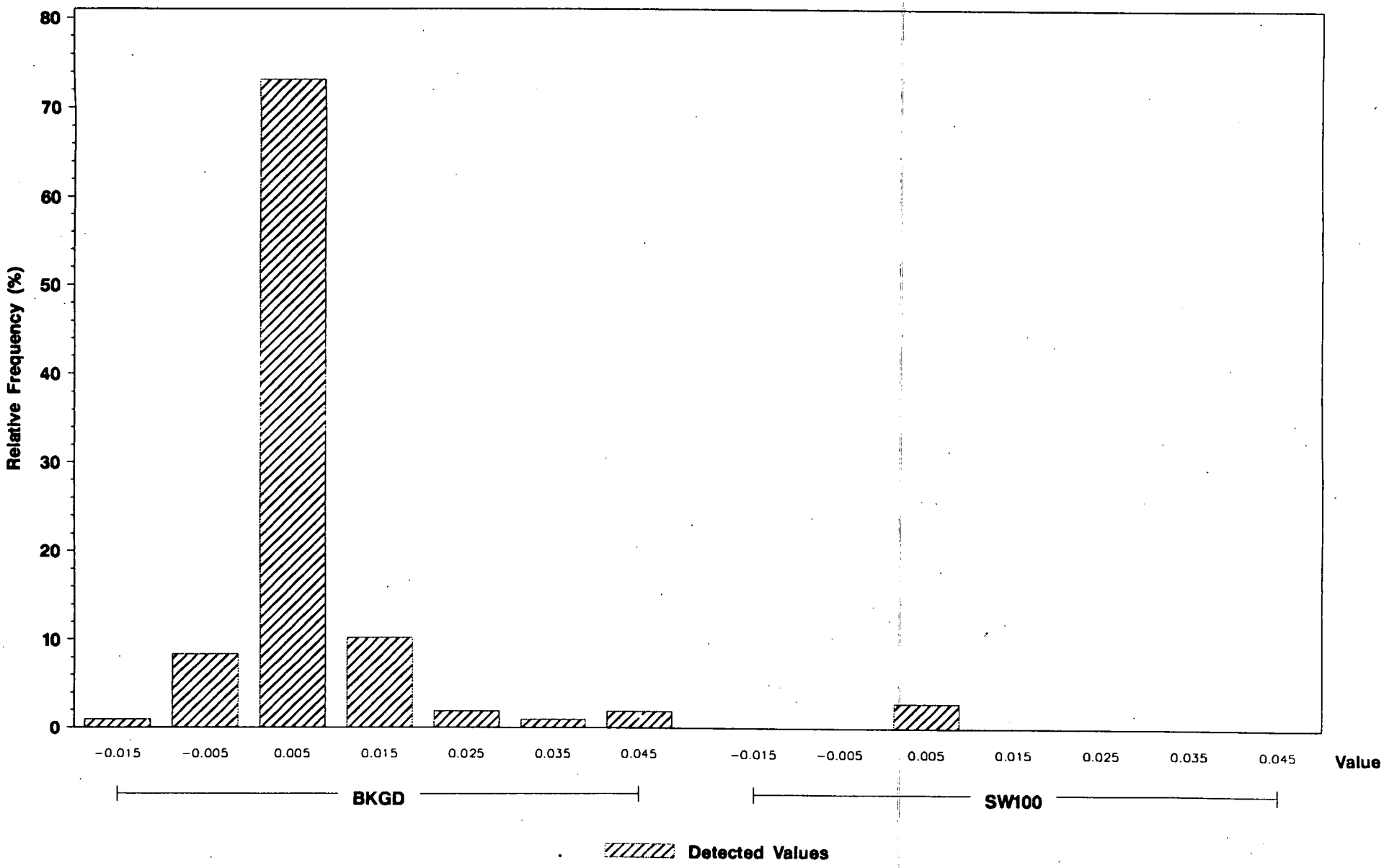
ANALYTE = PLUTONIUM-239



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Surface Water

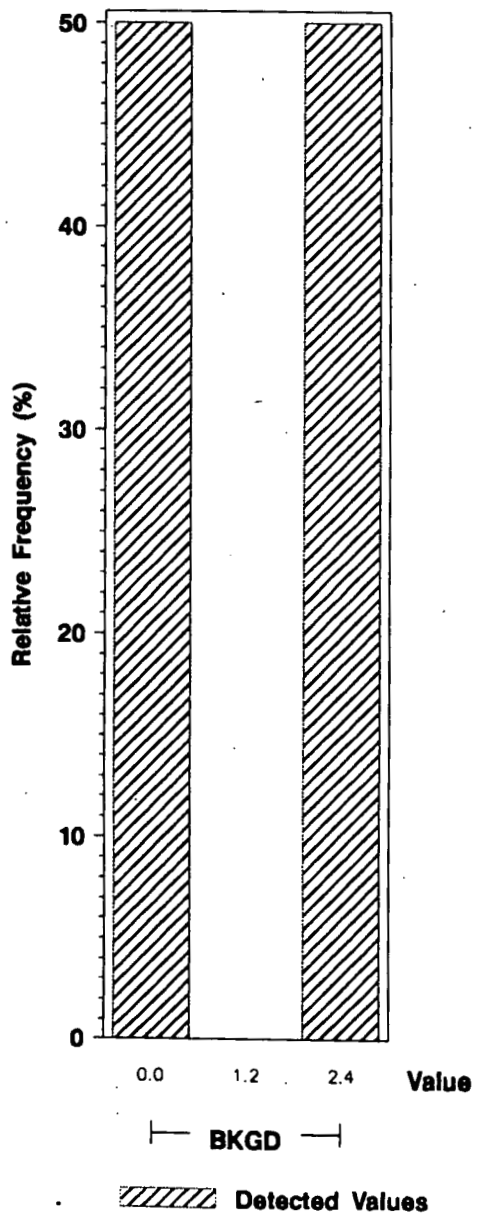
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total RADIUM – 226 (pCi/L) in Surface Water

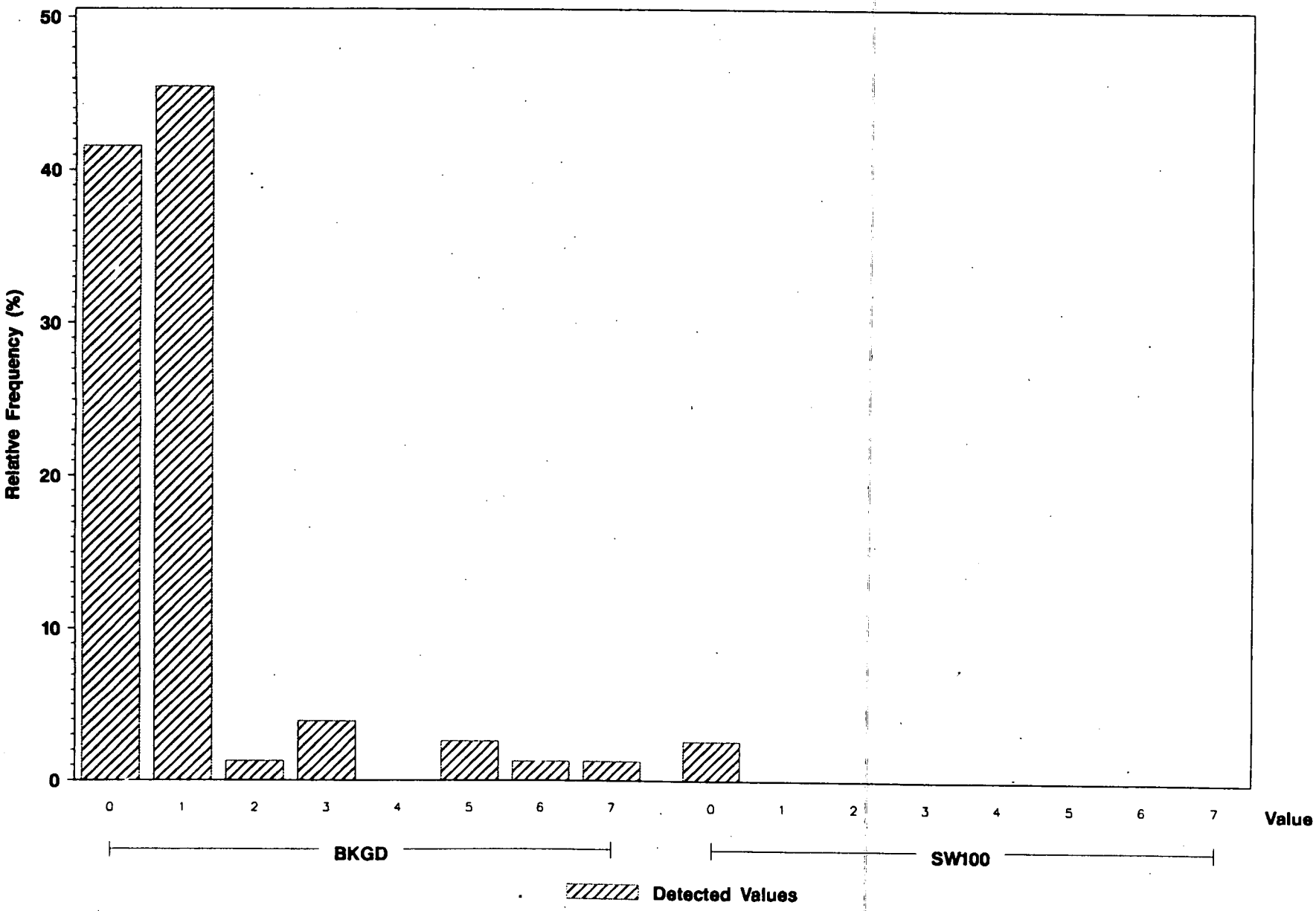
ANALYTE = RADIUM – 226



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Surface Water

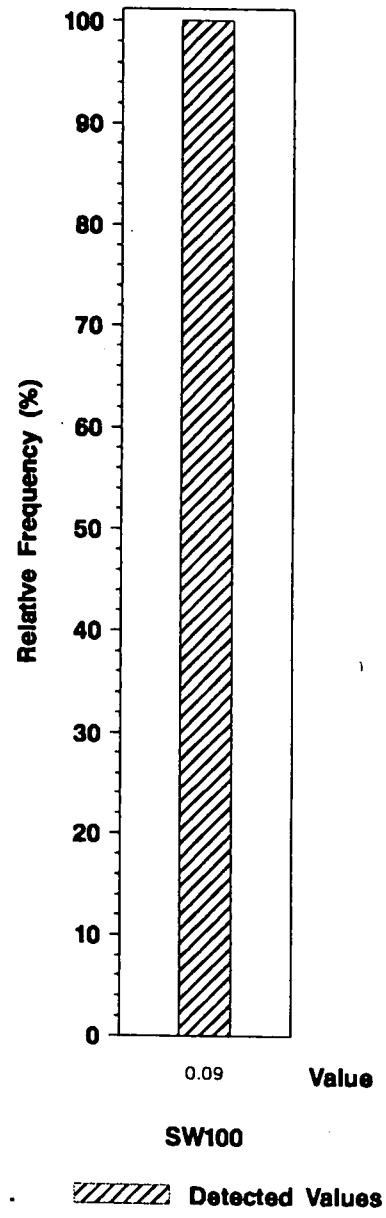
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Surface Water

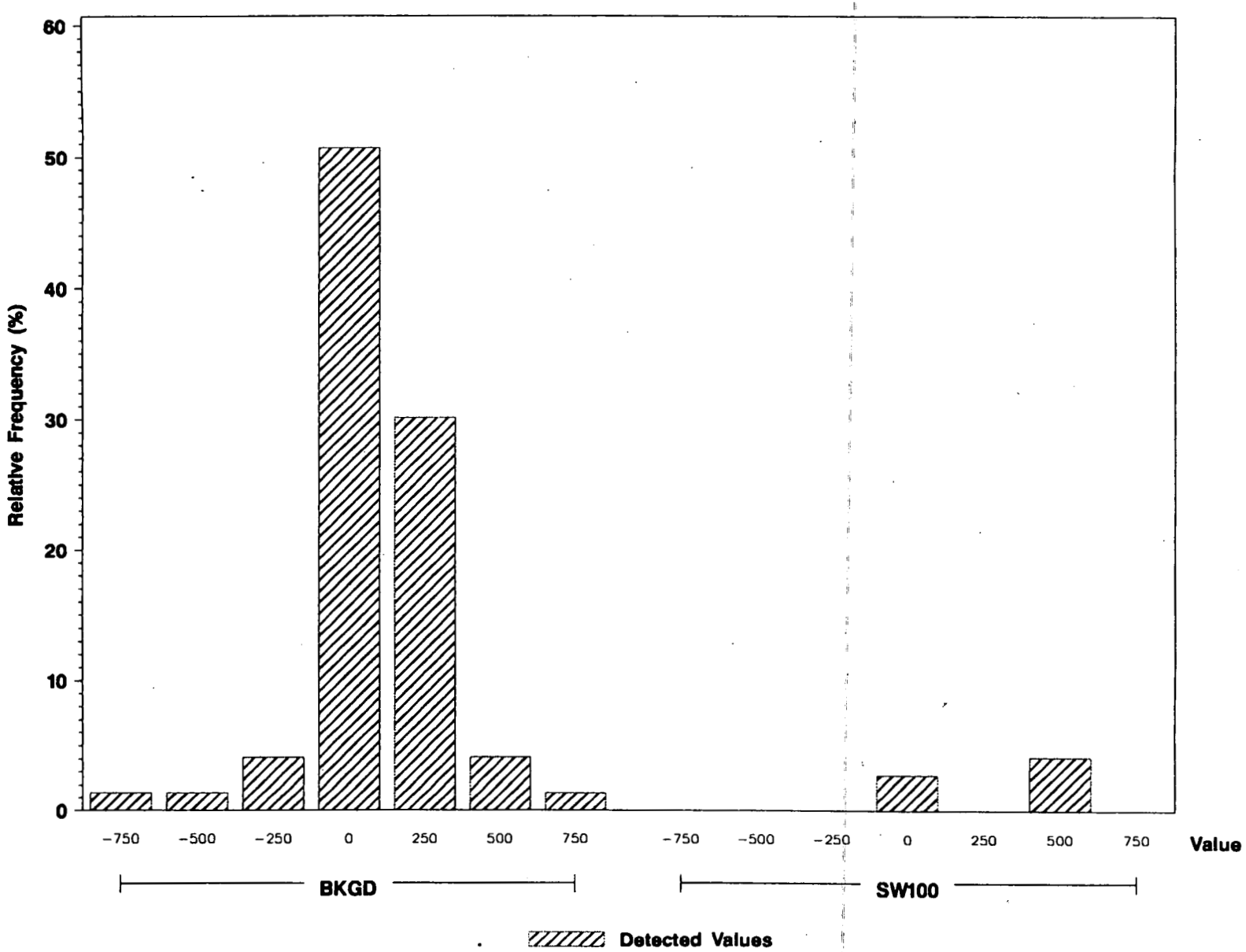
ANALYTE = STRONTIUM-90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TRITIUM (pCi/L) in Surface Water

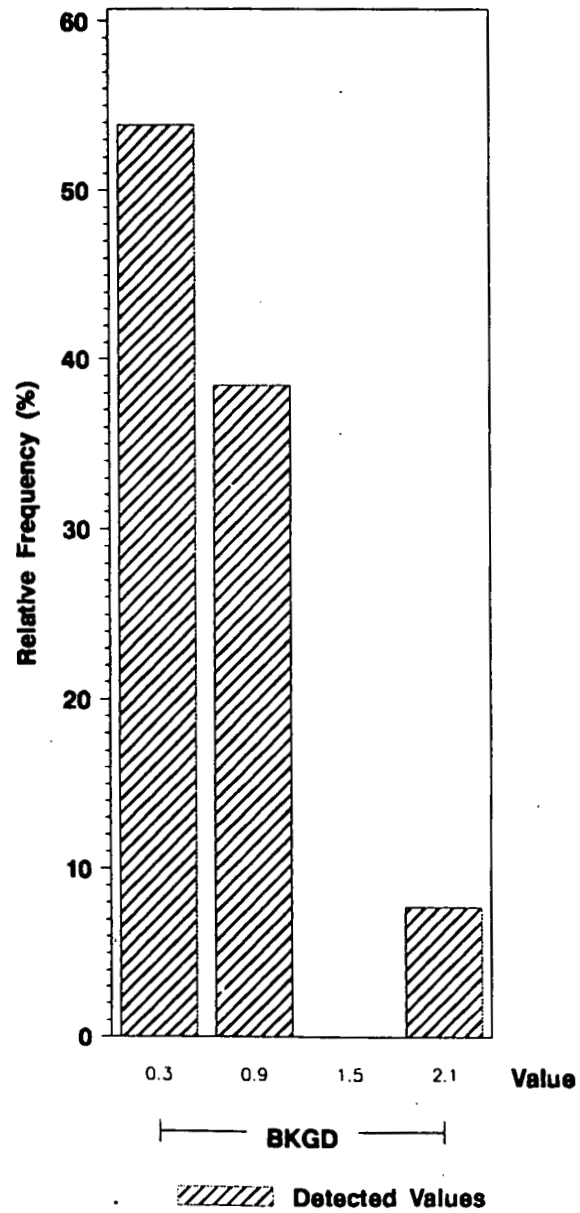
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Surface Water

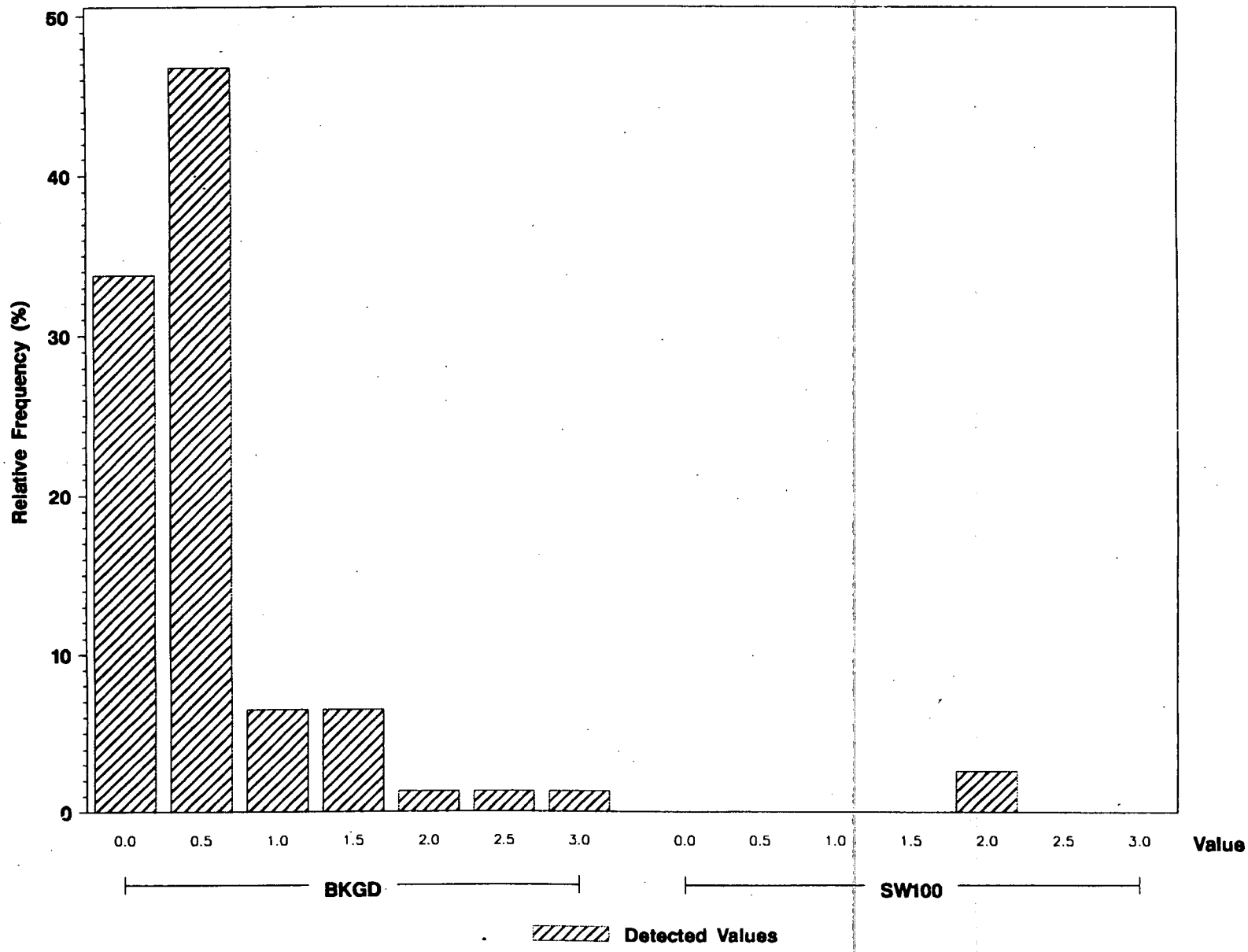
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM−233,−234 (pCi/L) in Surface Water

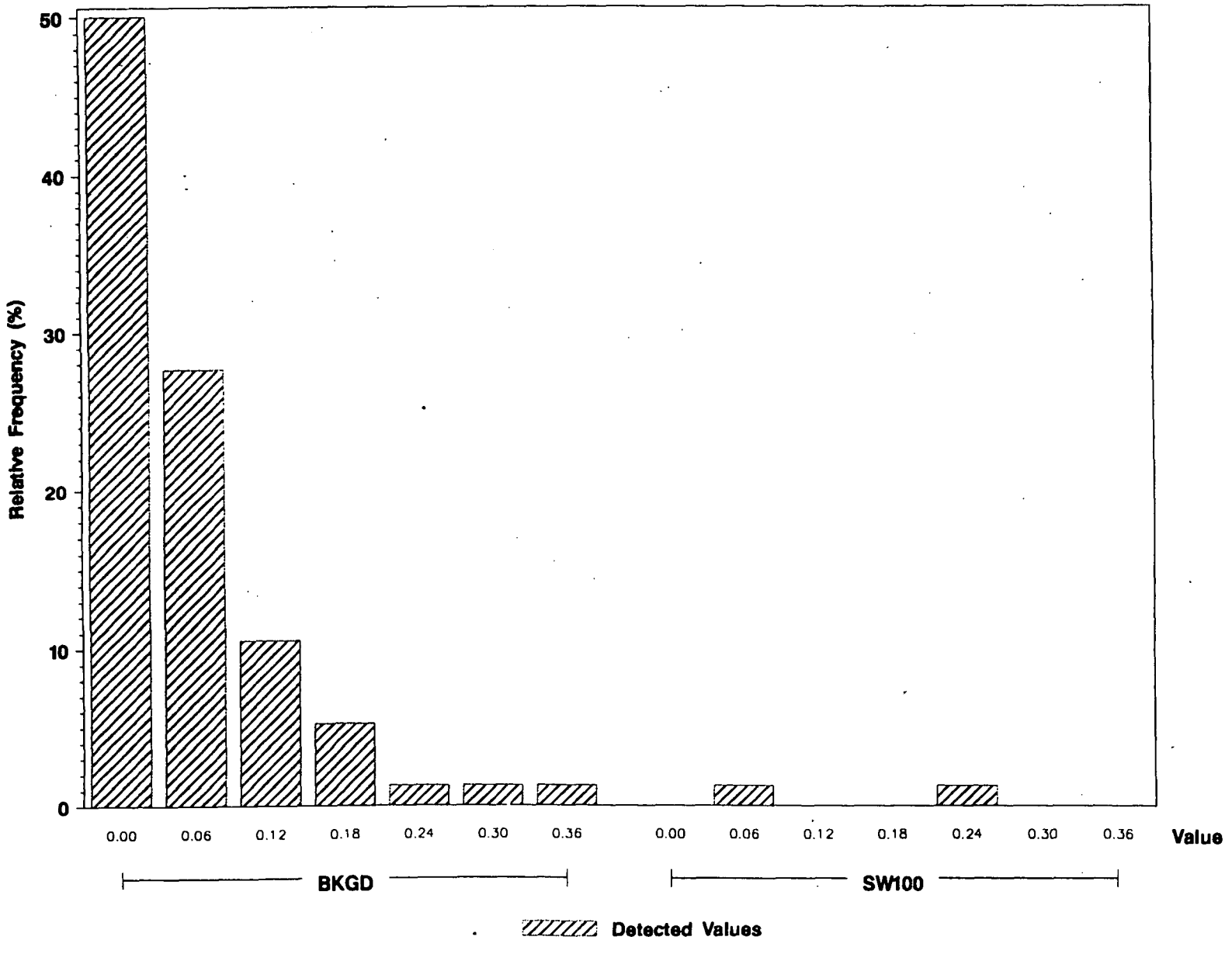
ANALYTE = URANIUM−233,−234



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM-235 (pCi/L) in Surface Water

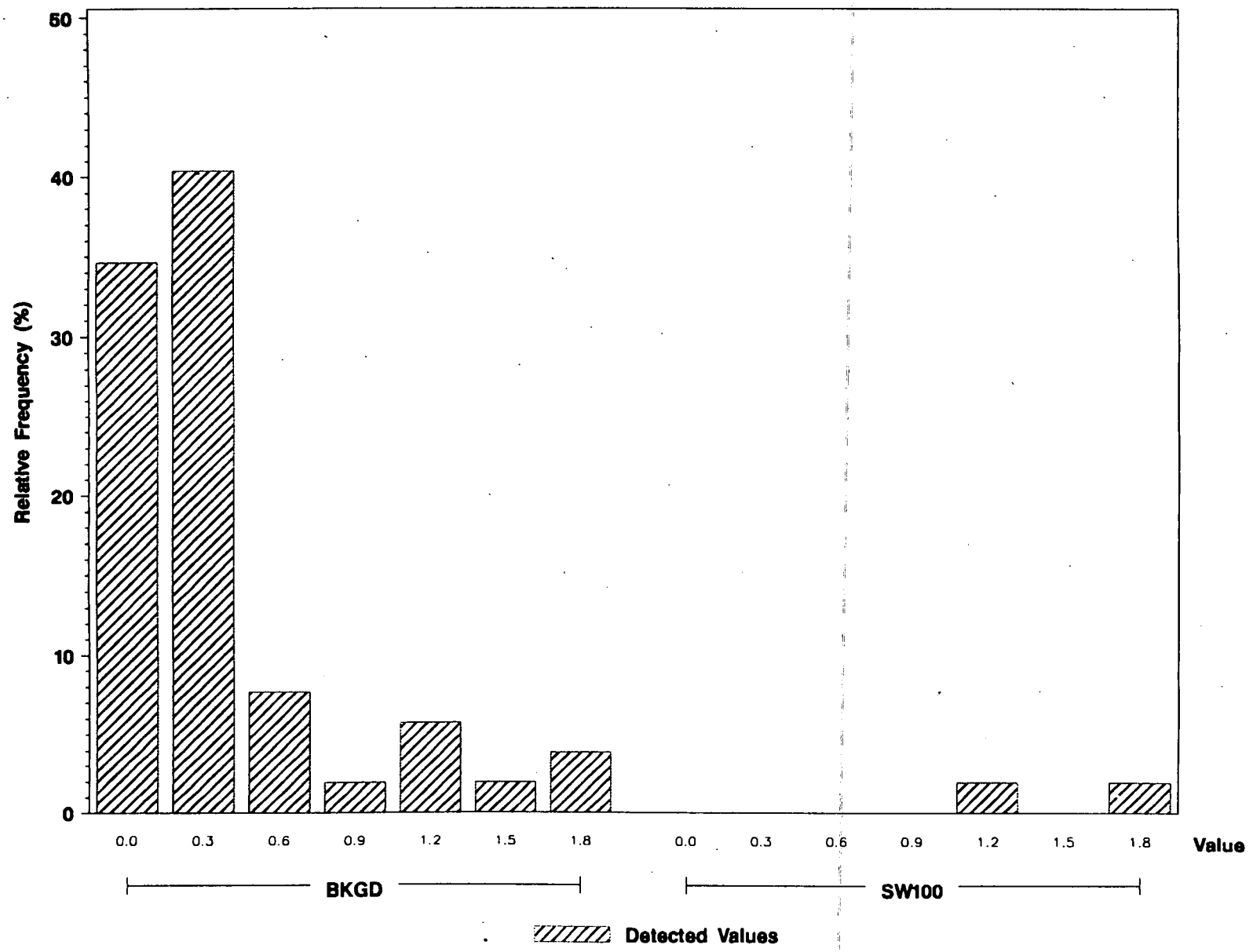
ANALYTE=URANIUM-235



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Surface Water

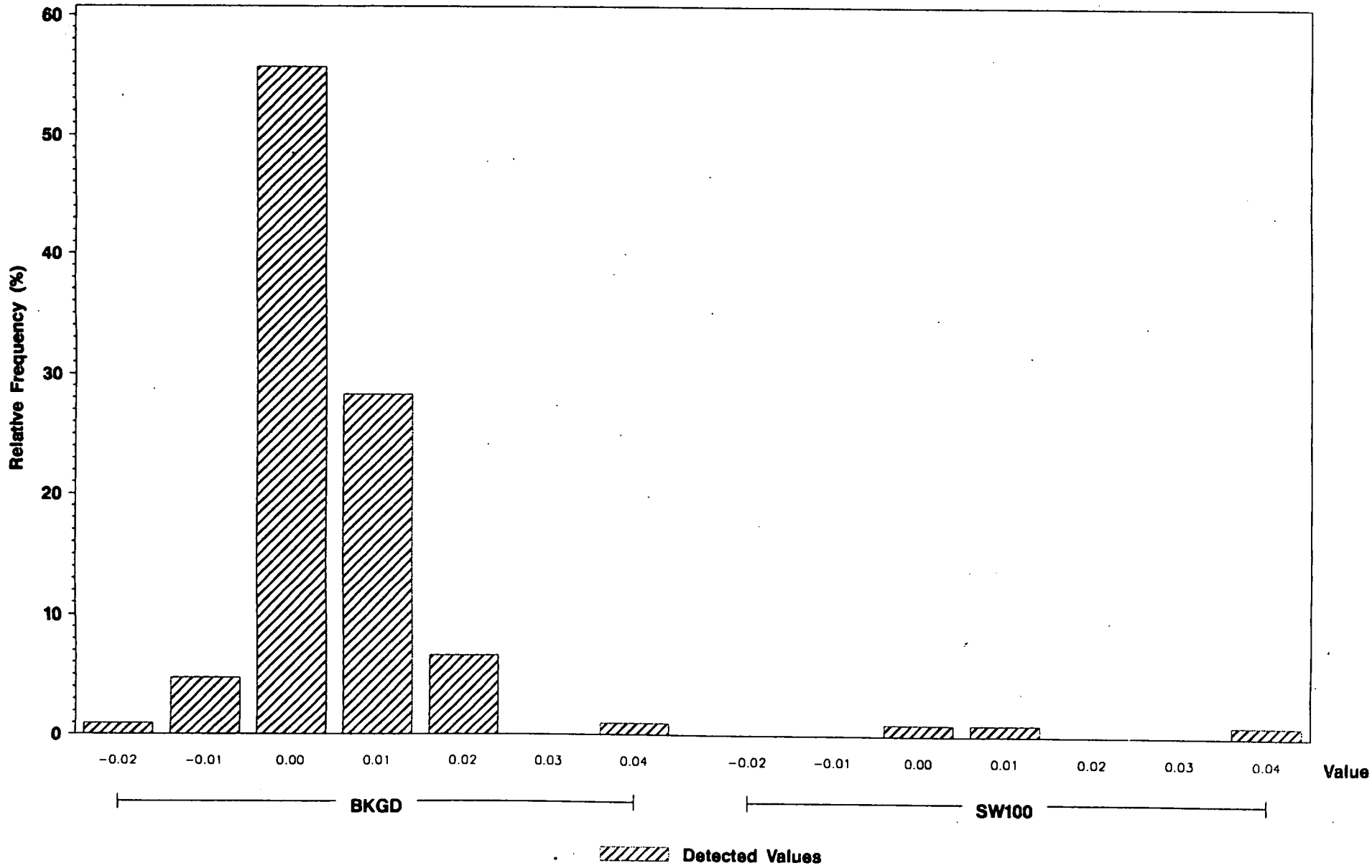
ANALYTE = URANIUM-238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Surface Water

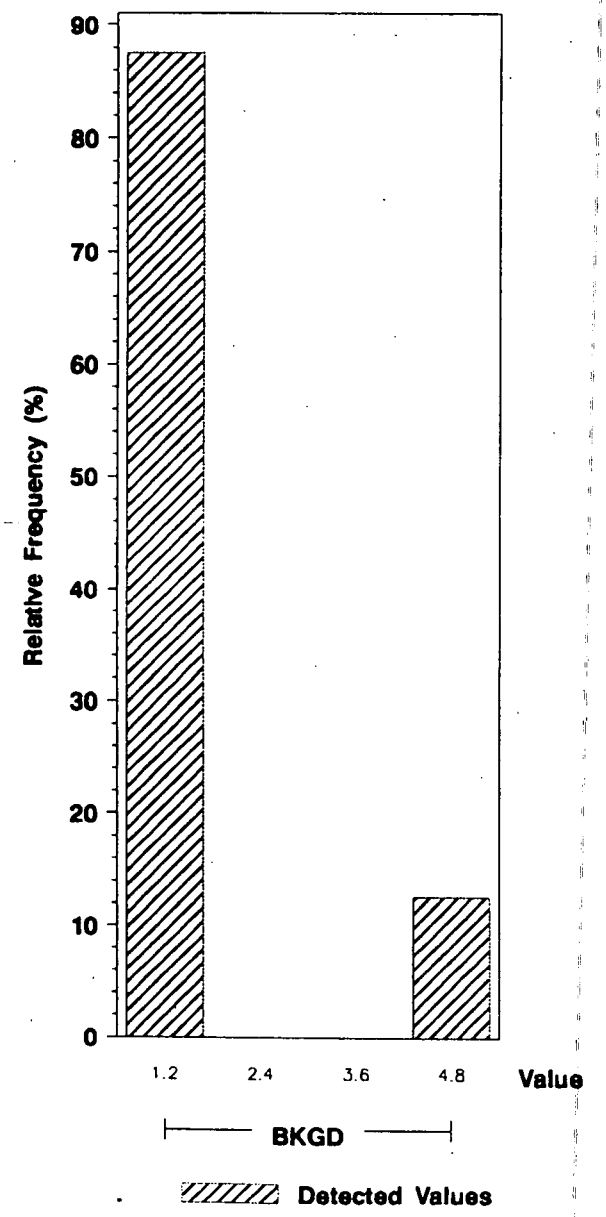
ANALYTE = AMERICIUM-241



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Surface Water

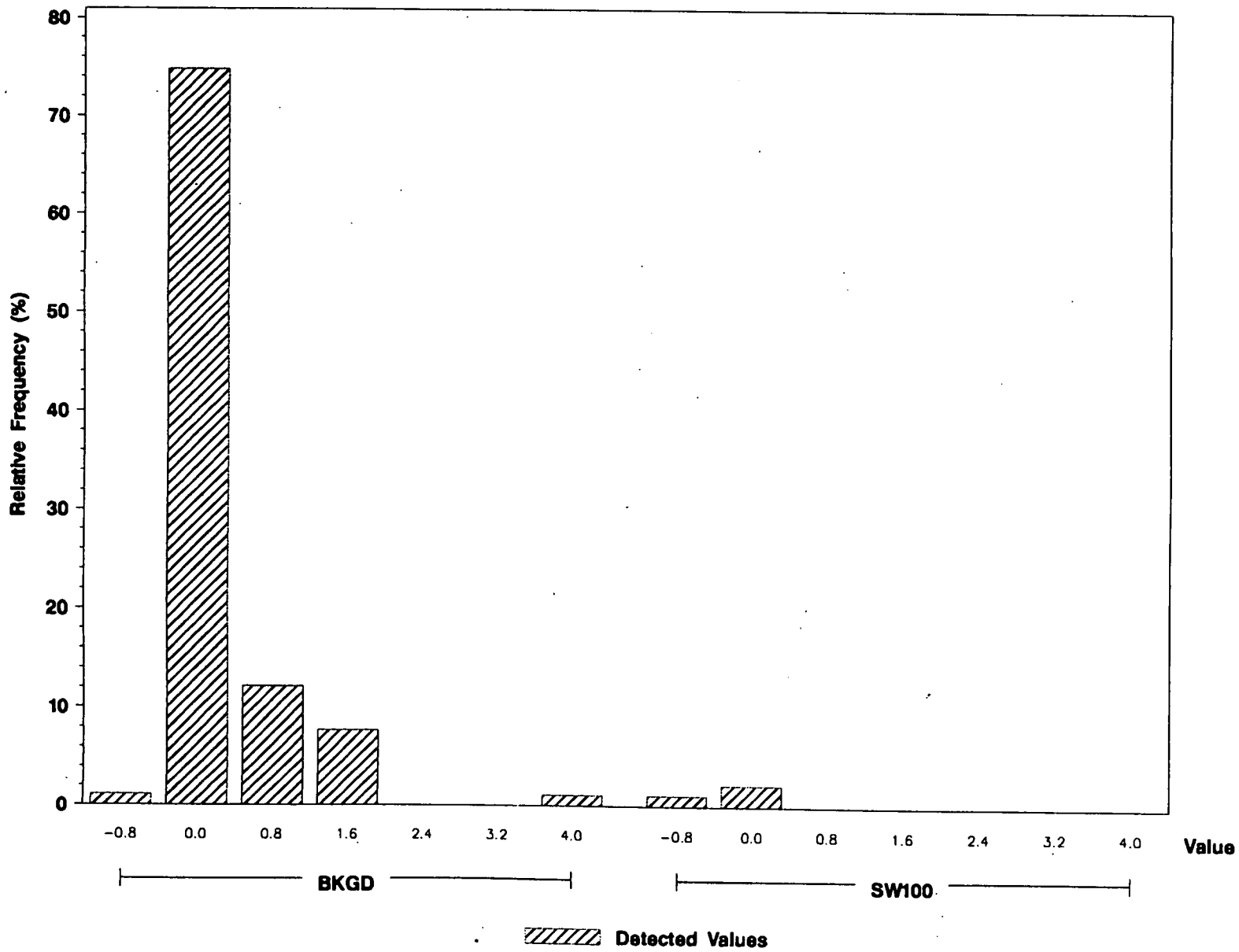
ANALYTE = CESIUM-134



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Surface Water

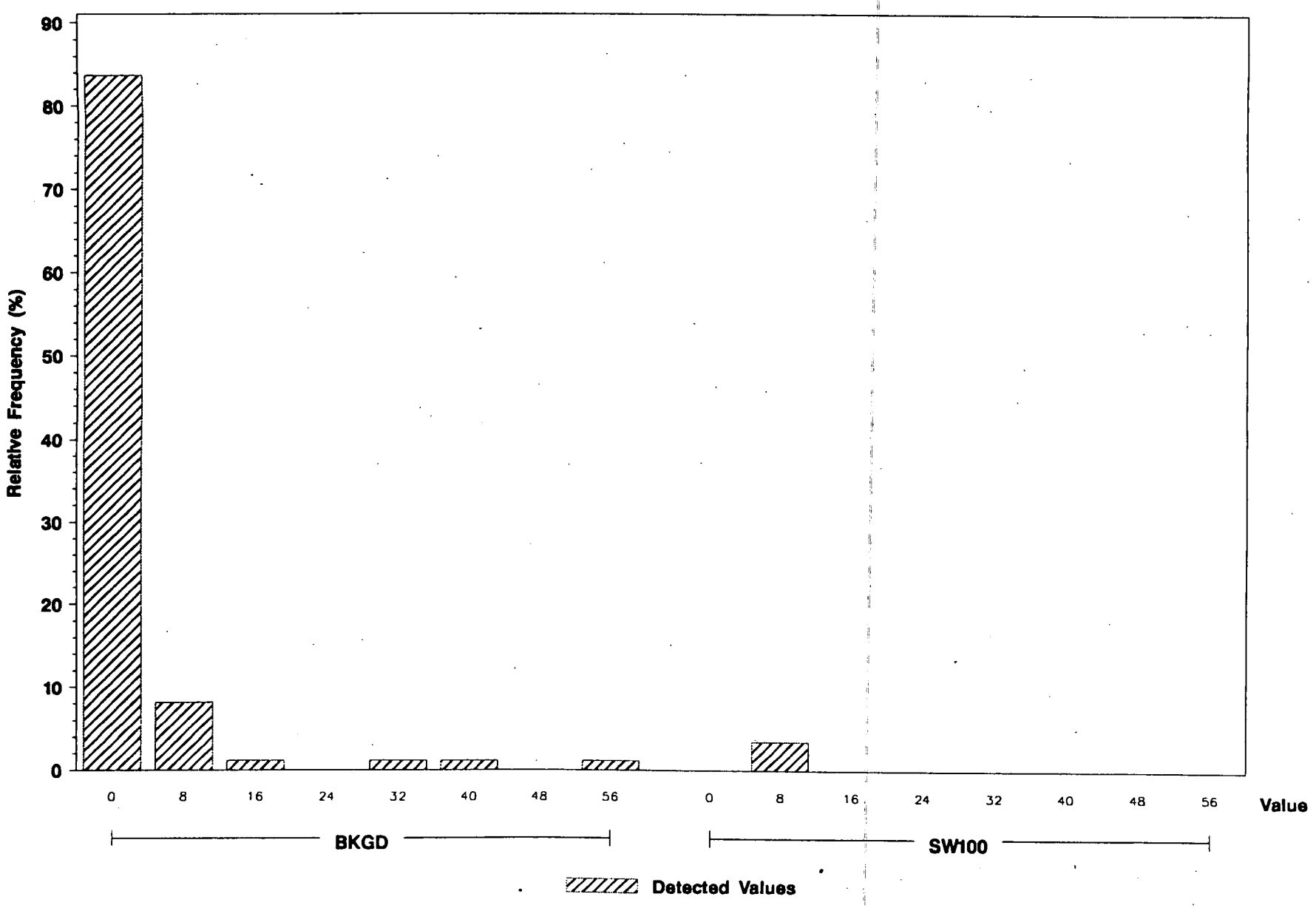
ANALYTE = CESIUM-137



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Surface Water

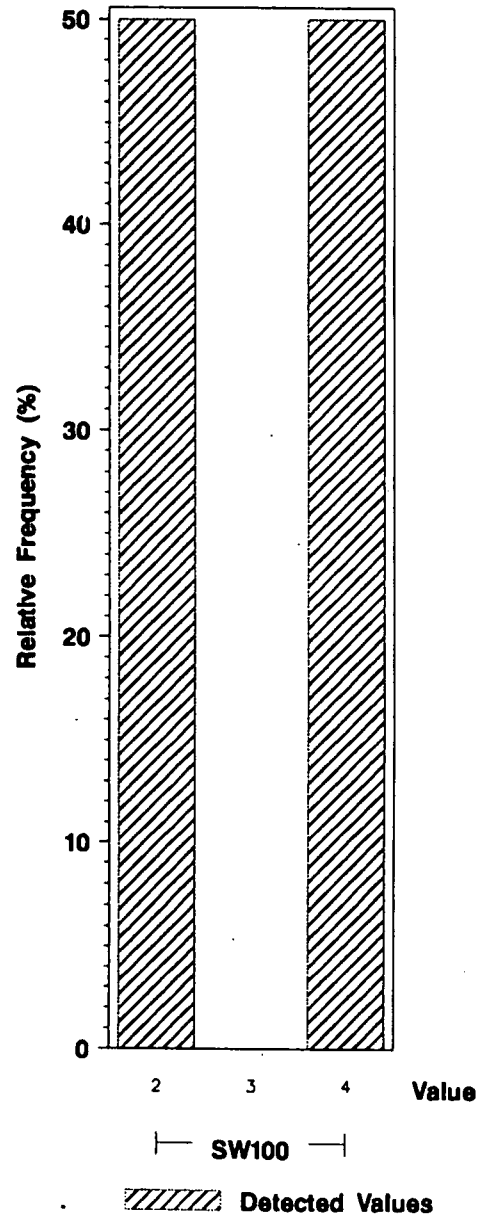
ANALYTE = GROSS ALPHA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS ALPHA – DISSOLVED (pCi/L) in Surface Water

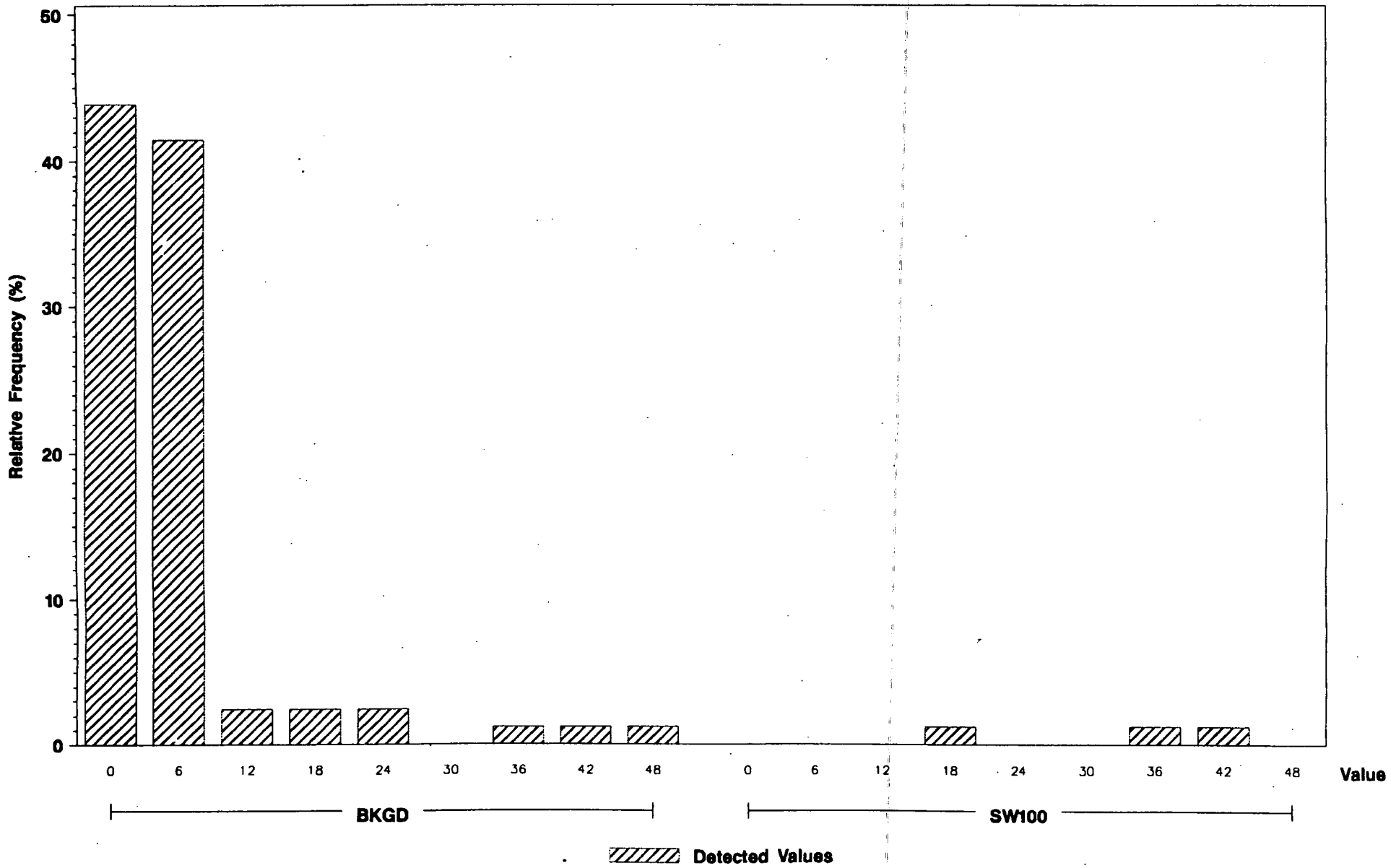
ANALYTE=GROSS ALPHA – DISSOLVED



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS BETA (pCi/L) in Surface Water

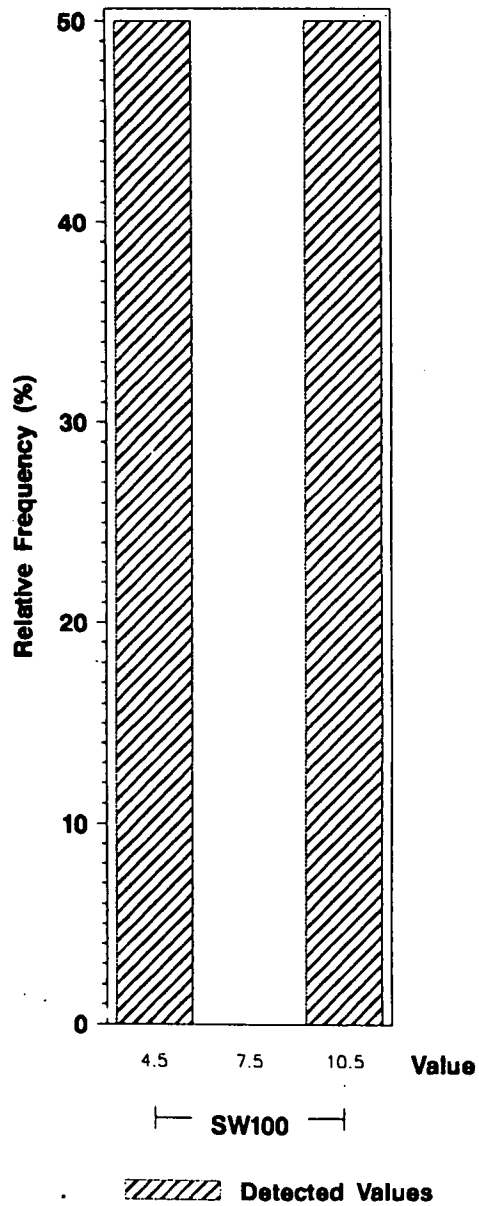
ANALYTE=GROSS BETA



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total GROSS BETA – DISSOLVED (pCi/L) in Surface Water

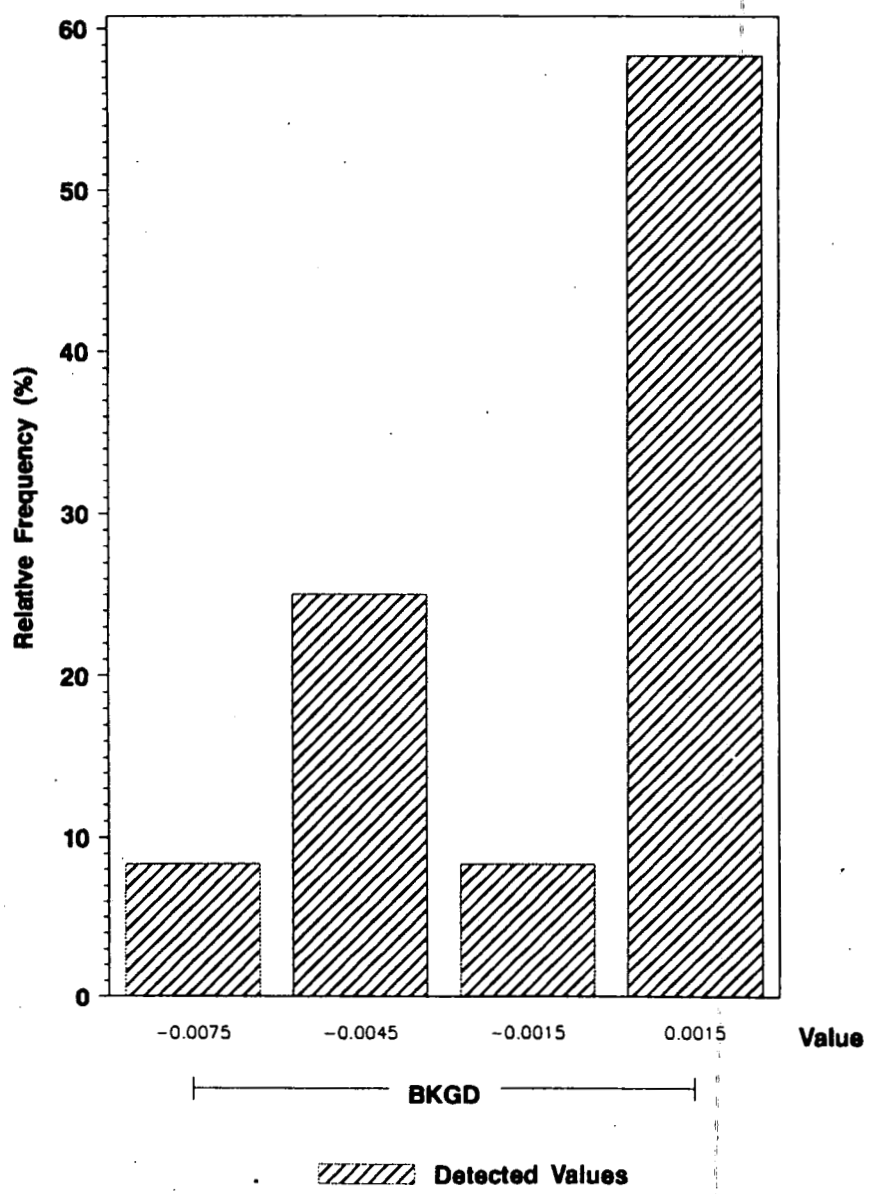
ANALYTE=GROSS BETA – DISSOLVED



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 236 (pCi/L) in Surface Water

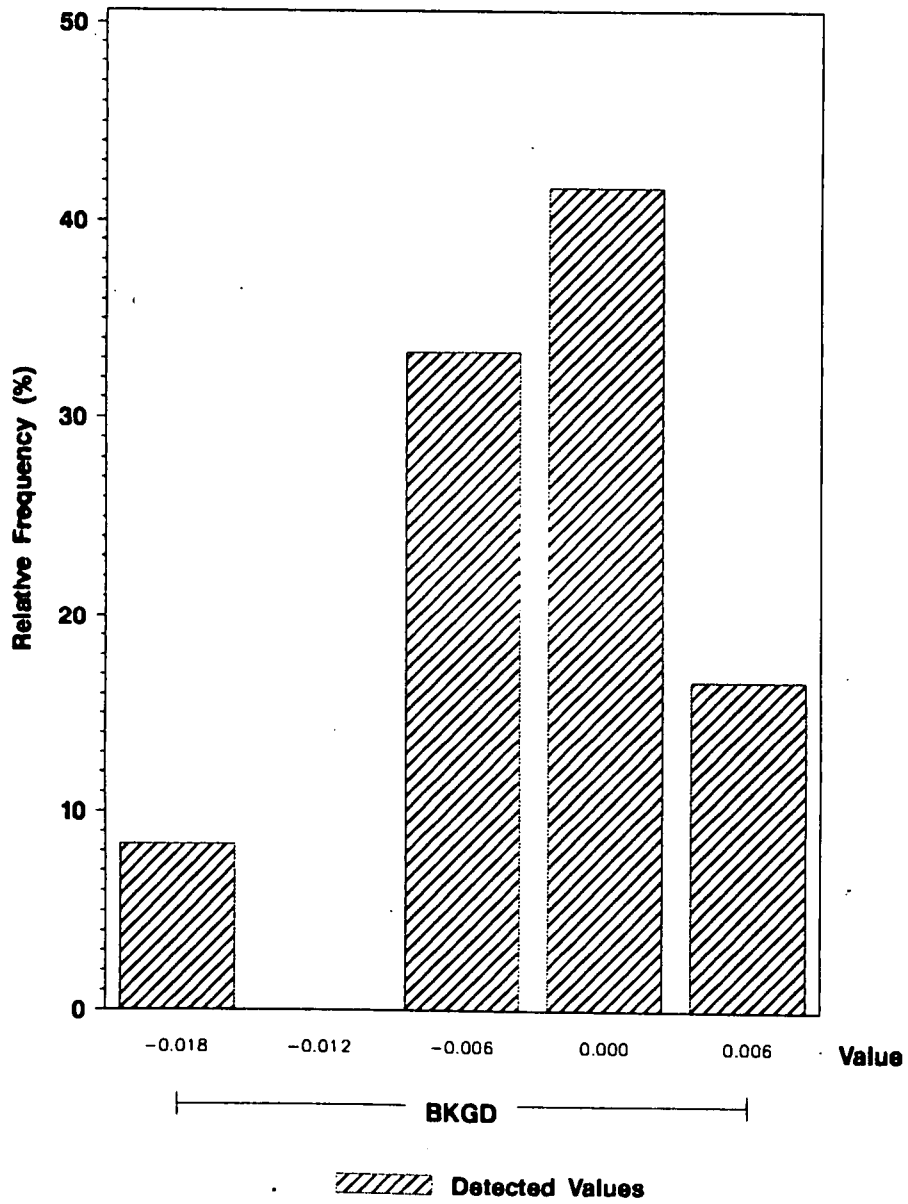
ANALYTE = PLUTONIUM – 236



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 238 (pCi/L) in Surface Water

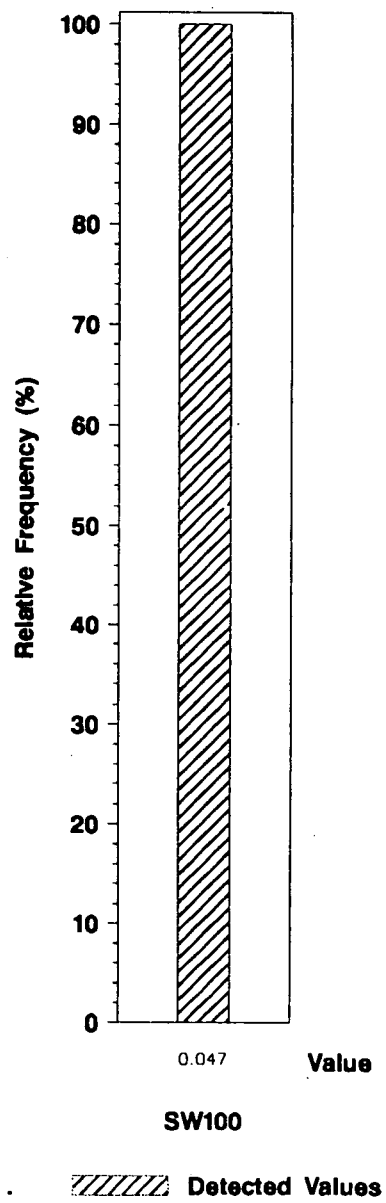
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 239 (pCi/L) in Surface Water

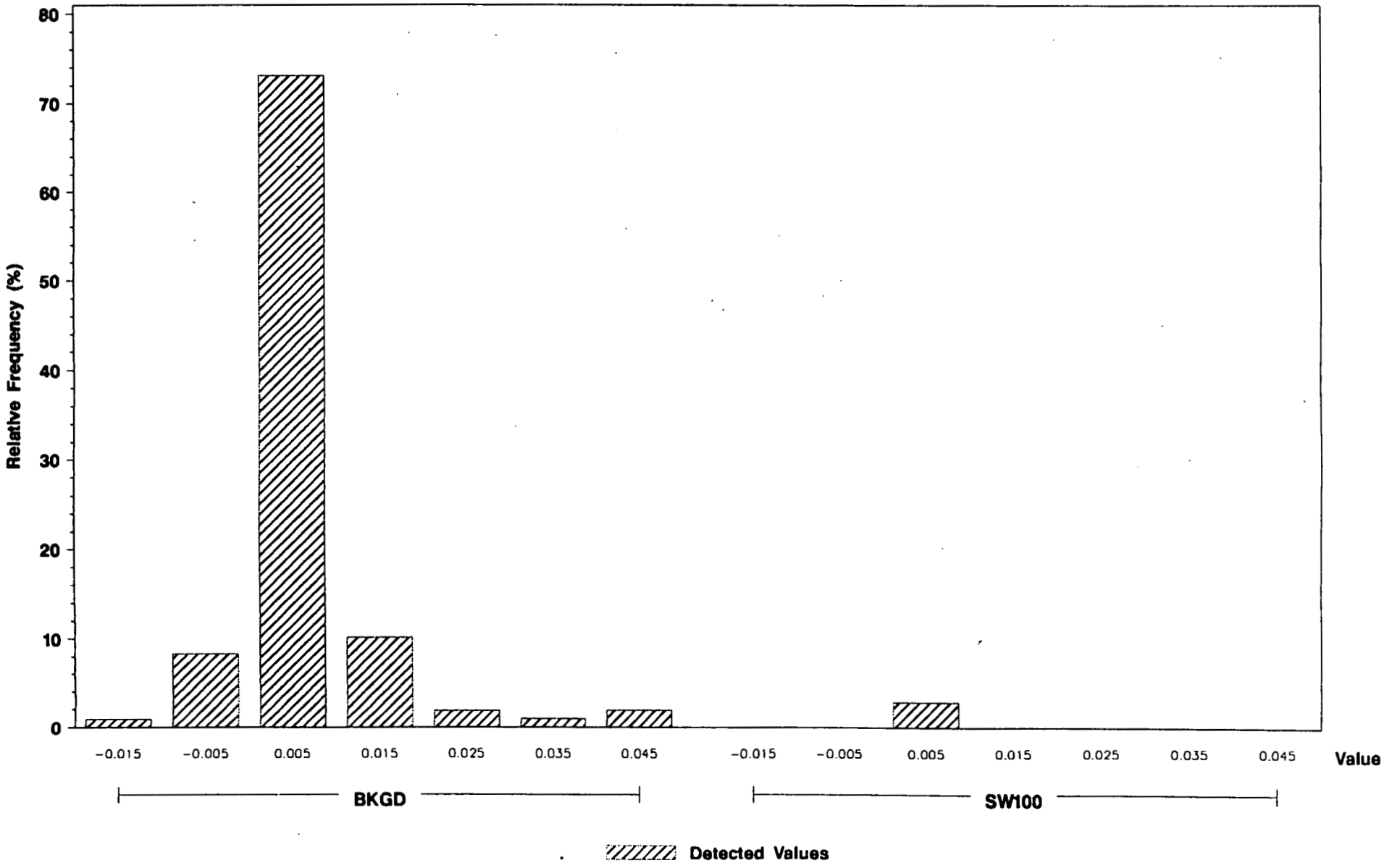
ANALYTE = PLUTONIUM – 239



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Surface Water

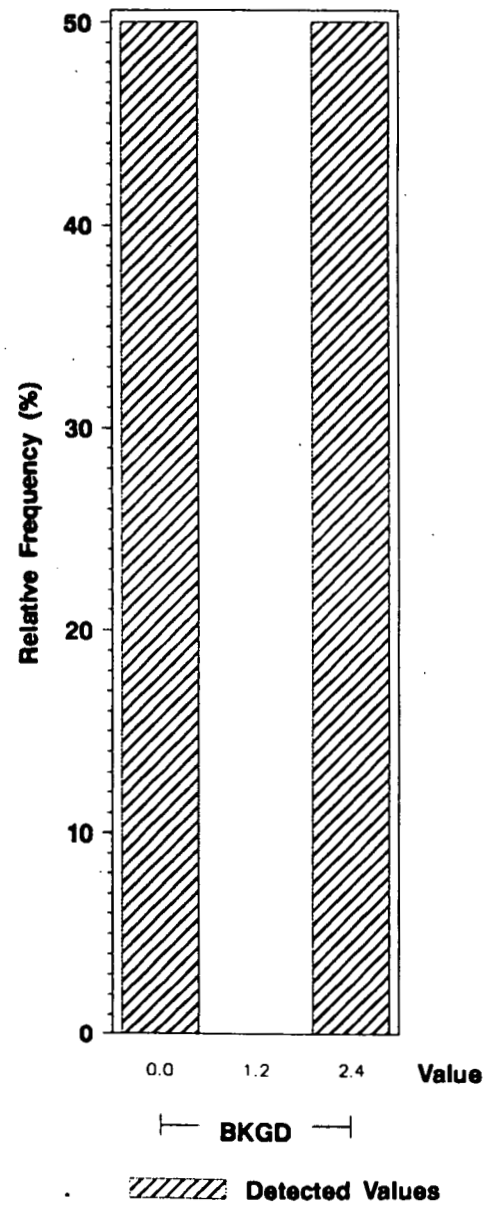
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total RADIUM-226 (pCi/L) in Surface Water

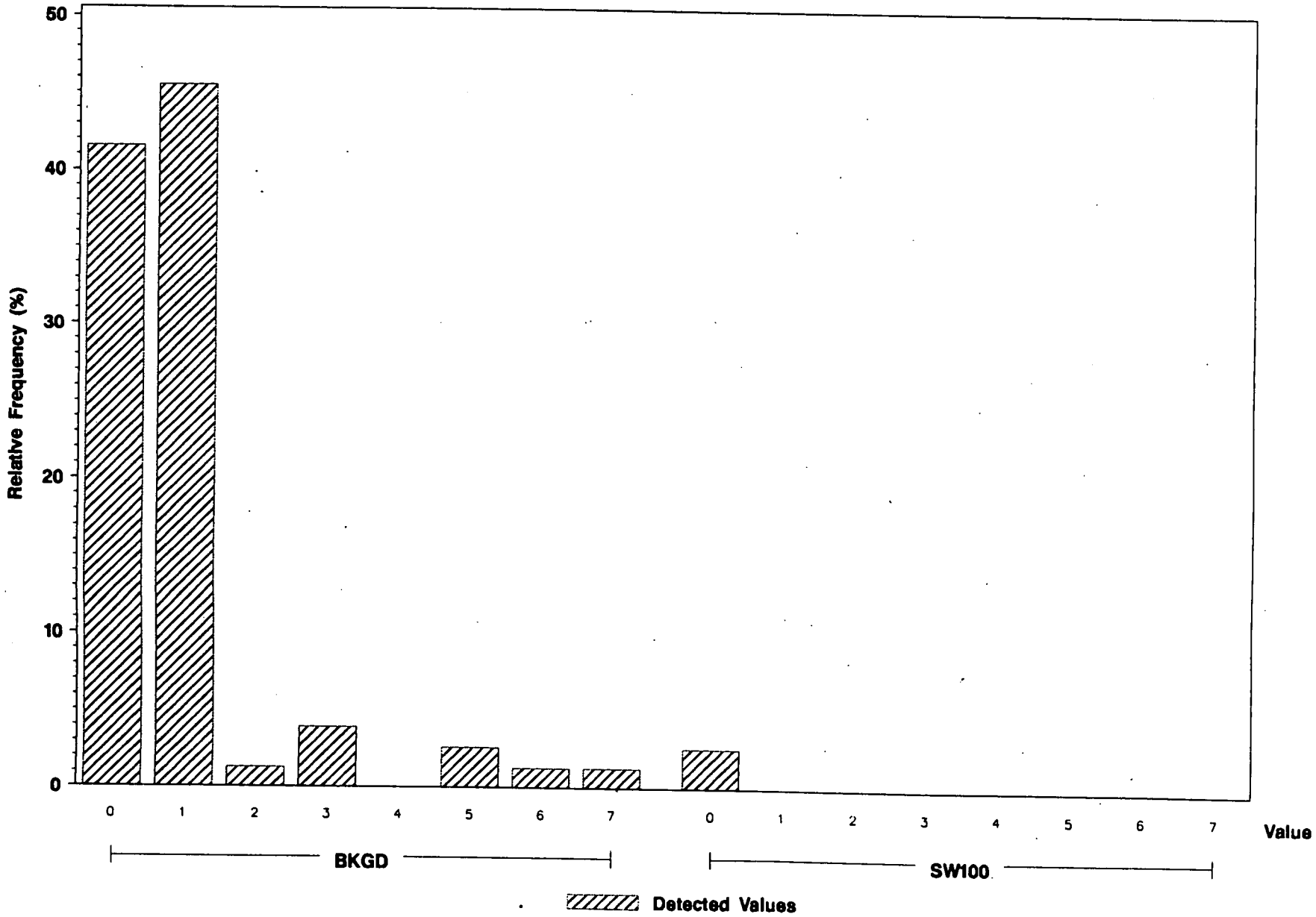
ANALYTE = RADIUM-226



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Surface Water

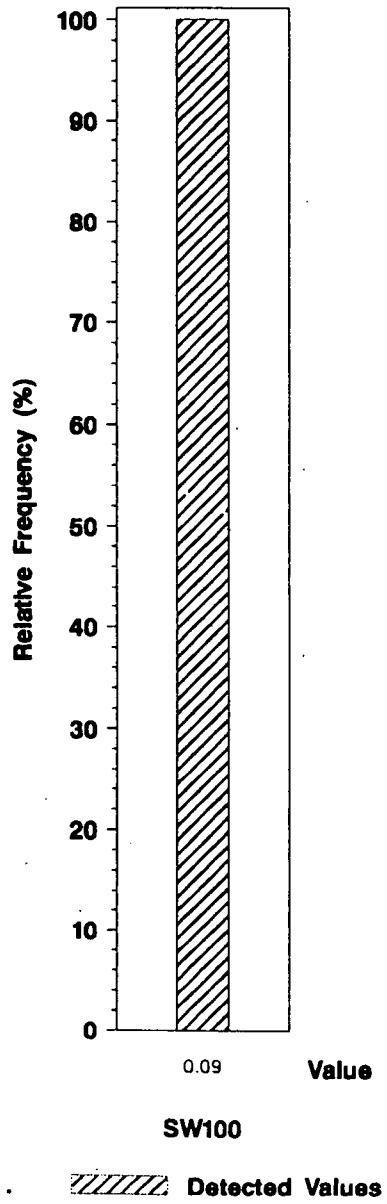
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total STRONTIUM-90 (pCi/L) in Surface Water

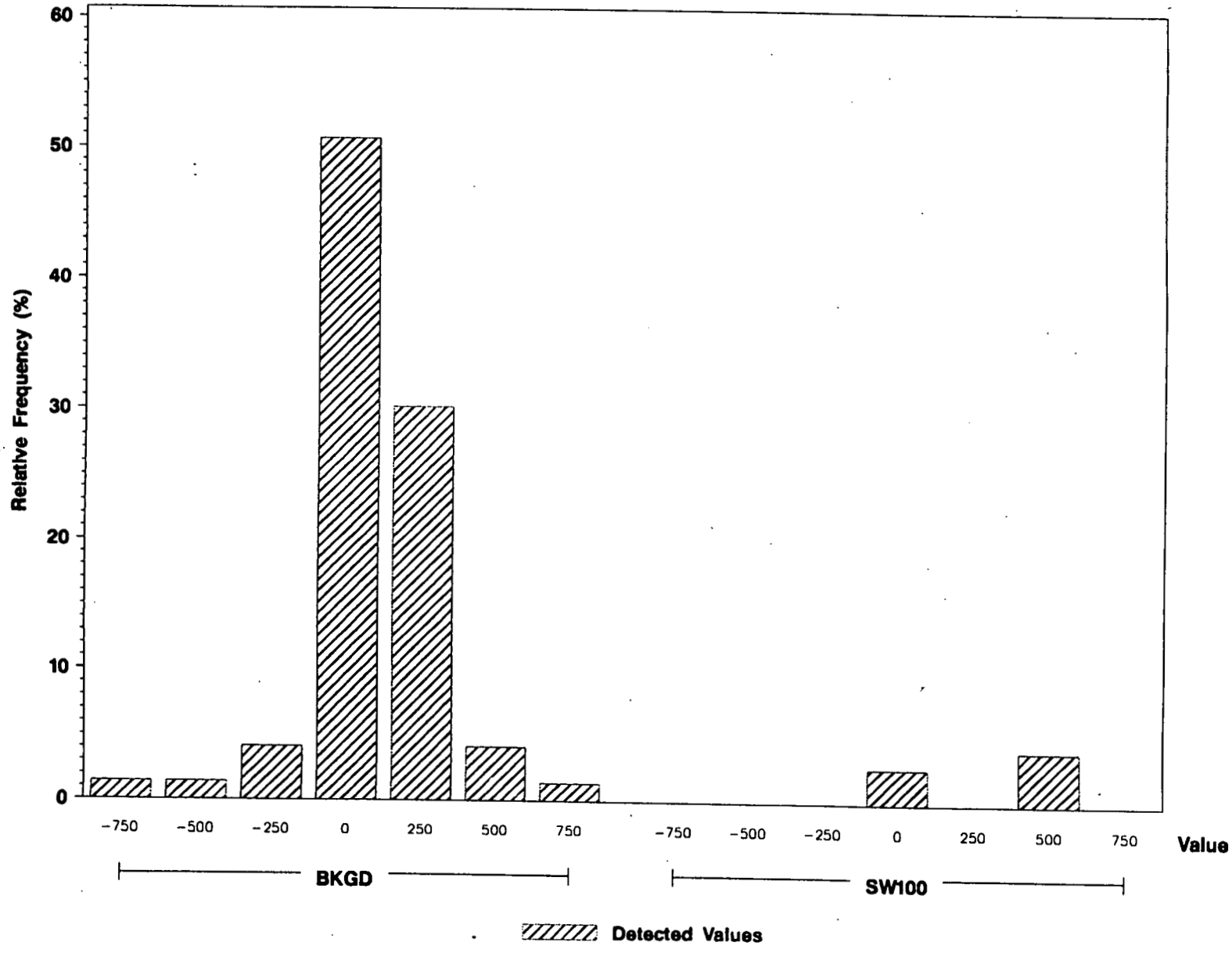
ANALYTE=STRONTIUM-90



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total TRITIUM (pCi/L) in Surface Water

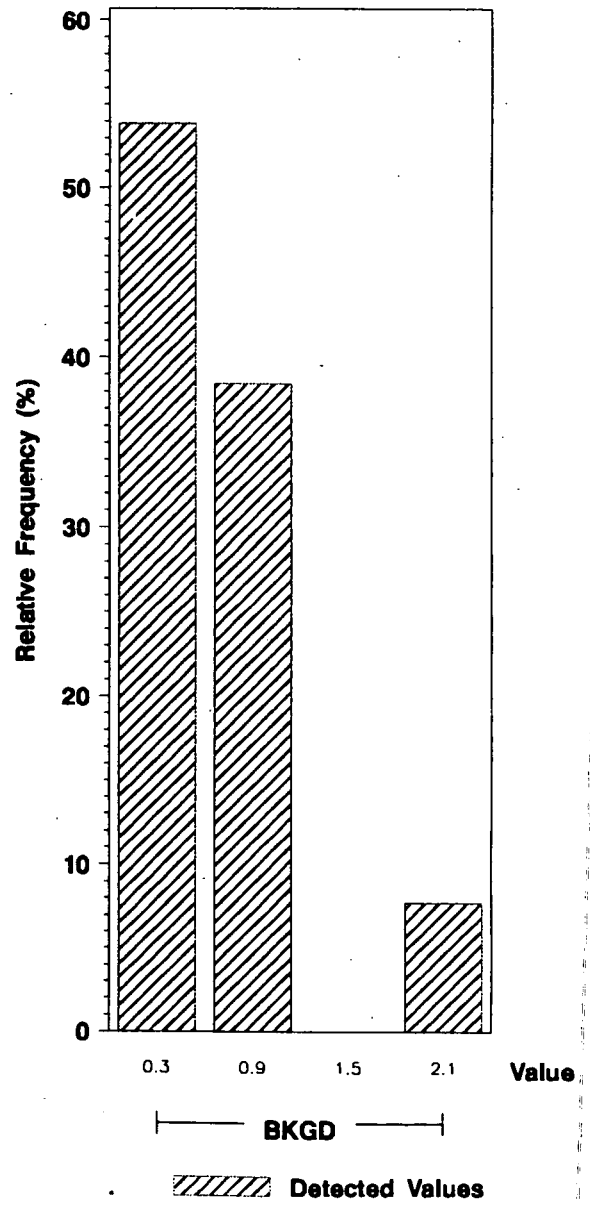
ANALYTE = TRITIUM



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM, TOTAL (pCi/L) in Surface Water

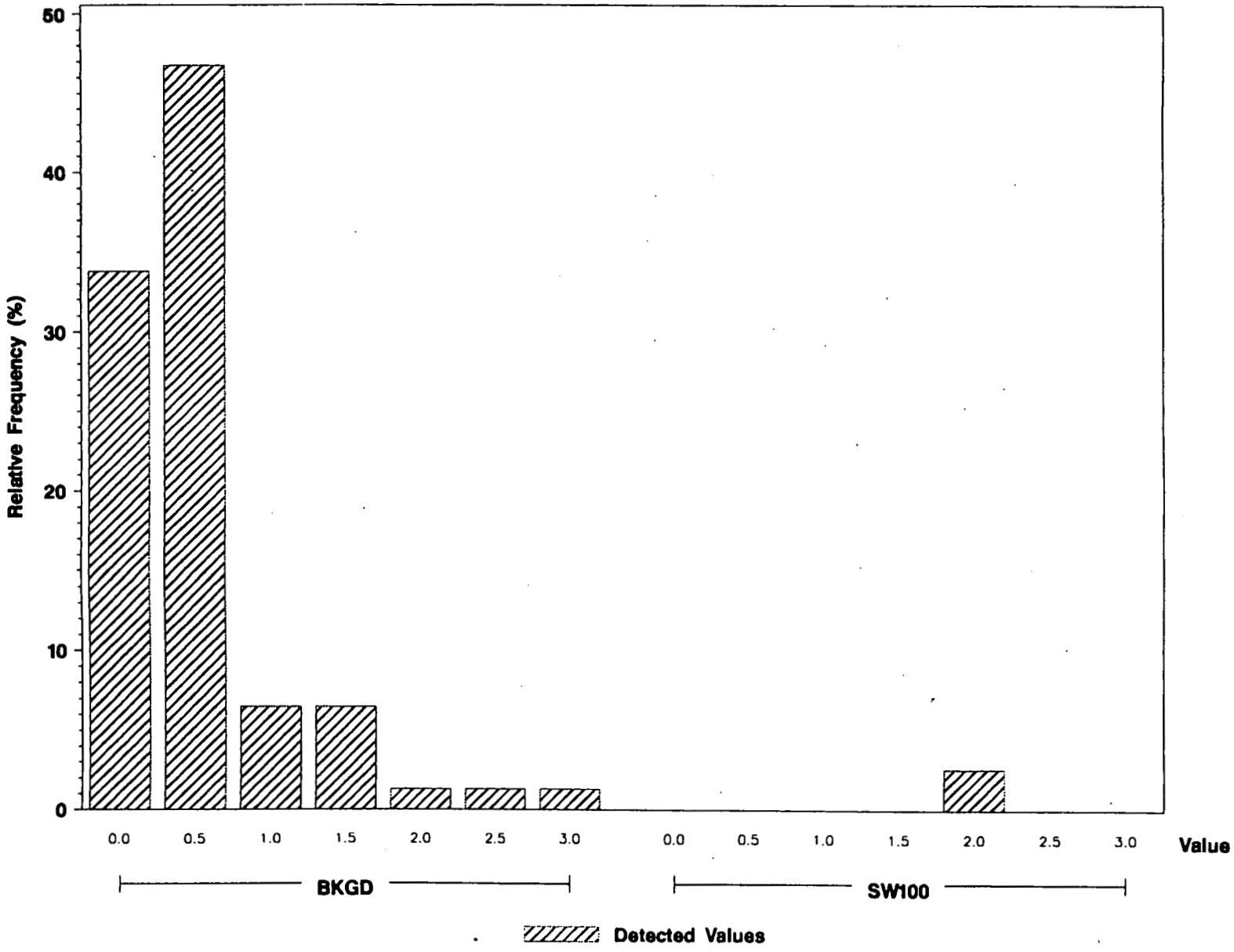
ANALYTE = URANIUM, TOTAL



# Background vs OU7 Surface Water (SW100) Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Surface Water

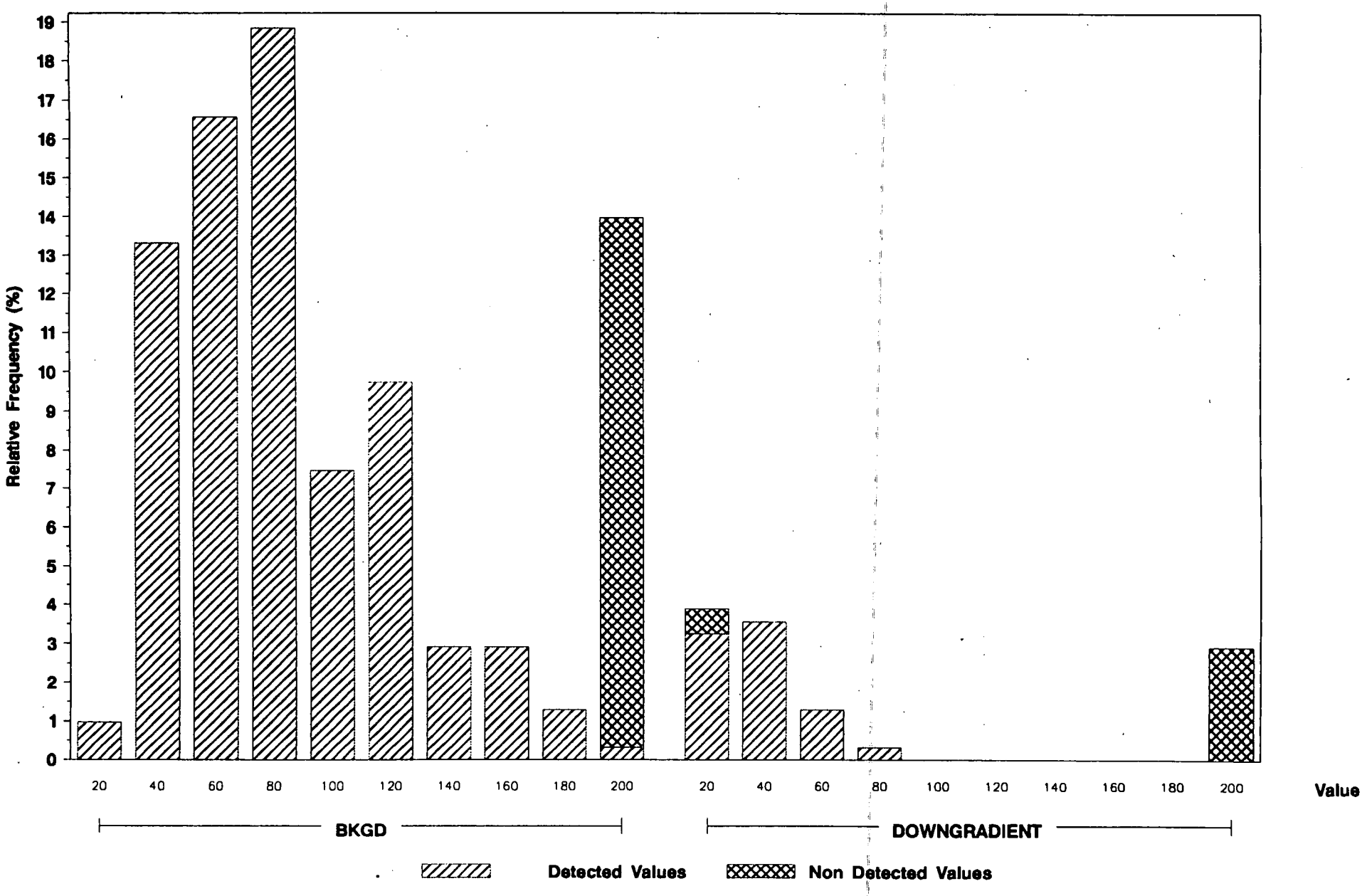
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved BARIUM (ug/L) in Groundwater

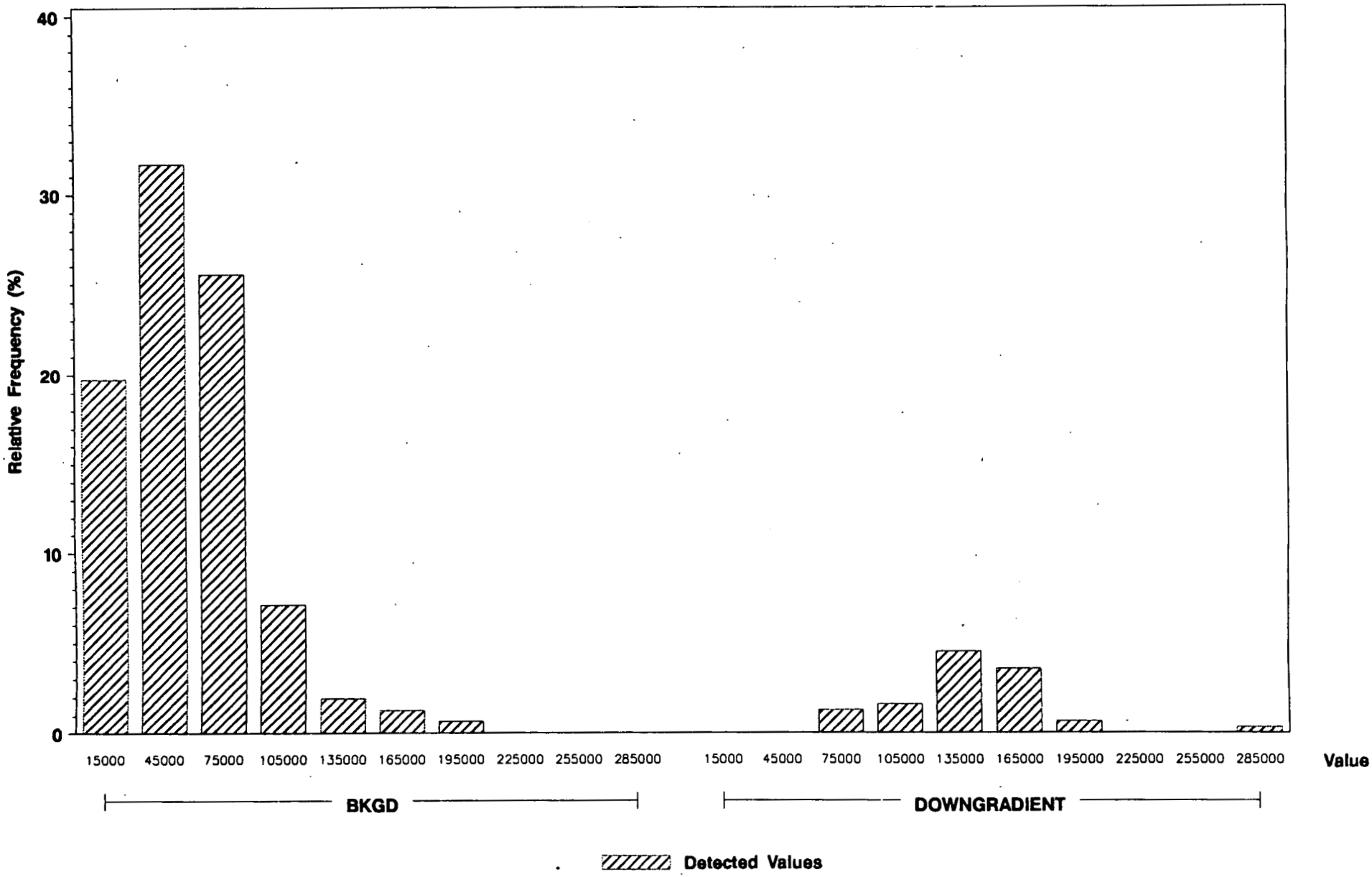
ANALYTE = BARIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Groundwater

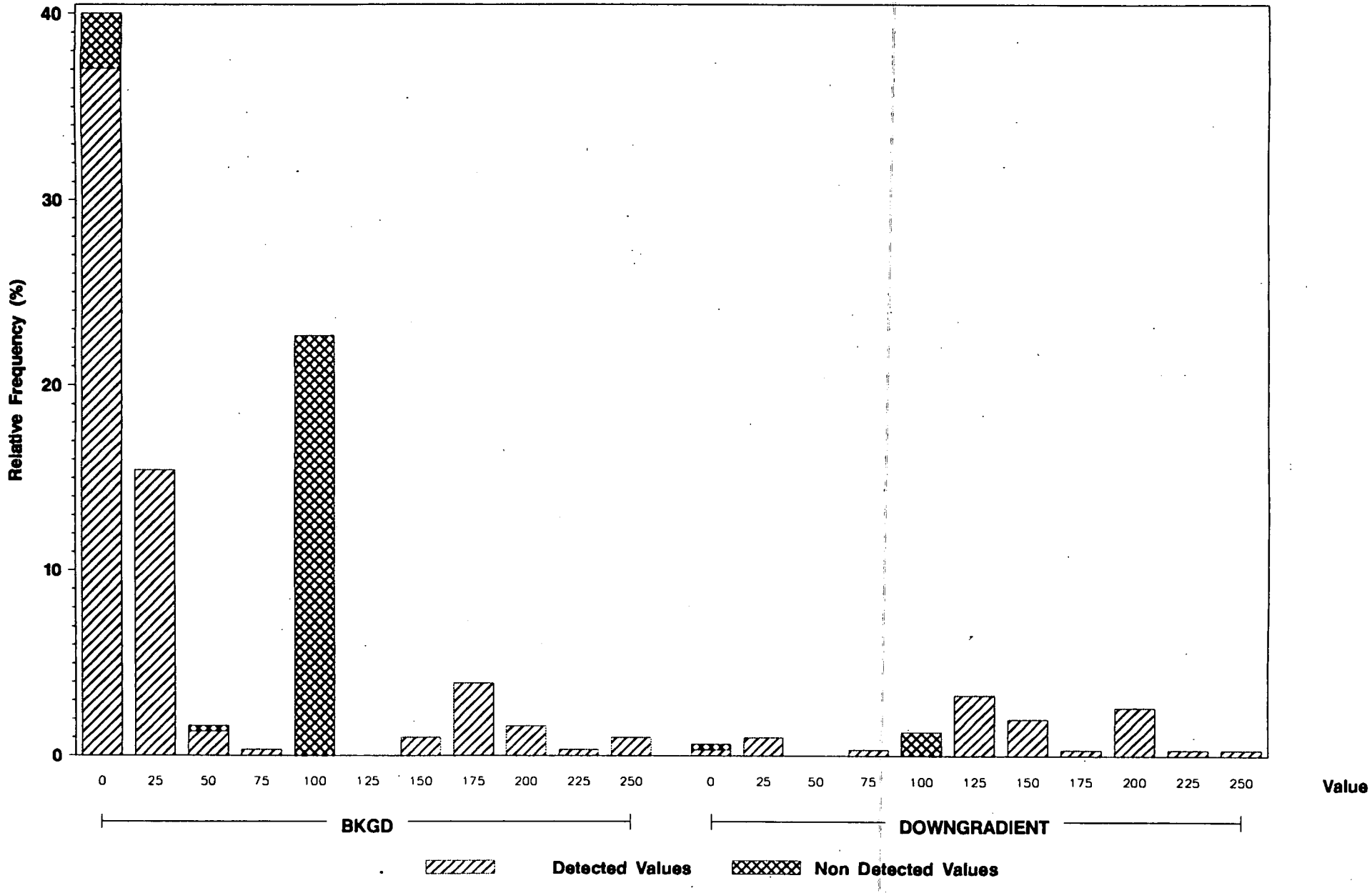
ANALYTE = CALCIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Groundwater

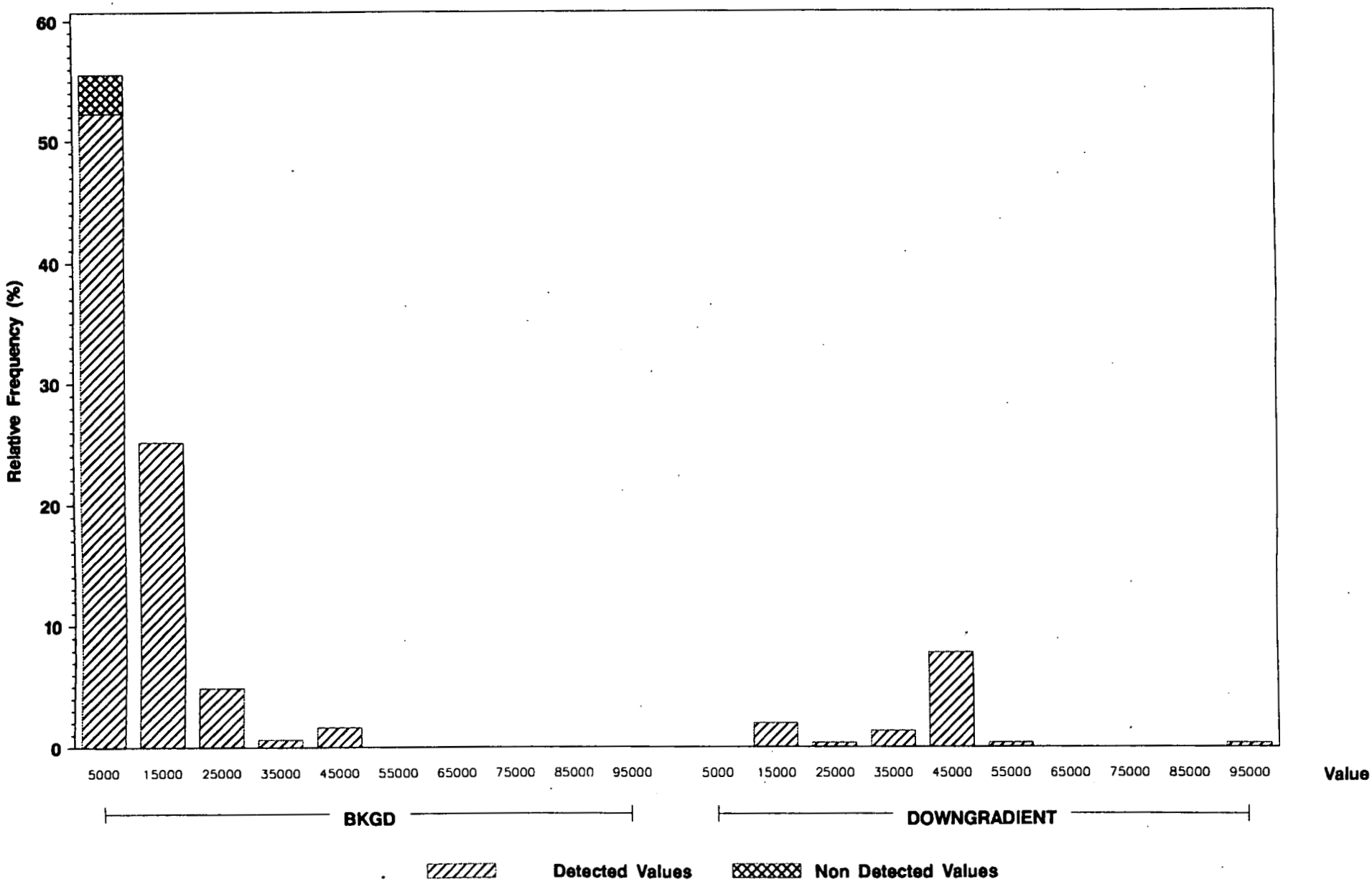
ANALYTE=LITHIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Groundwater

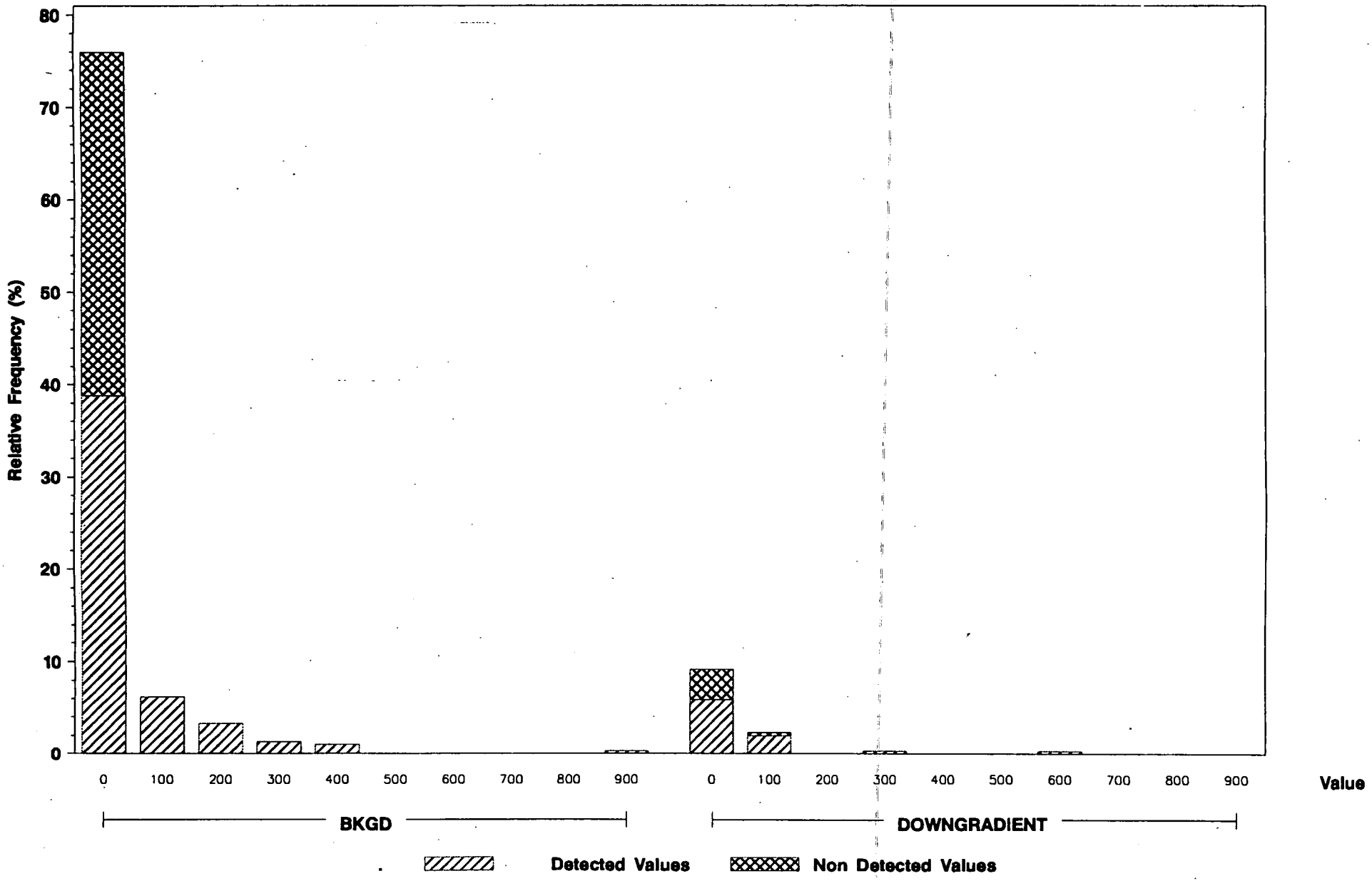
ANALYTE = MAGNESIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Groundwater

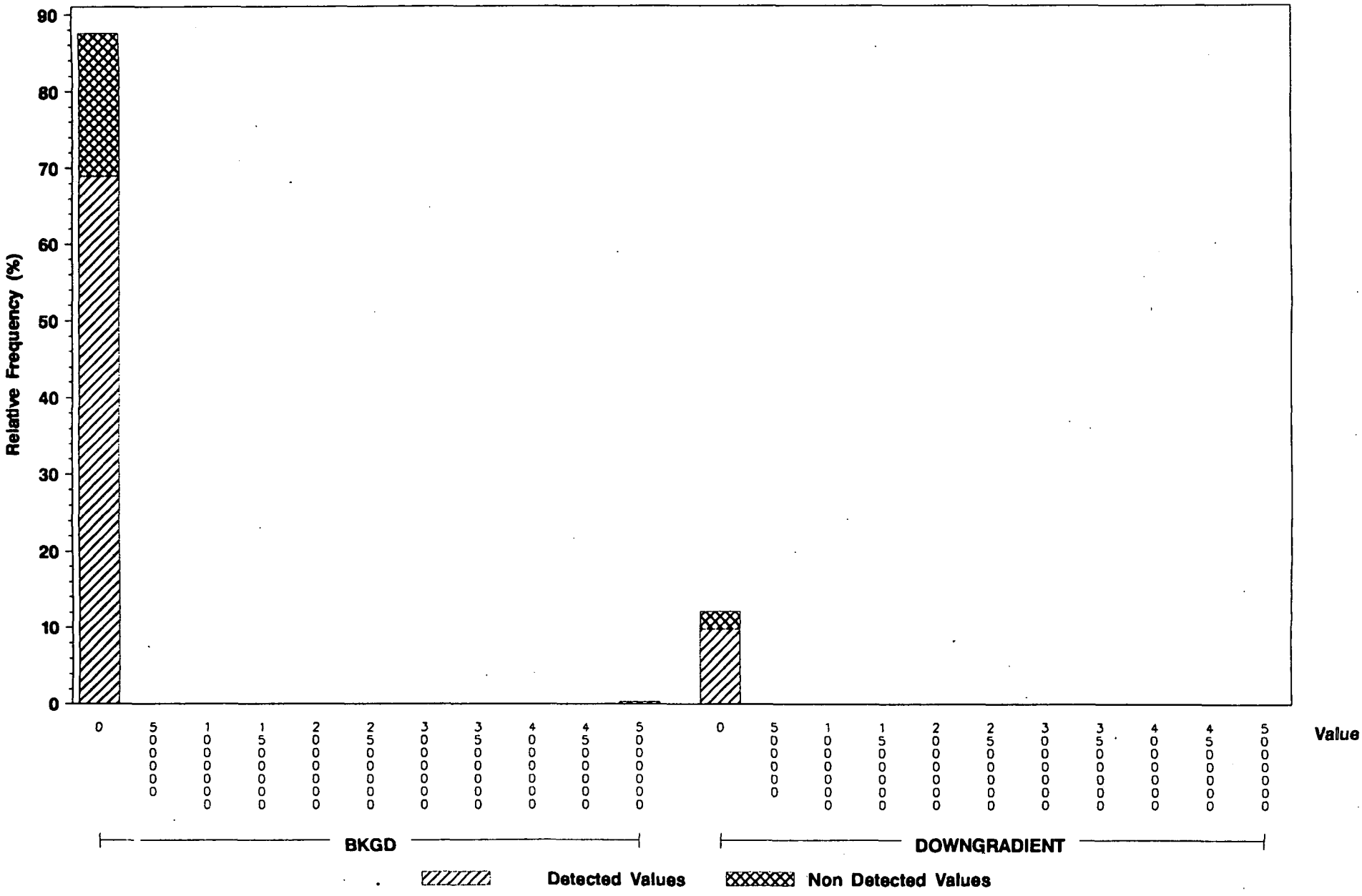
ANALYTE = MANGANESE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Groundwater

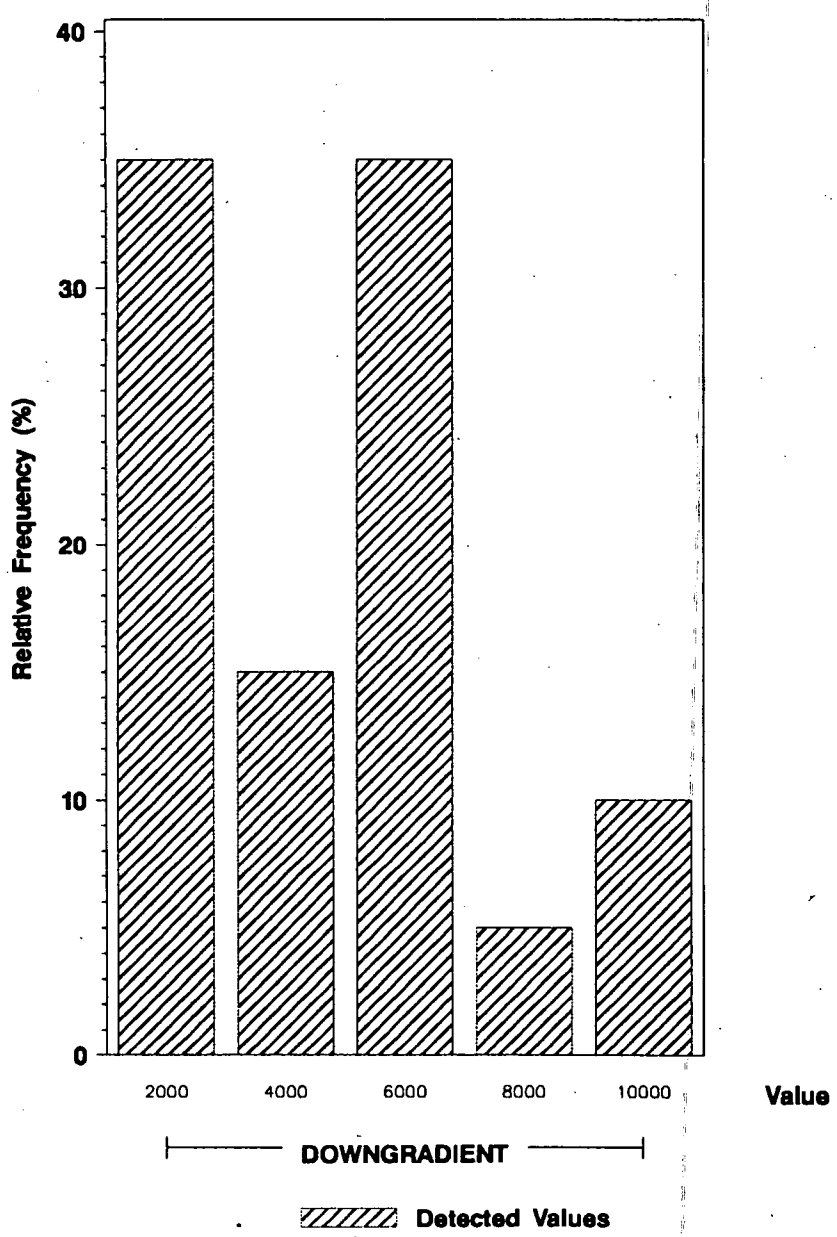
ANALYTE = POTASSIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved SILICON (ug/L) in Groundwater

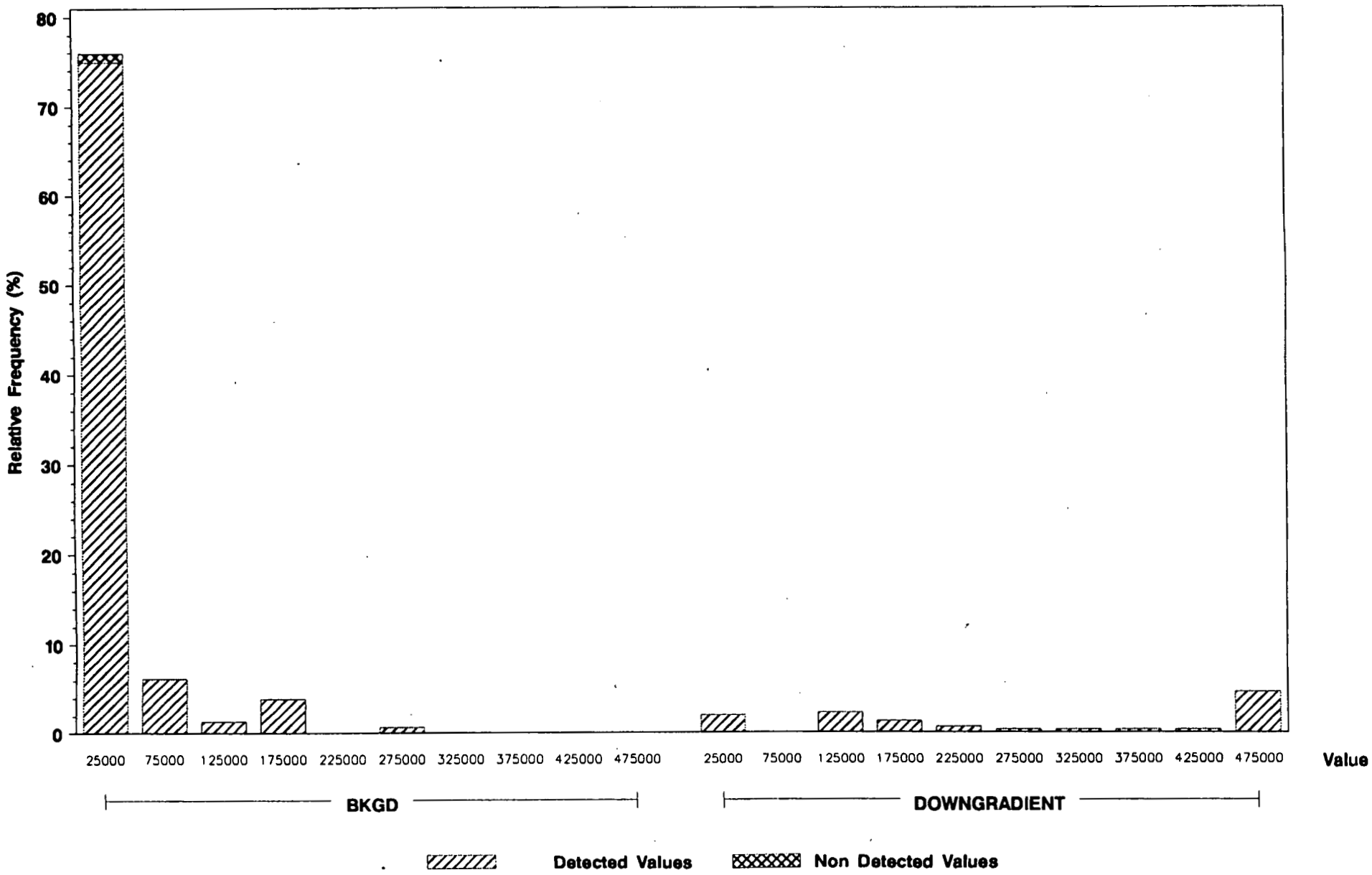
ANALYTE = SILICON



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved SODIUM (ug/L) in Groundwater

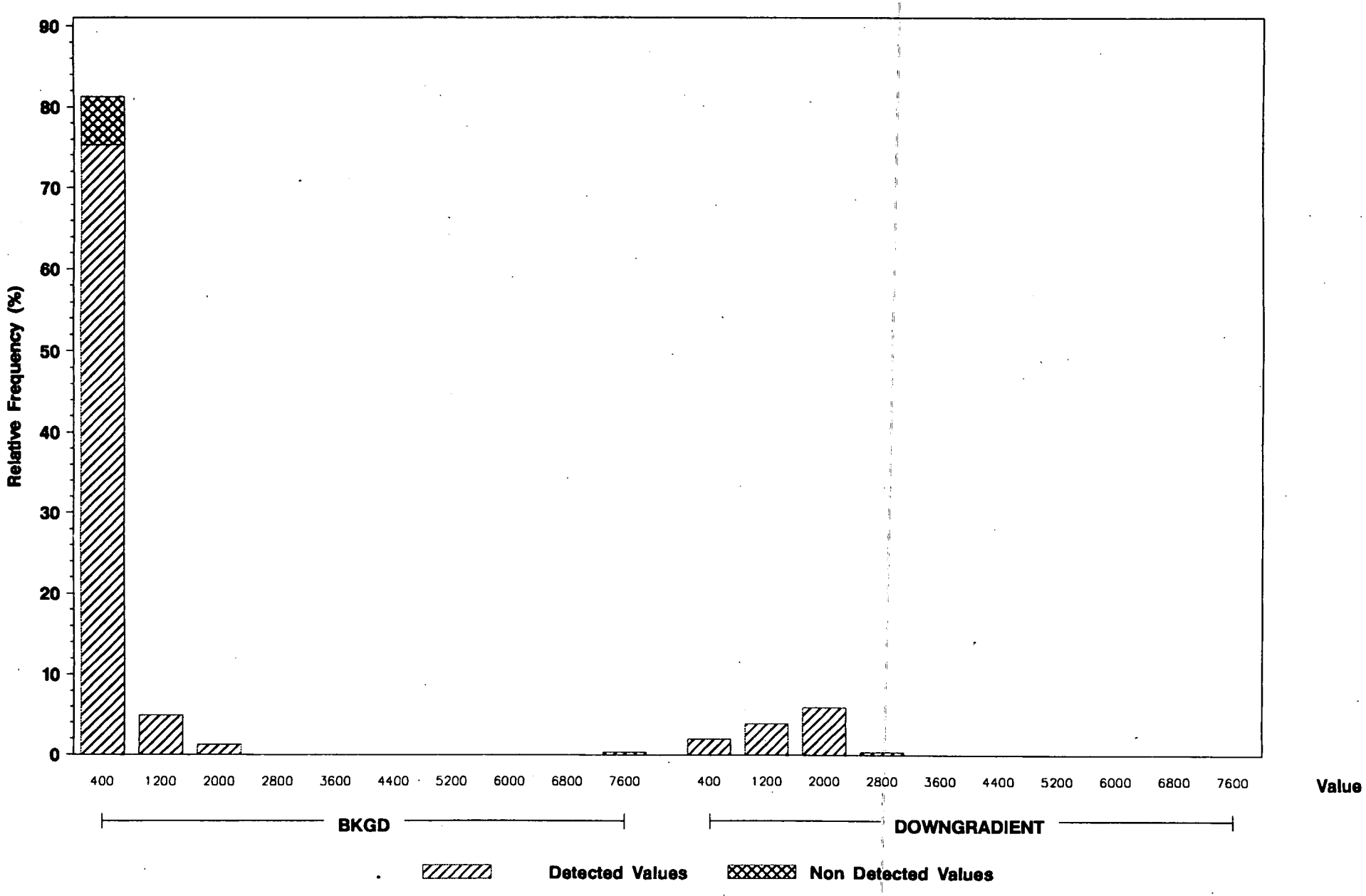
ANALYTE=SODIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Groundwater

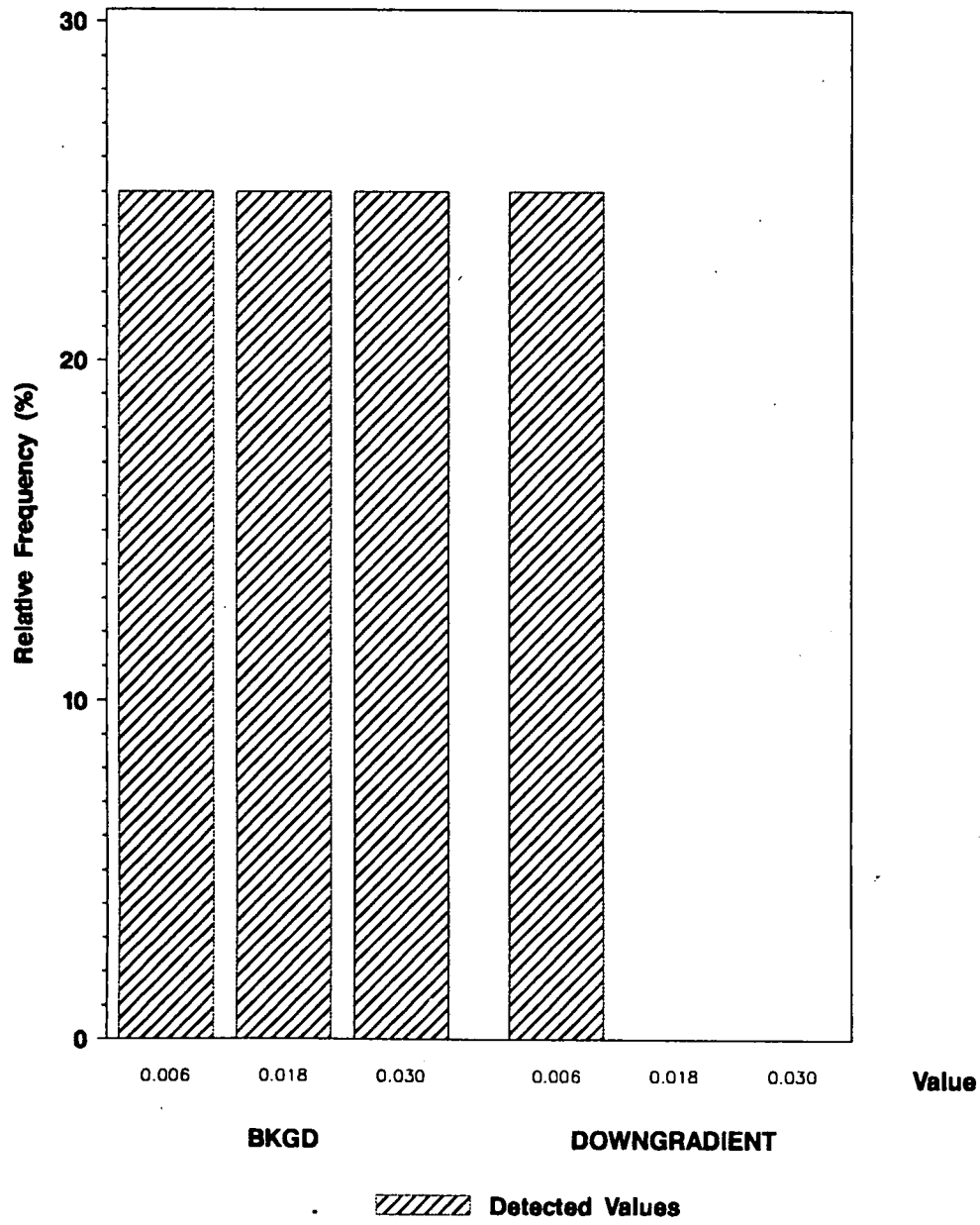
ANALYTE = STRONTIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Groundwater

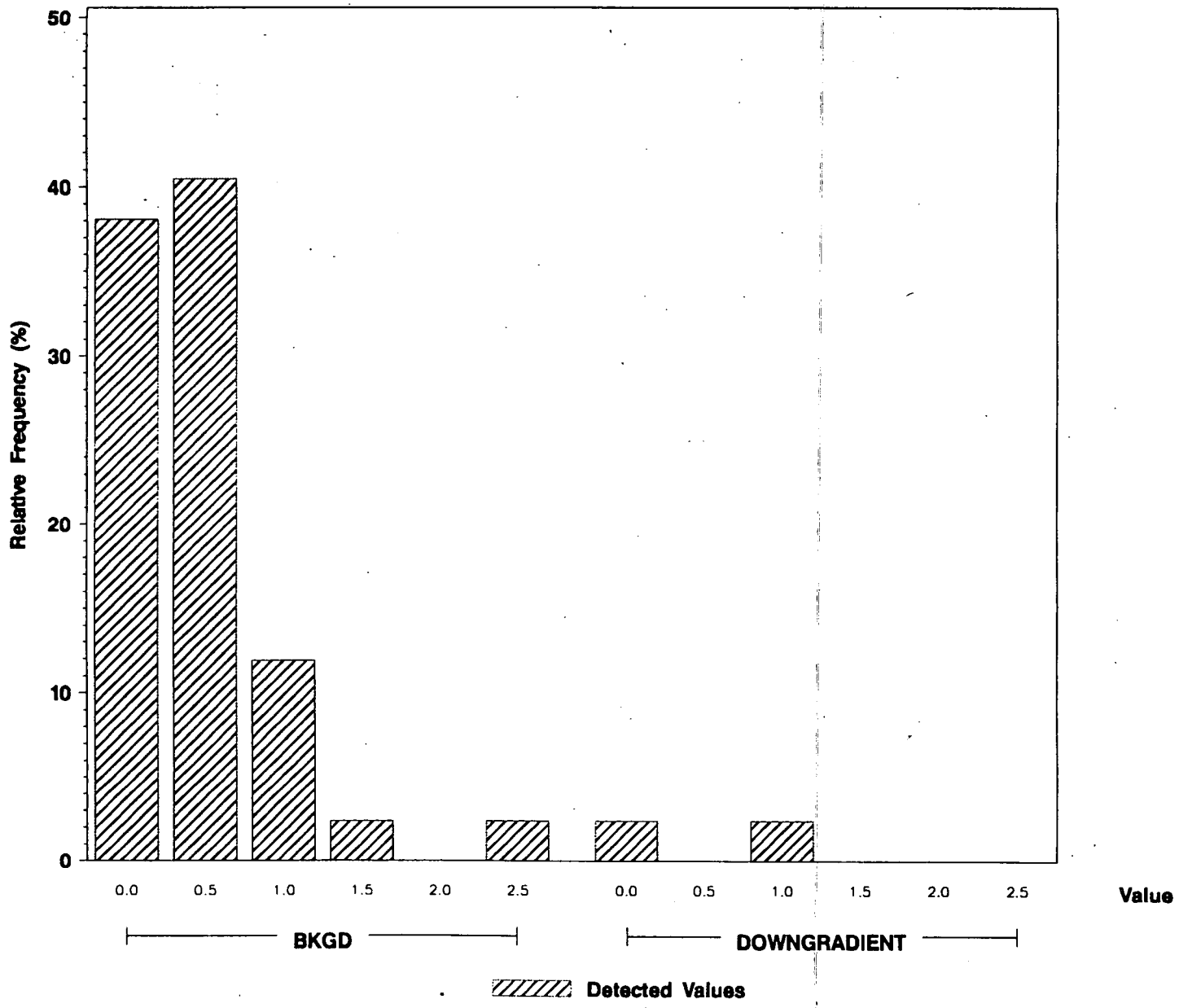
ANALYTE = AMERICIUM – 241



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Groundwater

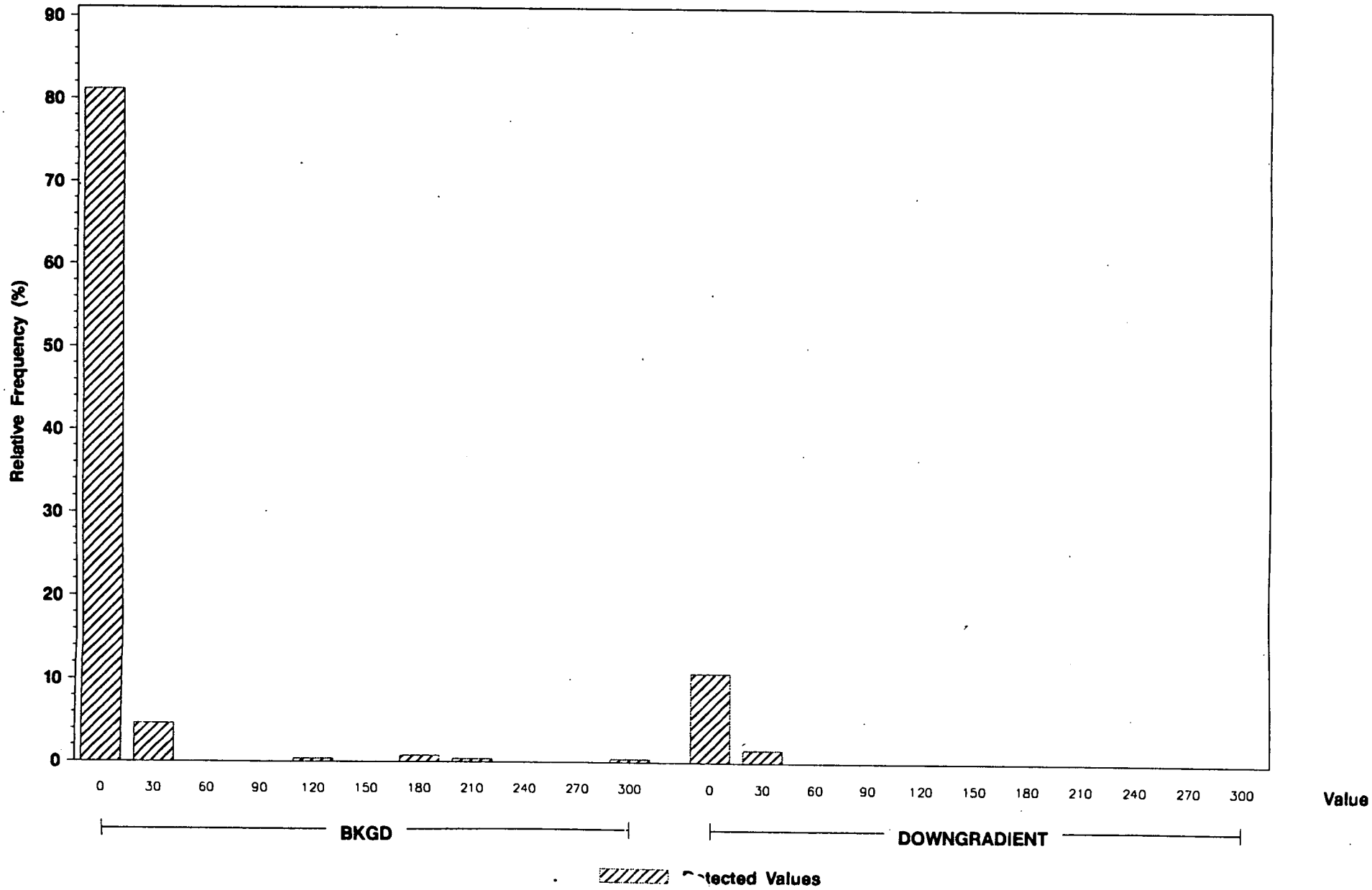
ANALYTE = CESIUM-137



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Groundwater

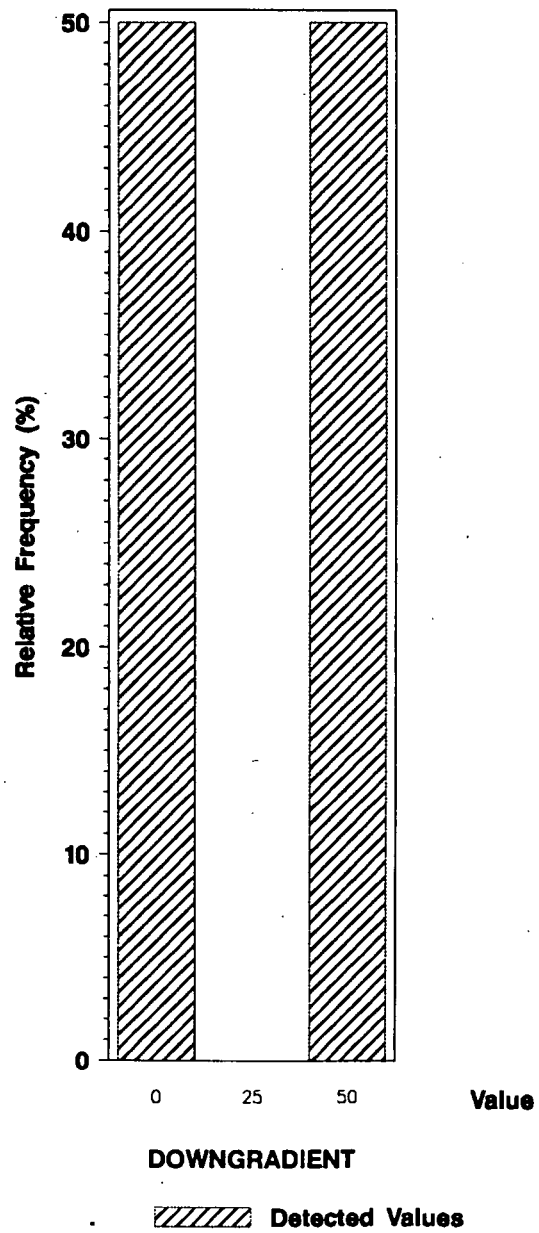
ANALYTE=GROSS ALPHA



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS ALPHA – SUSPENDED (pCi/L) in Groundwater

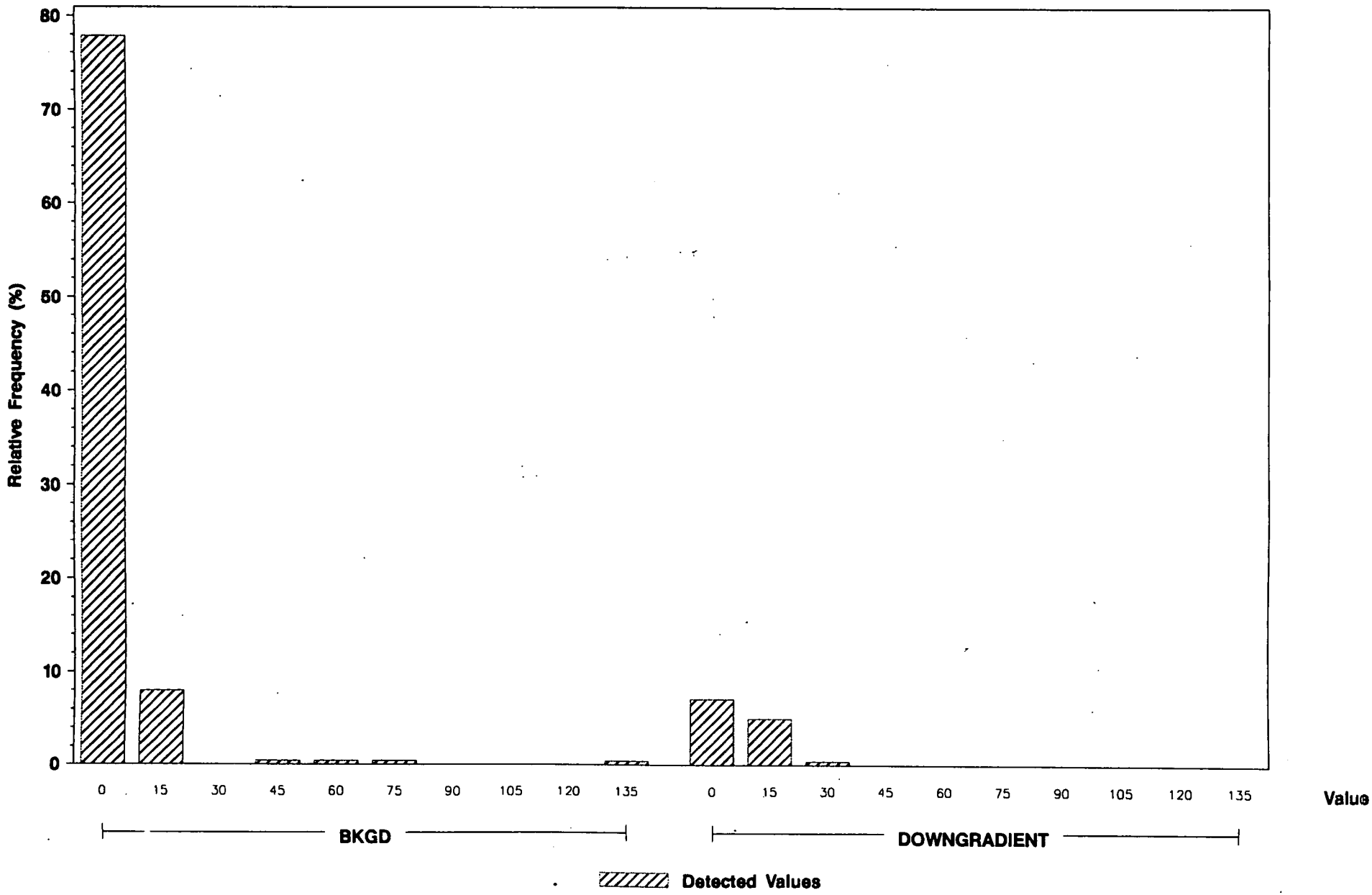
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Groundwater

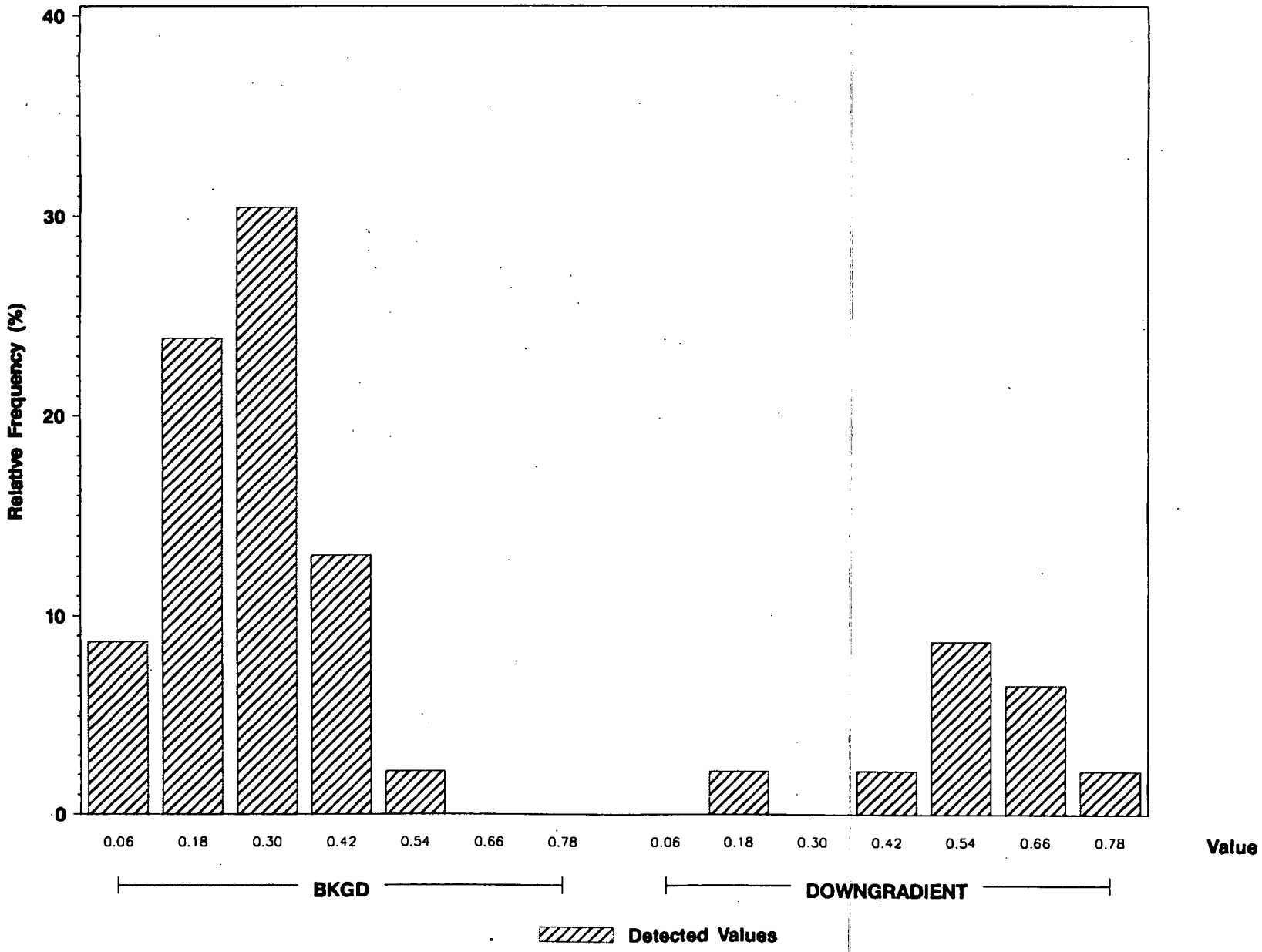
ANALYTE=GROSS BETA



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved RADIUM – 226 (pCi/L) in Groundwater

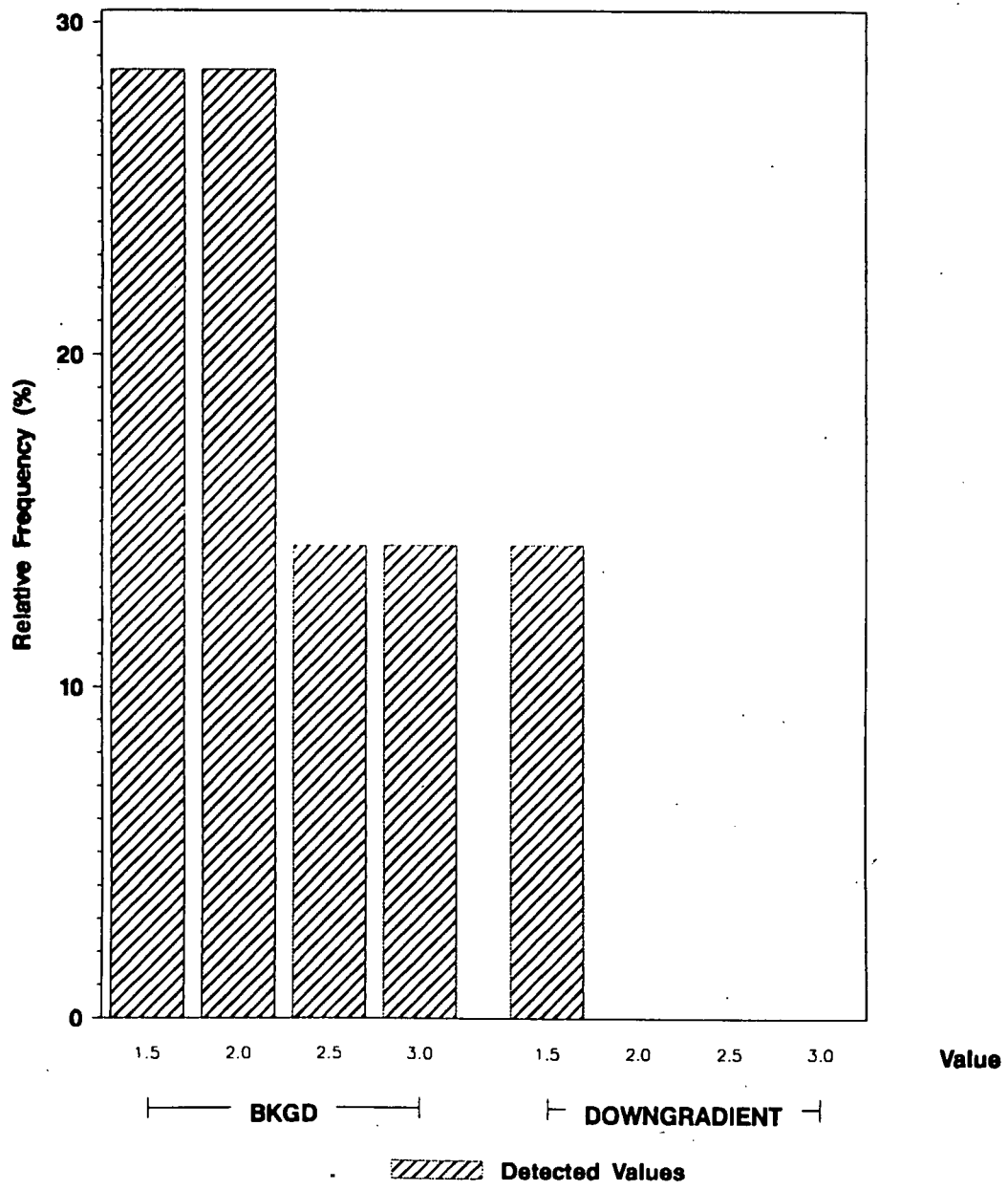
ANALYTE = RADIUM – 226



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved RADIUM – 228 (pCi/L) in Groundwater

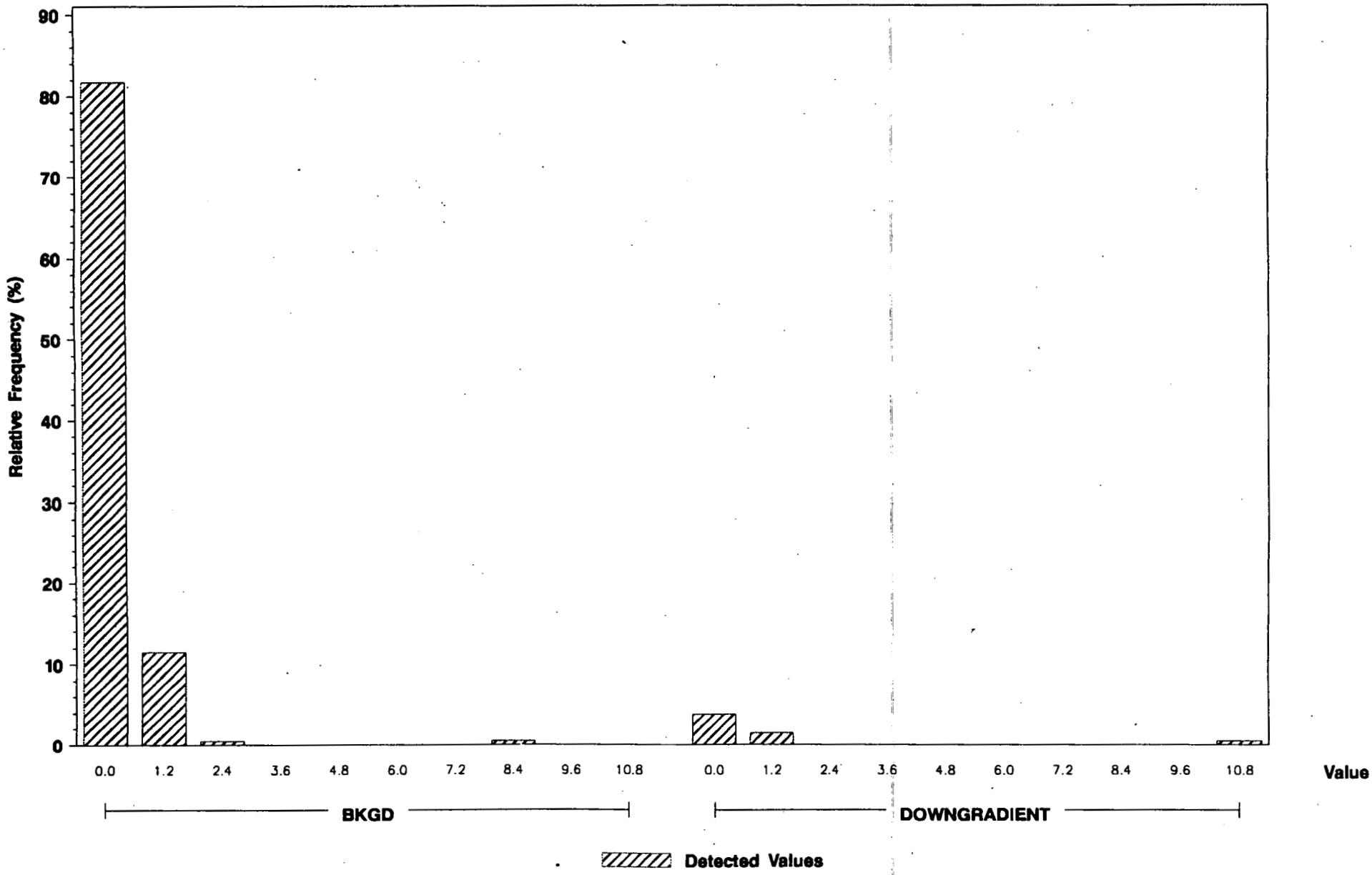
ANALYTE = RADIUM – 228



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Groundwater

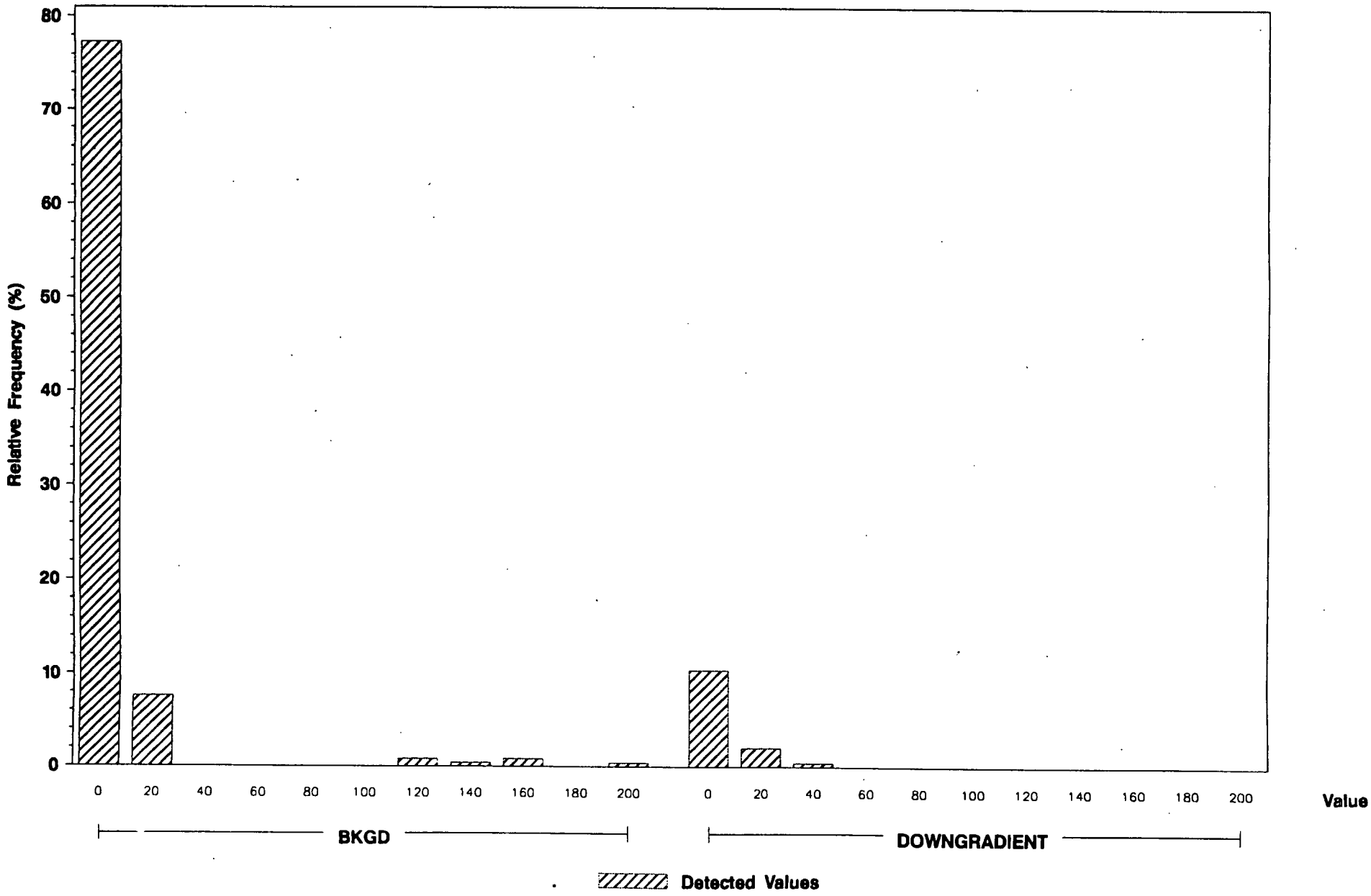
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved URANIUM – 233, – 234 (pCi/L) in Groundwater

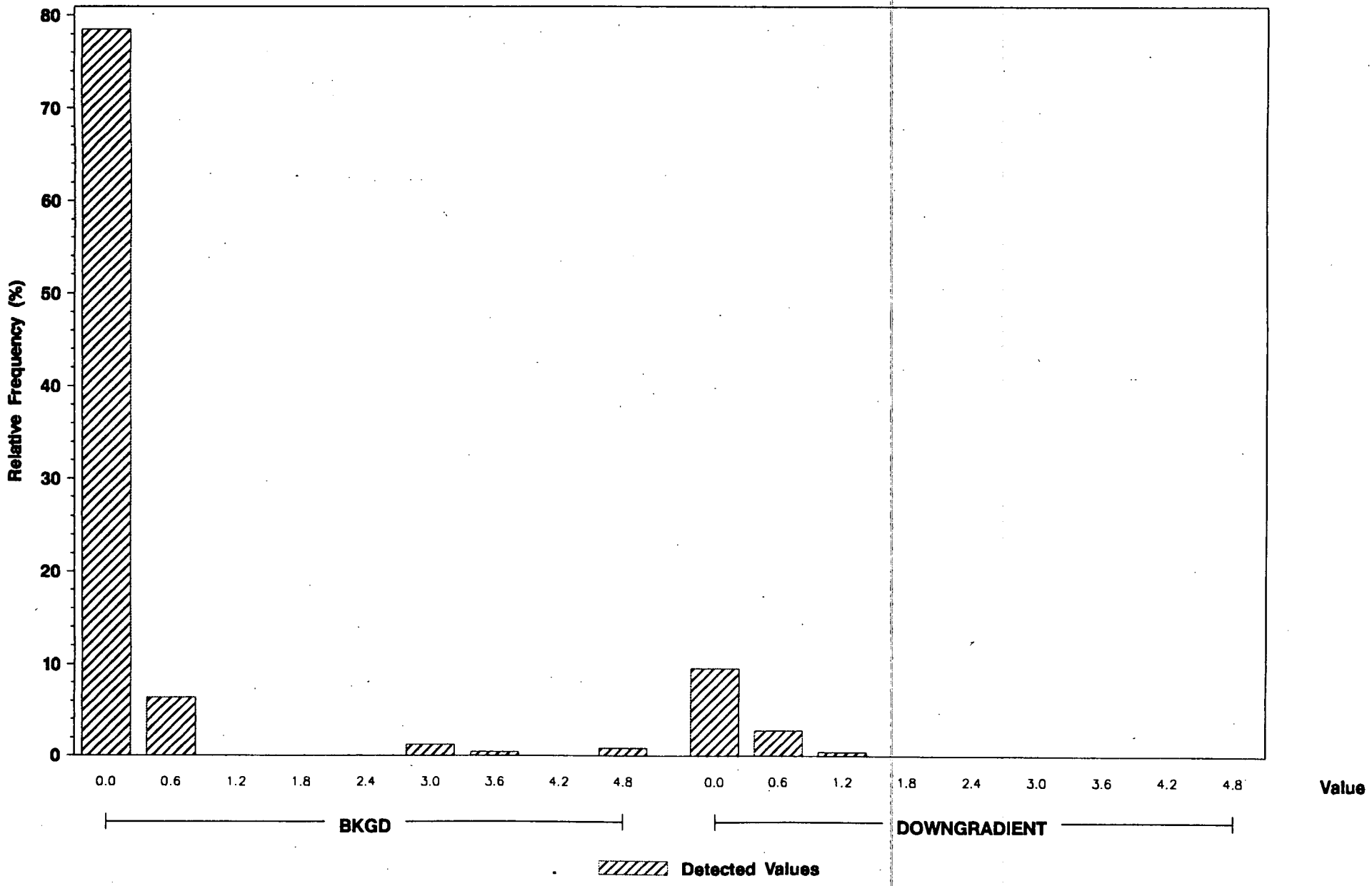
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved URANIUM-235 (pCi/L) in Groundwater

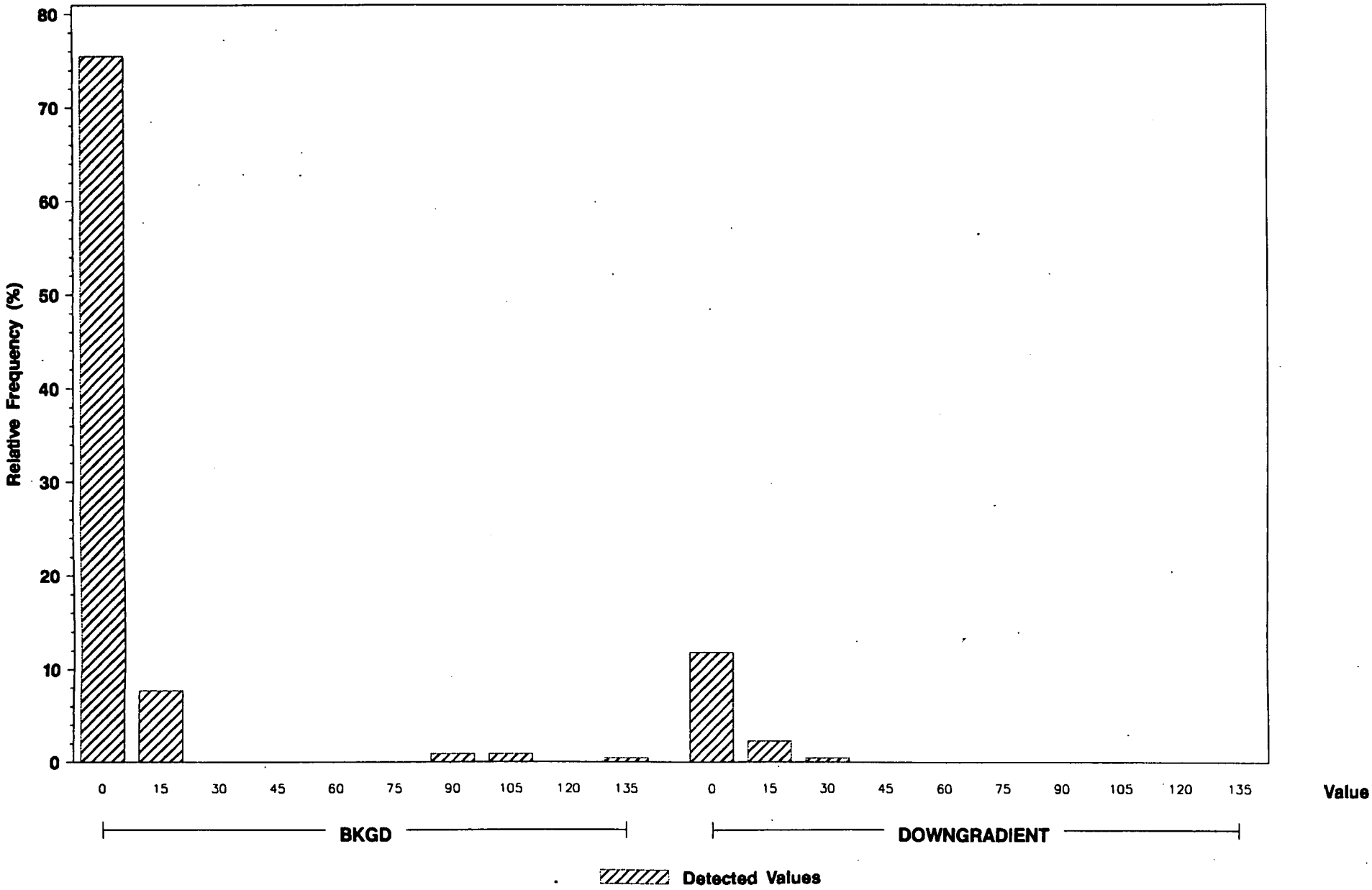
ANALYTE = URANIUM-235



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Dissolved URANIUM-238 (pCi/L) in Groundwater

ANALYTE = URANIUM-238



# Groundwater

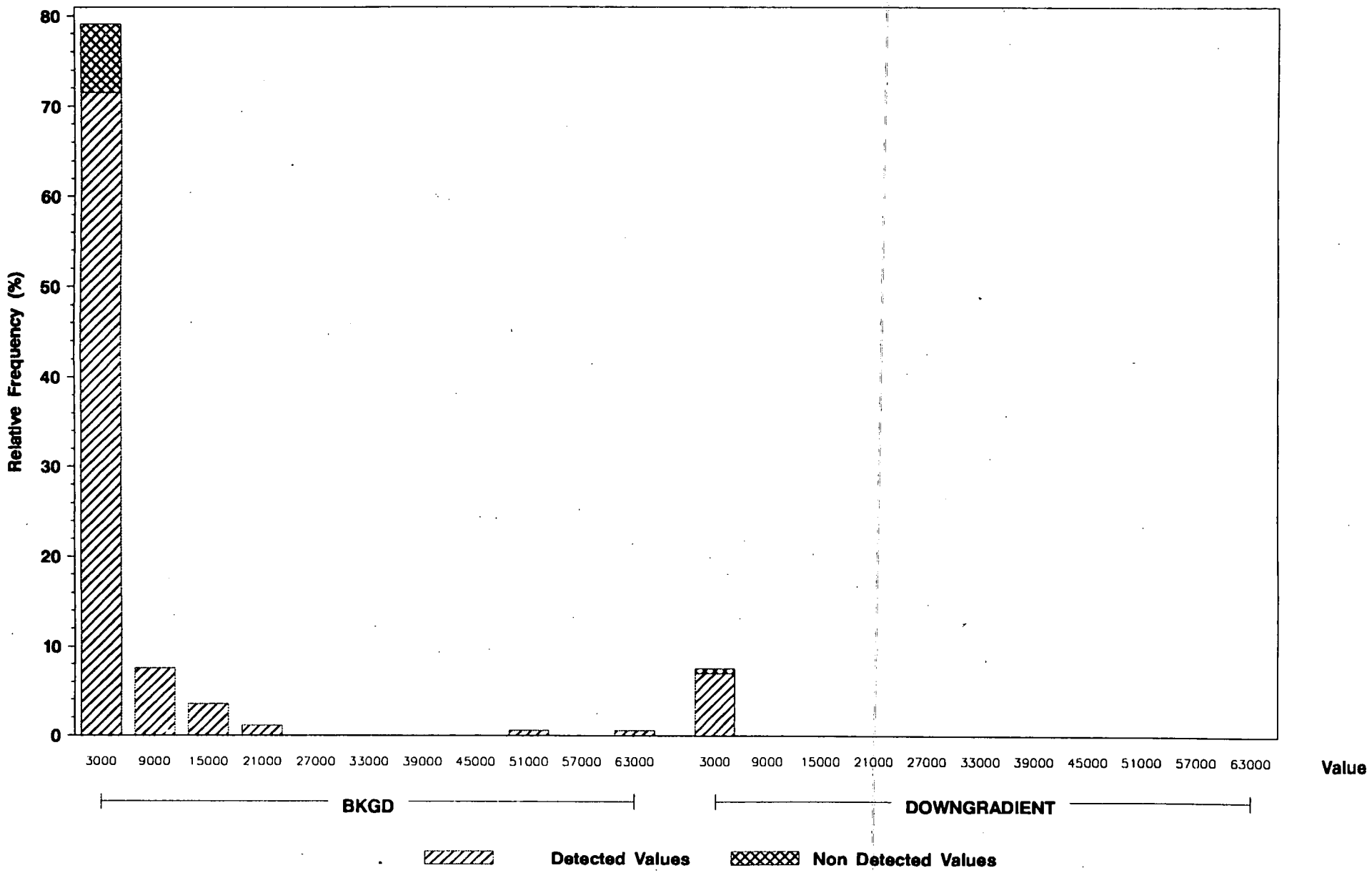
# (Total)

# Background vs. OU 7 Downgradient UHSU

# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total ALUMINUM (ug/L) in Groundwater

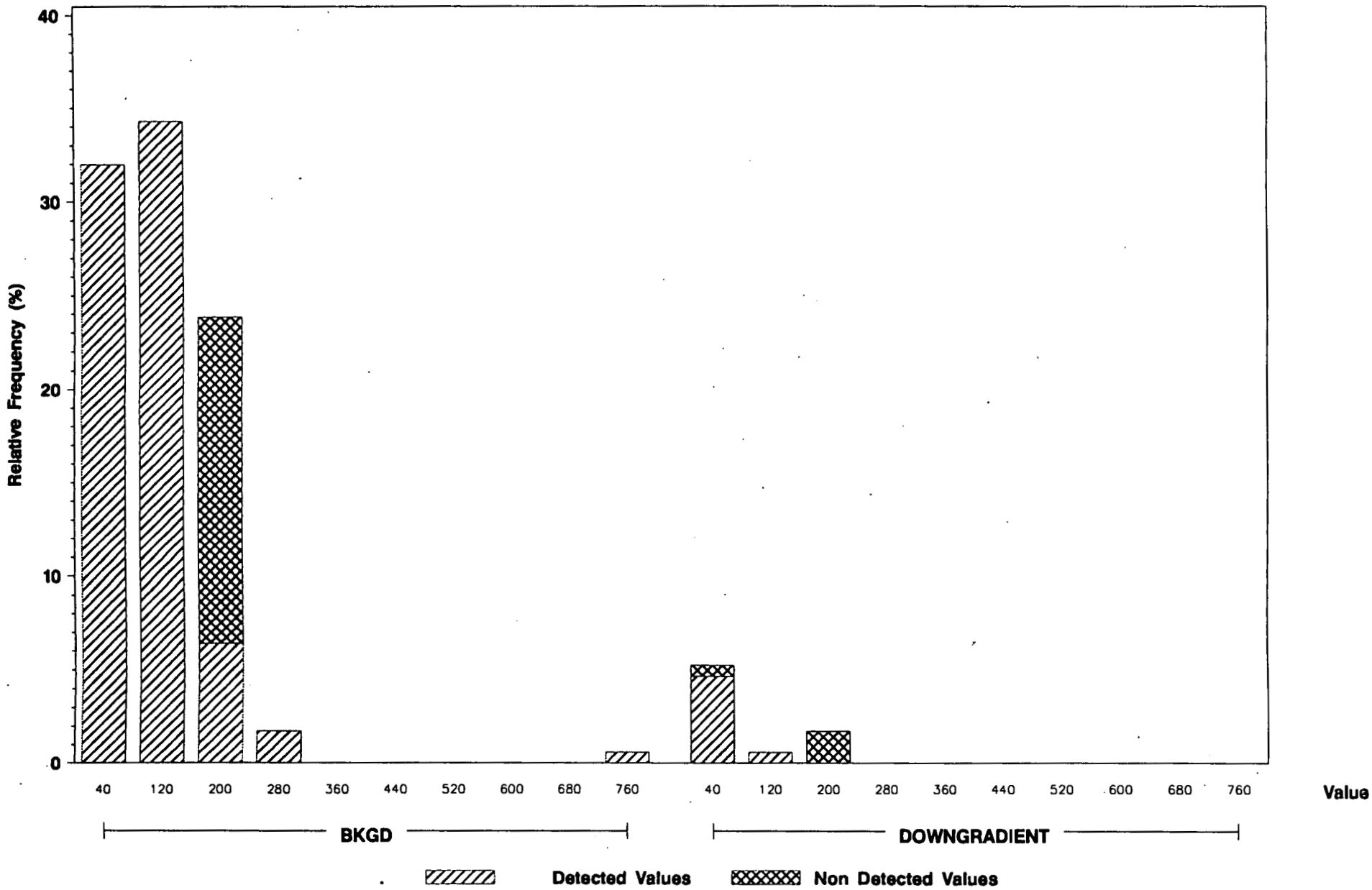
ANALYTE = ALUMINUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total BARIUM (ug/L) in Groundwater

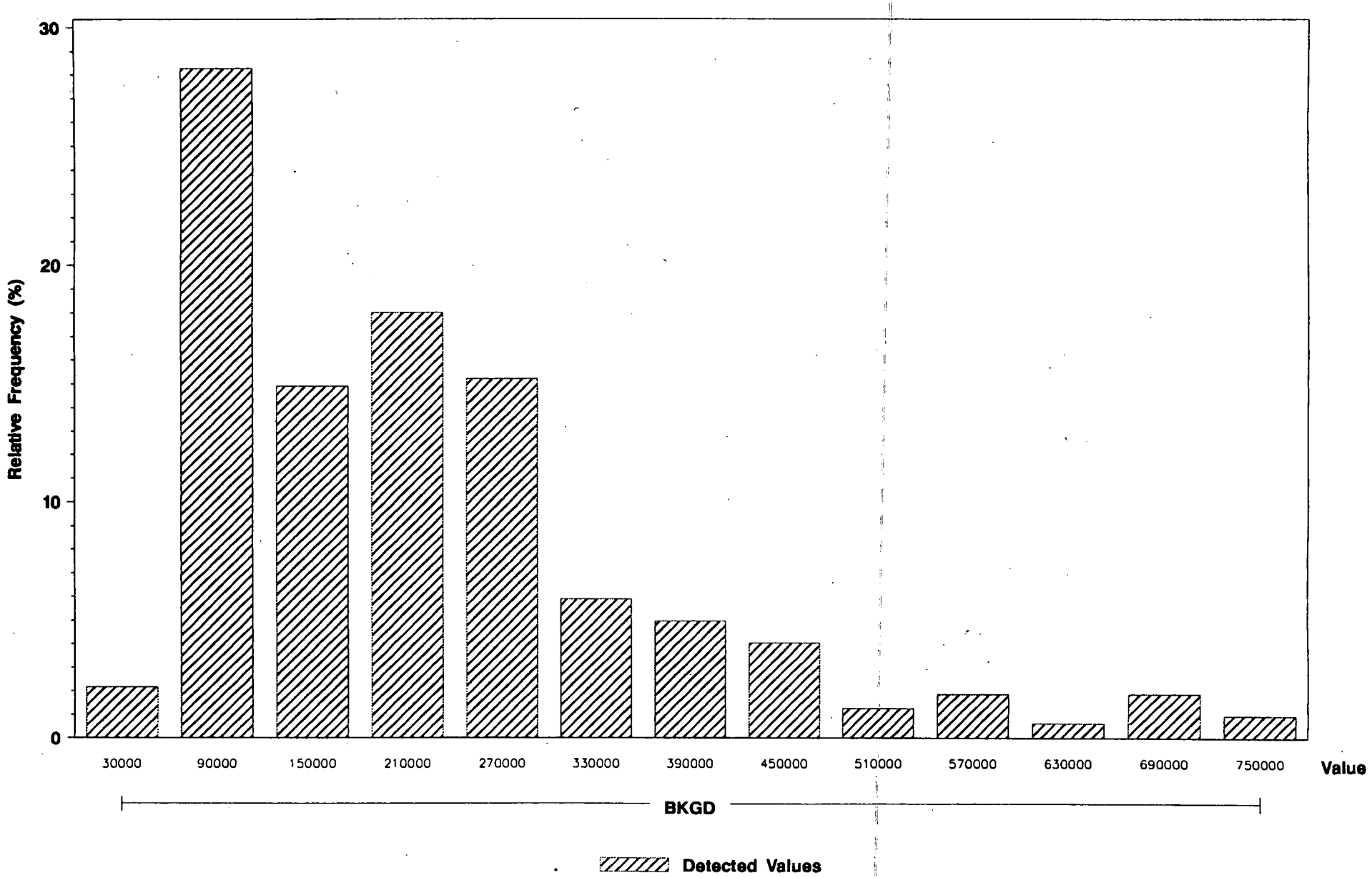
ANALYTE = BARIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total BICARBONATE (ug/L) in Groundwater

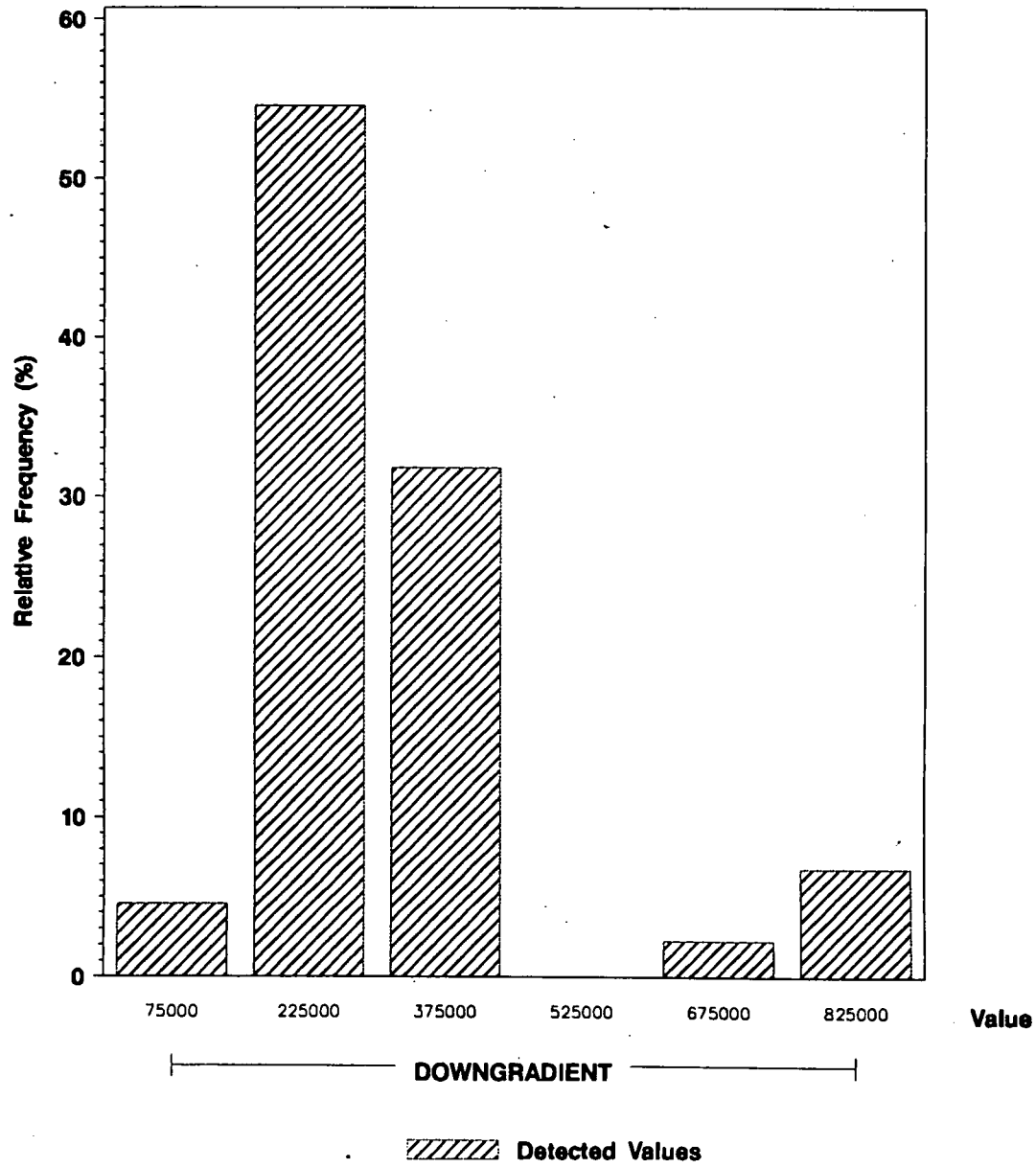
ANALYTE = BICARBONATE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Groundwater

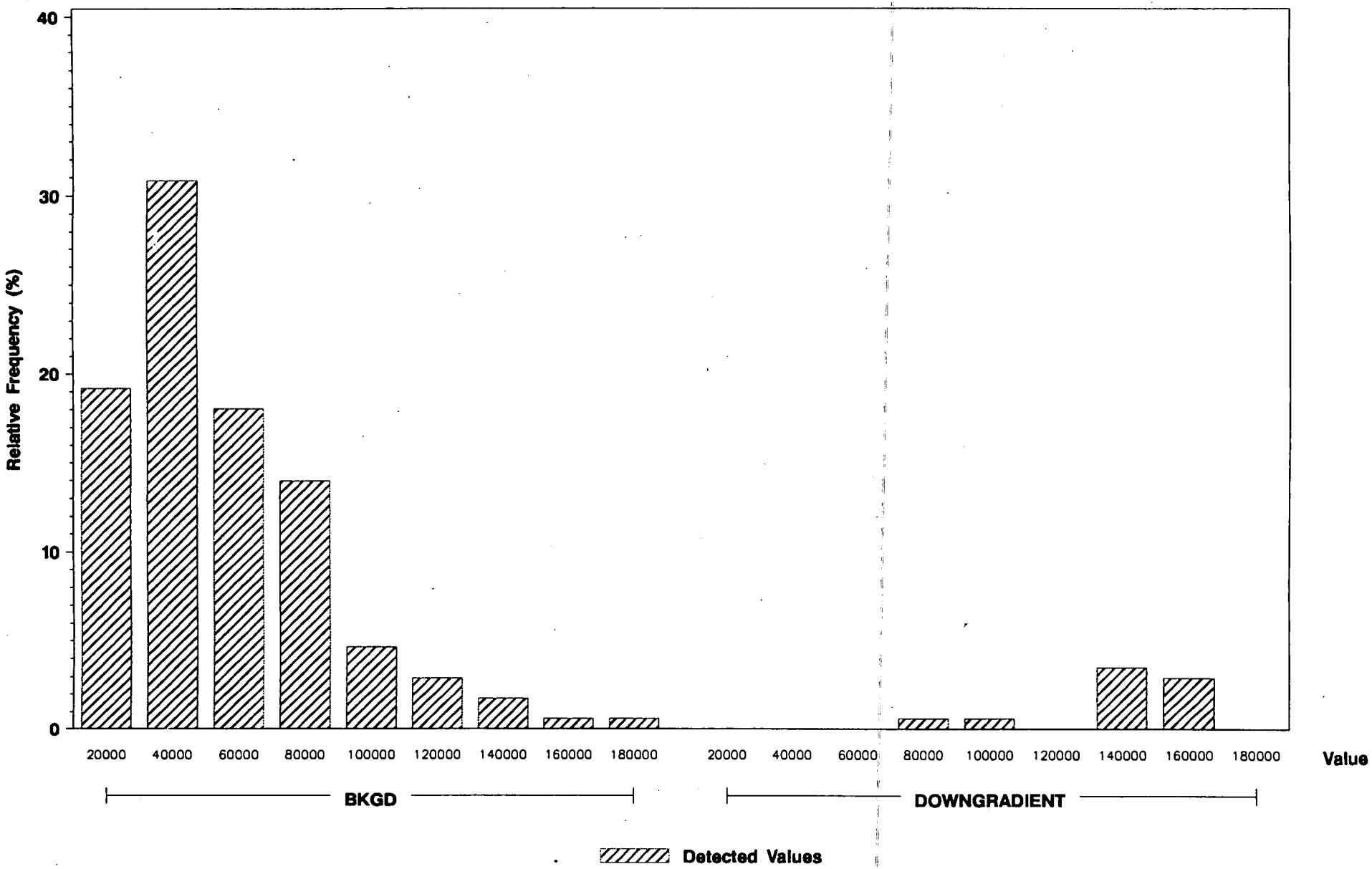
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total CALCIUM (ug/L) in Groundwater

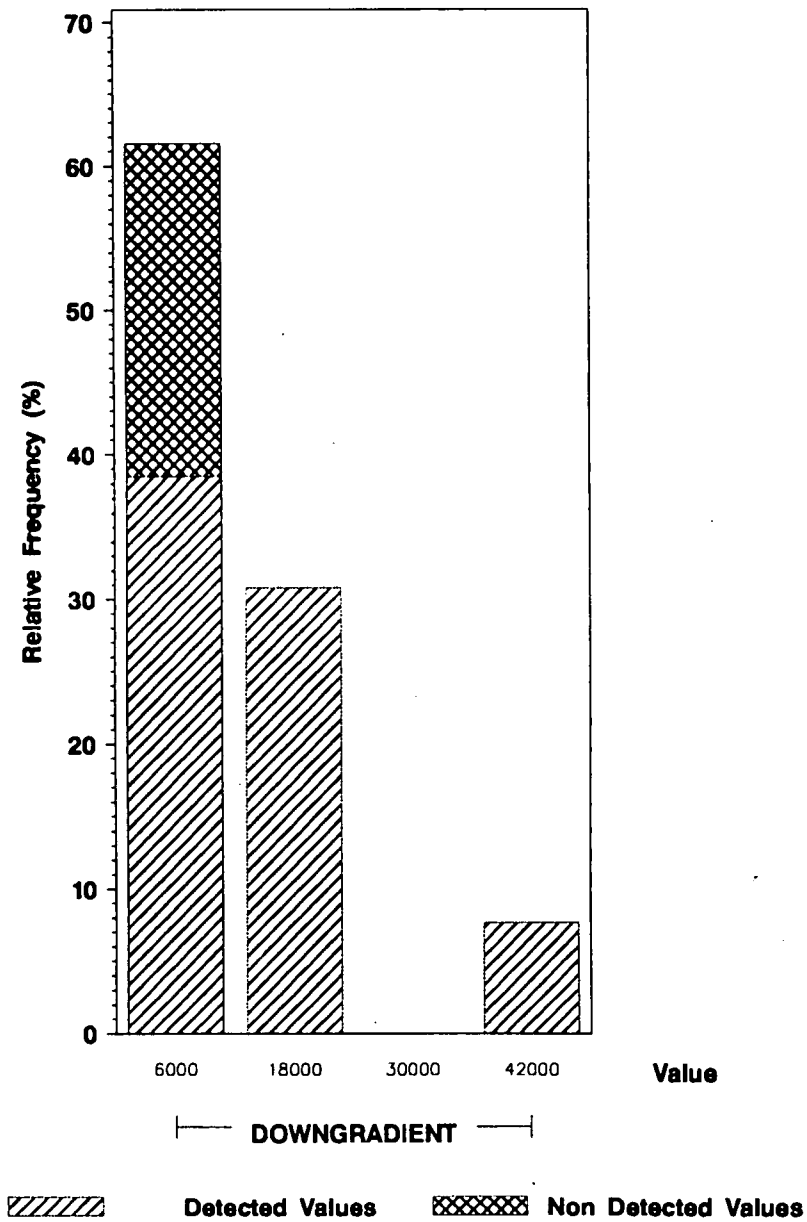
ANALYTE=CALCIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total CHEMICAL OXYGEN DEMAND (ug/L) in Groundwater

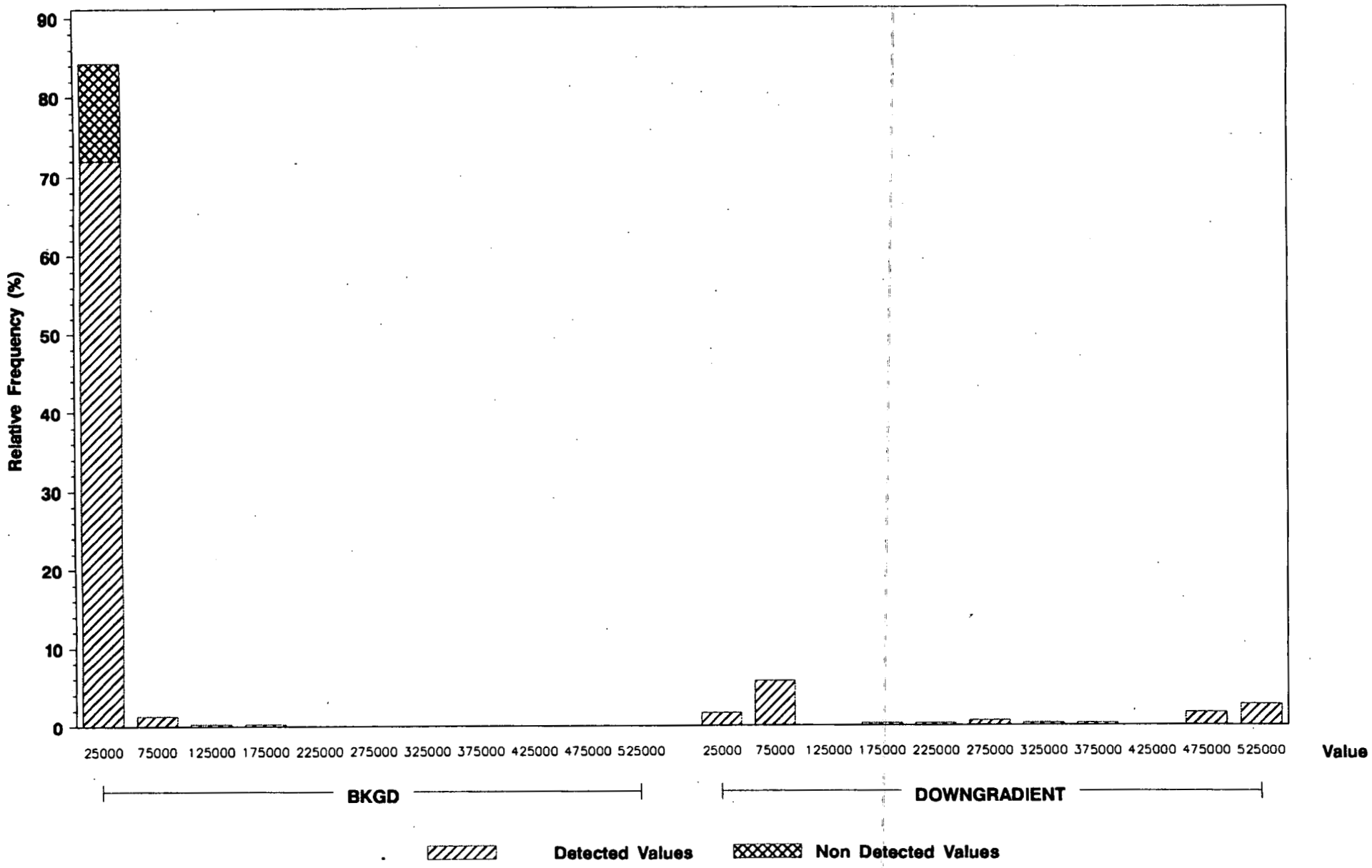
ANALYTE=CHEMICAL OXYGEN DEMAND



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total CHLORIDE (ug/L) in Groundwater

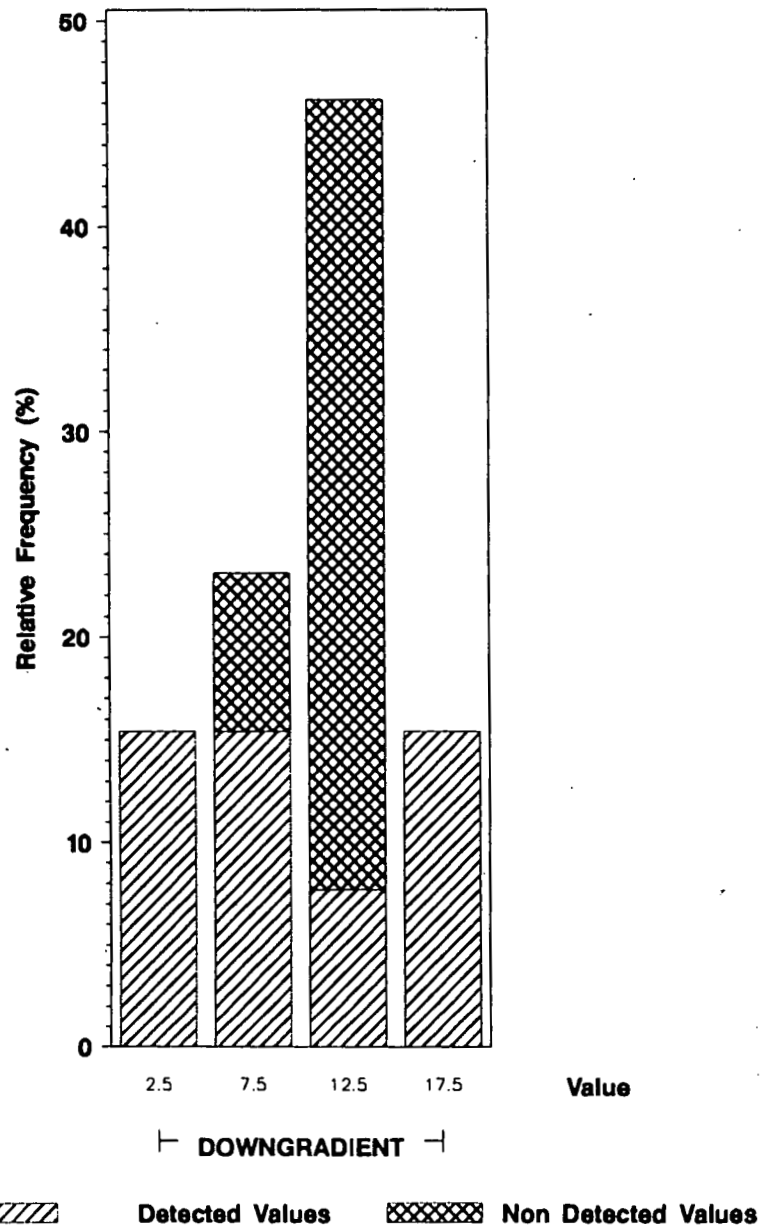
ANALYTE = CHLORIDE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total CHROMIUM (ug/L) in Groundwater

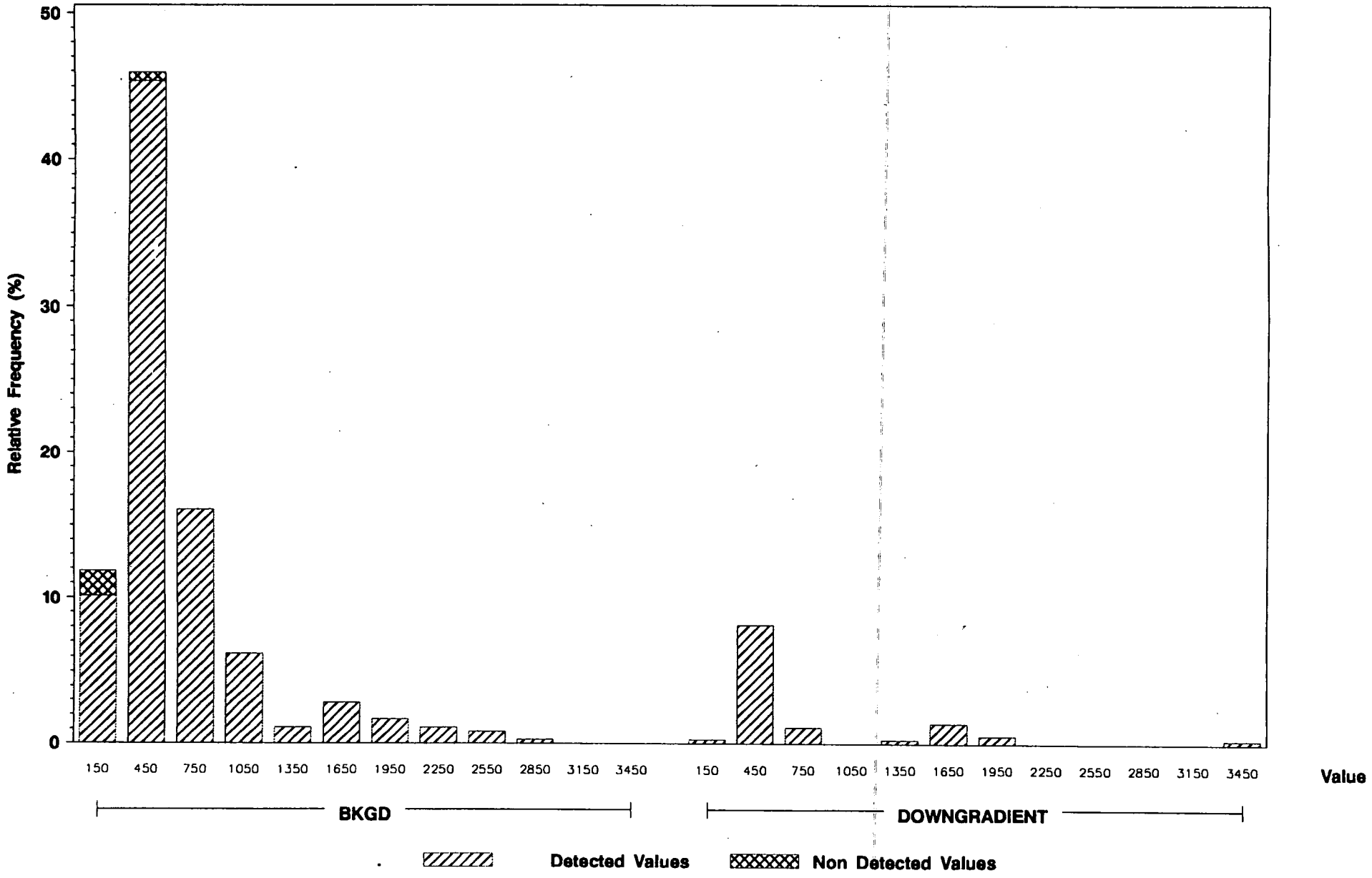
ANALYTE = CHROMIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total FLUORIDE (ug/L) in Groundwater

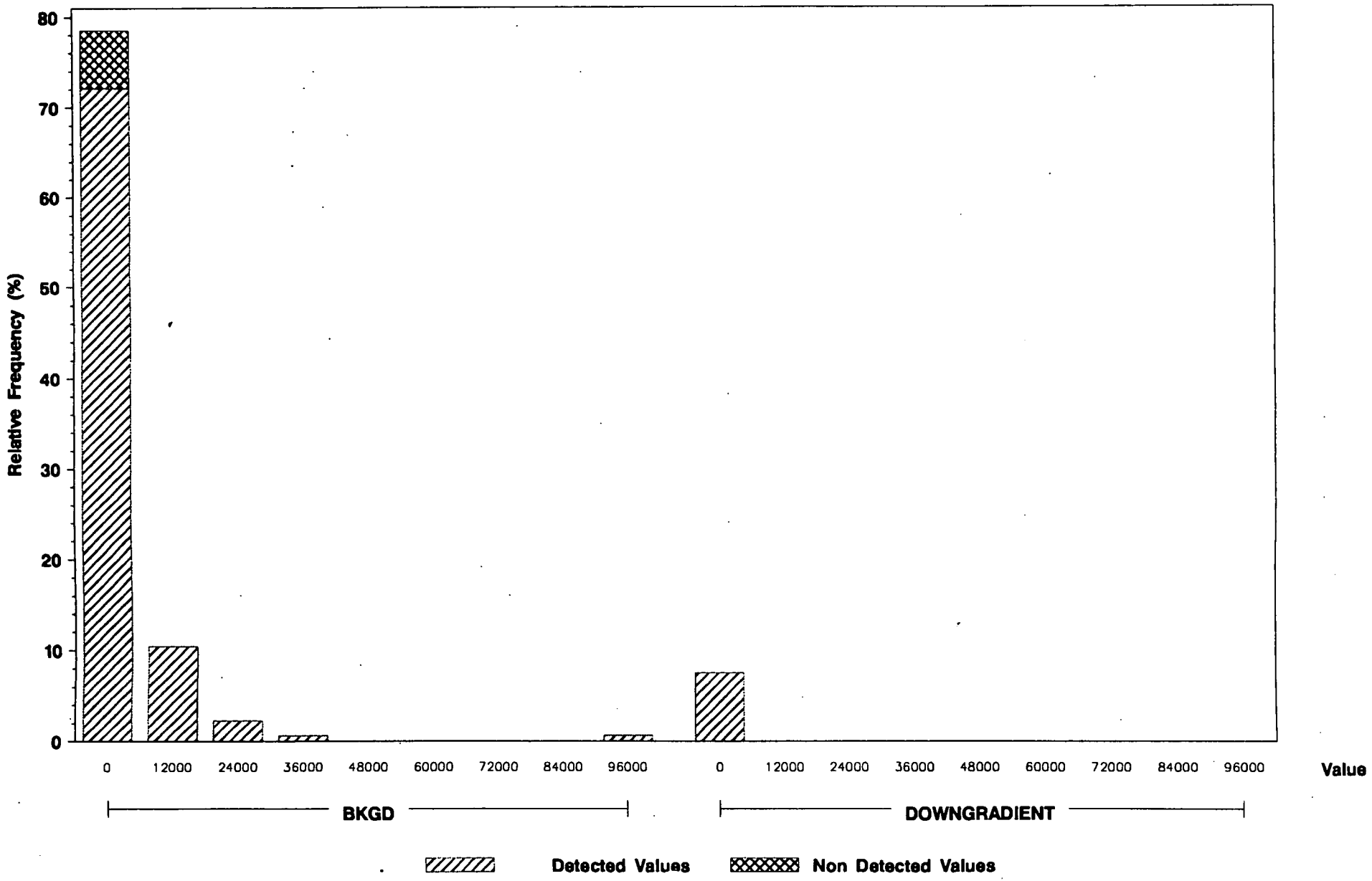
ANALYTE = FLUORIDE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total IRON (ug/L) in Groundwater

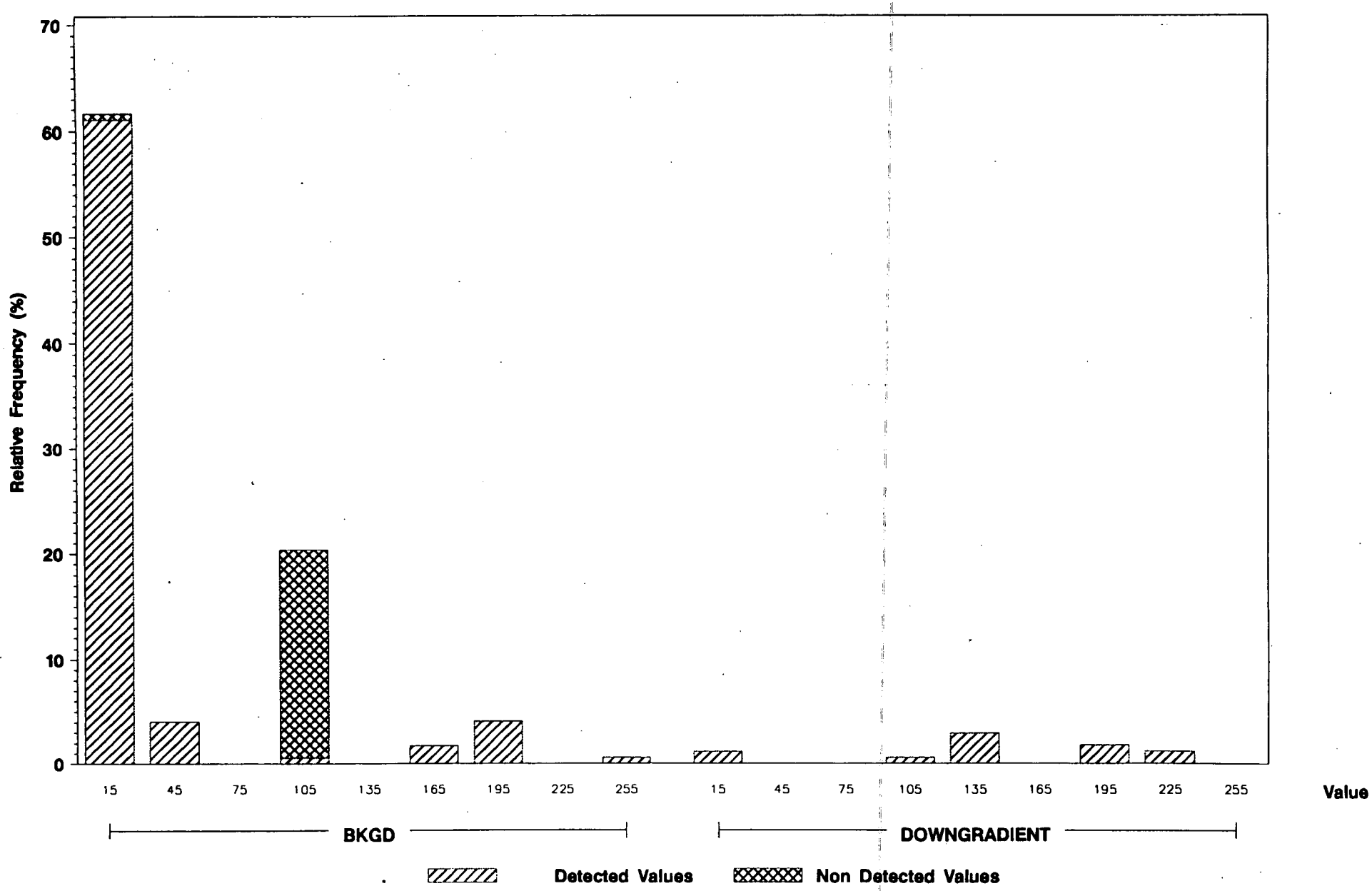
ANALYTE = IRON



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total LITHIUM (ug/L) in Groundwater

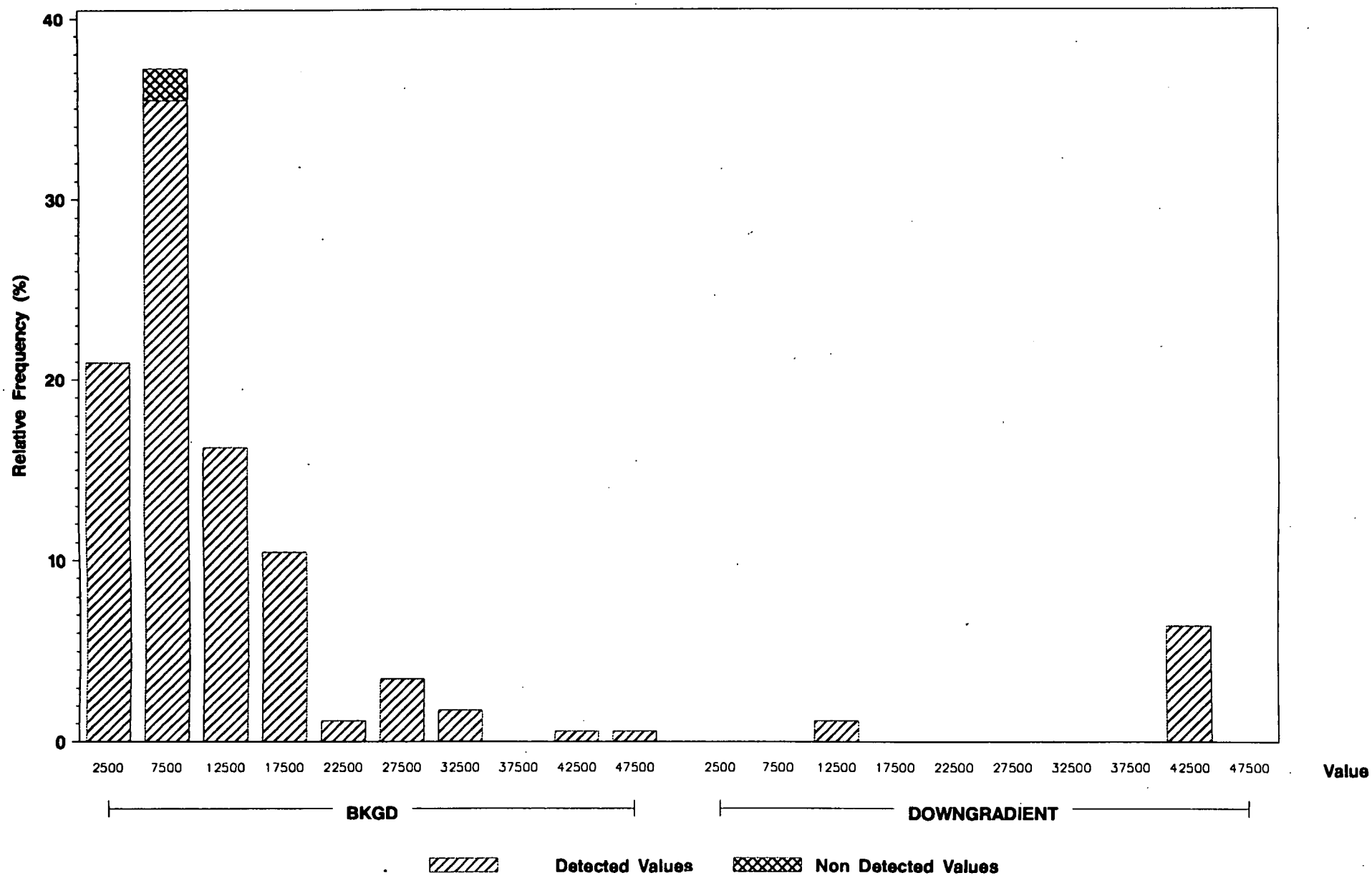
ANALYTE=LITHIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total MAGNESIUM (ug/L) in Groundwater

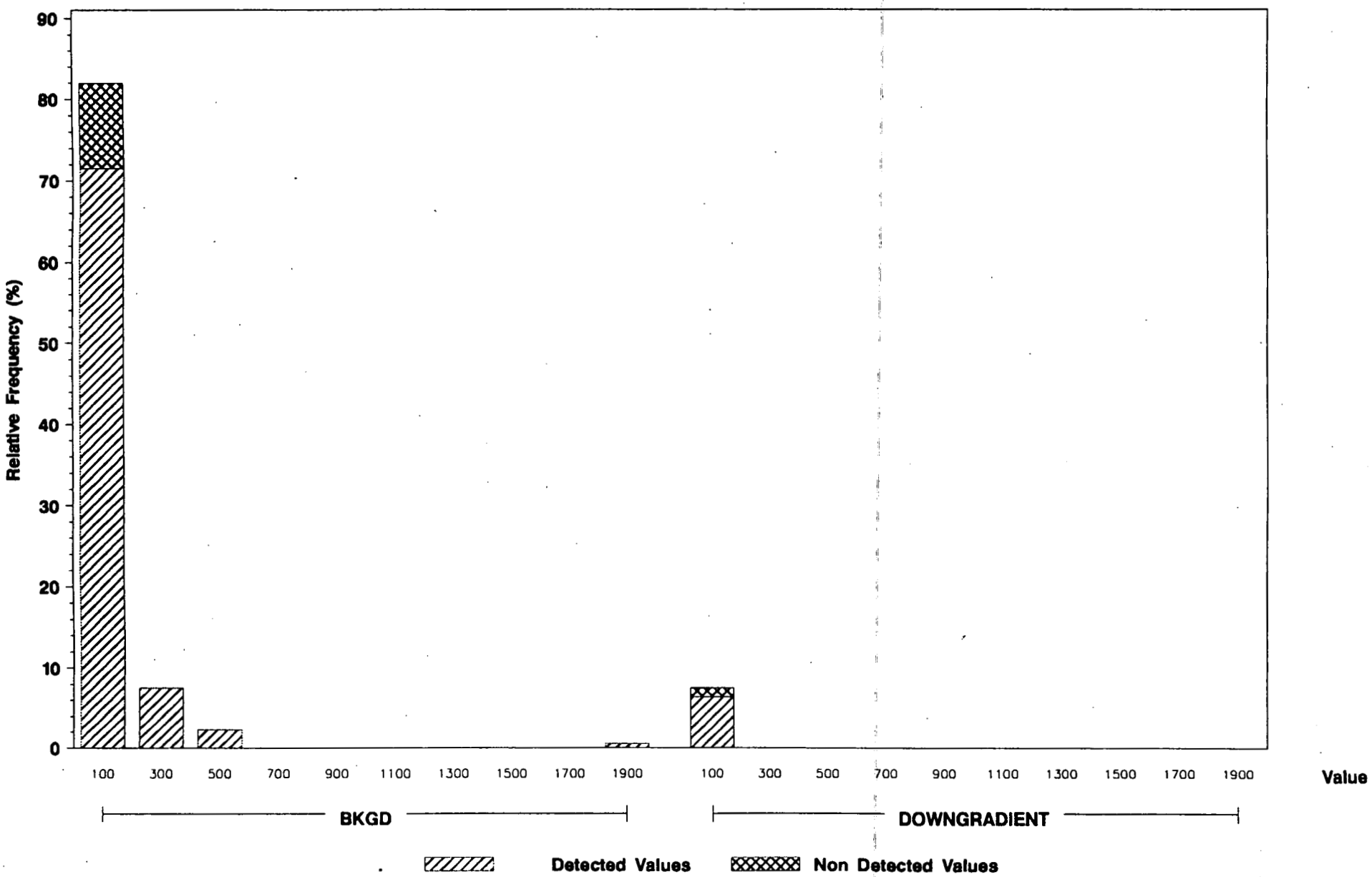
ANALYTE = MAGNESIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total MANGANESE (ug/L) in Groundwater

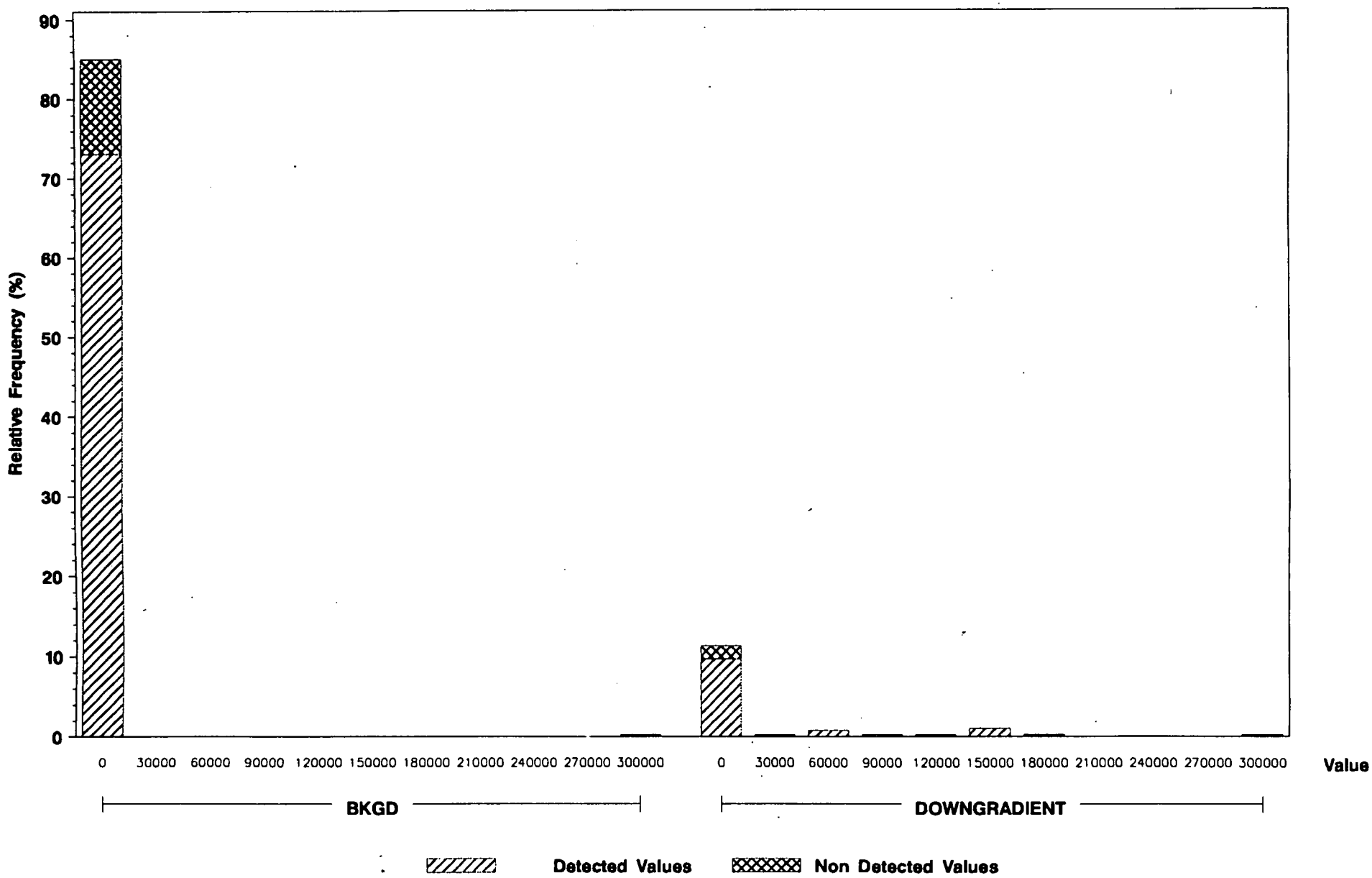
ANALYTE = MANGANESE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Groundwater

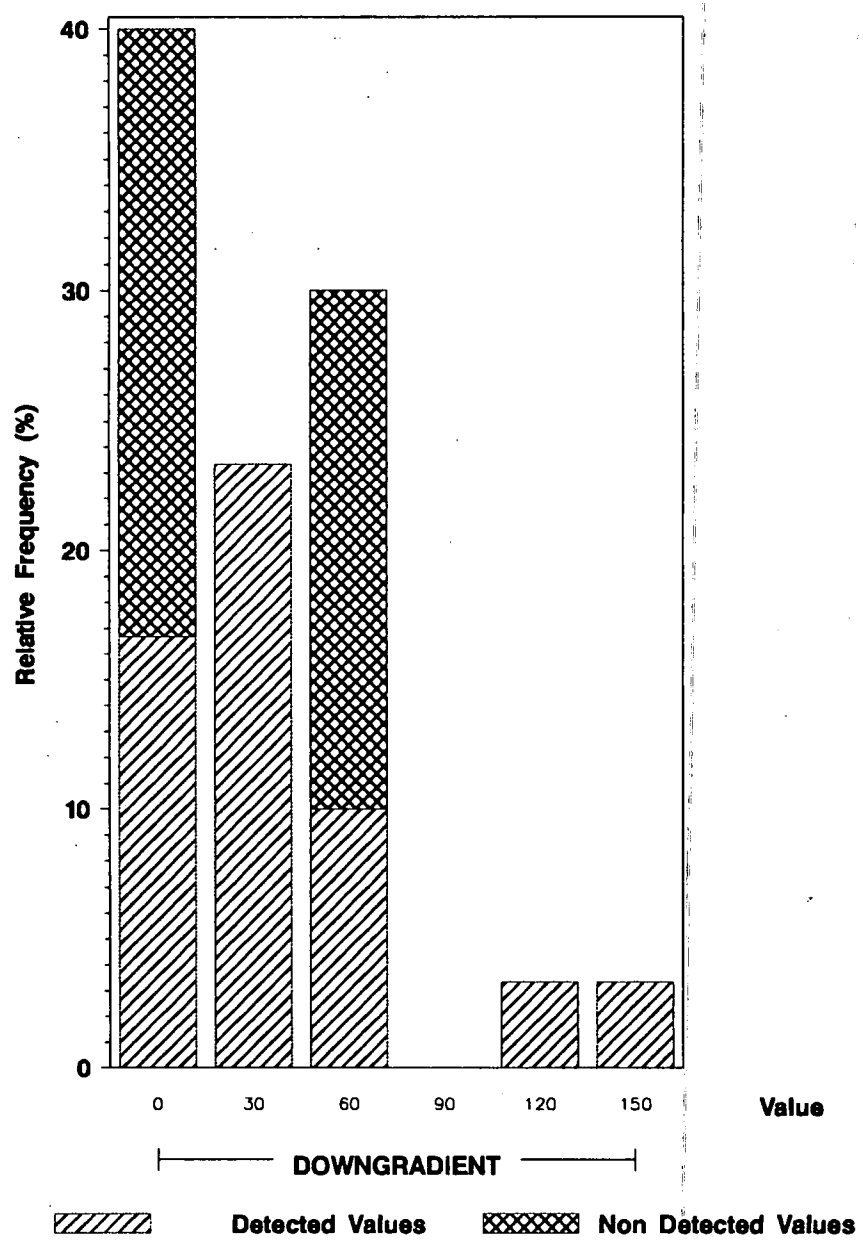
ANALYTE = NITRATE/NITRITE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total ORTHOPHOSPHATE (ug/L) in Groundwater

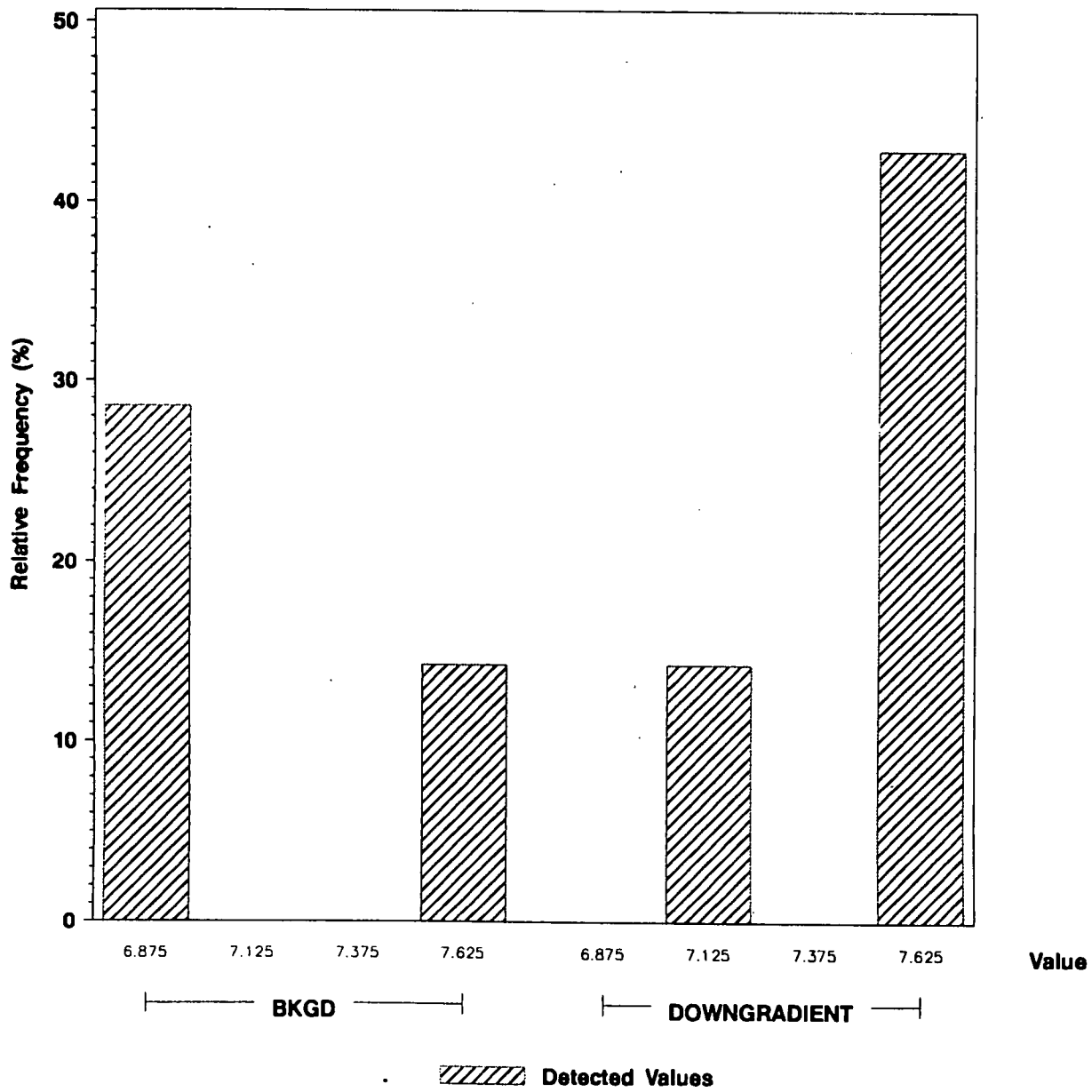
ANALYTE = ORTHOPHOSPHATE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## pH (Standard Units) in Groundwater

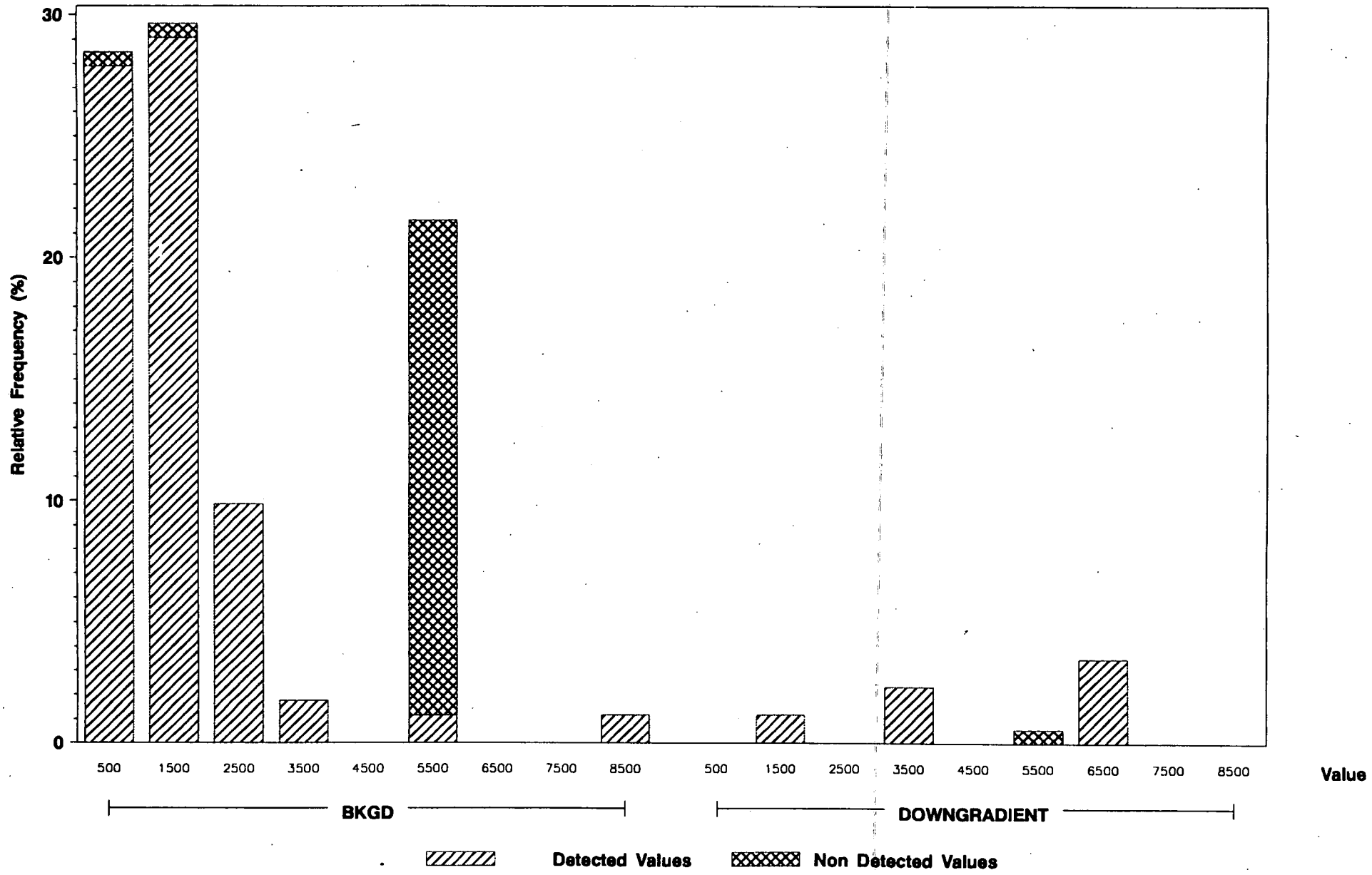
ANALYTE = pH



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total POTASSIUM (ug/L) in Groundwater

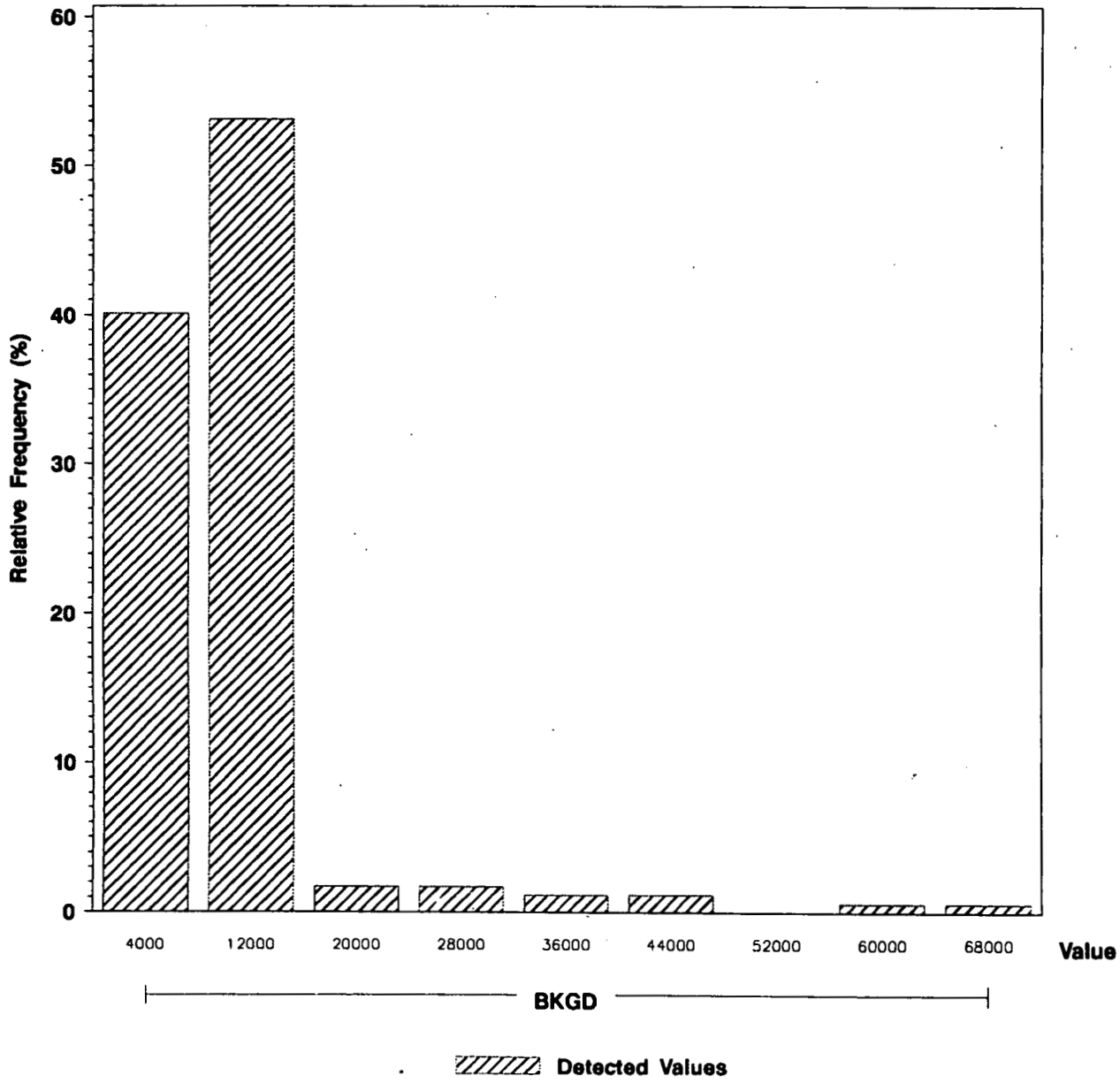
ANALYTE = POTASSIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total SILICA (ug/L) in Groundwater

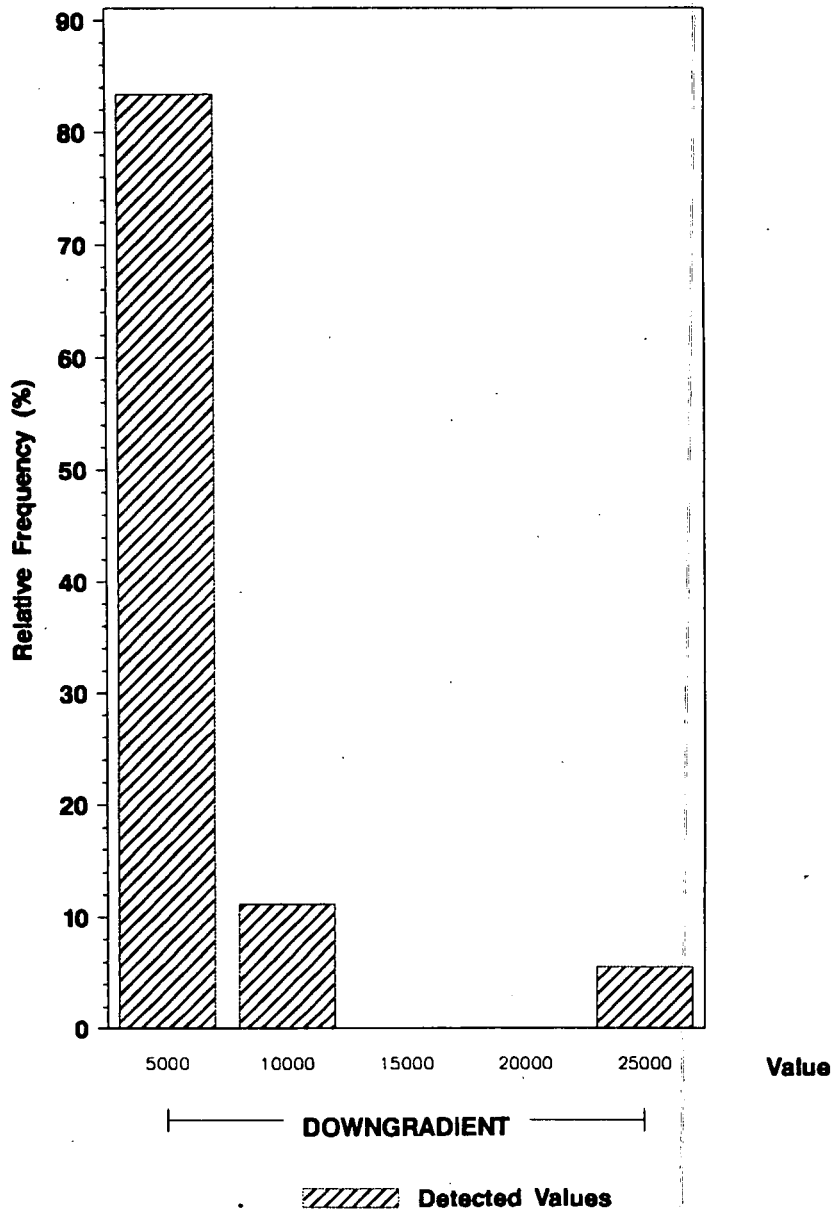
ANALYTE = SILICA



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total SILICA, DISSOLVED (ug/L) in Groundwater

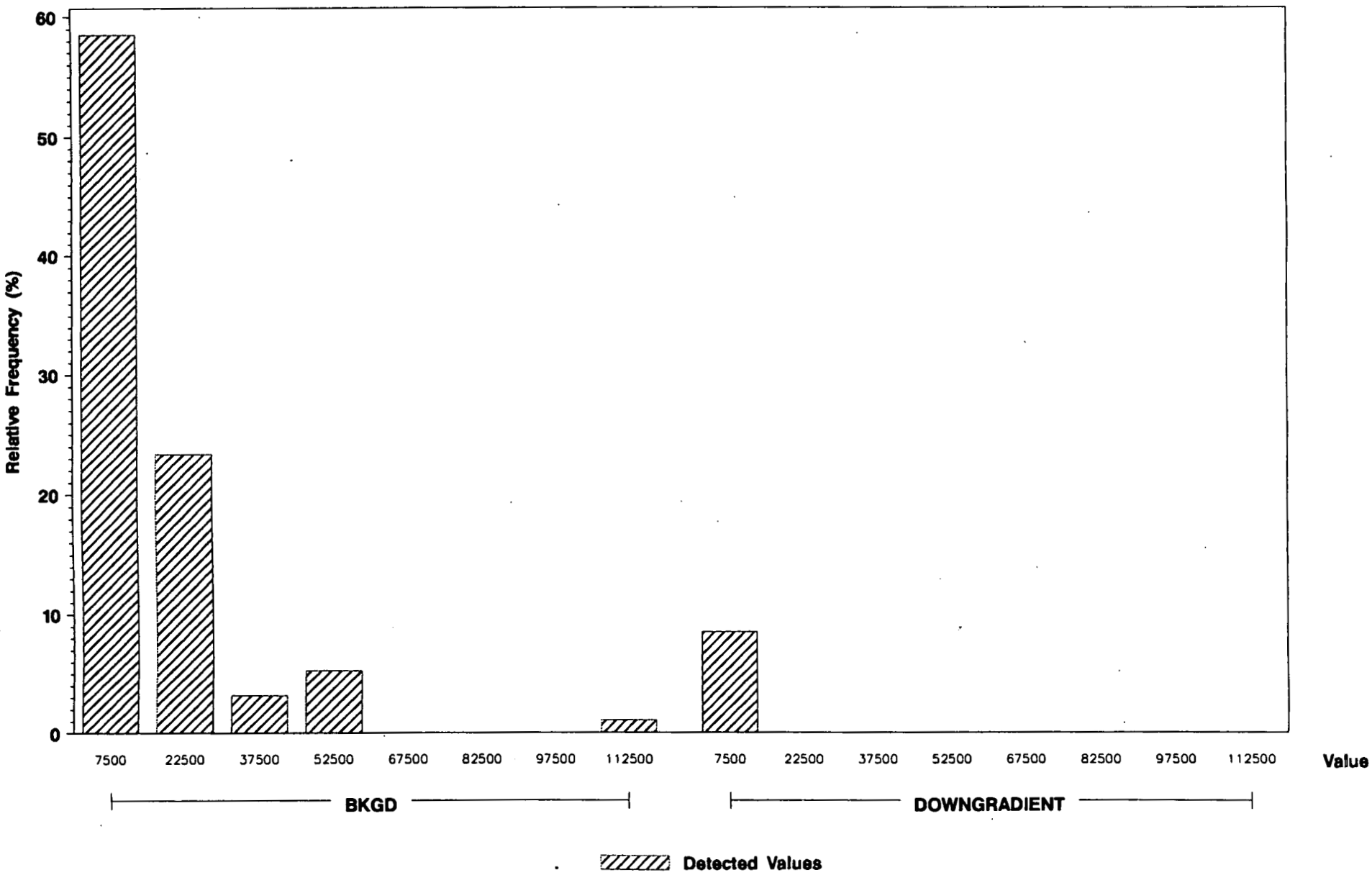
ANALYTE = SILICA, DISSOLVED



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total SILICON (ug/L) in Groundwater

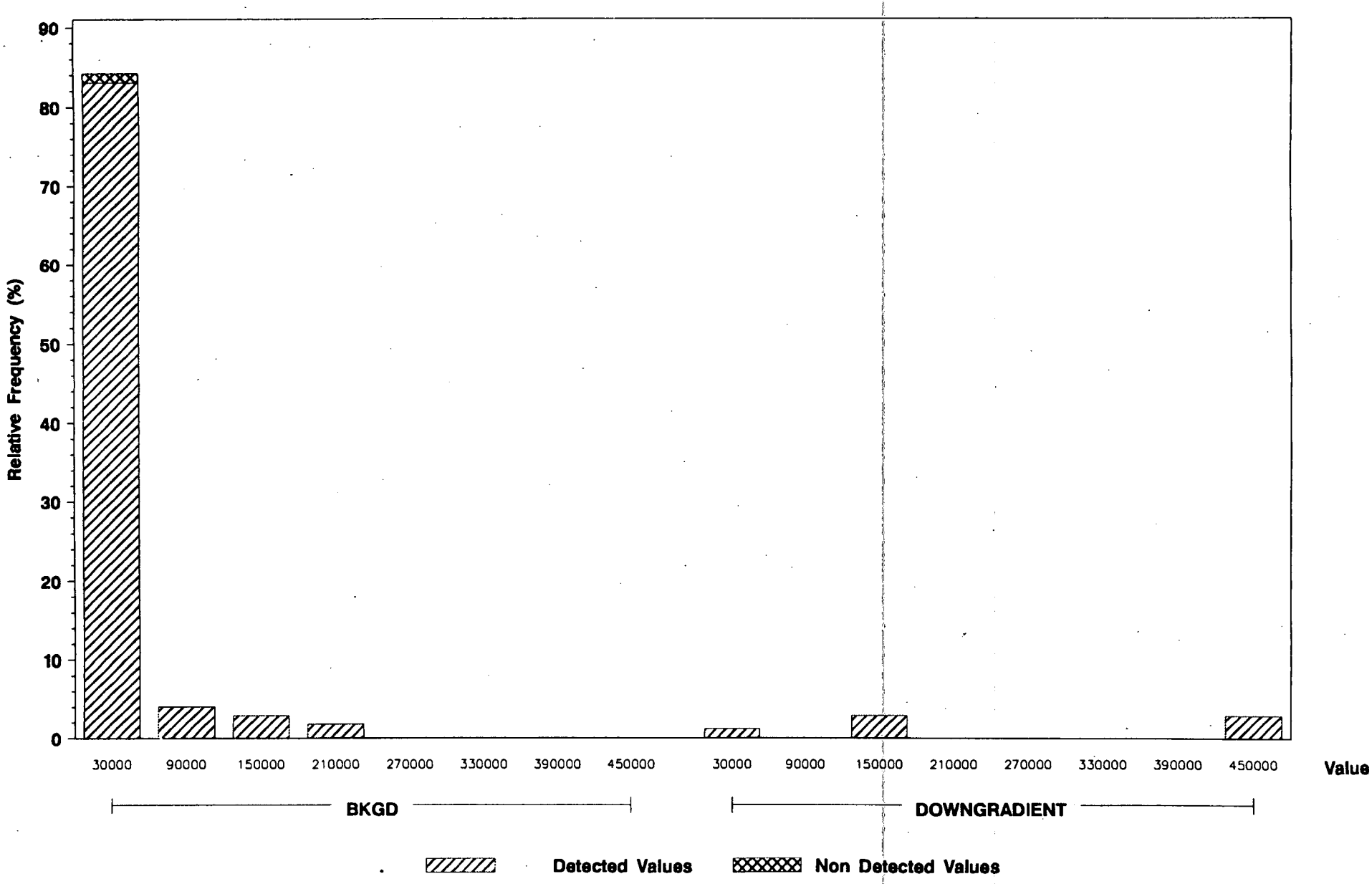
ANALYTE=SILICON



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total SODIUM (ug/L) in Groundwater

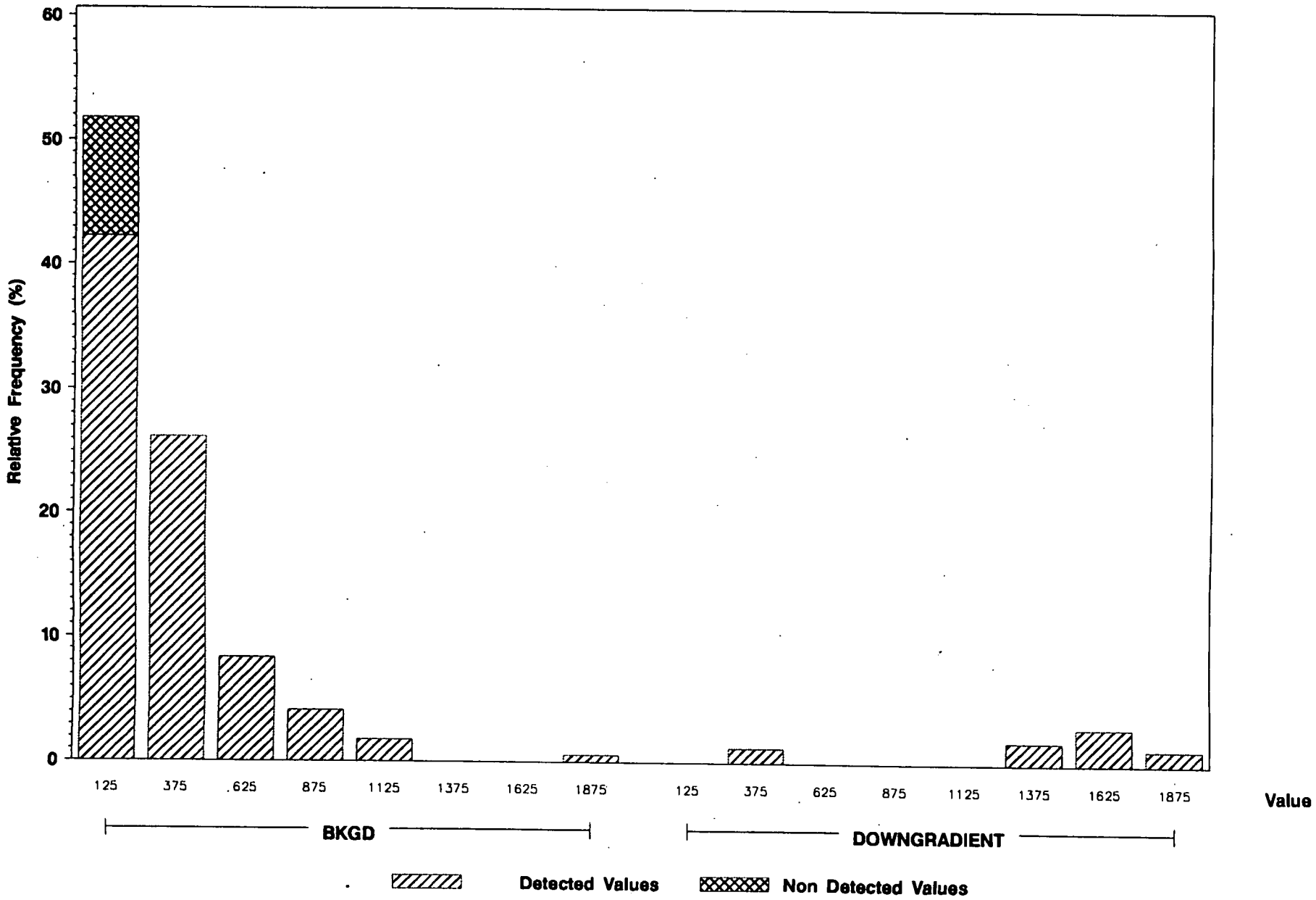
ANALYTE=SODIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total STRONTIUM (ug/L) in Groundwater

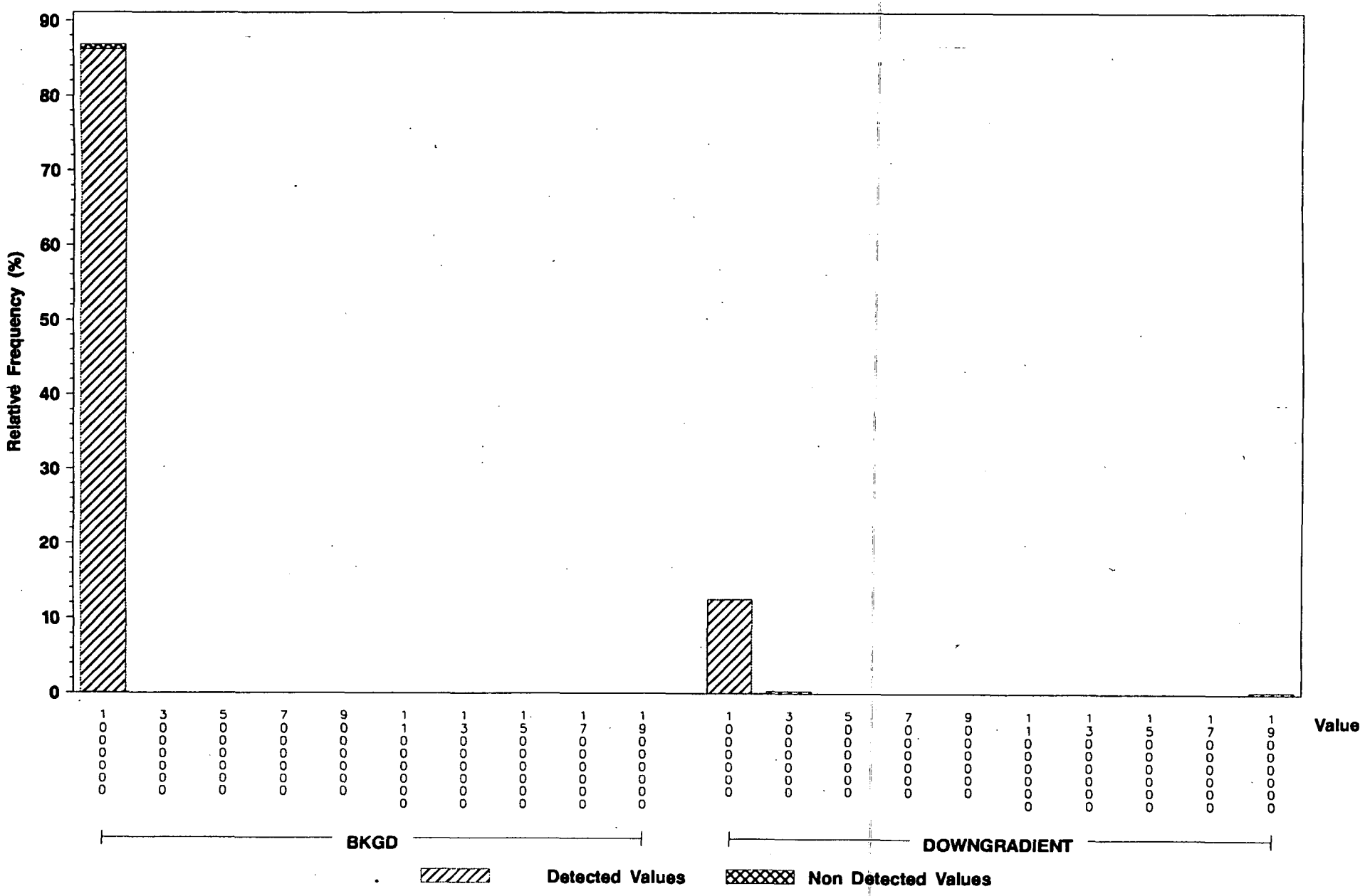
ANALYTE=STRONTIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total SULFATE (ug/L) in Groundwater

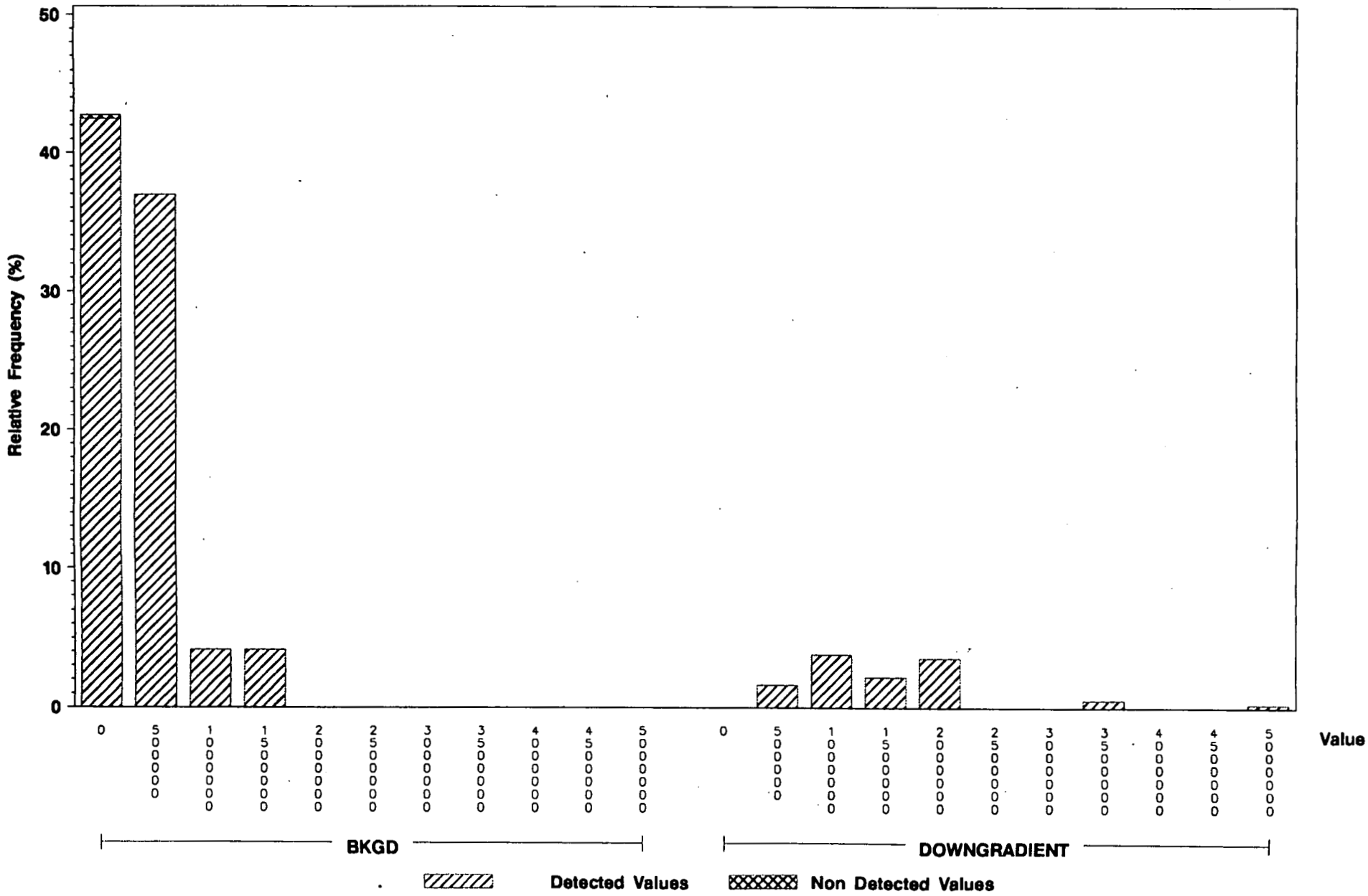
ANALYTE = SULFATE



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## TOTAL DISSOLVED SOLIDS (ug/L) in Groundwater

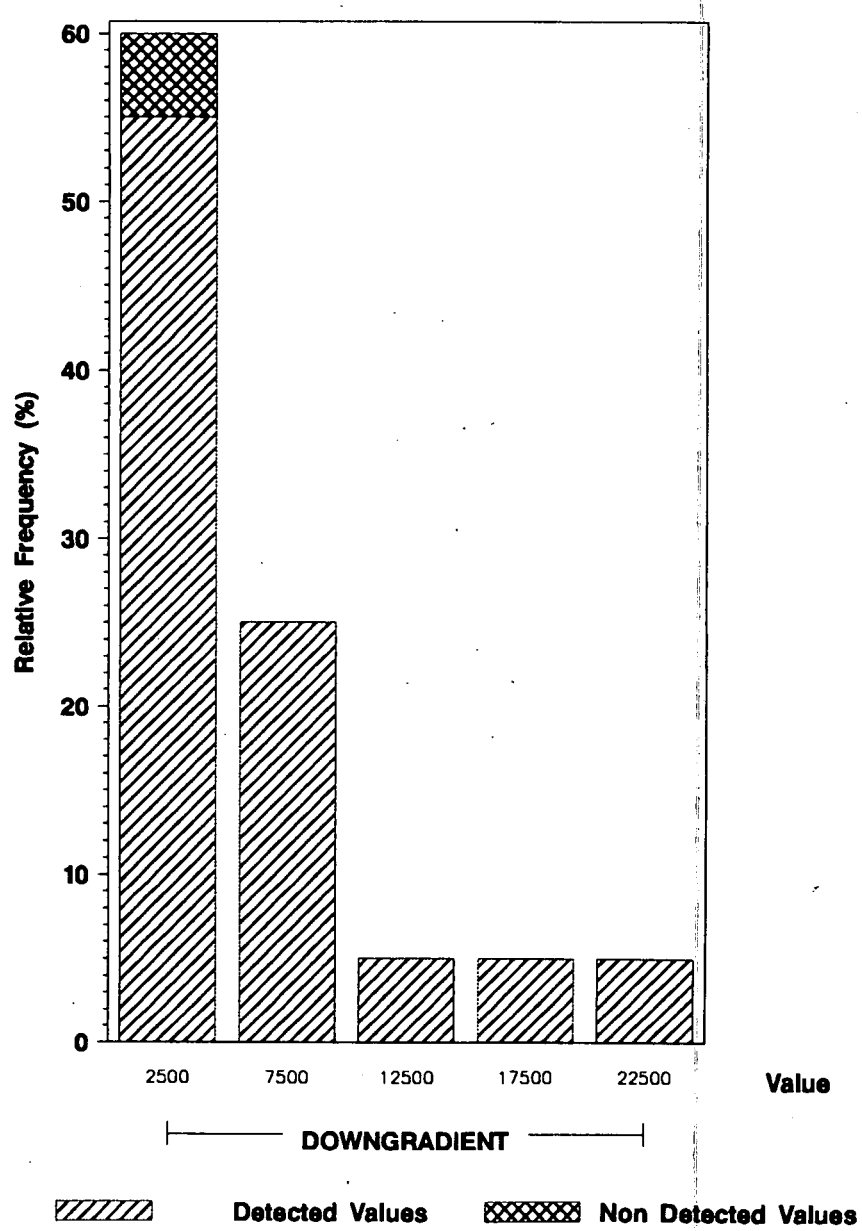
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## TOTAL ORGANIC CARBON (ug/L) in Groundwater

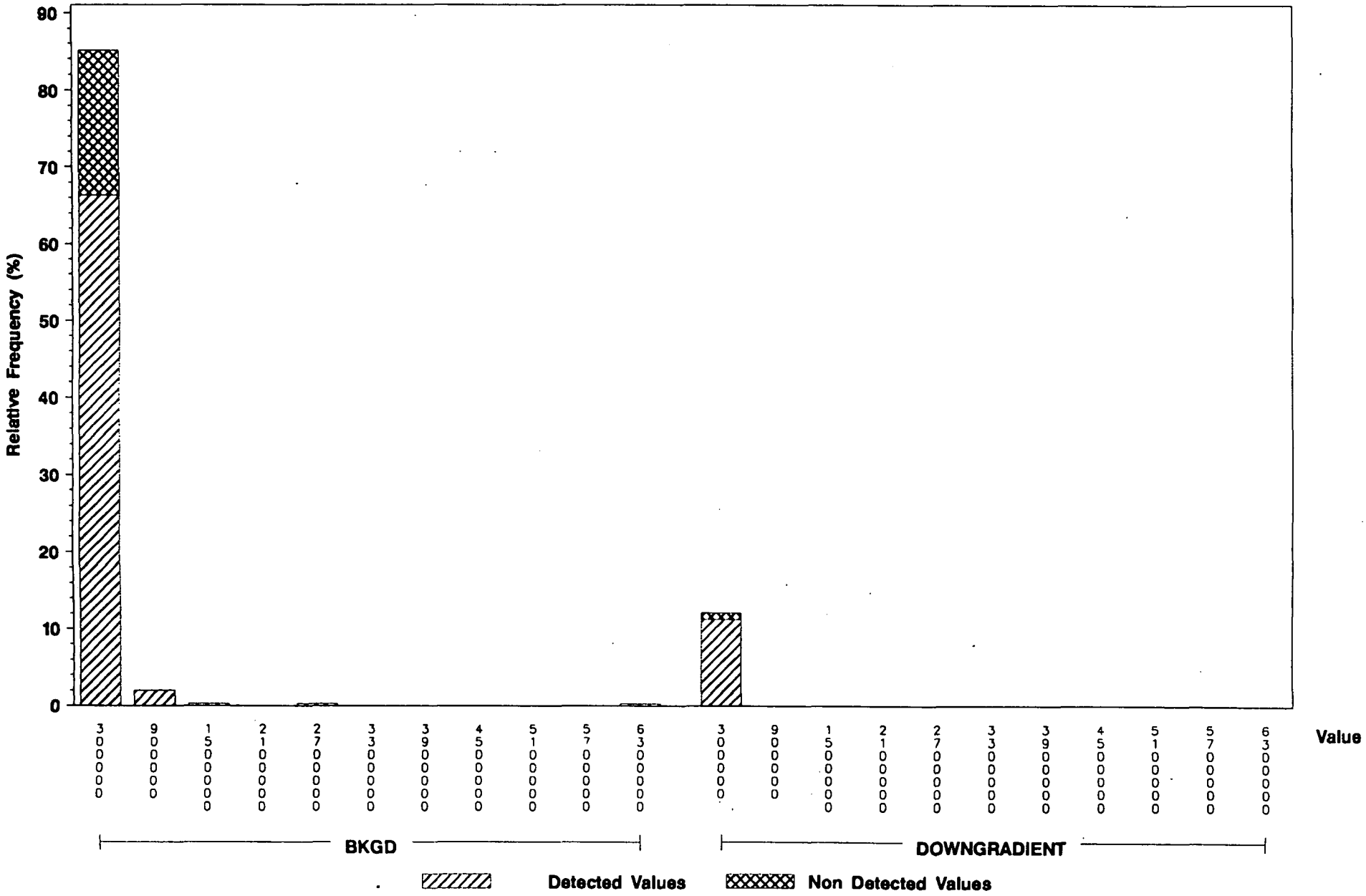
ANALYTE = TOTAL ORGANIC CARBON



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## TOTAL SUSPENDED SOLIDS (ug/L) in Groundwater

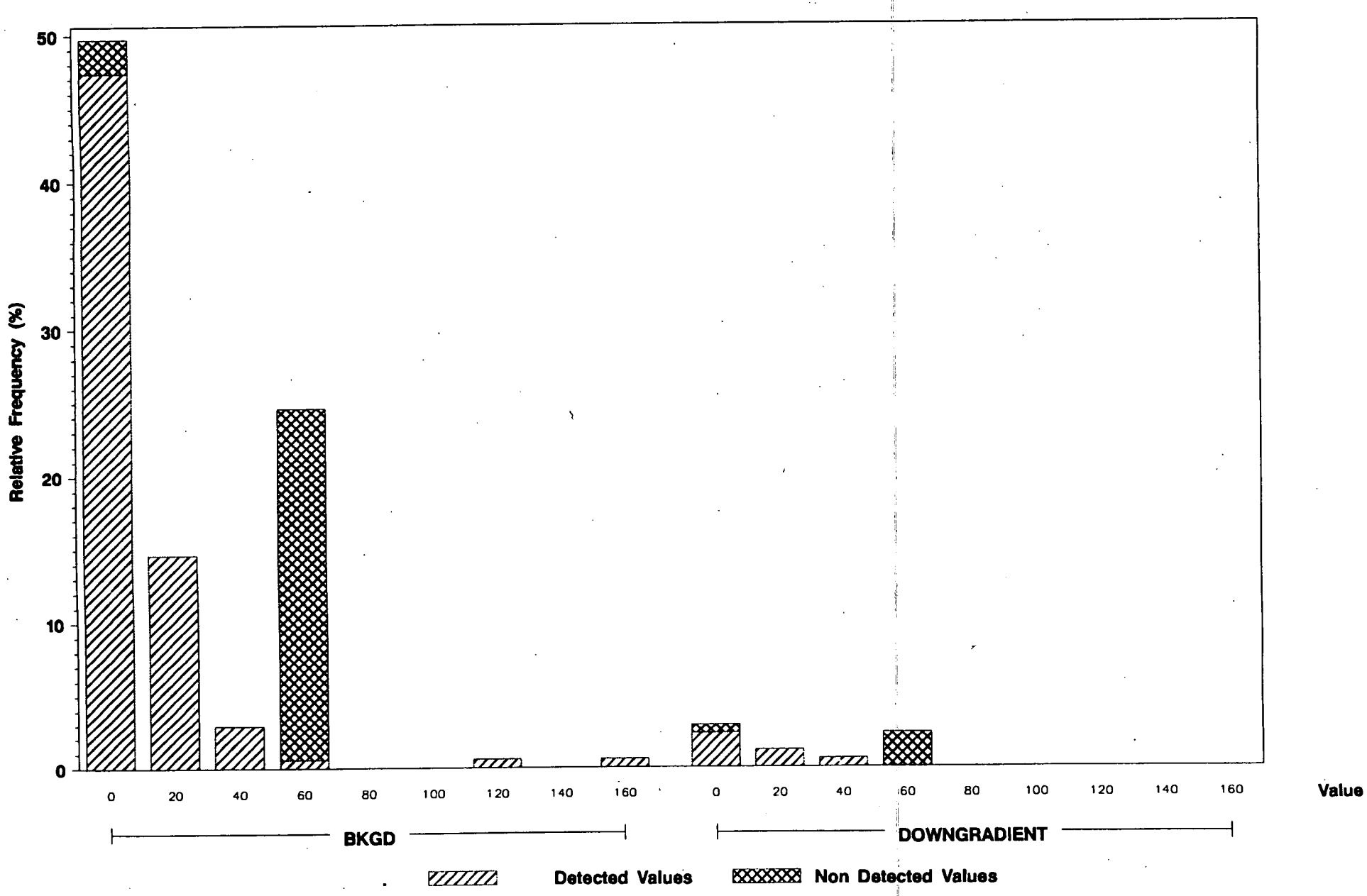
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total VANADIUM (ug/L) in Groundwater

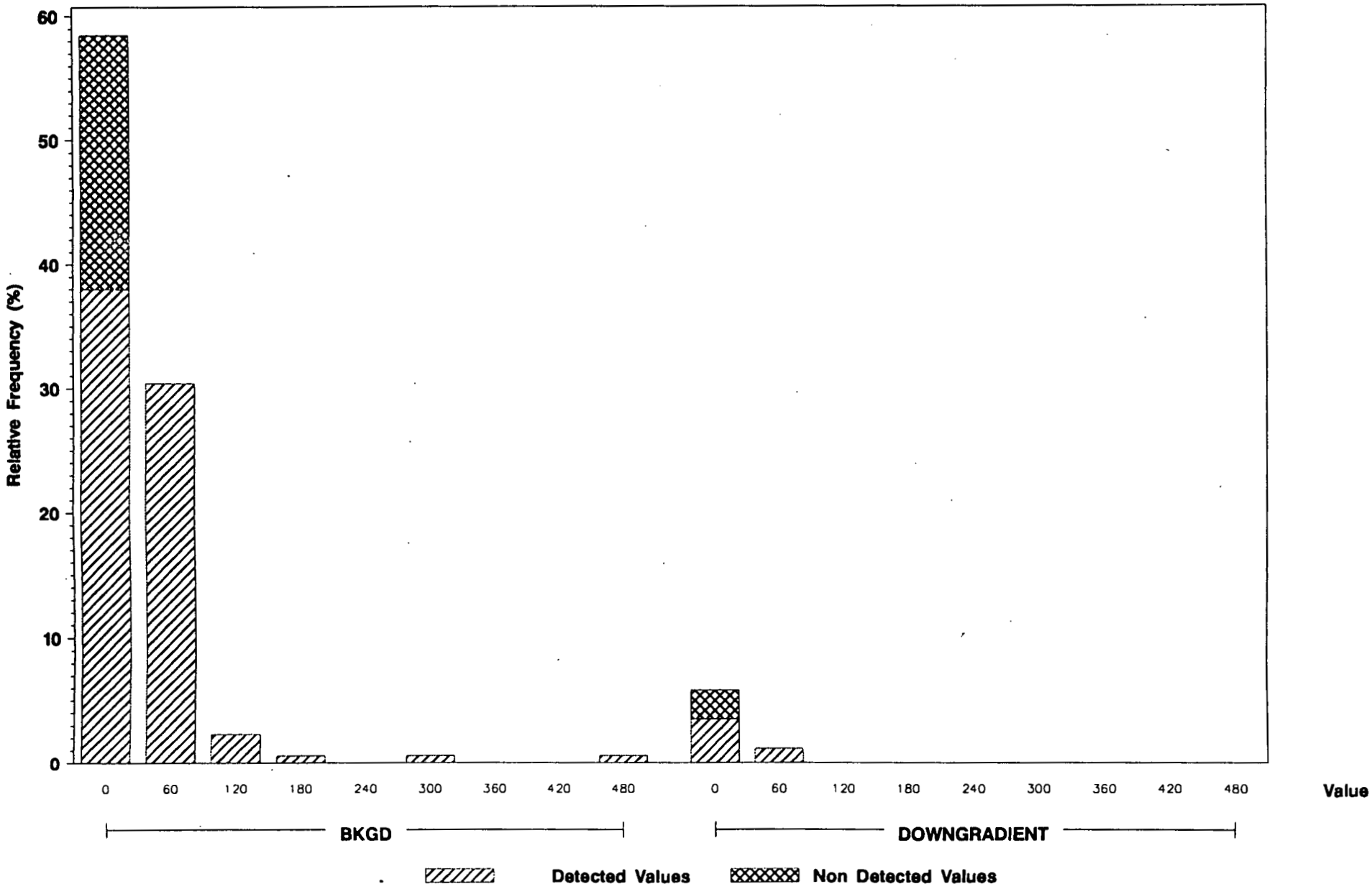
ANALYTE = VANADIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total ZINC (ug/L) in Groundwater

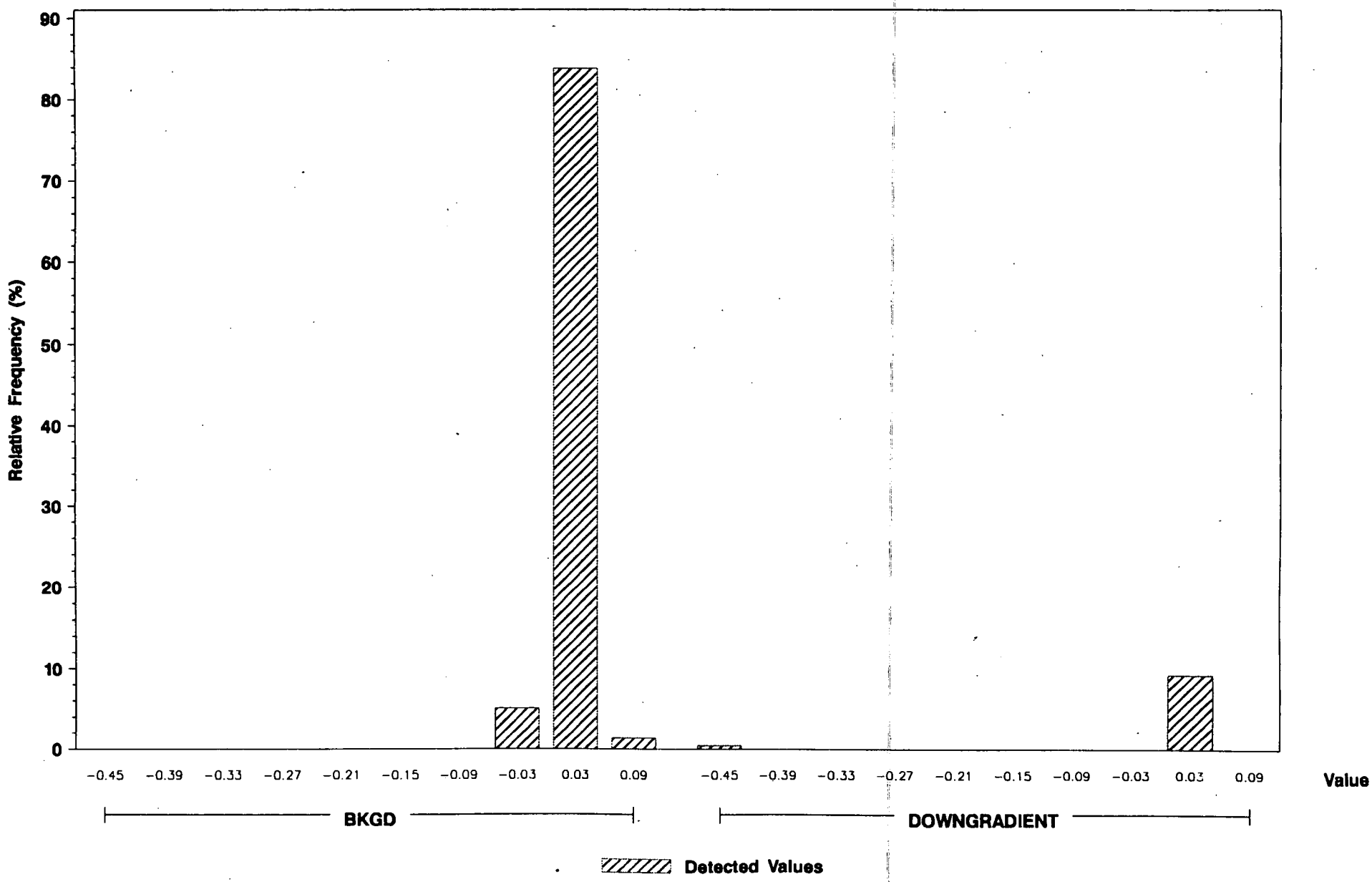
ANALYTE=ZINC



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Groundwater

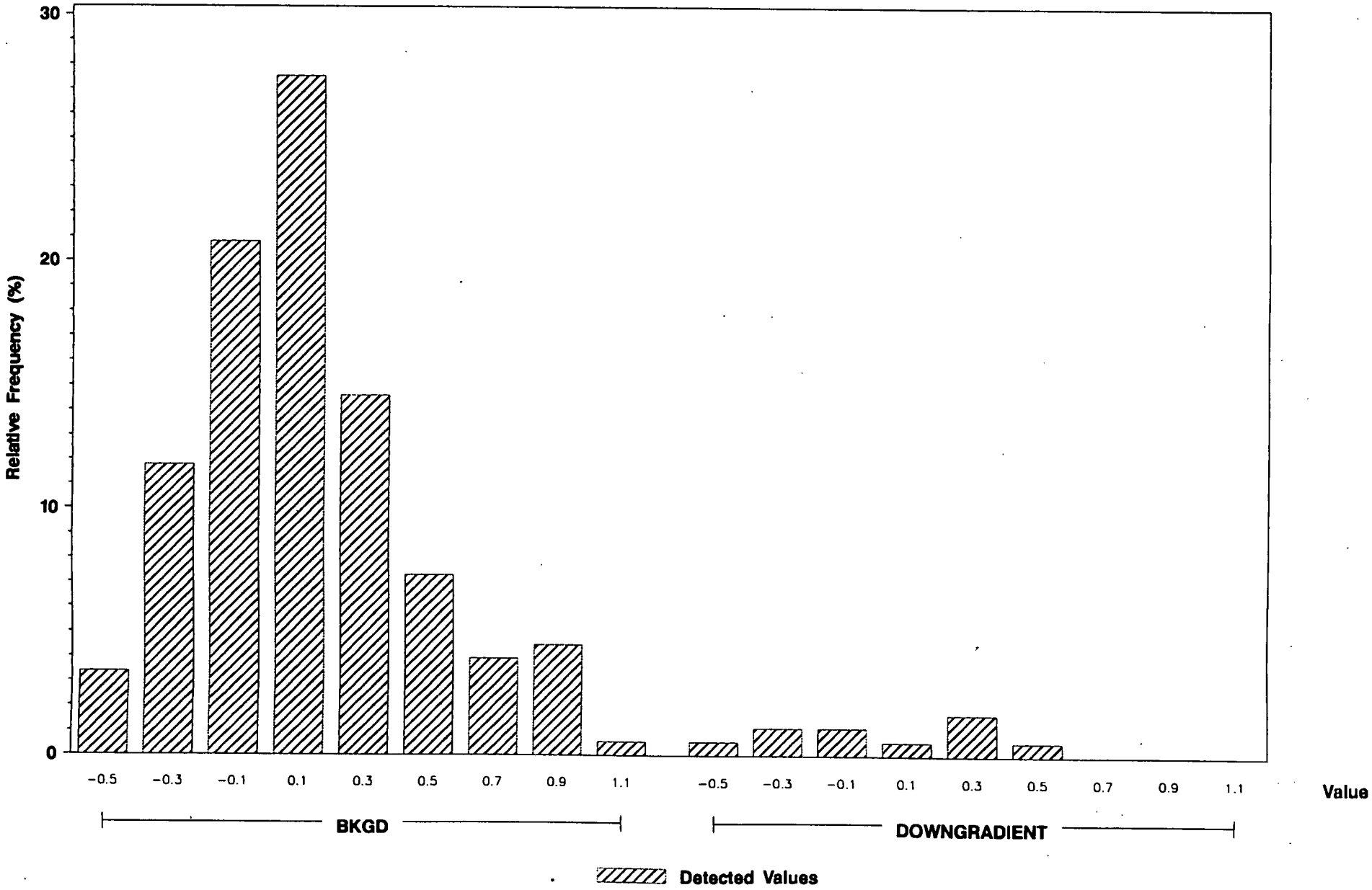
ANALYTE=AMERICIUM-241



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Groundwater

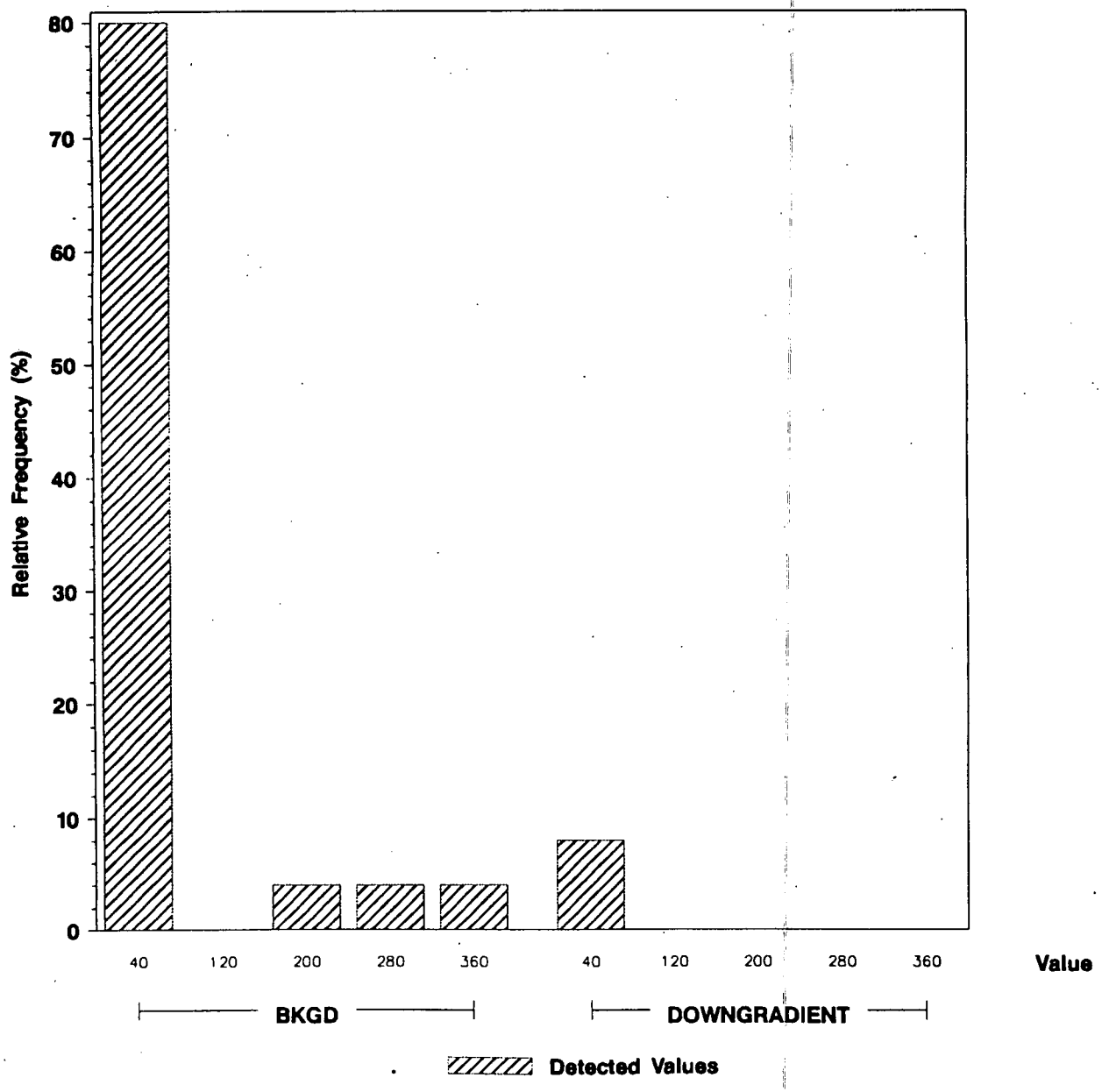
ANALYTE = CESIUM-137



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Groundwater

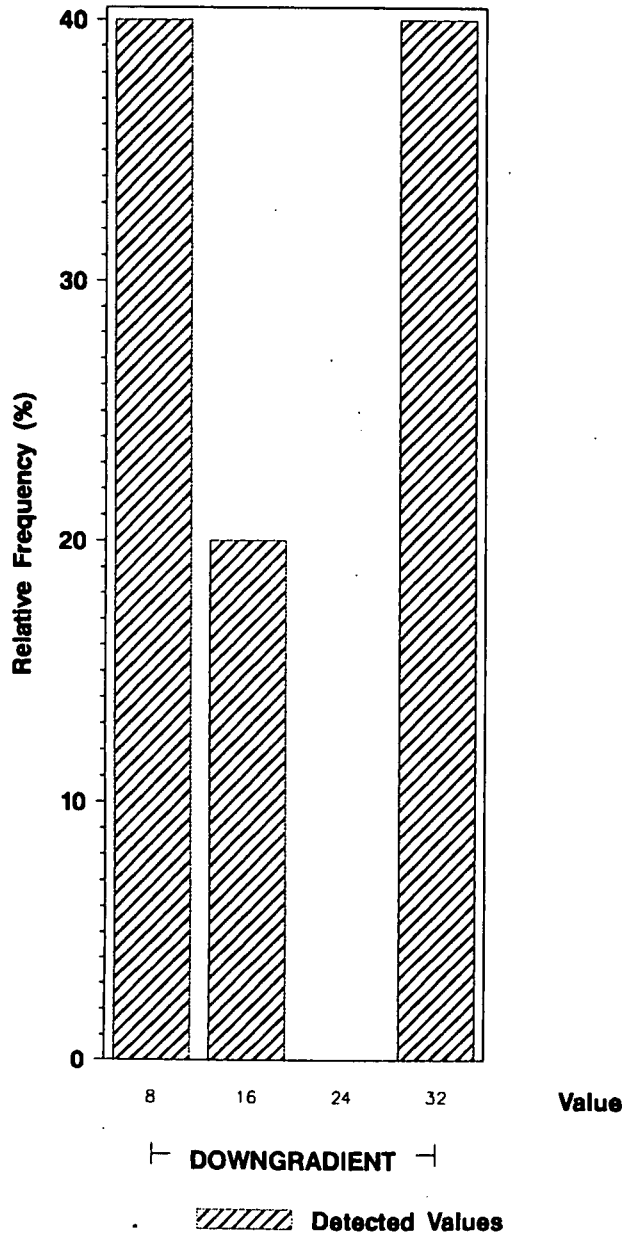
ANALYTE = GROSS ALPHA



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS ALPHA – DISSOLVED (pCi/L) in Groundwater

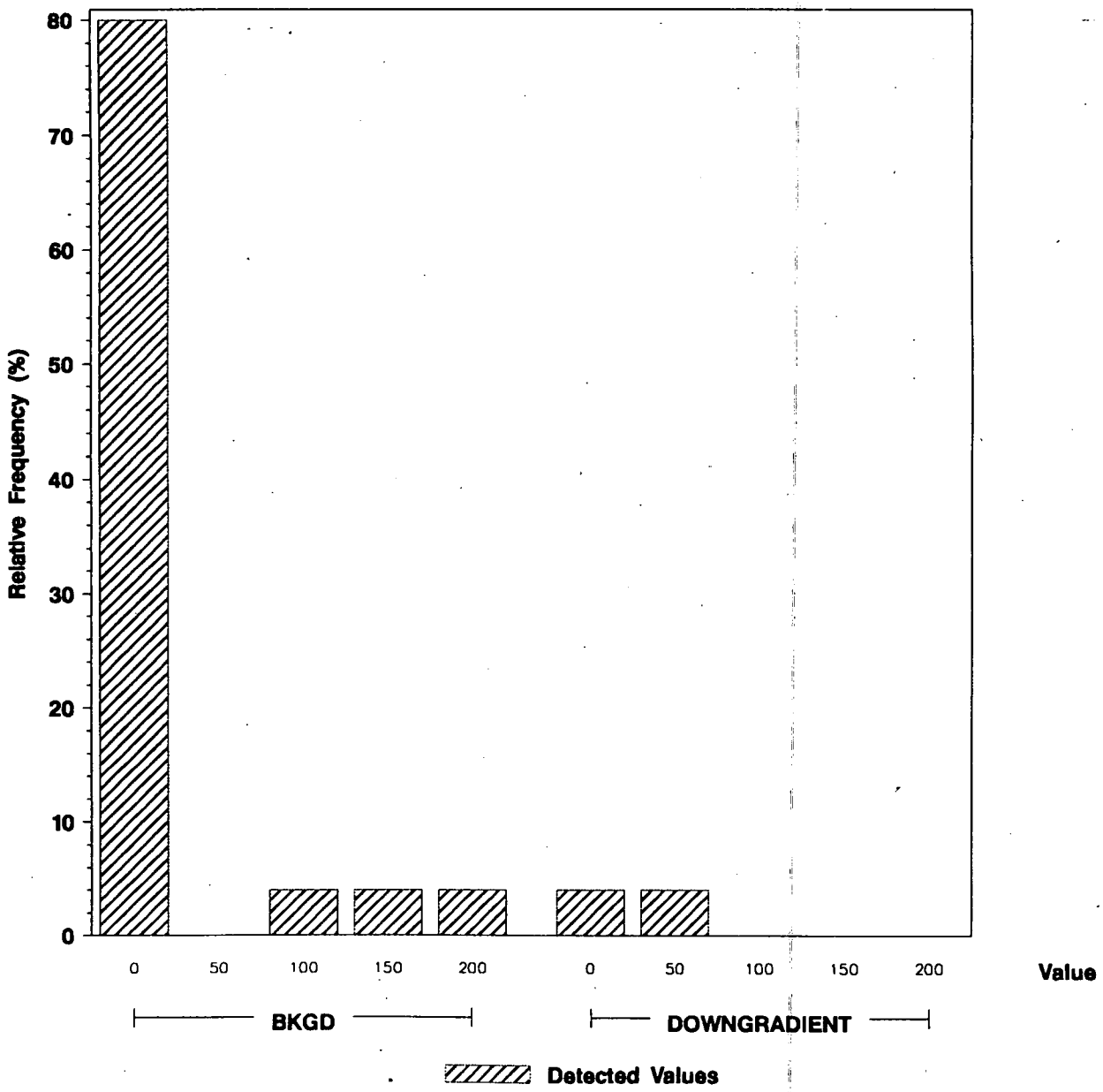
ANALYTE=GROSS ALPHA – DISSOLVED



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS BETA (pCi/L) in Groundwater

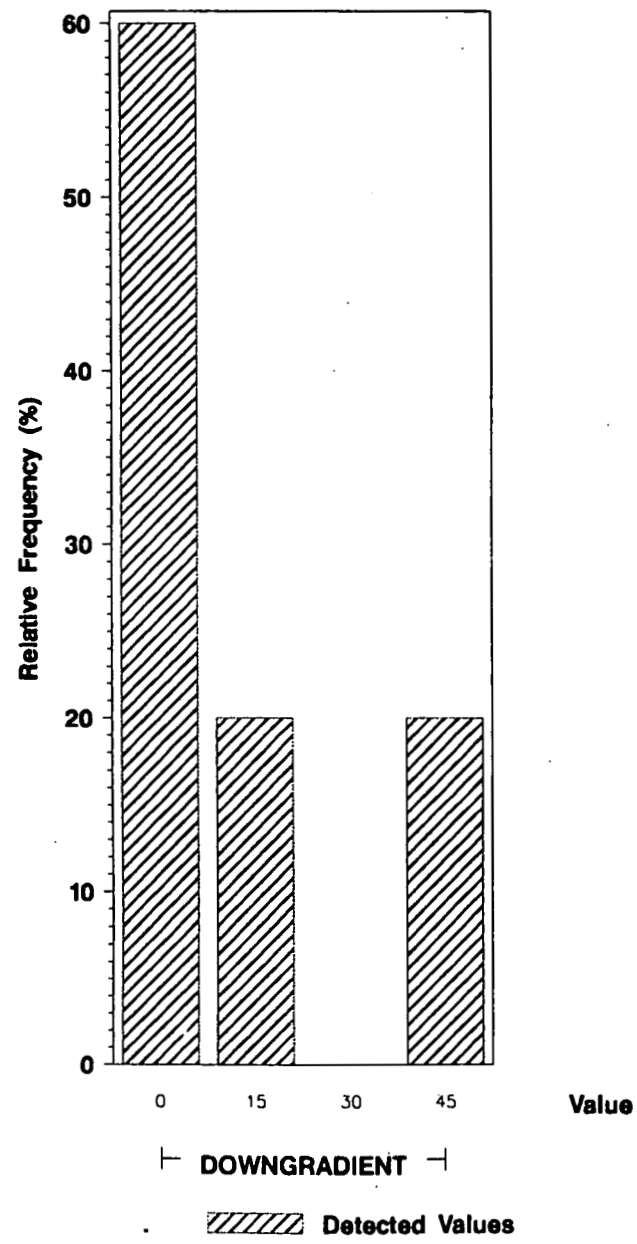
ANALYTE=GROSS BETA



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total GROSS BETA – DISSOLVED (pCi/L) in Groundwater

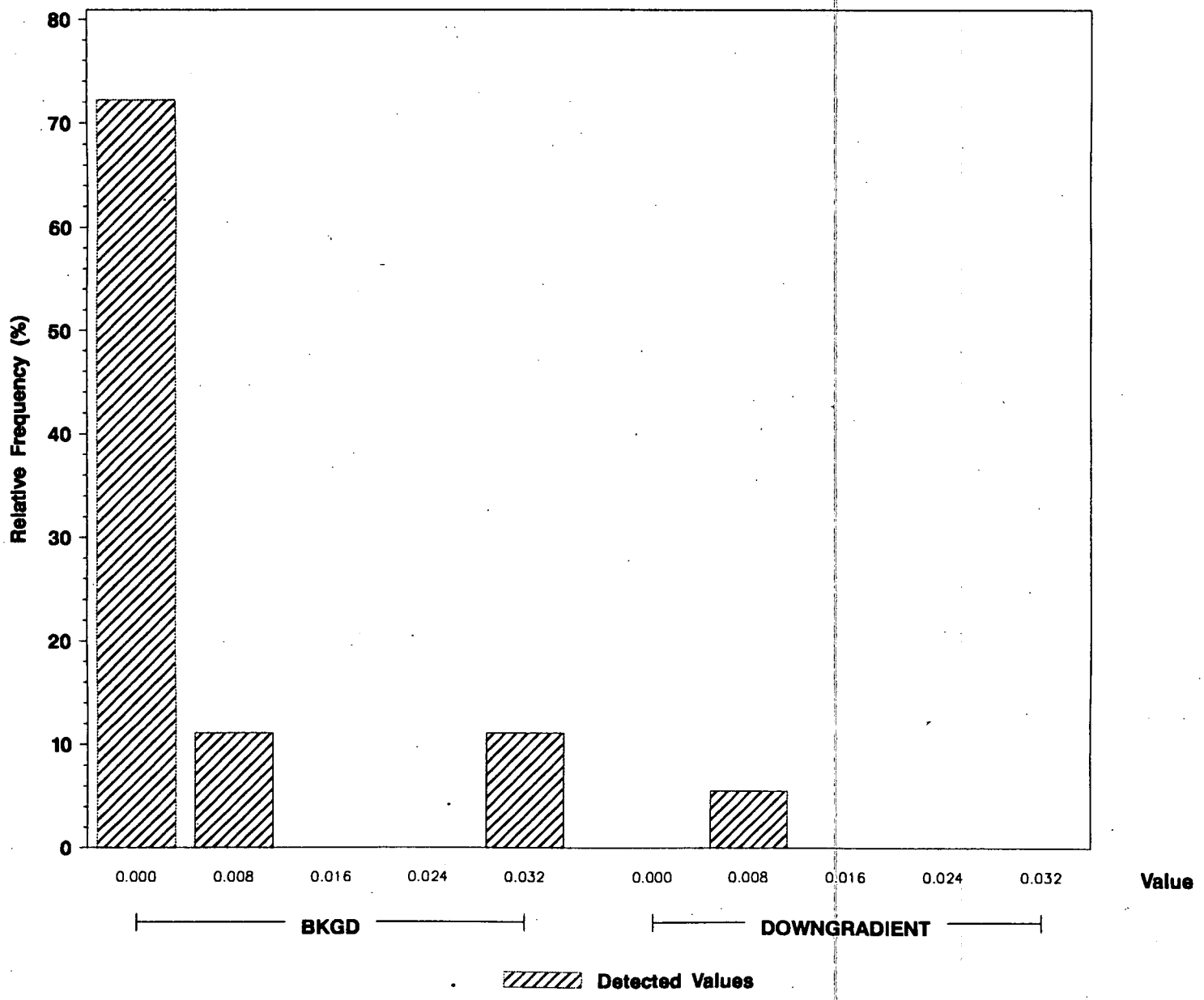
ANALYTE=GROSS BETA – DISSOLVED



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total PLUTONIUM-238 (pCi/L) in Groundwater

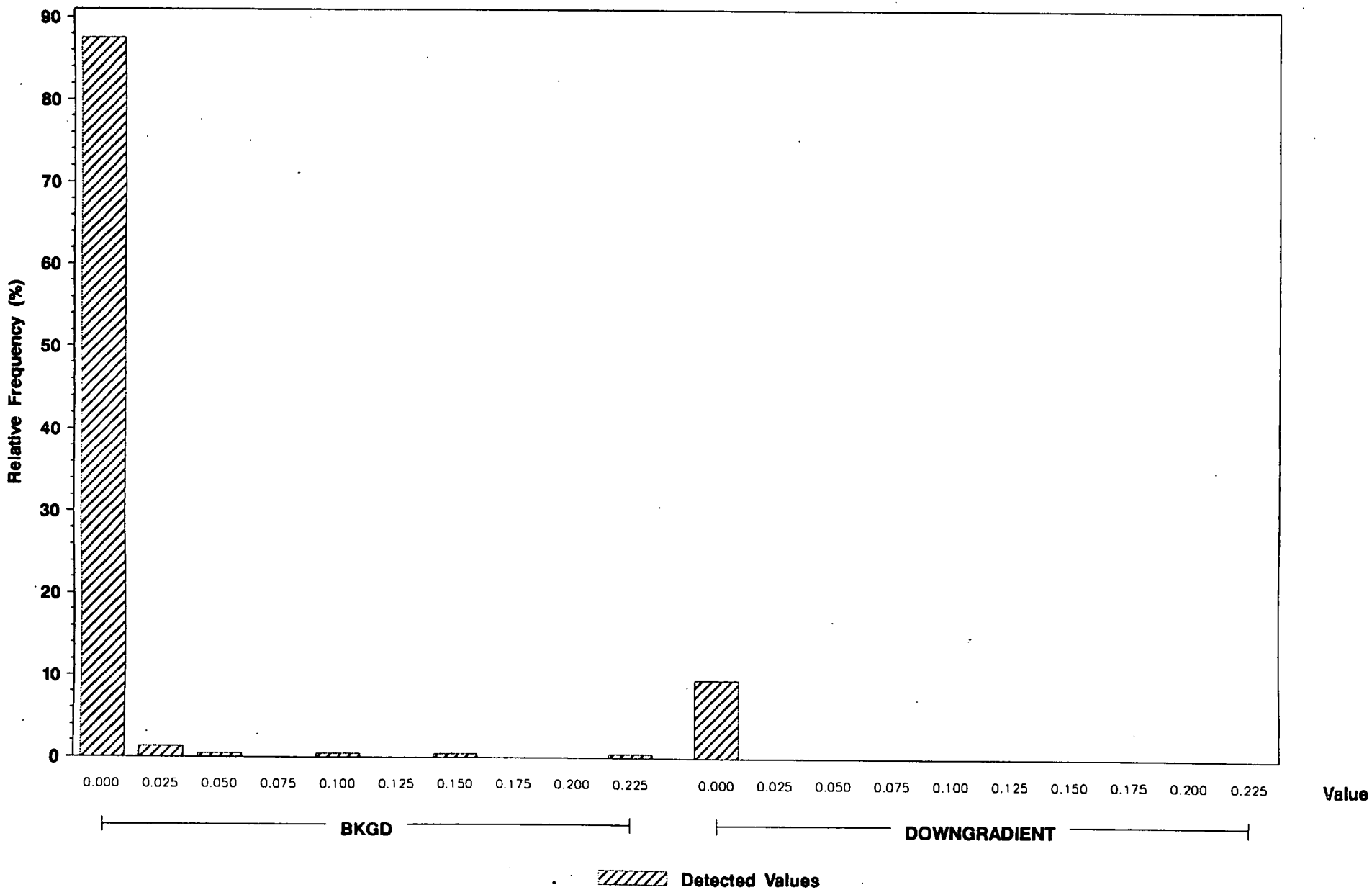
ANALYTE = PLUTONIUM-238



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Groundwater

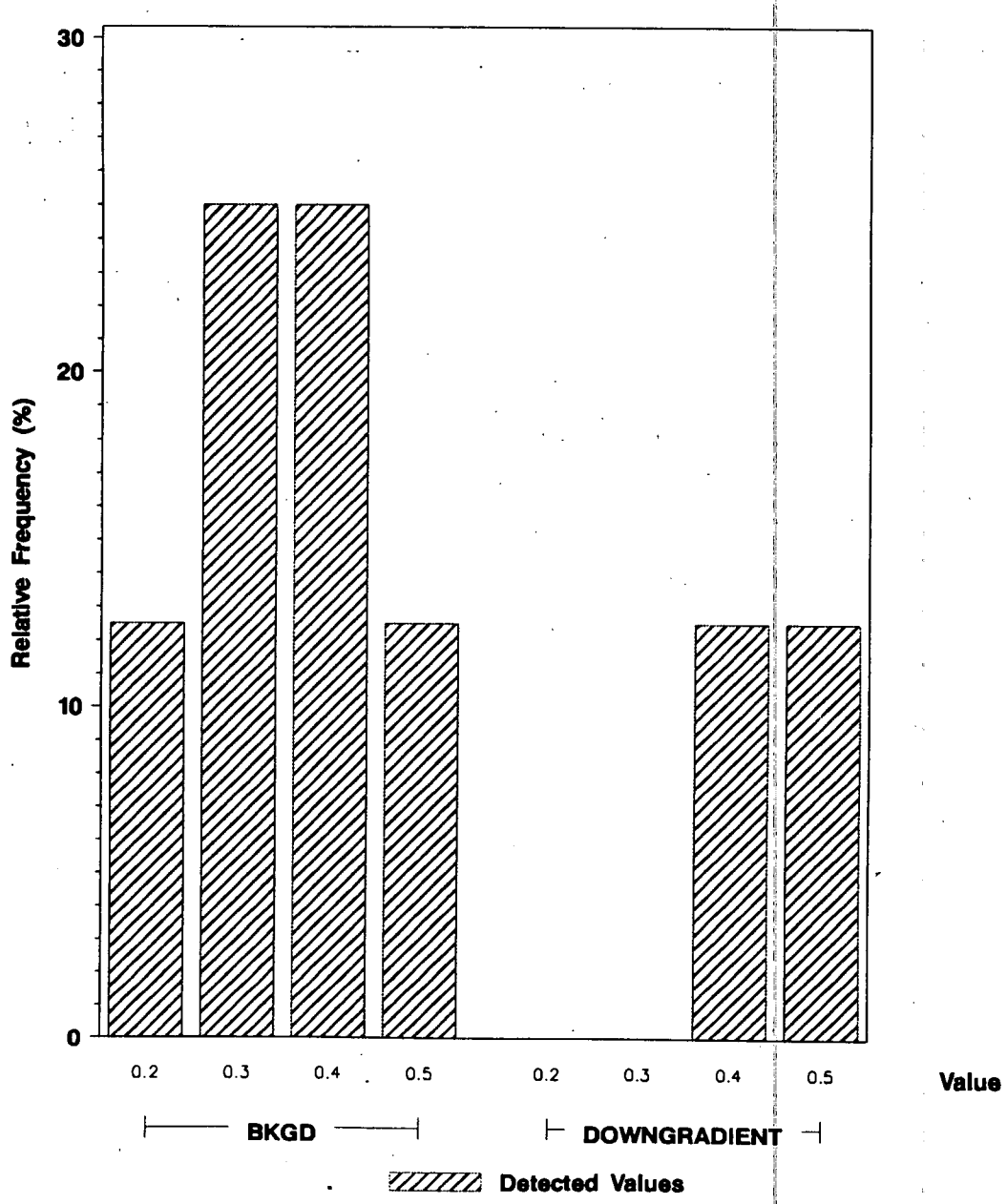
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total RADIUM – 226 (pCi/L) in Groundwater

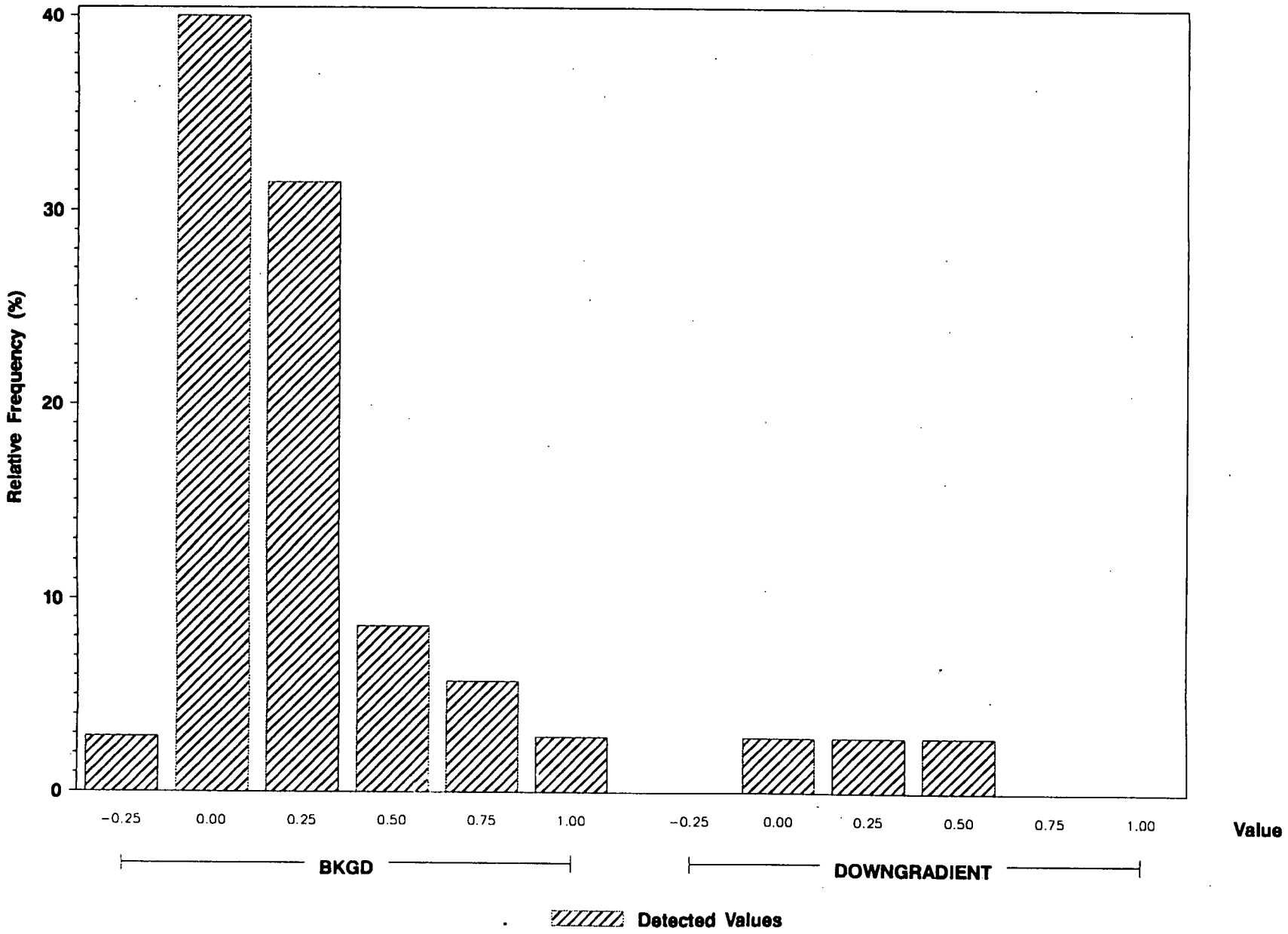
ANALYTE = RADIUM – 226



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Groundwater

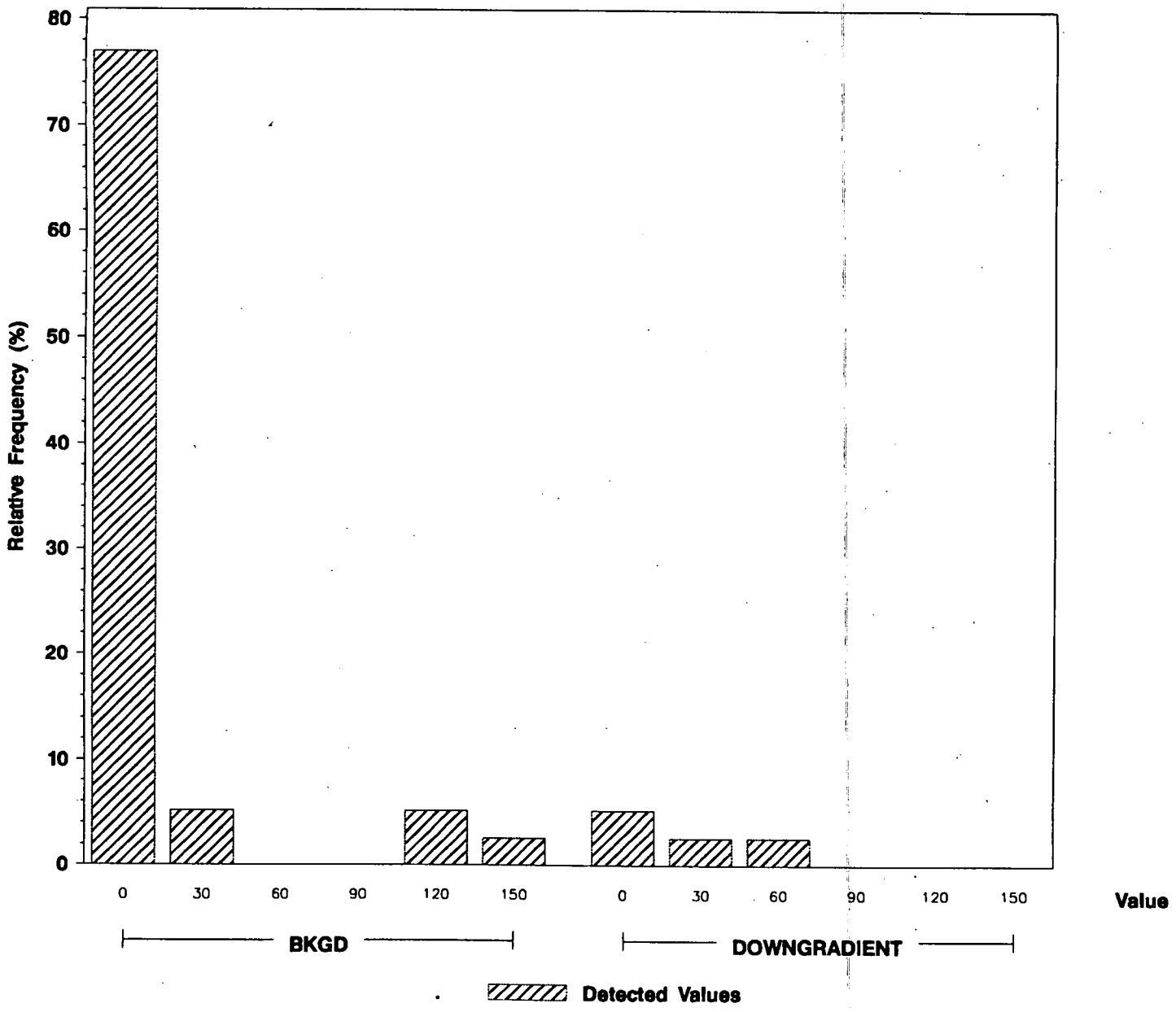
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total URANIUM – 233, – 234 (pCi/L) in Groundwater

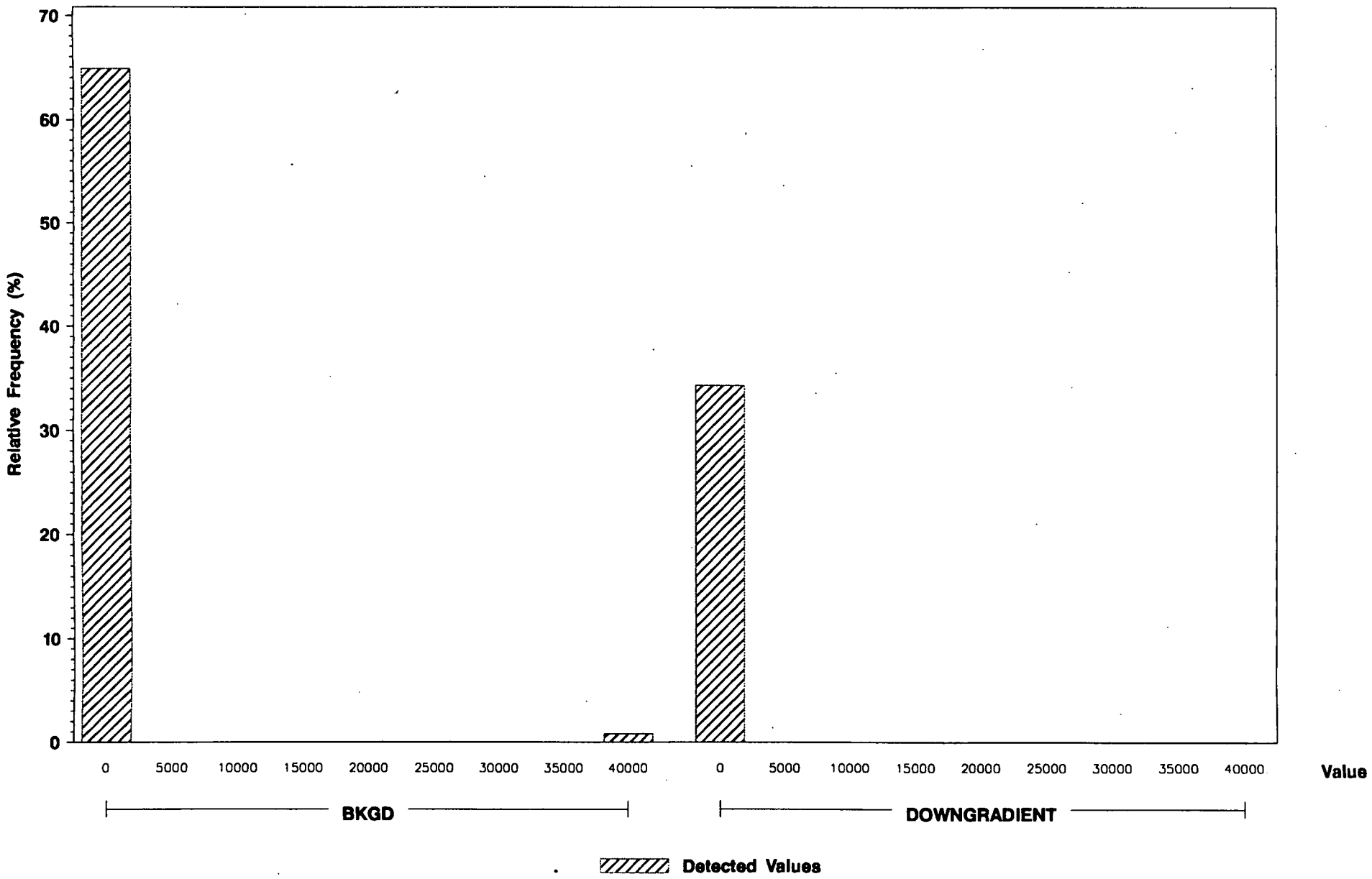
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total TRITIUM (pCi/L) in Groundwater

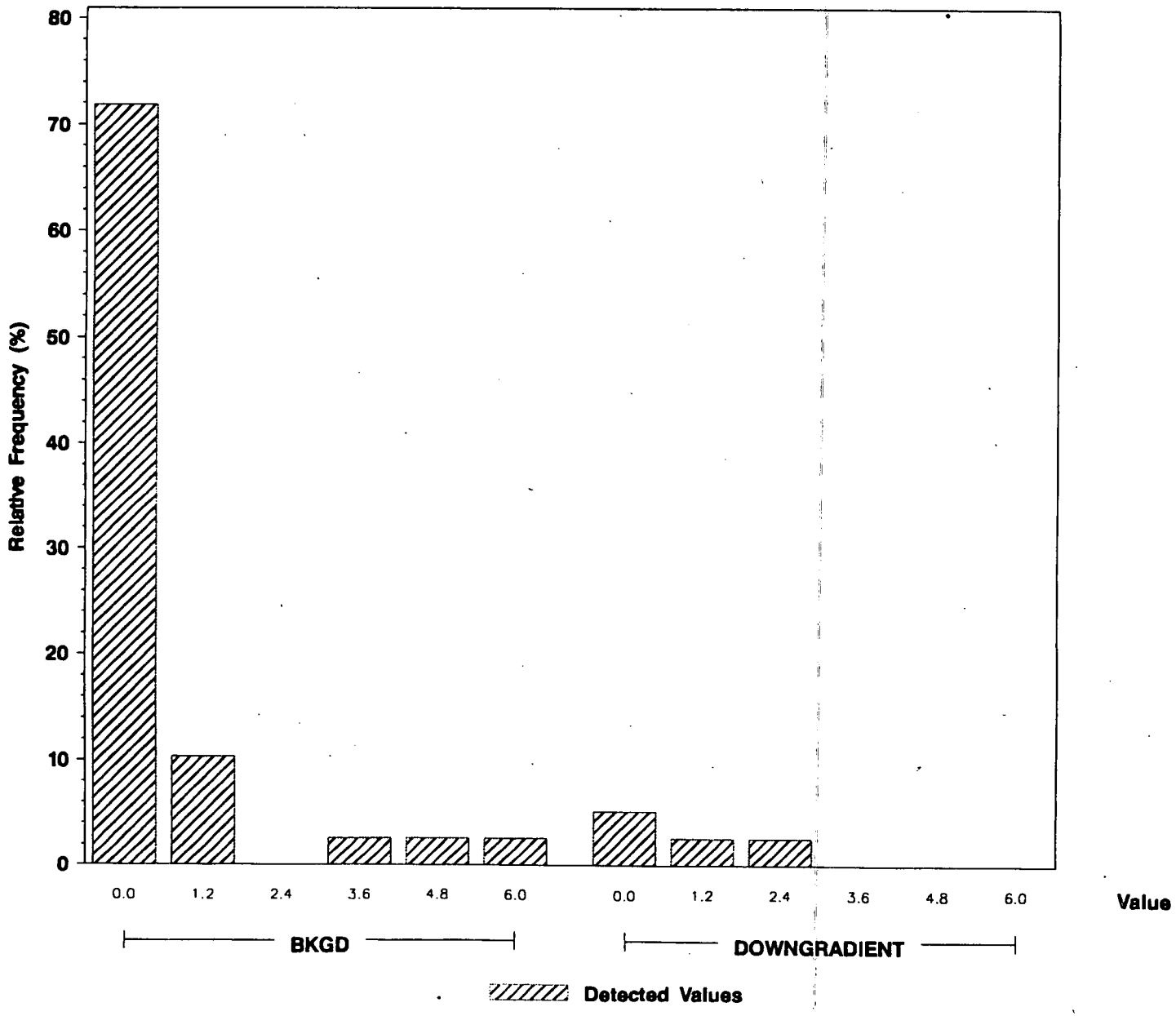
ANALYTE = TRITIUM



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total URANIUM – 235 (pCi/L) in Groundwater

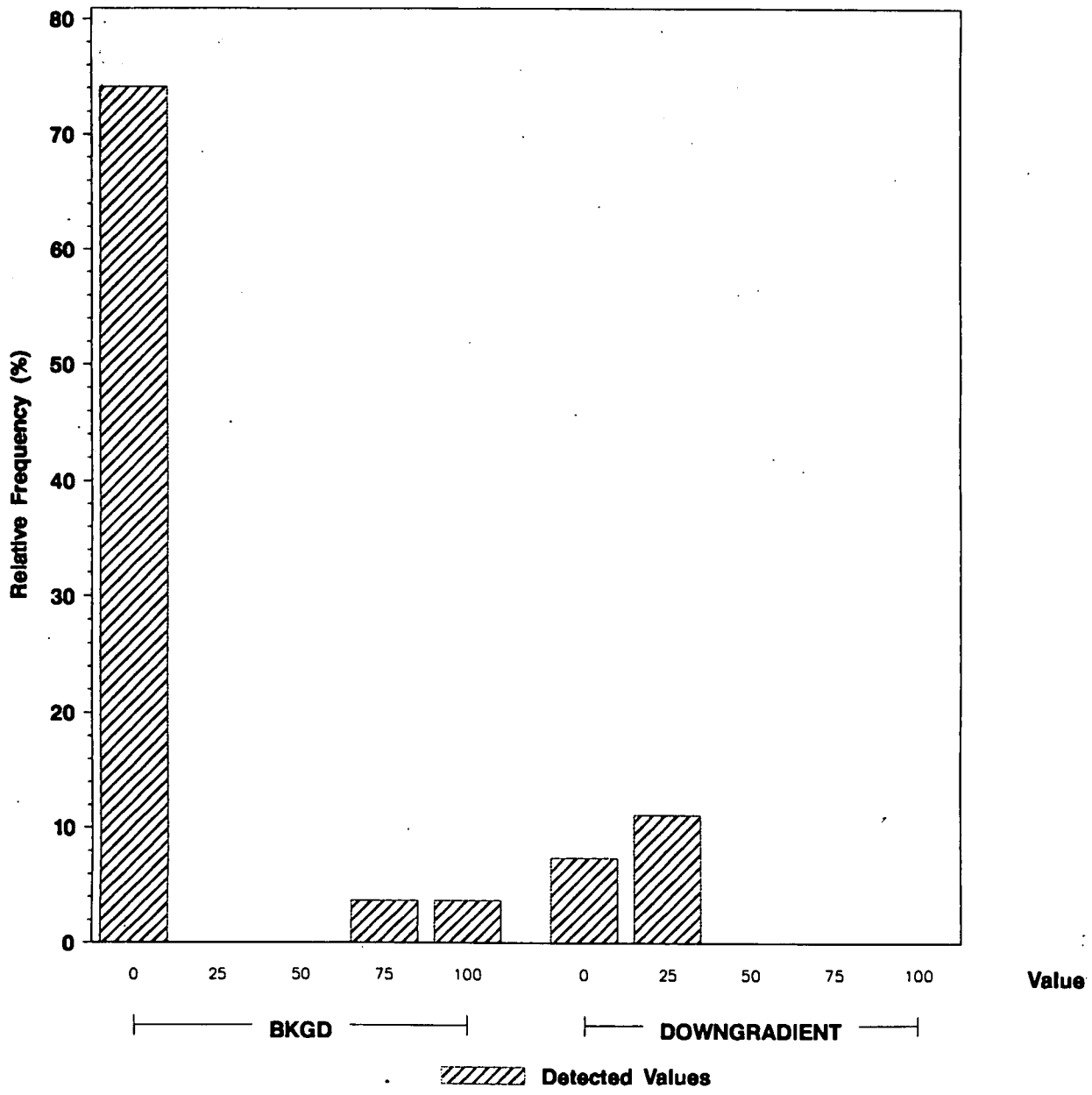
ANALYTE = URANIUM – 235



# Background vs OU7 Downgradient Groundwater (UHSU) Frequency Histogram

## Total URANIUM – 238 (pCi/L) in Groundwater

ANALYTE = URANIUM – 238



# Groundwater

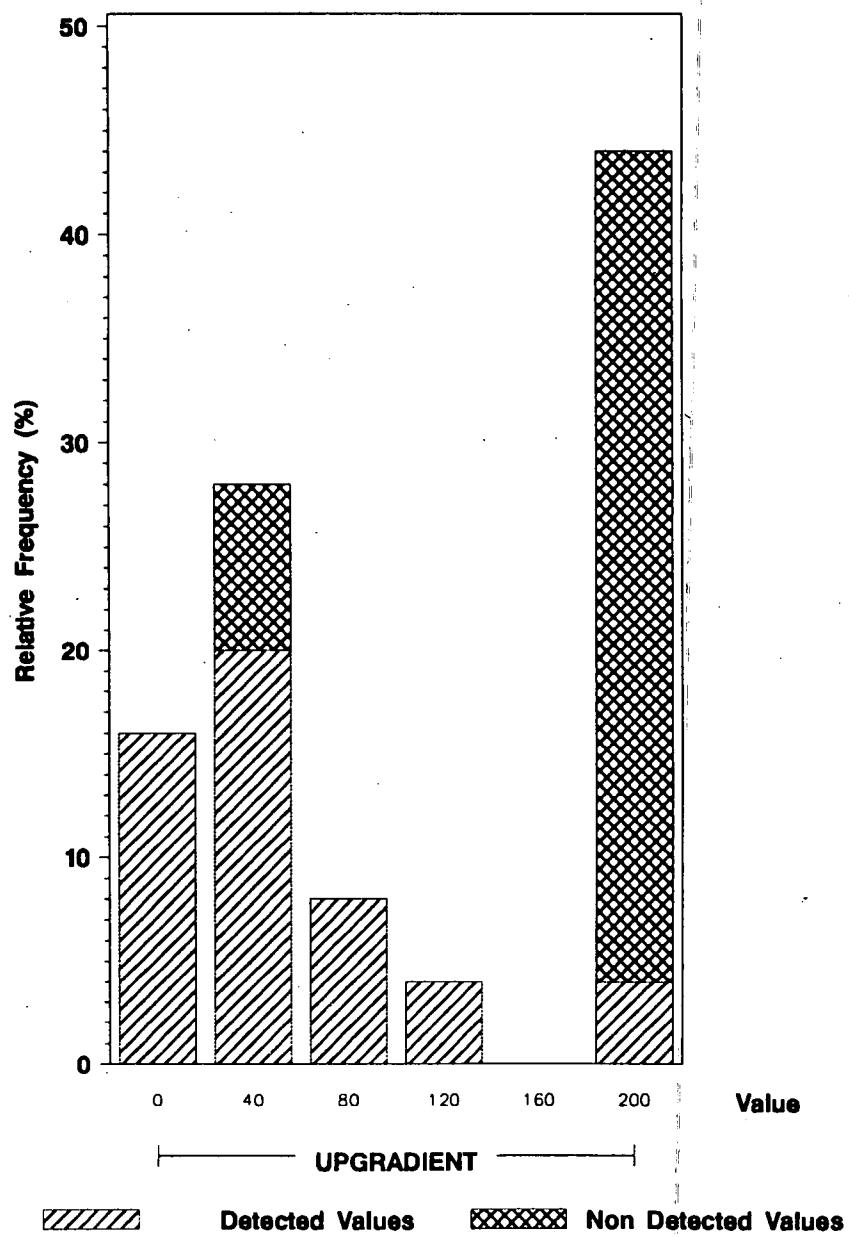
# (Dissolved)

# Background vs. OU 7 Upgradient LHSU

# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved ALUMINUM (ug/L) in Groundwater

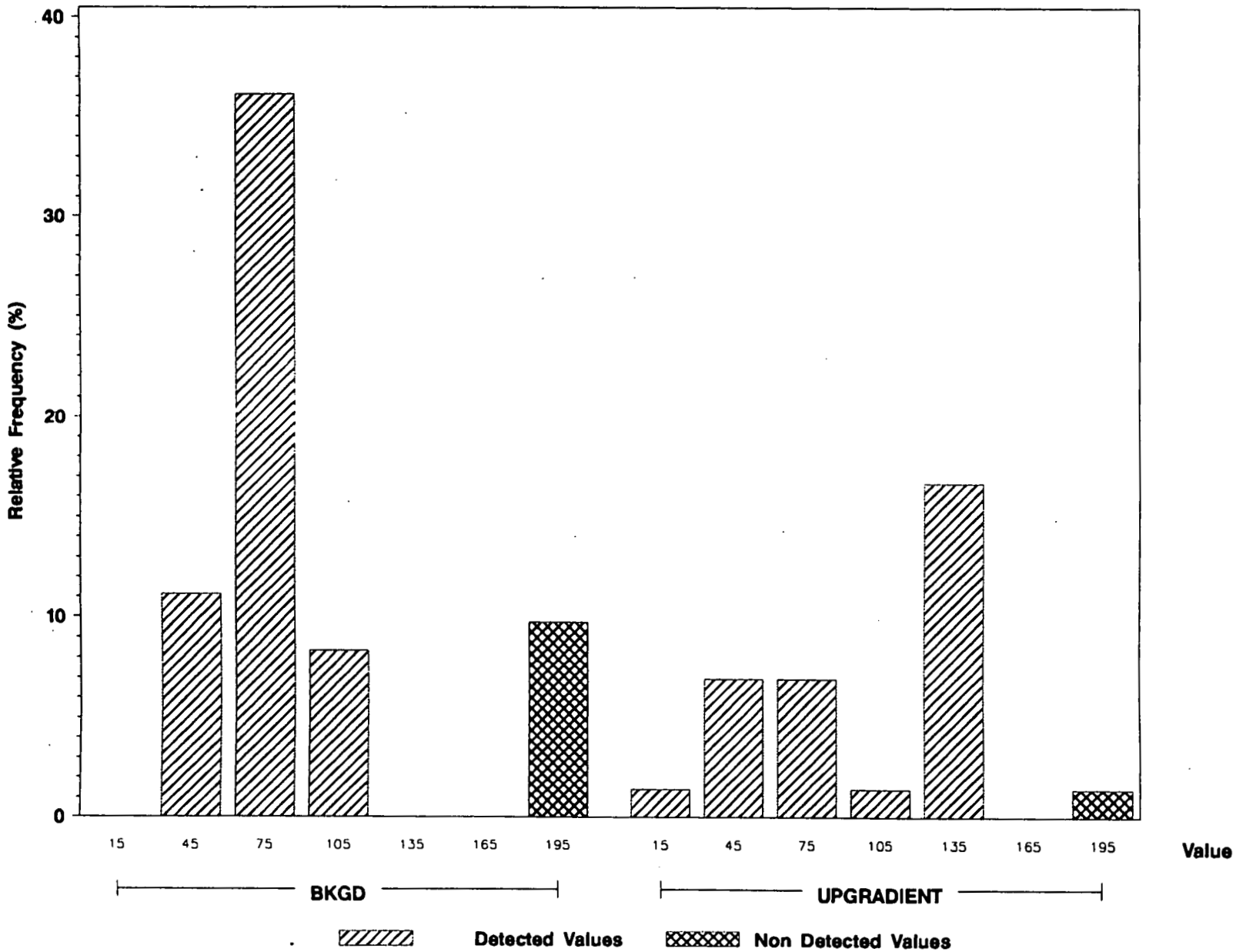
ANALYTE = ALUMINUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved BARIUM (ug/L) in Groundwater

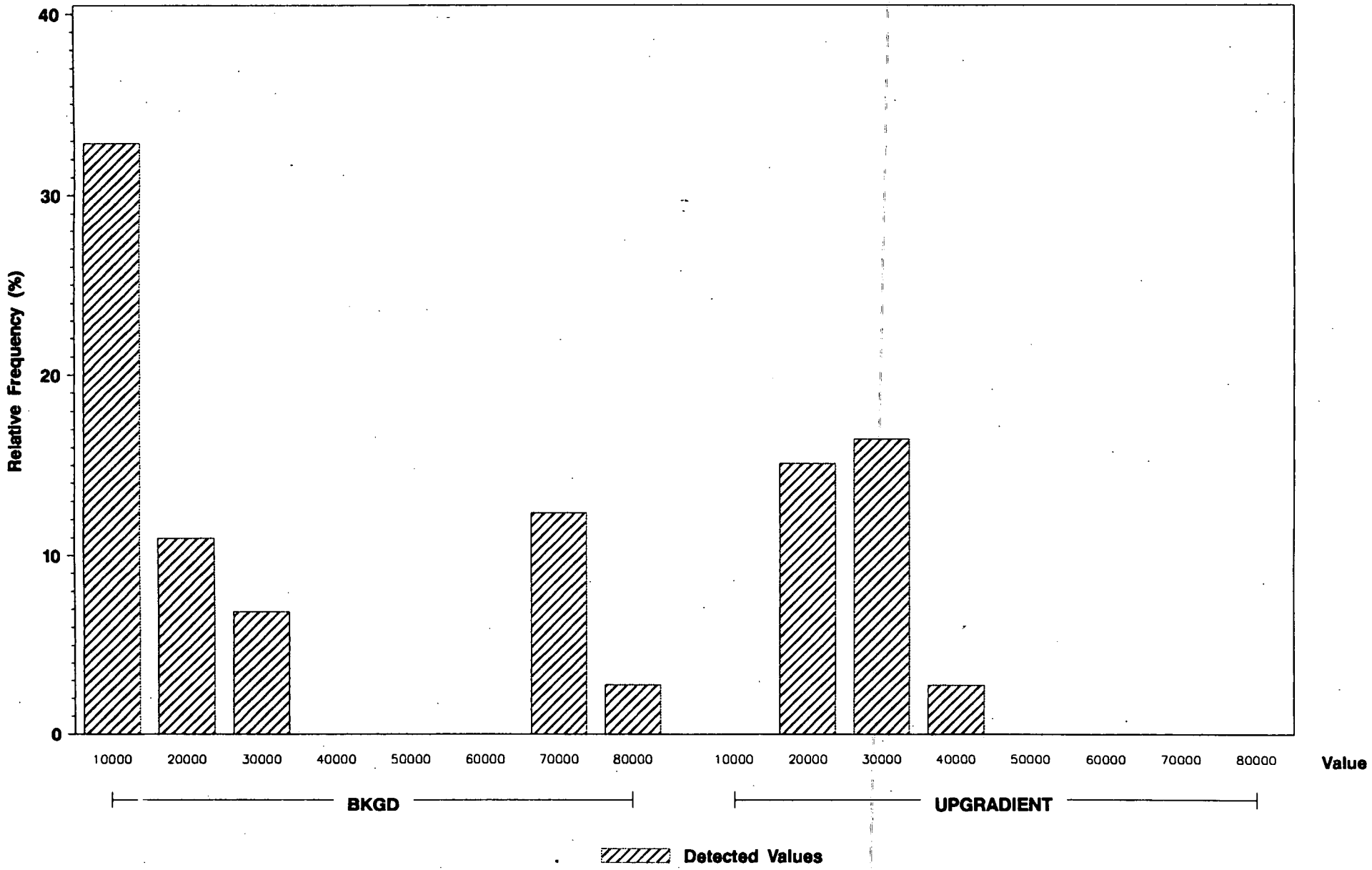
ANALYTE = BARIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Groundwater

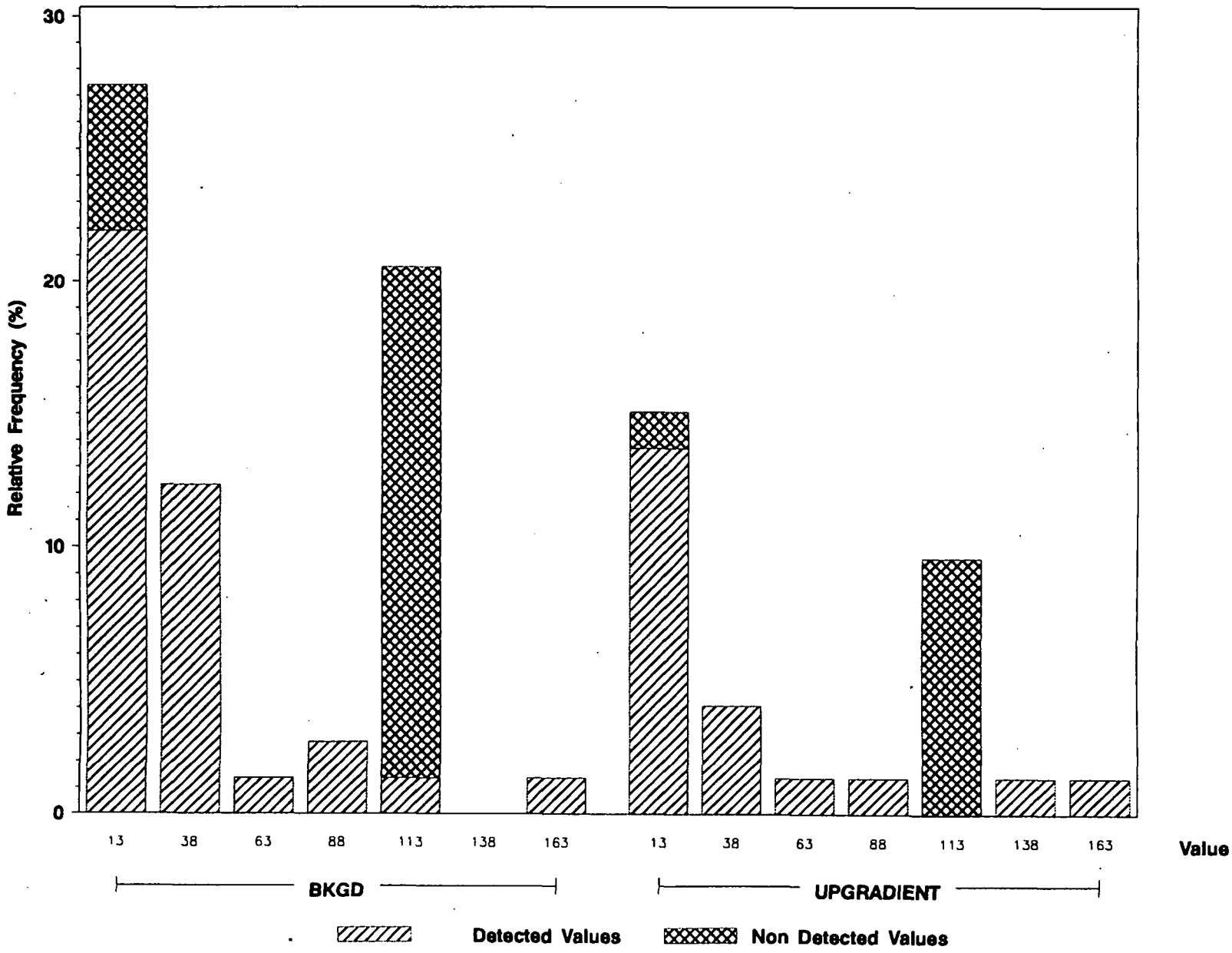
ANALYTE=CALCIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved IRON (ug/L) in Groundwater

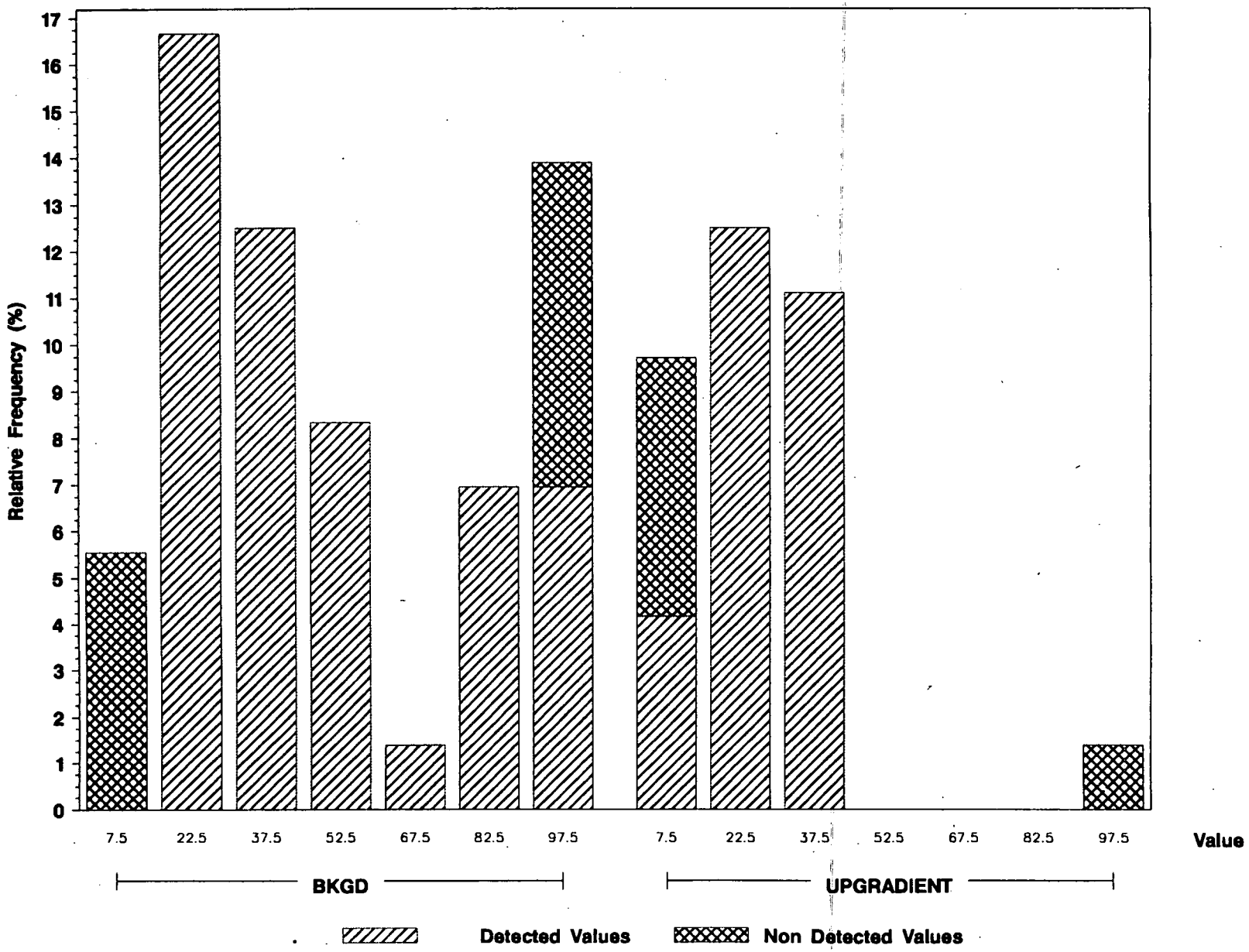
ANALYTE = IRON



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Groundwater

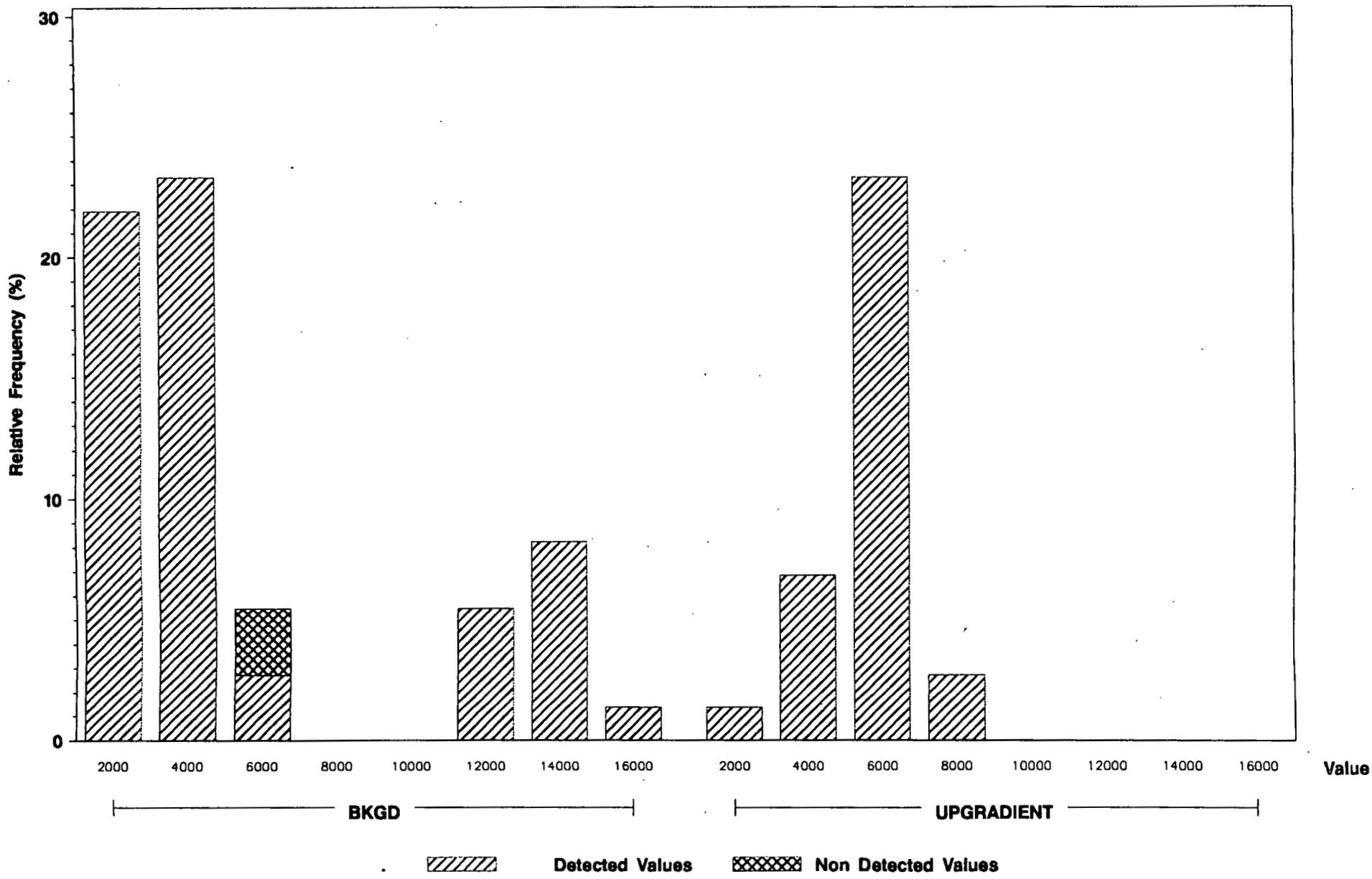
ANALYTE = LITHIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Groundwater

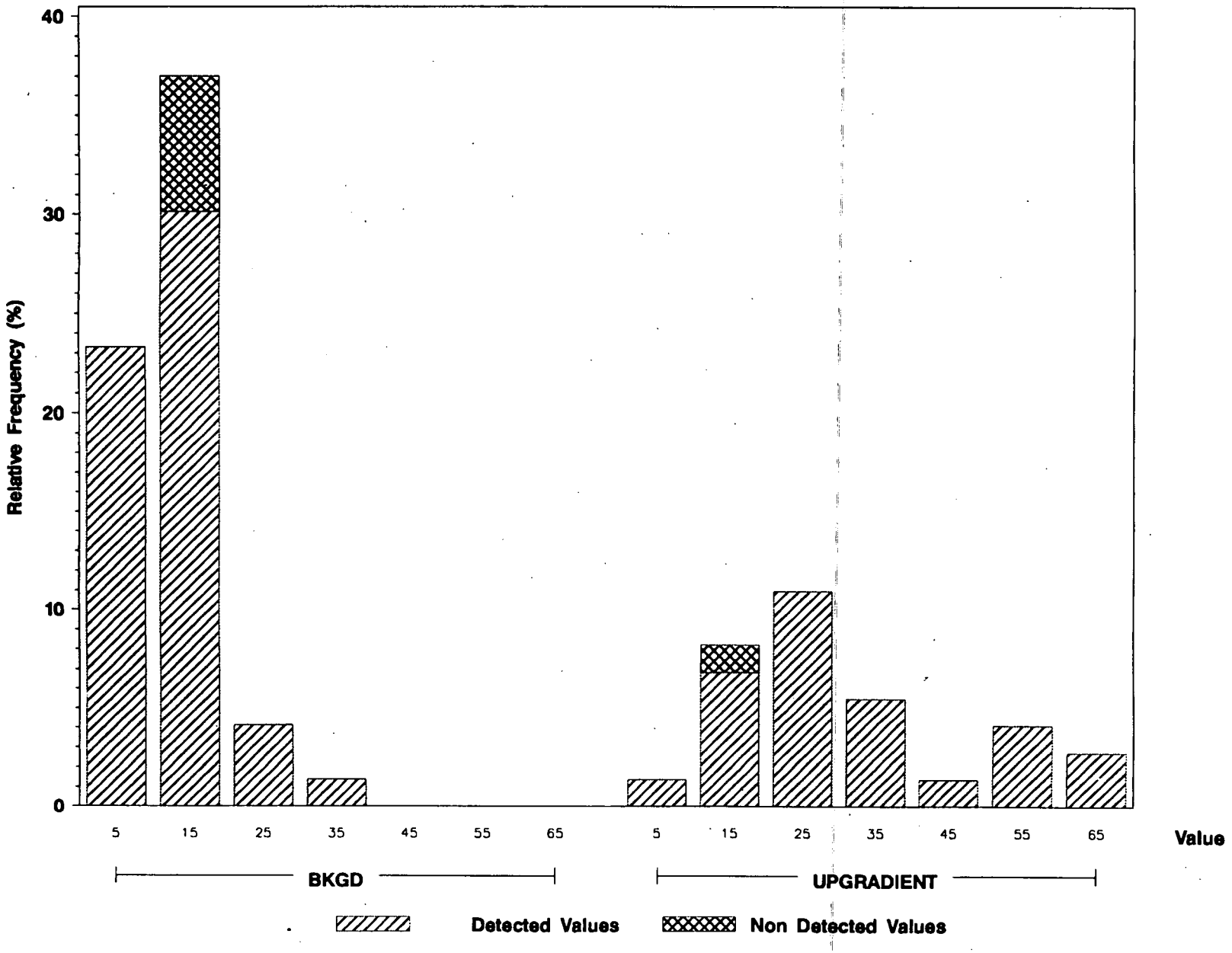
ANALYTE = MAGNESIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Groundwater

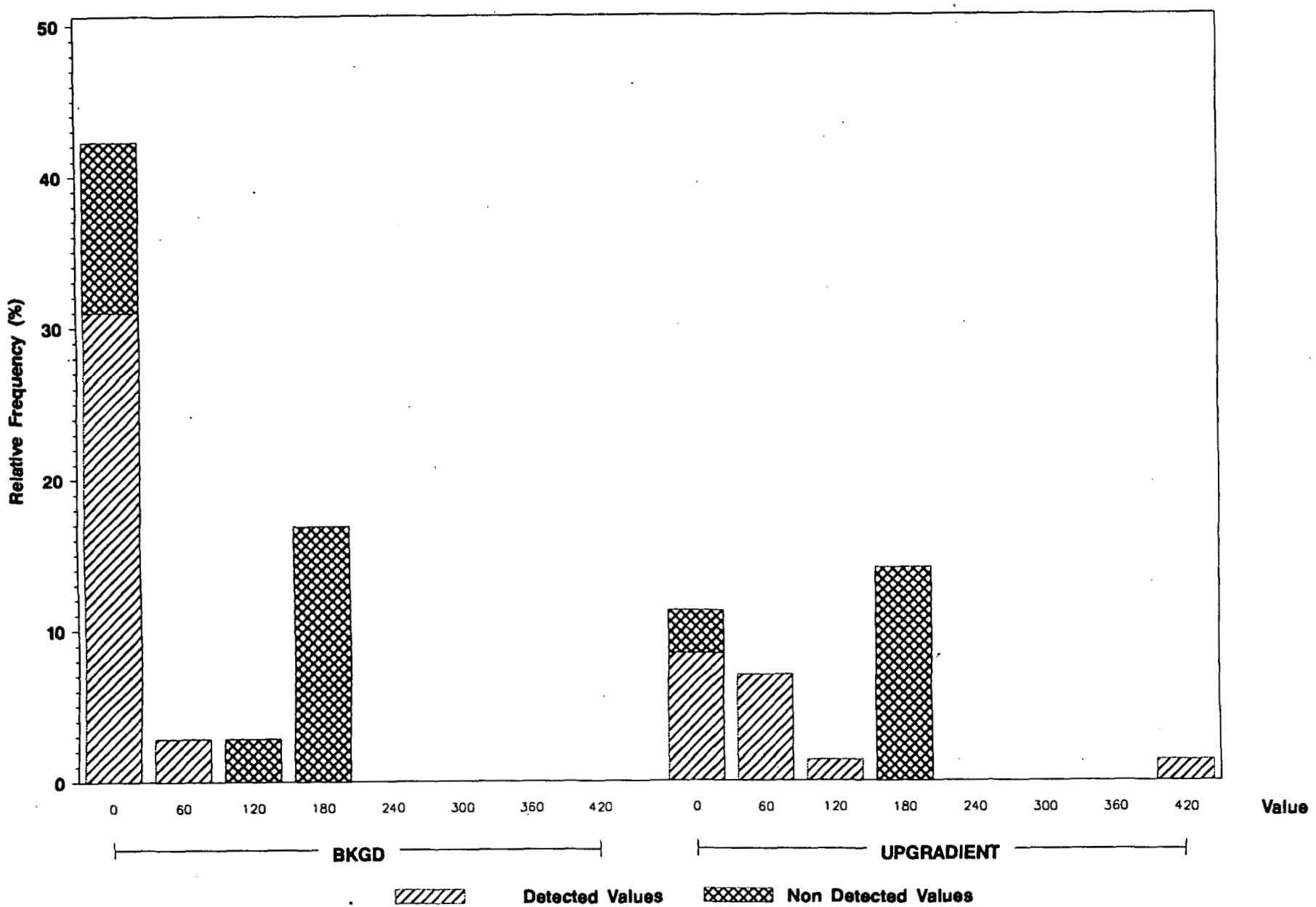
ANALYTE = MANGANESE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved MOLYBDENUM (ug/L) in Groundwater

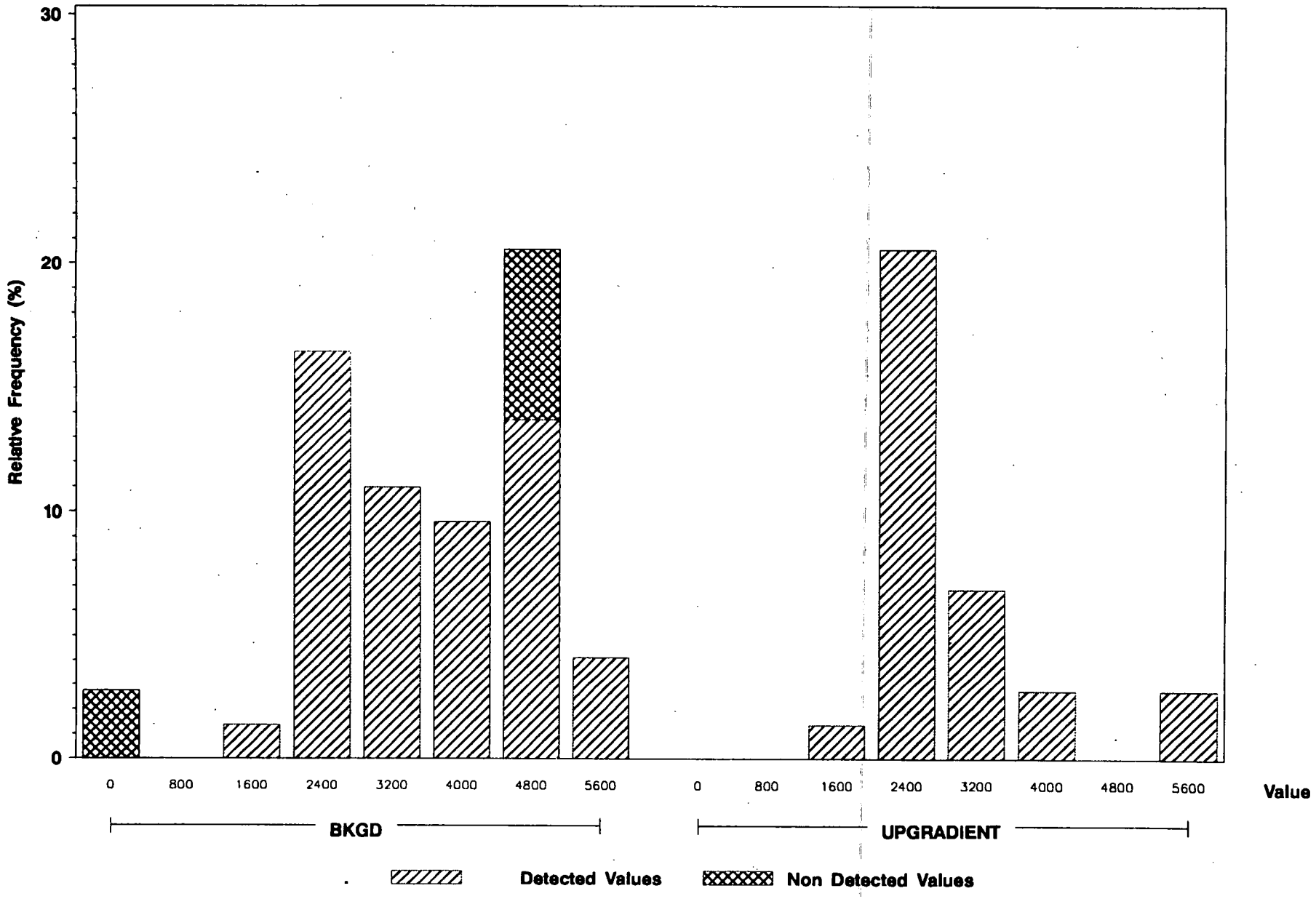
ANALYTE = MOLYBDENUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Groundwater

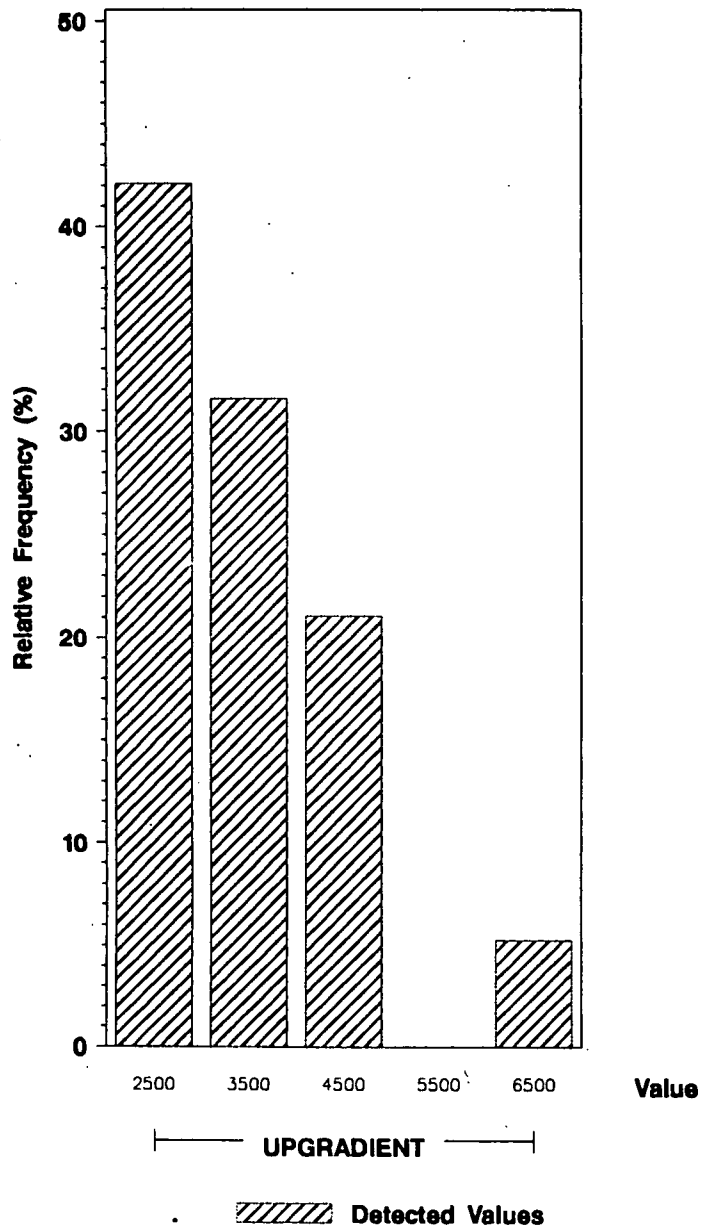
ANALYTE = POTASSIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved SILICON (ug/L) in Groundwater

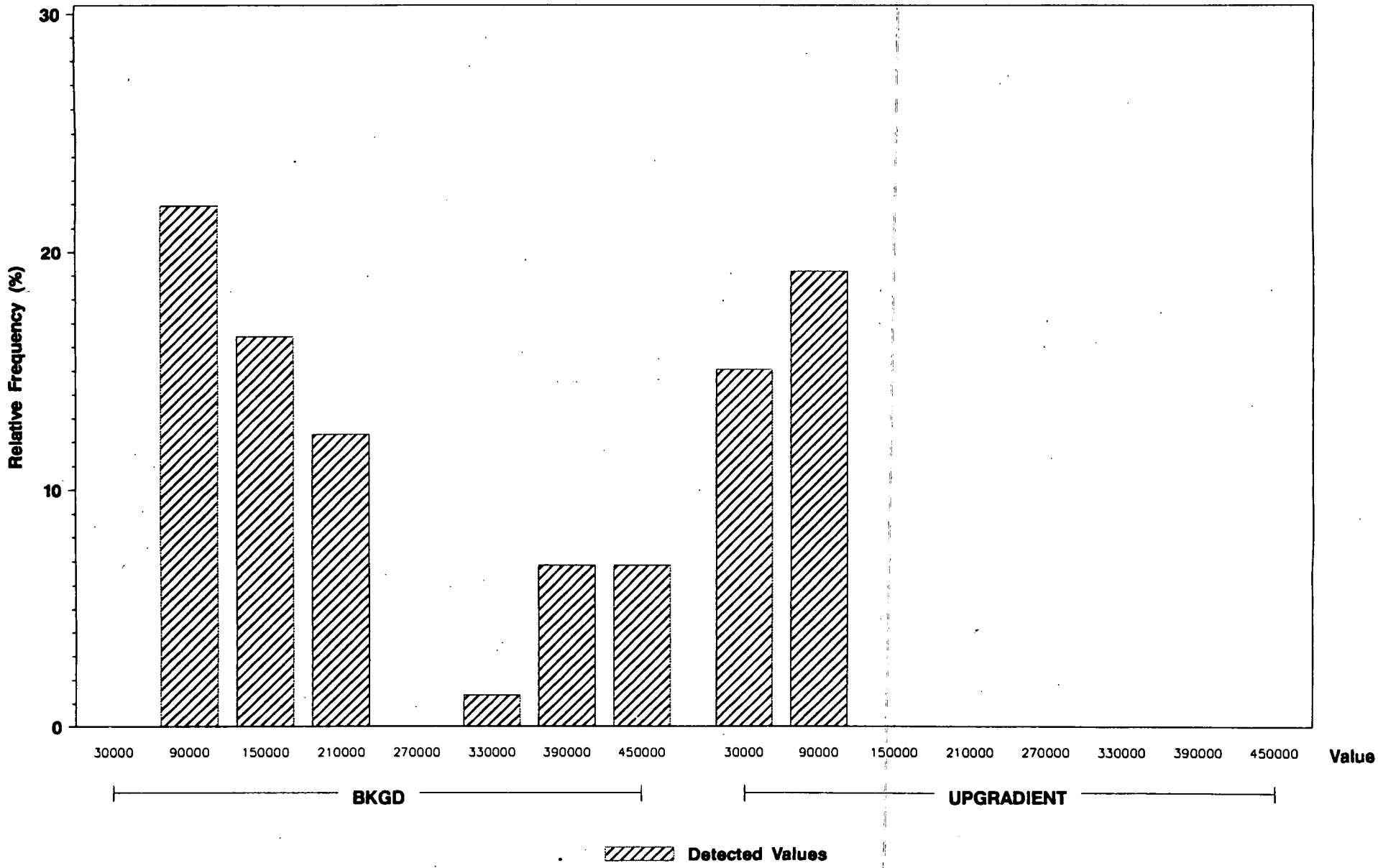
ANALYTE = SILICON



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved SODIUM (ug/L) in Groundwater

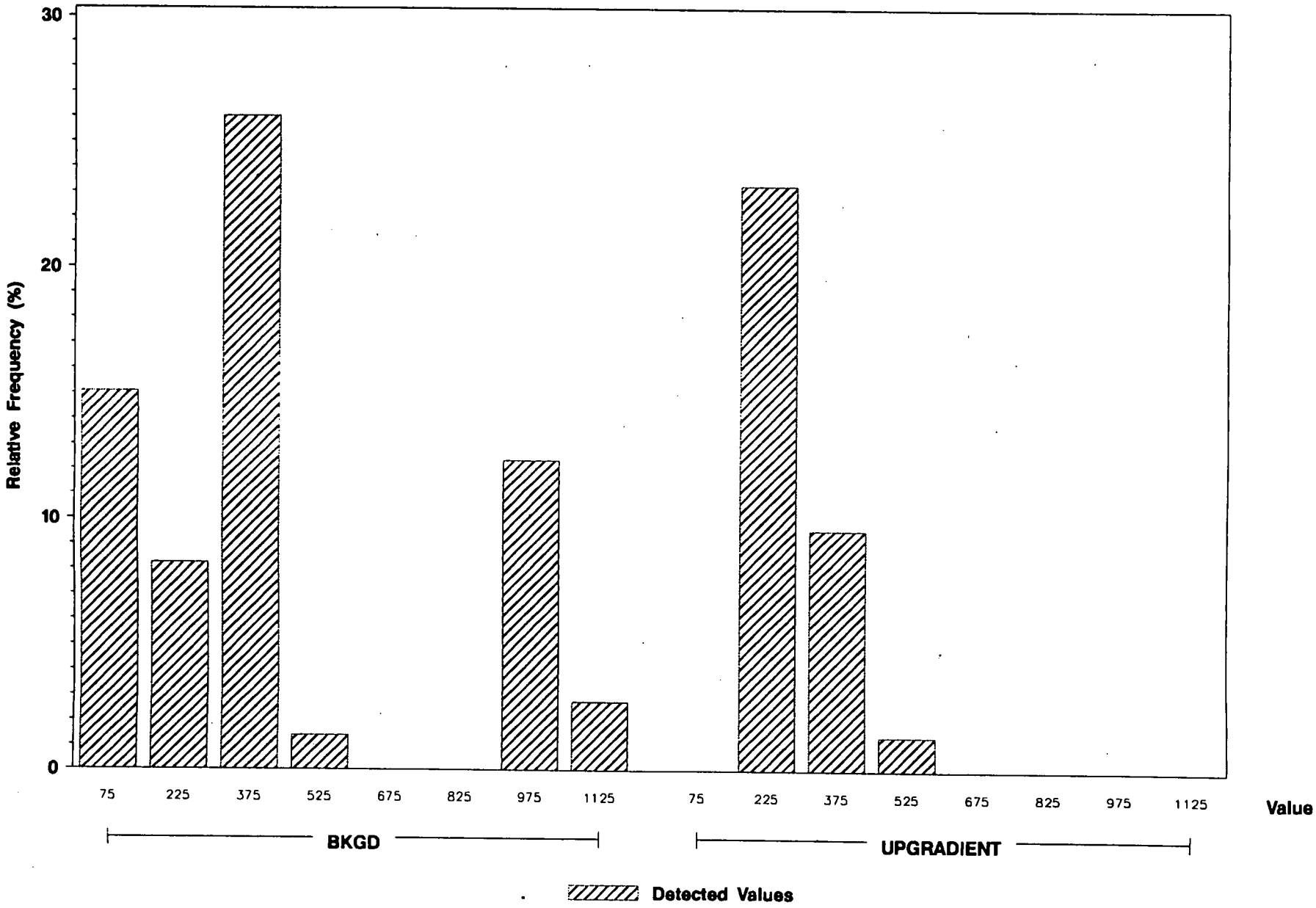
ANALYTE = SODIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Groundwater

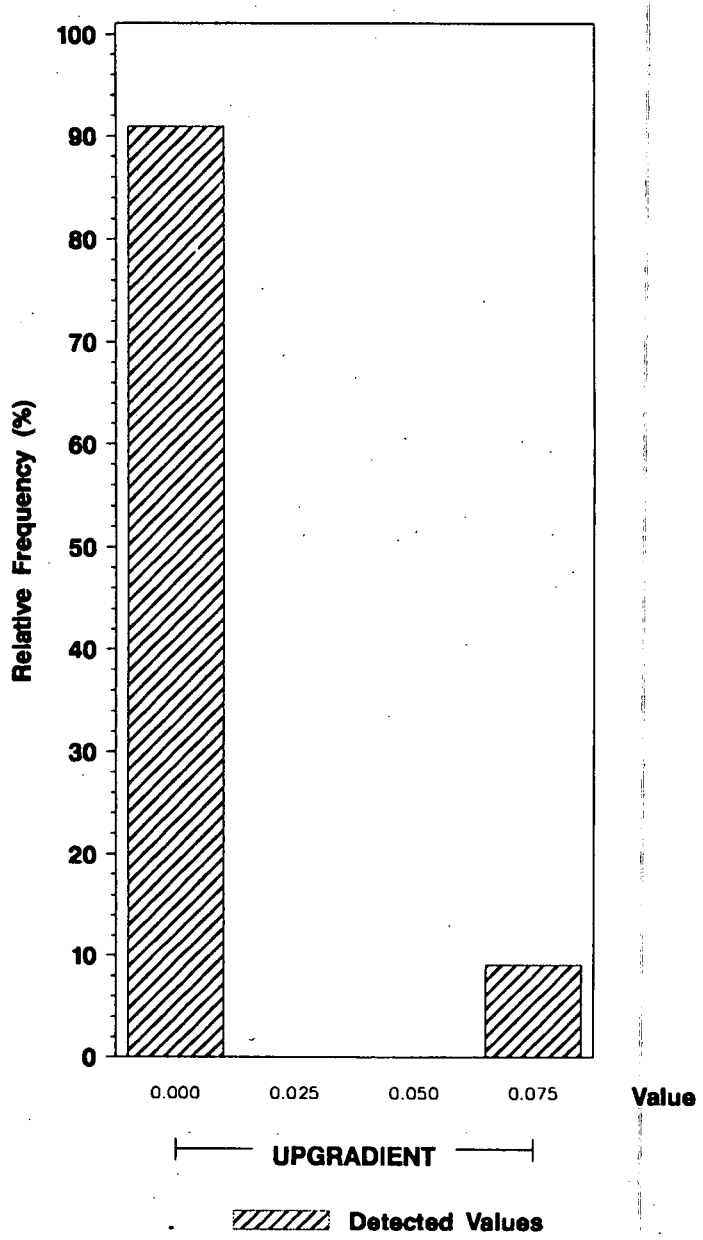
ANALYTE = STRONTIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved AMERICIUM – 241 (pCi/L) in Groundwater

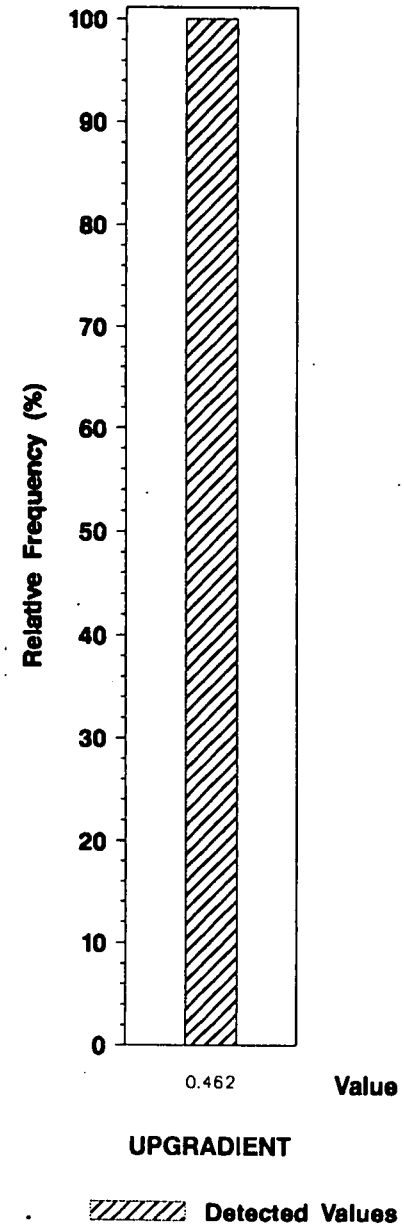
ANALYTE = AMERICIUM – 241



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved CESIUM – 134 (pCi/L) in Groundwater

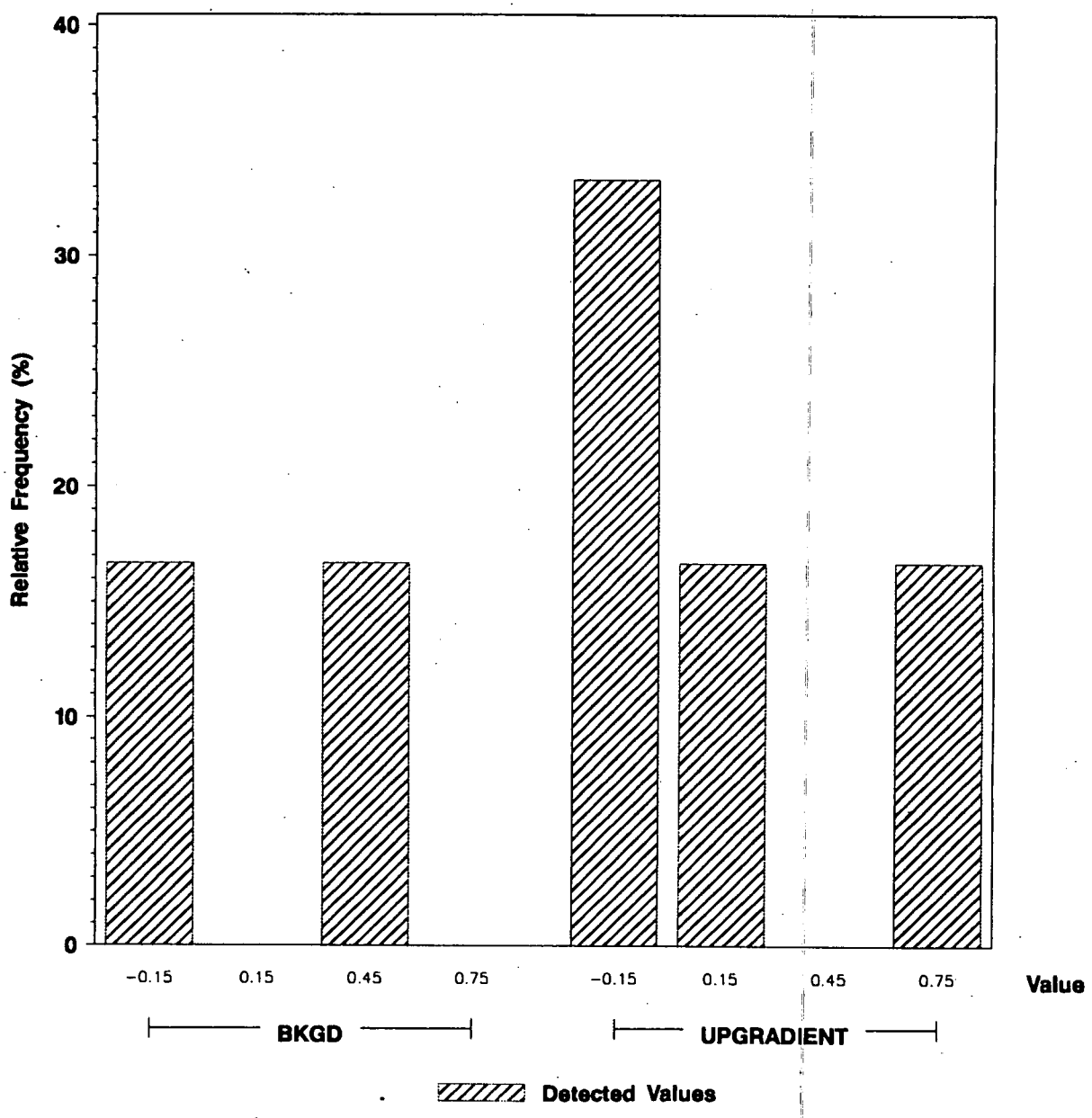
ANALYTE = CESIUM – 134



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved CESIUM-137 (pCi/L) in Groundwater

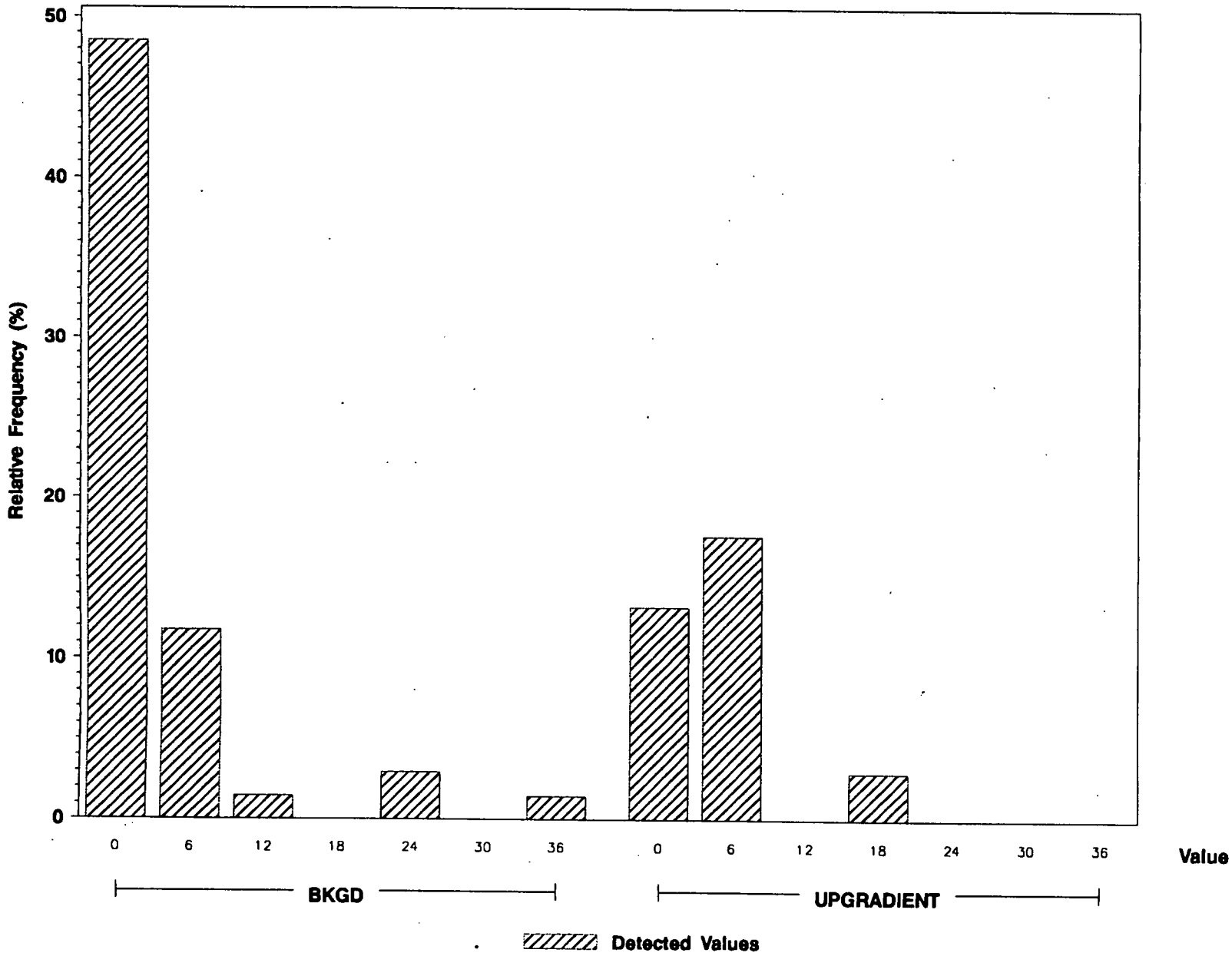
ANALYTE = CESIUM-137



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Groundwater

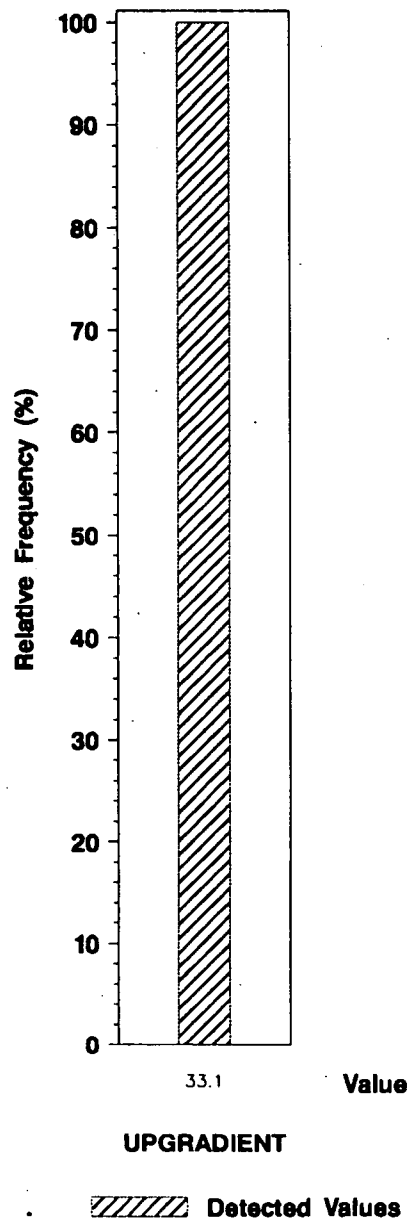
ANALYTE=GROSS ALPHA



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved GROSS ALPHA – SUSPENDED (pCi/L) in Groundwater

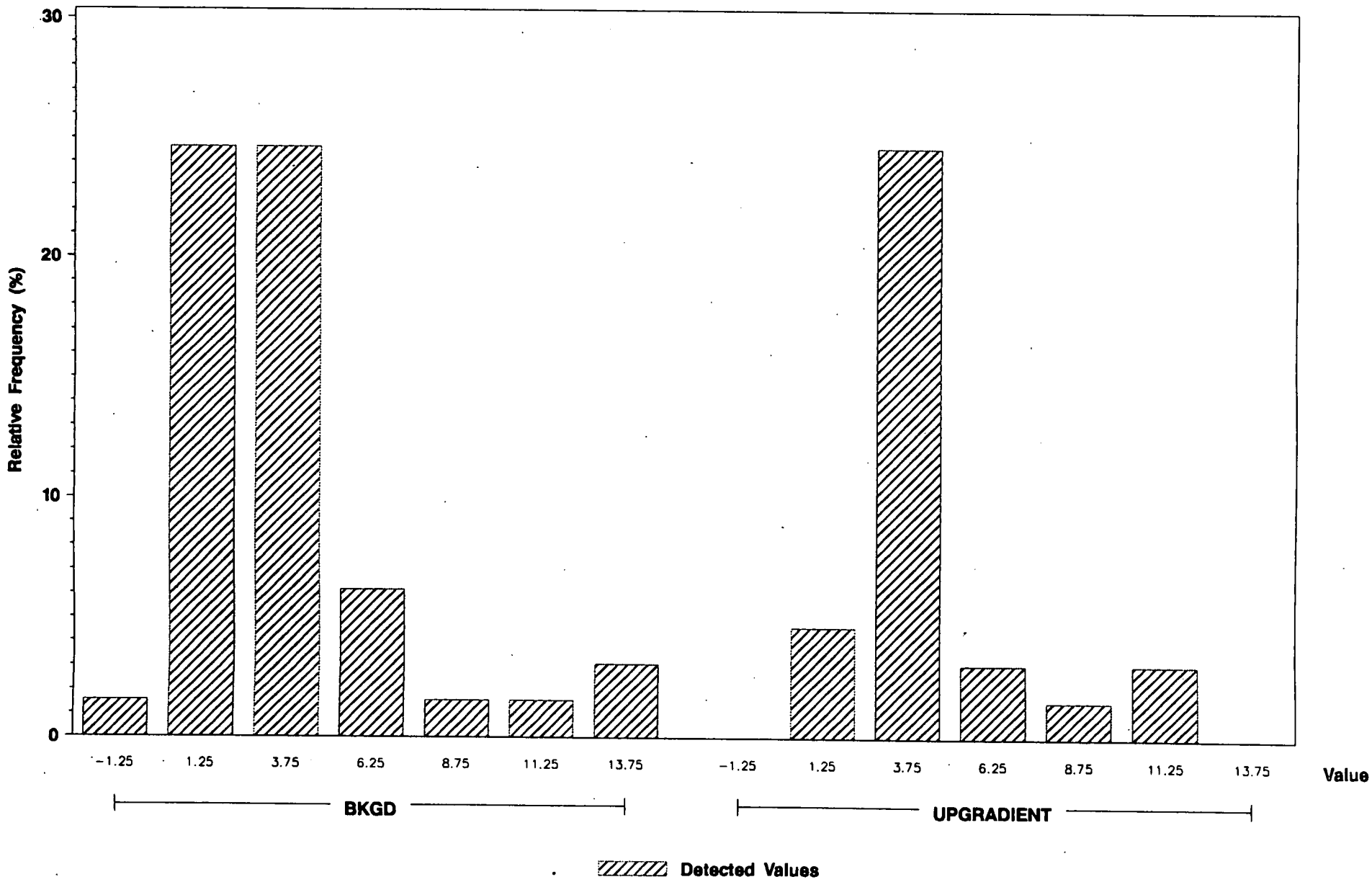
ANALYTE = GROSS ALPHA – SUSPENDED



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Groundwater

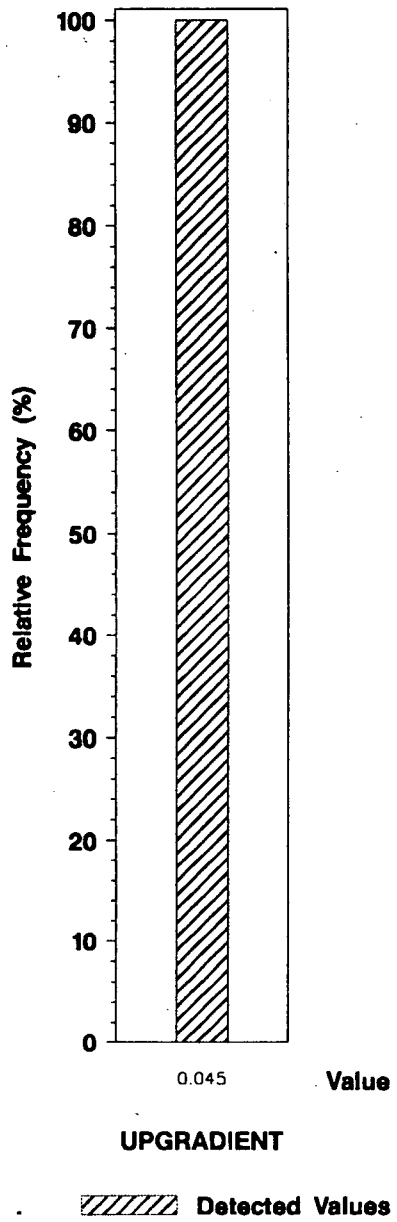
ANALYTE=GROSS BETA



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved PLUTONIUM – 239 (pCi/L) in Groundwater

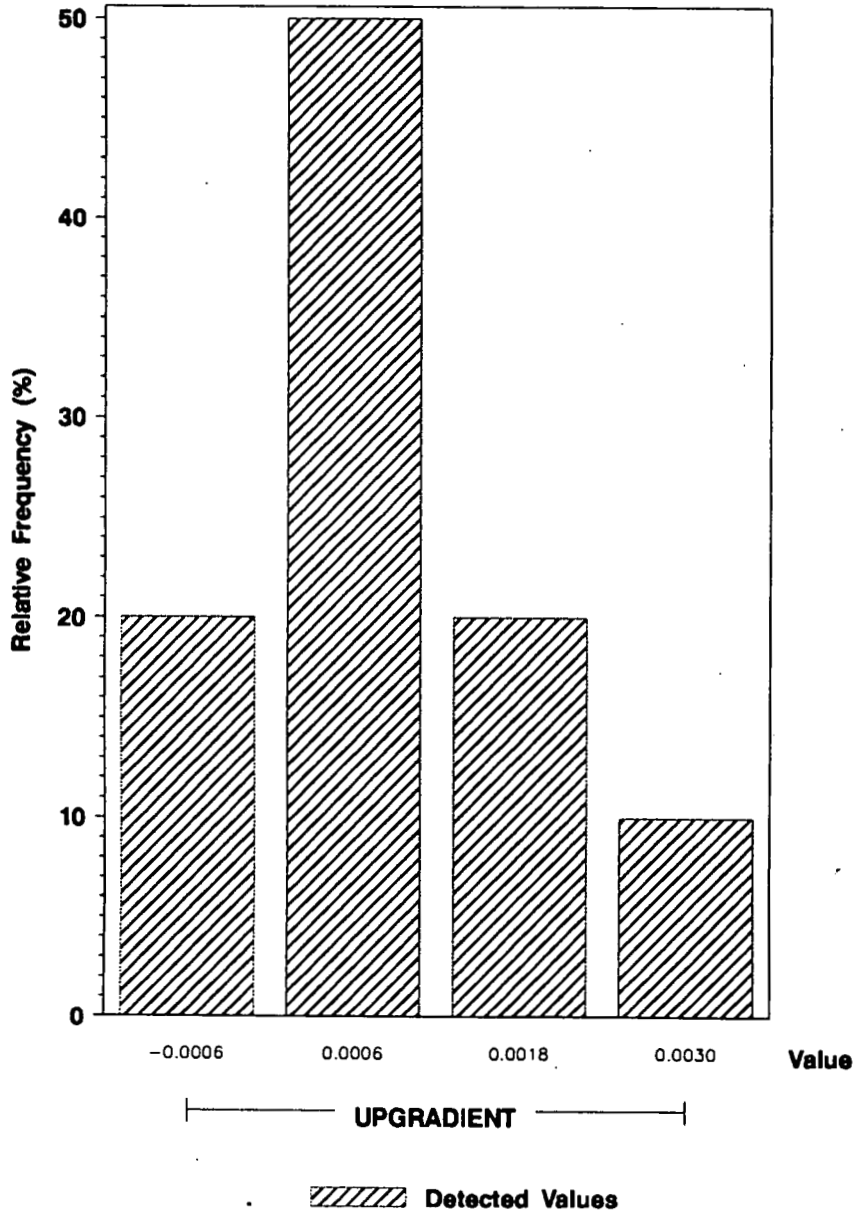
ANALYTE = PLUTONIUM – 239



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved PLUTONIUM – 239/240 (pCi/L) in Groundwater

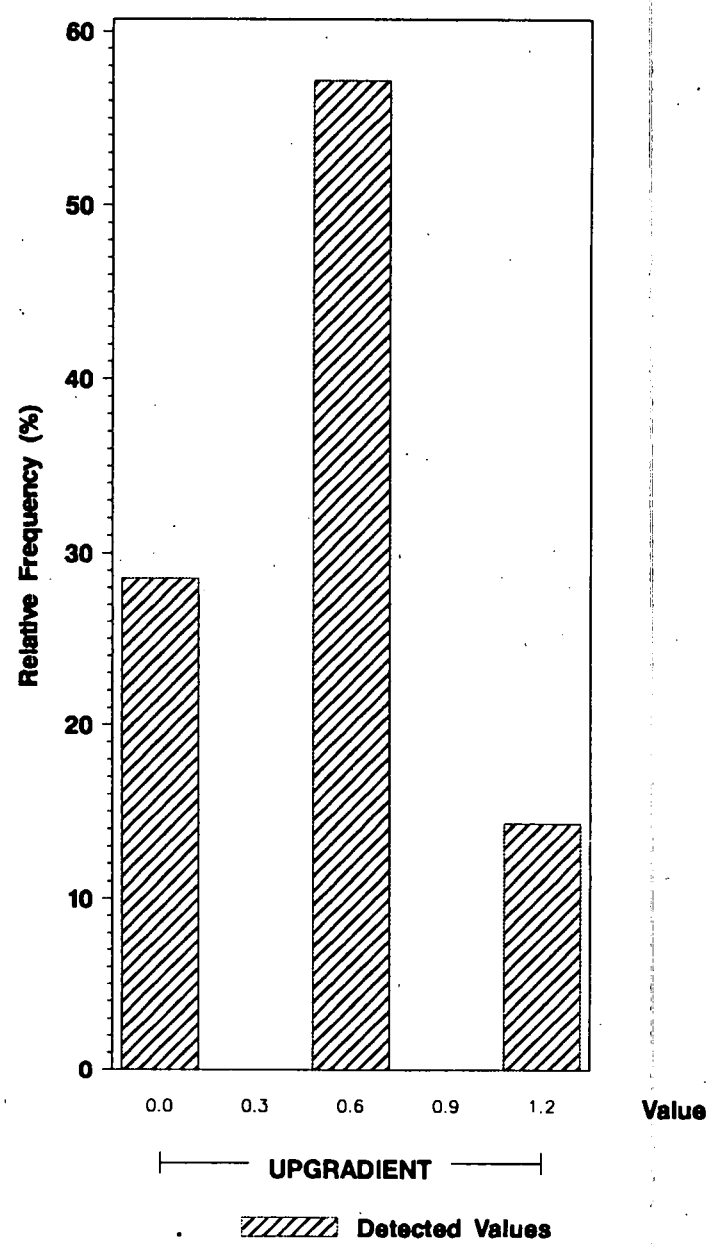
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved RADIOCESIUM (pCi/L) in Groundwater

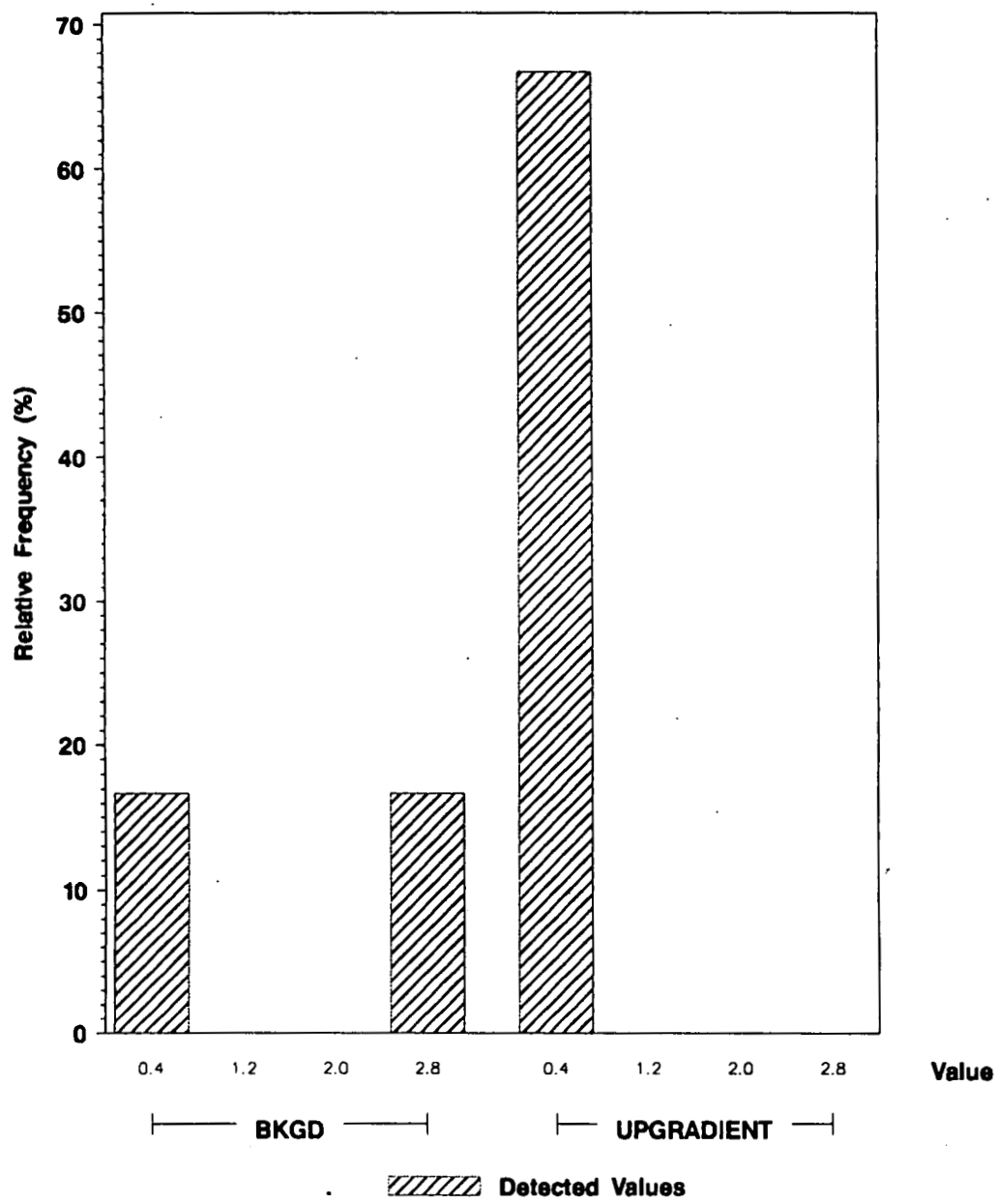
ANALYTE = RADIOCESIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved RADIUM-226 (pCi/L) in Groundwater

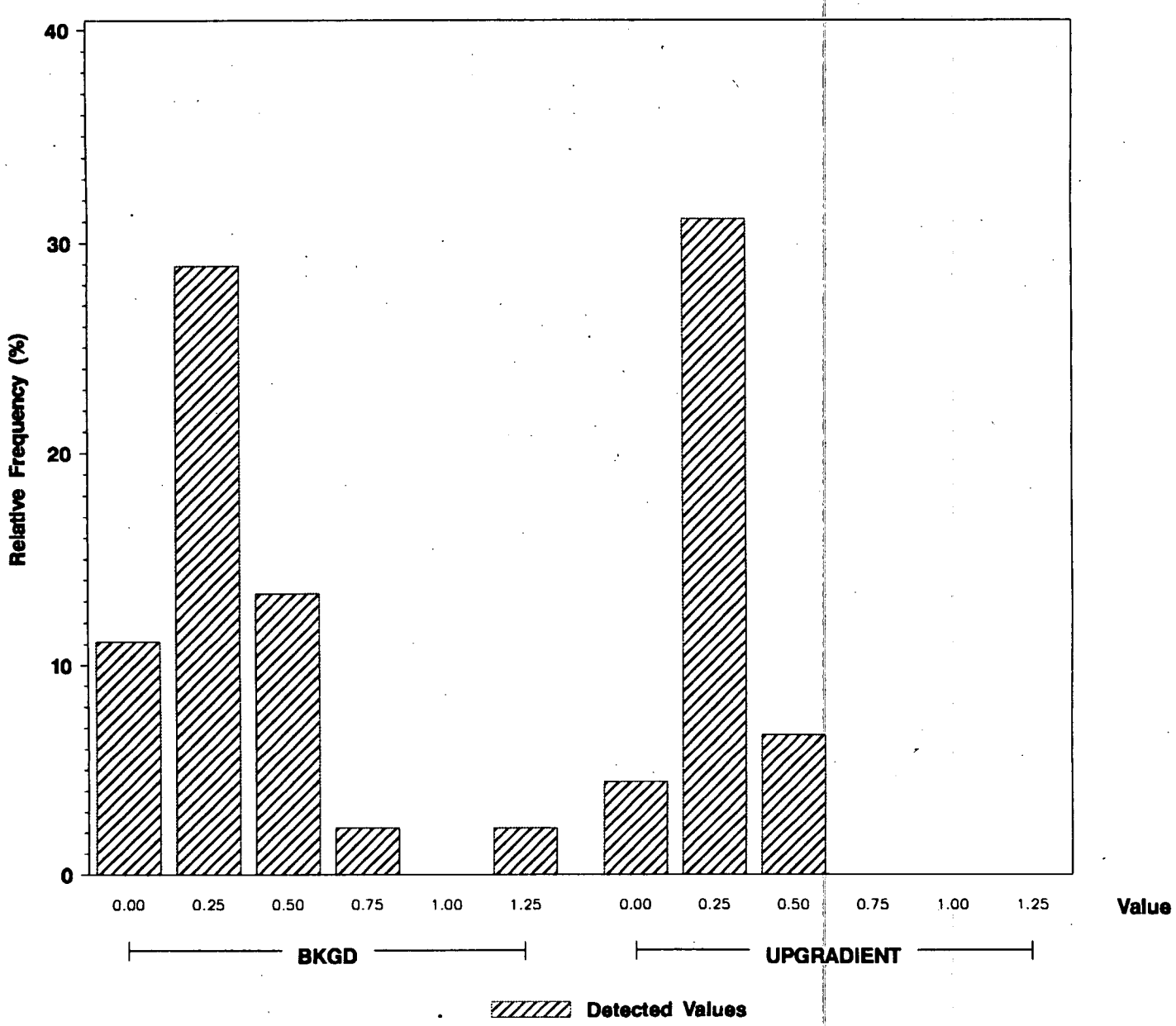
ANALYTE = RADIUM-226



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Groundwater

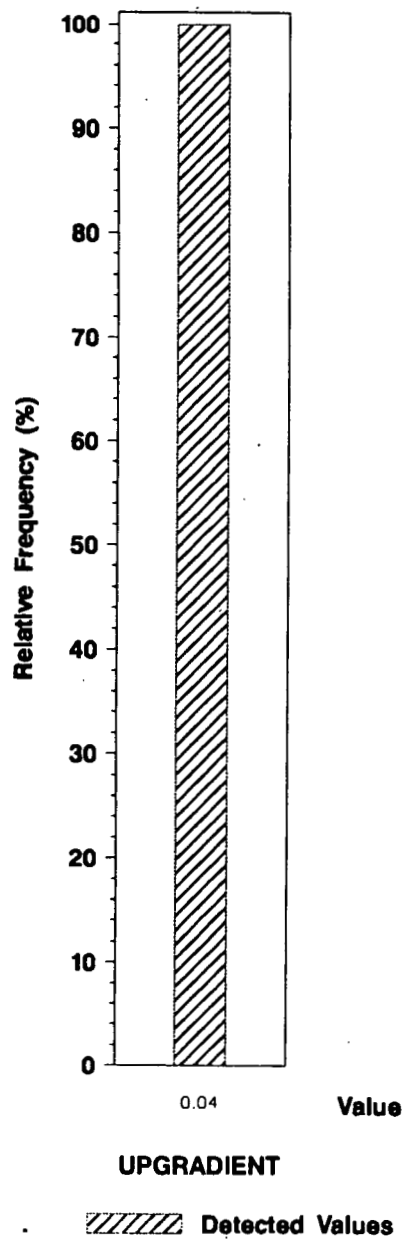
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved STRONTIUM-90 (pCi/L) in Groundwater

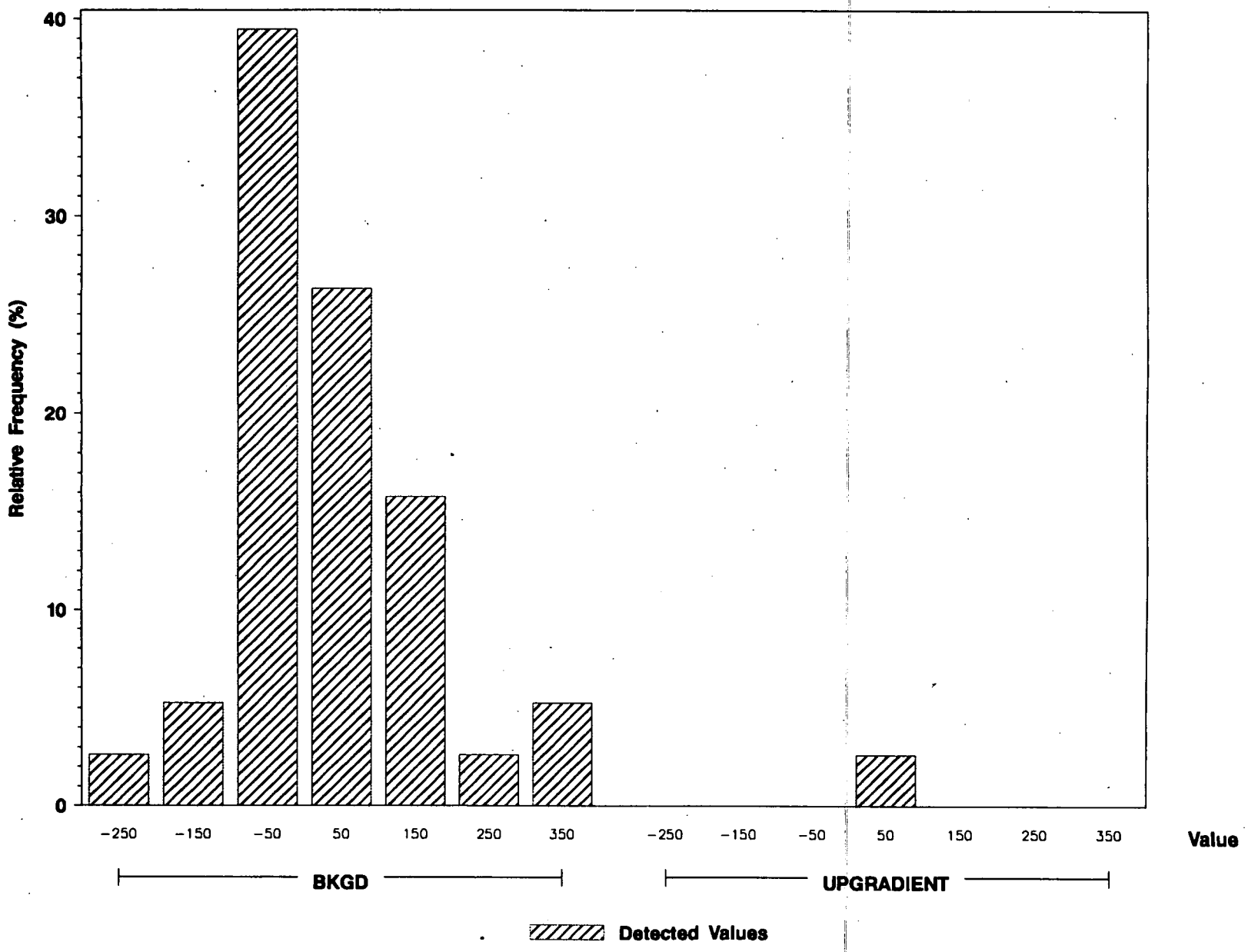
ANALYTE = STRONTIUM-90



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Groundwater

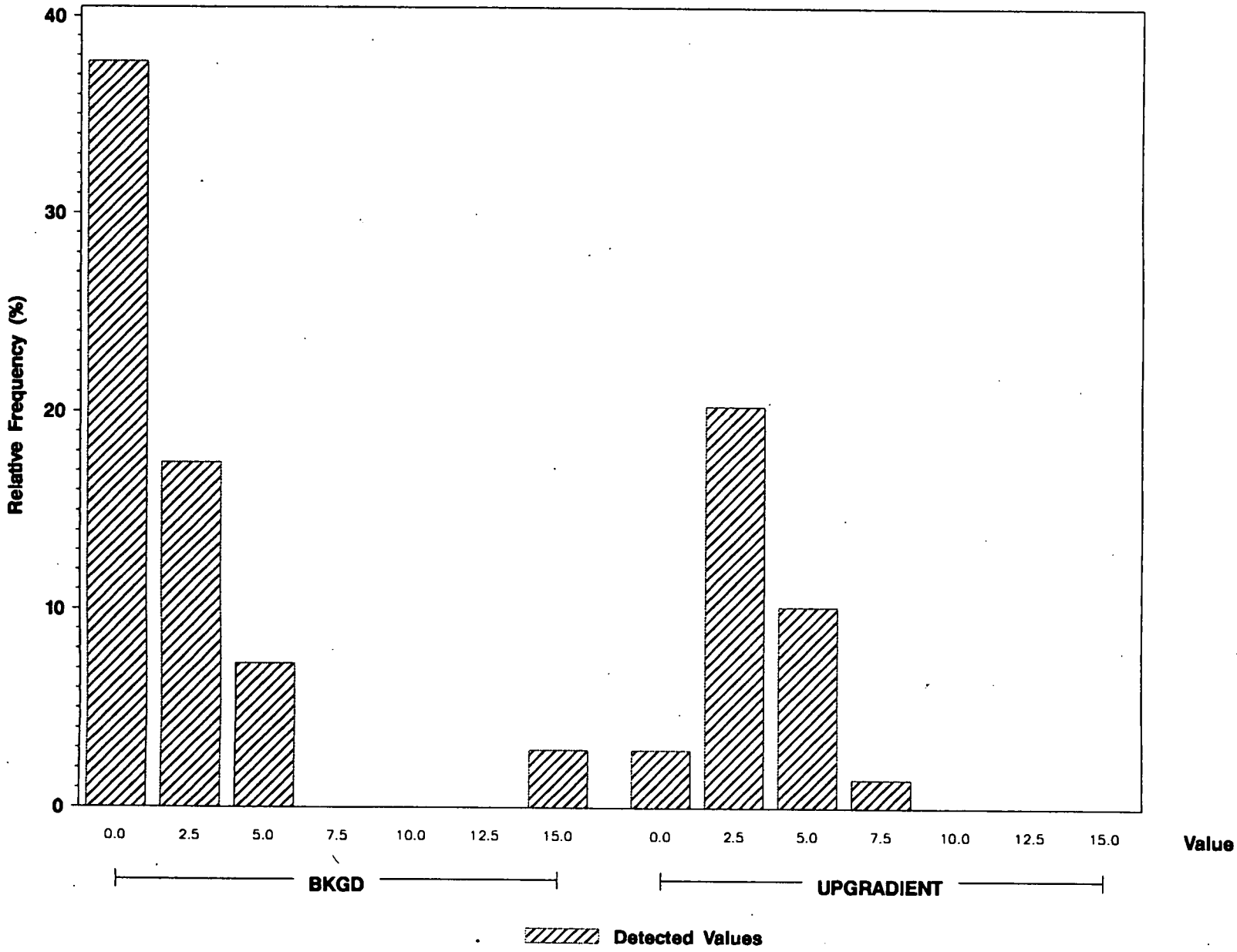
ANALYTE = TRITIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved URANIUM – 233, – 234 (pCi/L) in Groundwater

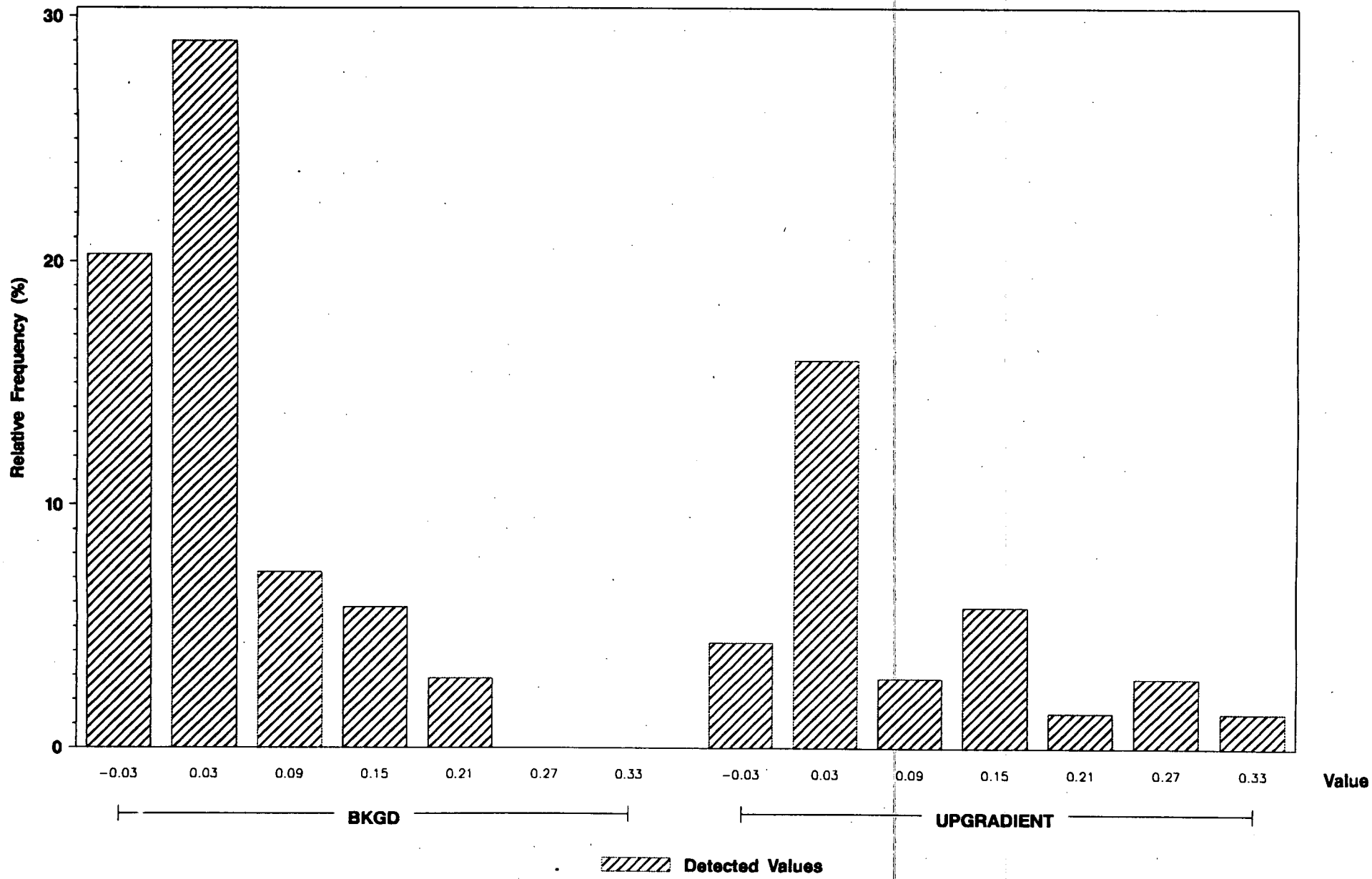
ANALYTE = URANIUM – 233, – 234



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved URANIUM – 235 (pCi/L) in Groundwater

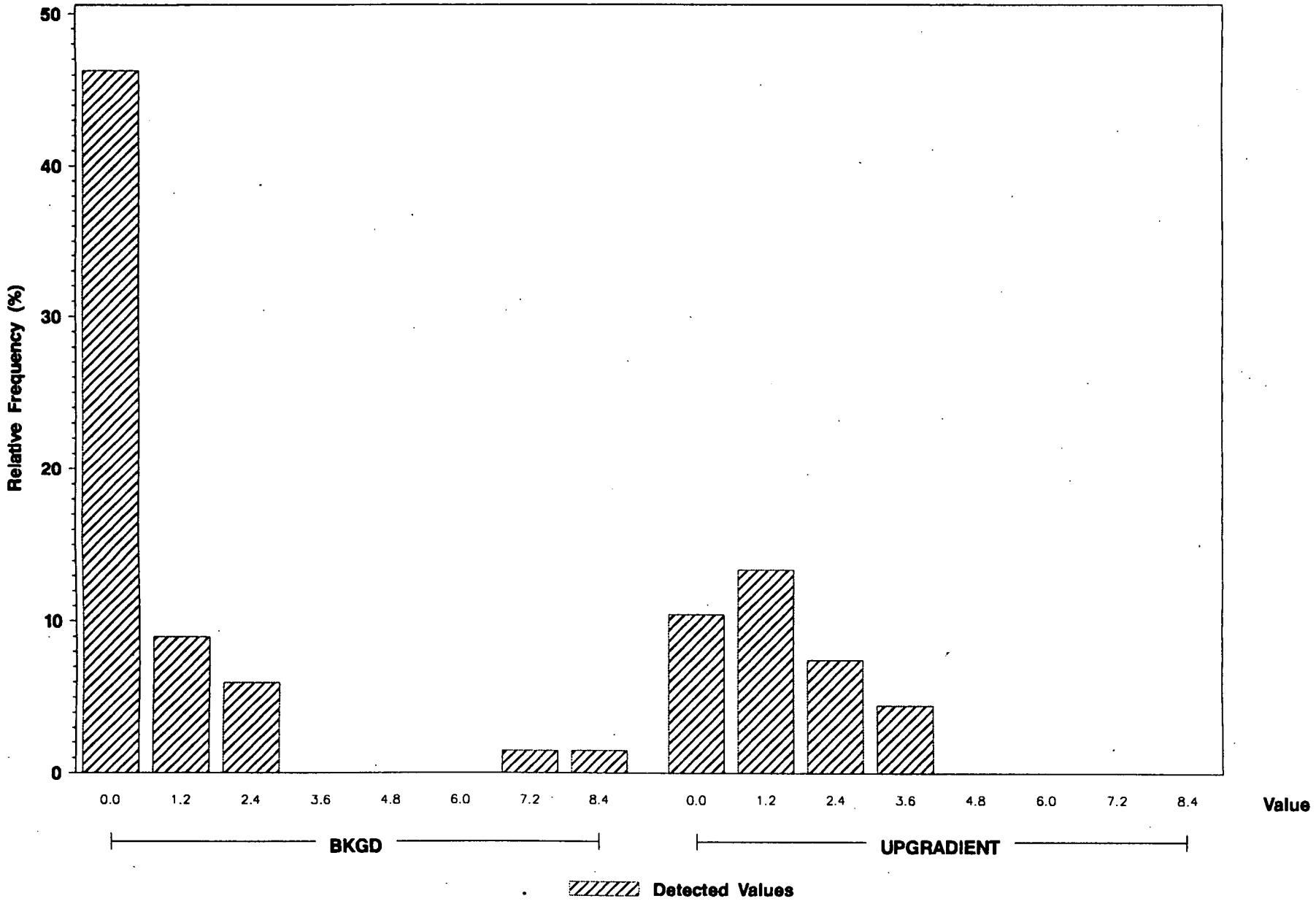
ANALYTE = URANIUM – 235



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Dissolved URANIUM-238 (pCi/L) in Groundwater

ANALYTE=URANIUM-238



# Groundwater

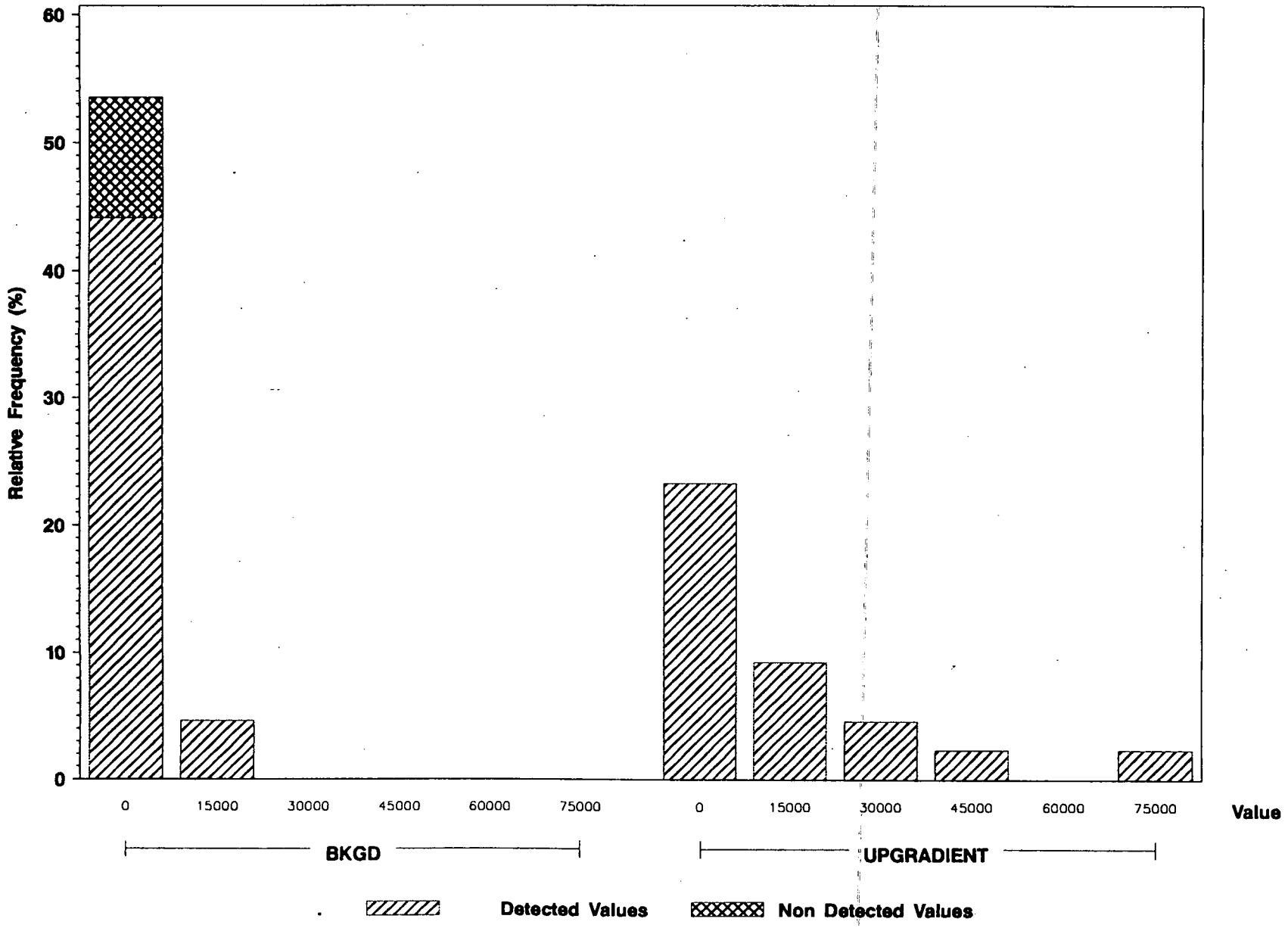
# (Total)

# Background vs. OU 7 Upgradient LHSU

# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total ALUMINUM (ug/L) in Groundwater

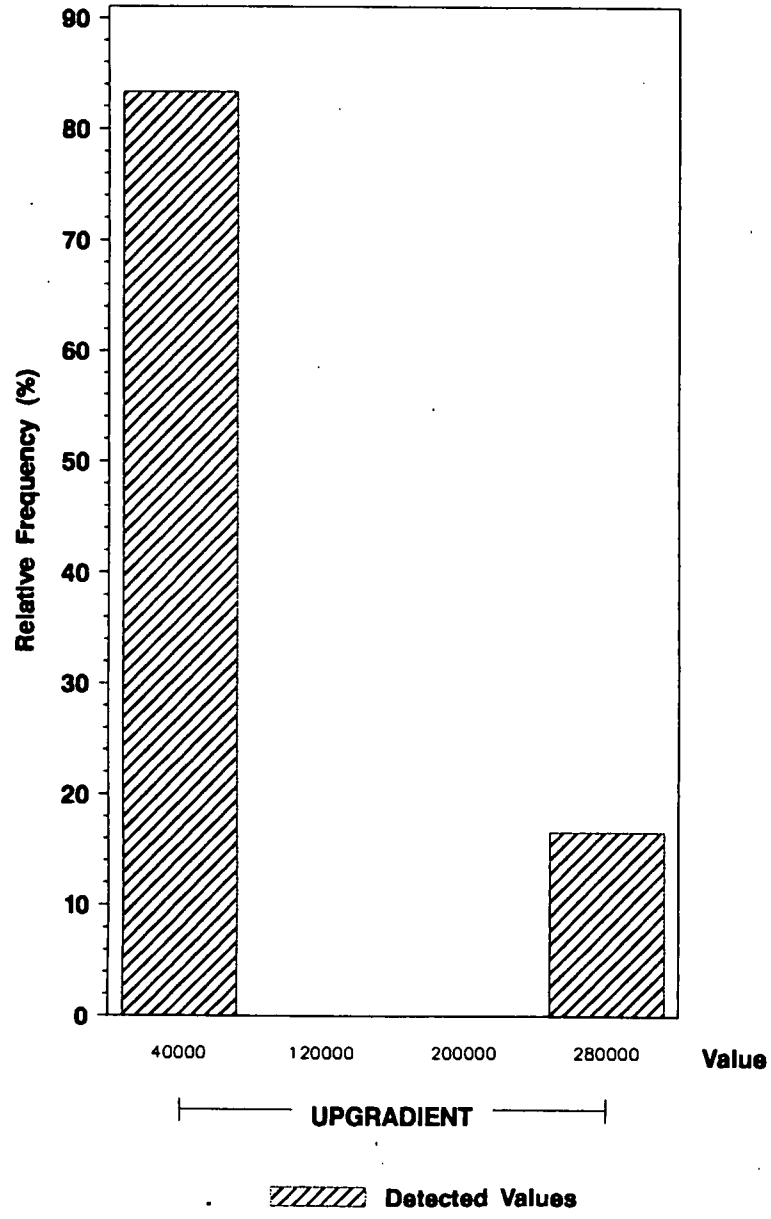
ANALYTE = ALUMINUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total AMMONIA (ug/L) in Groundwater

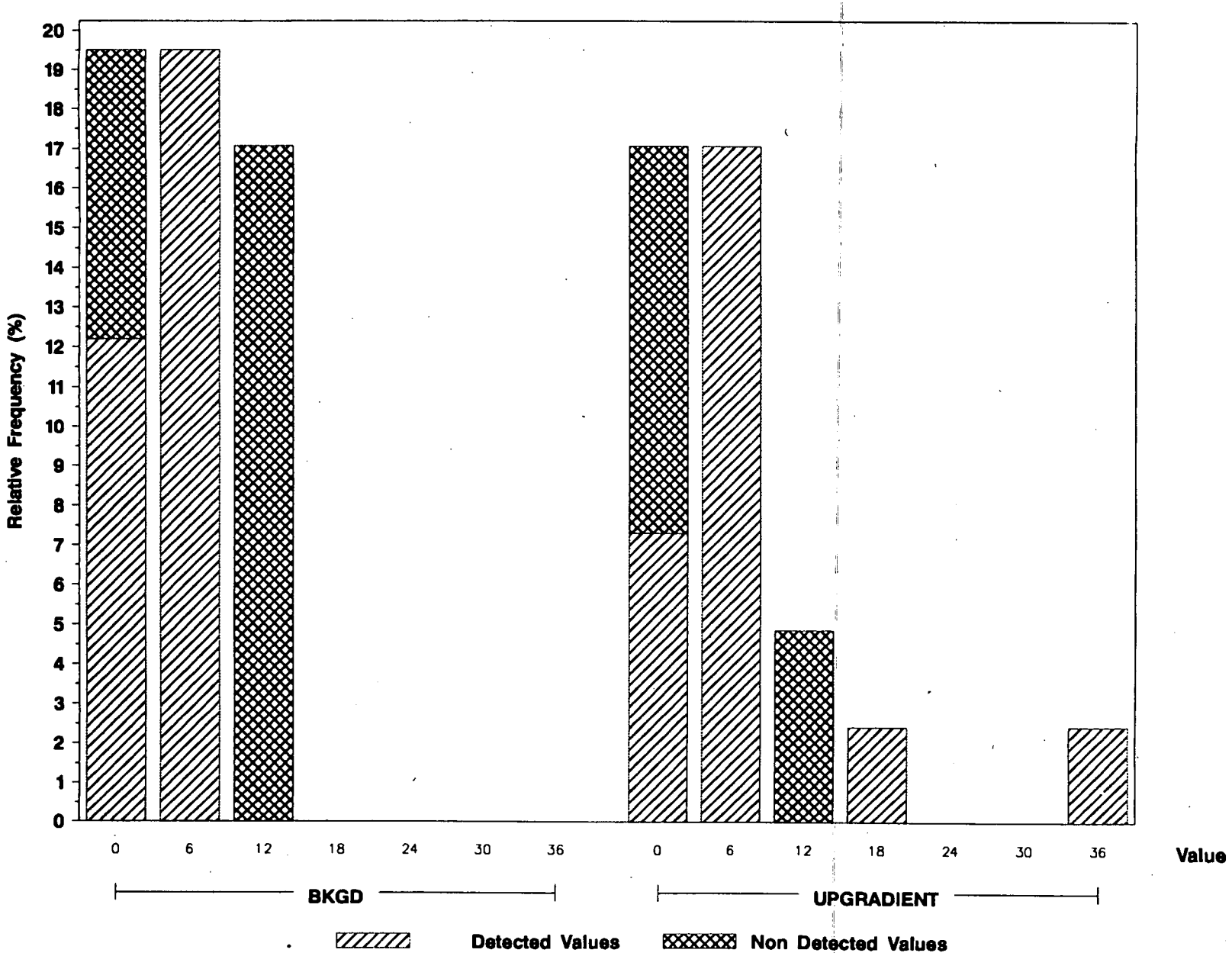
ANALYTE = AMMONIA



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total ARSENIC (ug/L) in Groundwater

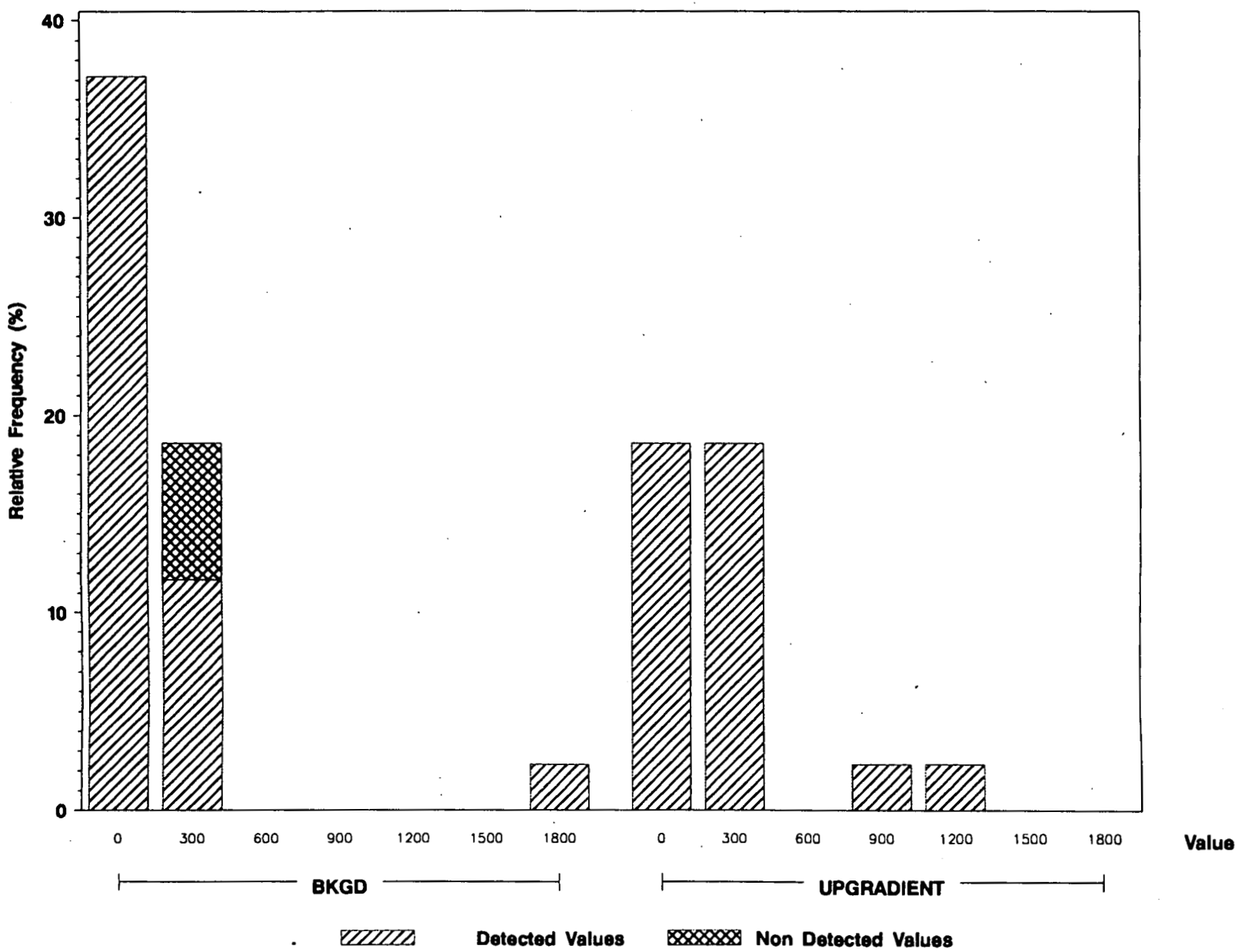
ANALYTE = ARSENIC



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total BARIUM (ug/L) in Groundwater

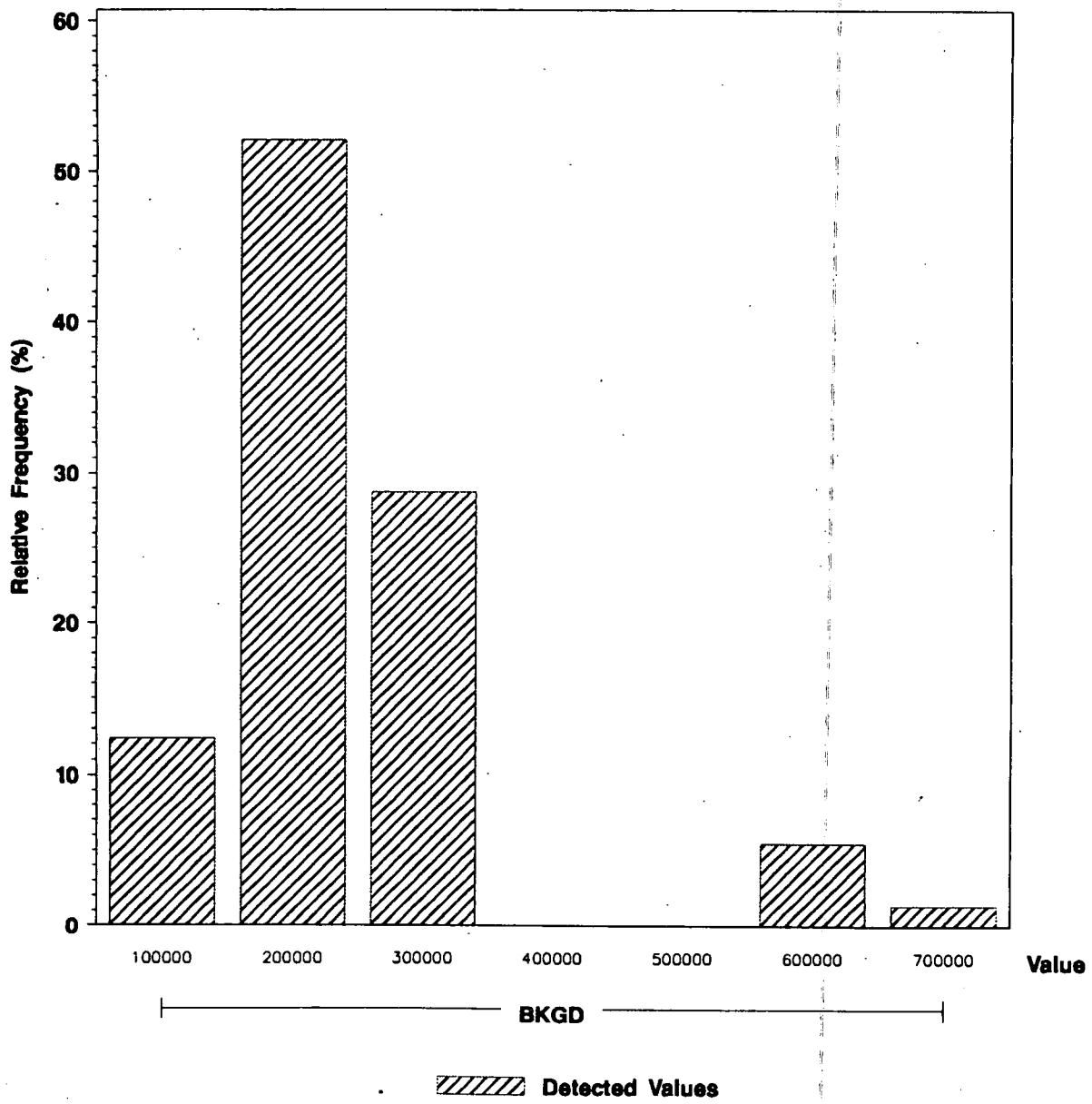
ANALYTE = BARIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total BICARBONATE (ug/L) in Groundwater

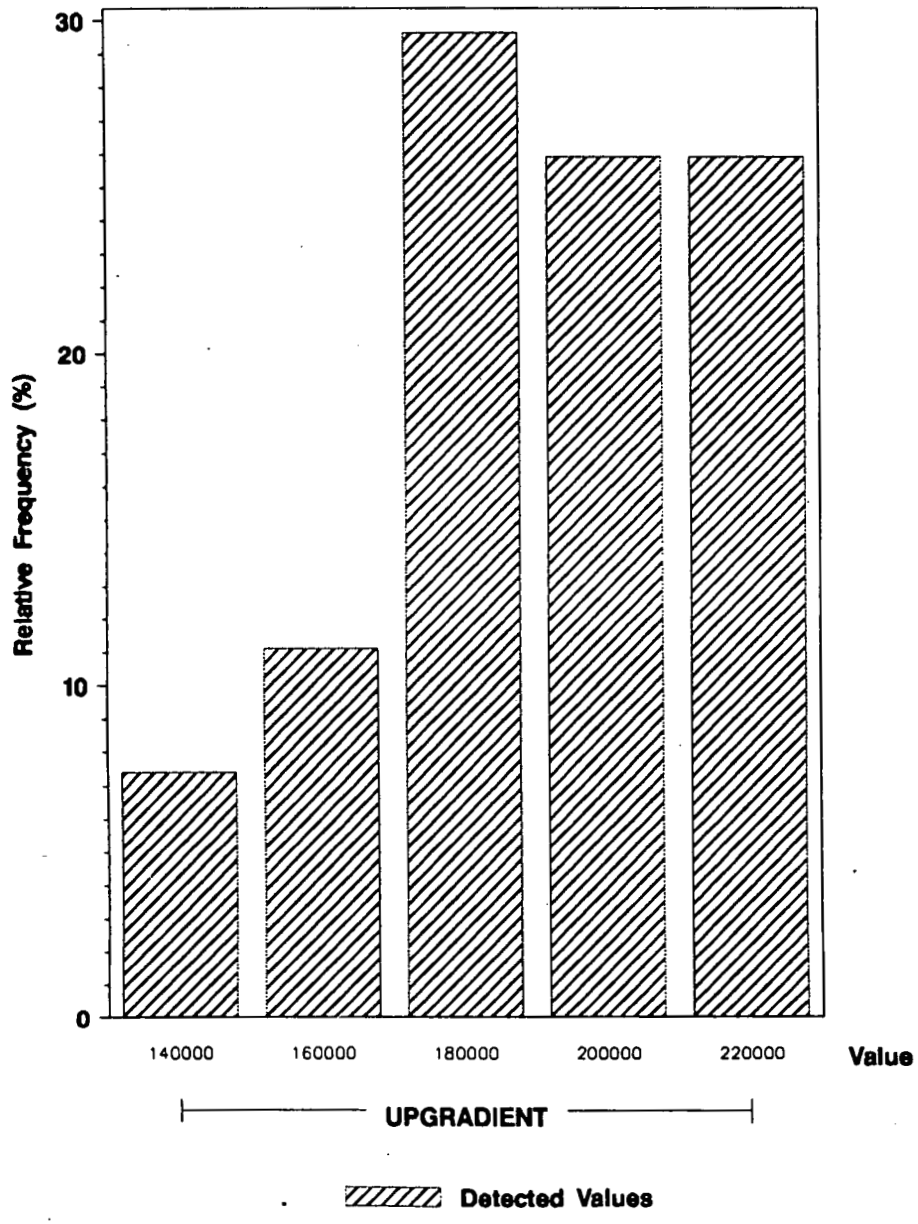
ANALYTE = BICARBONATE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Groundwater

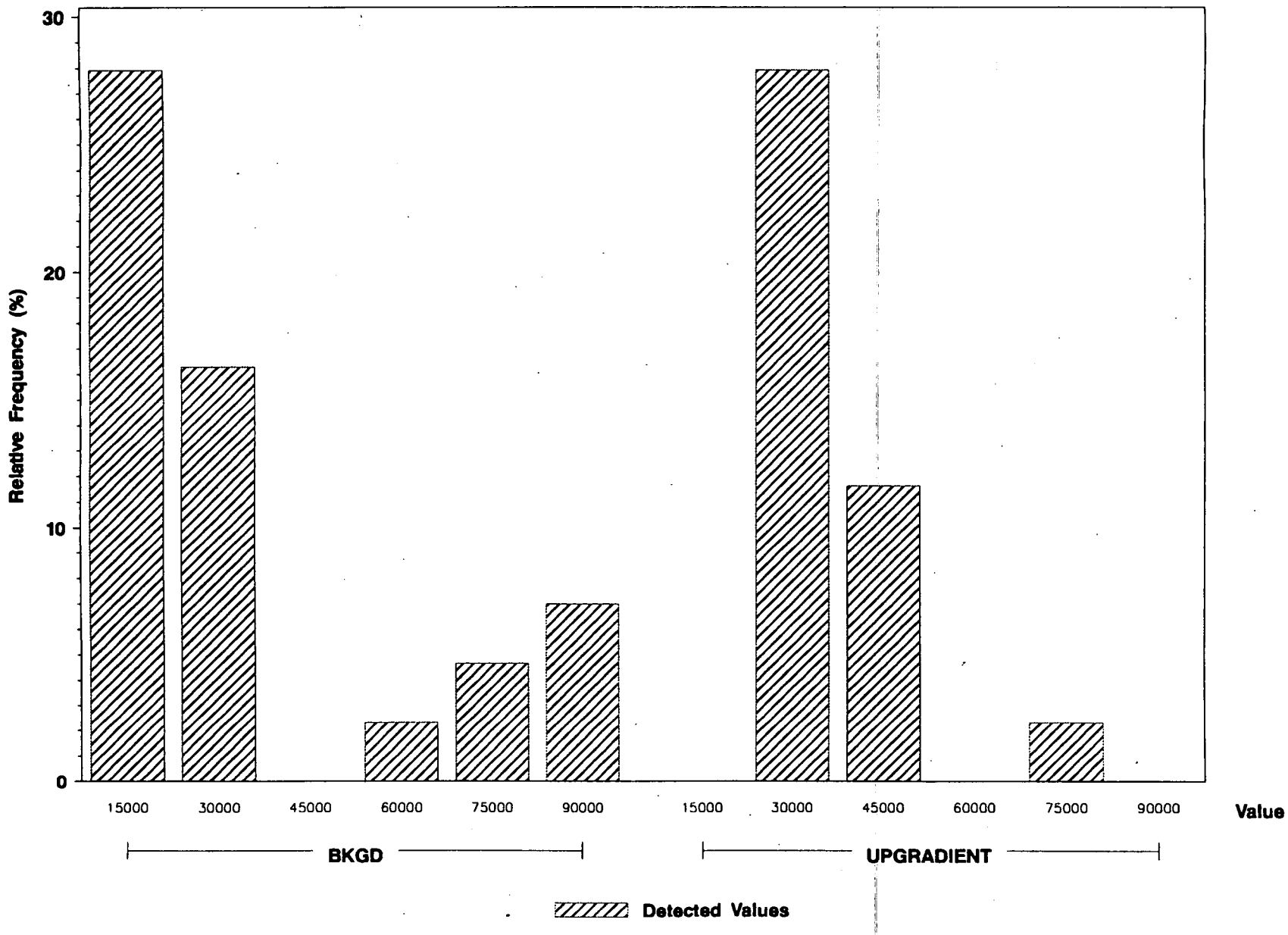
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total CALCIUM (ug/L) in Groundwater

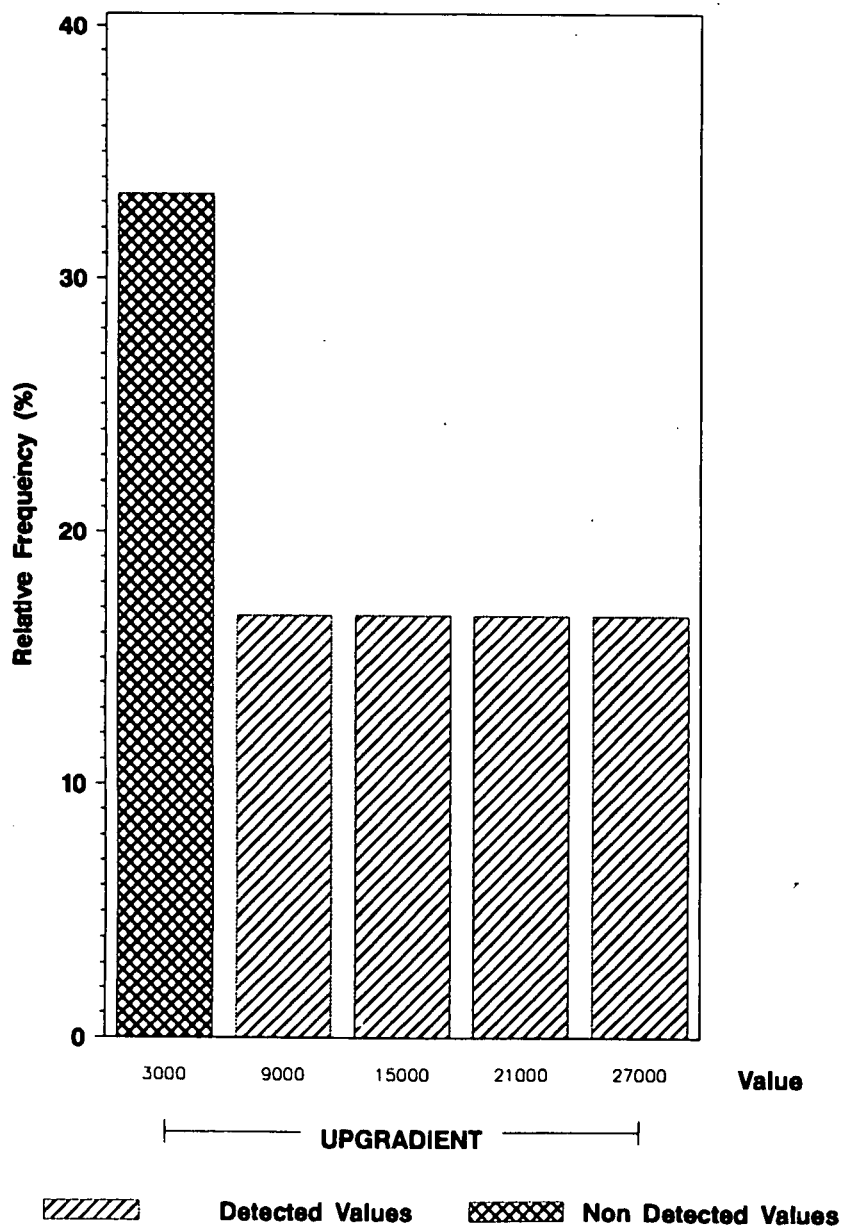
ANALYTE=CALCIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total CHEMICAL OXYGEN DEMAND (ug/L) in Groundwater

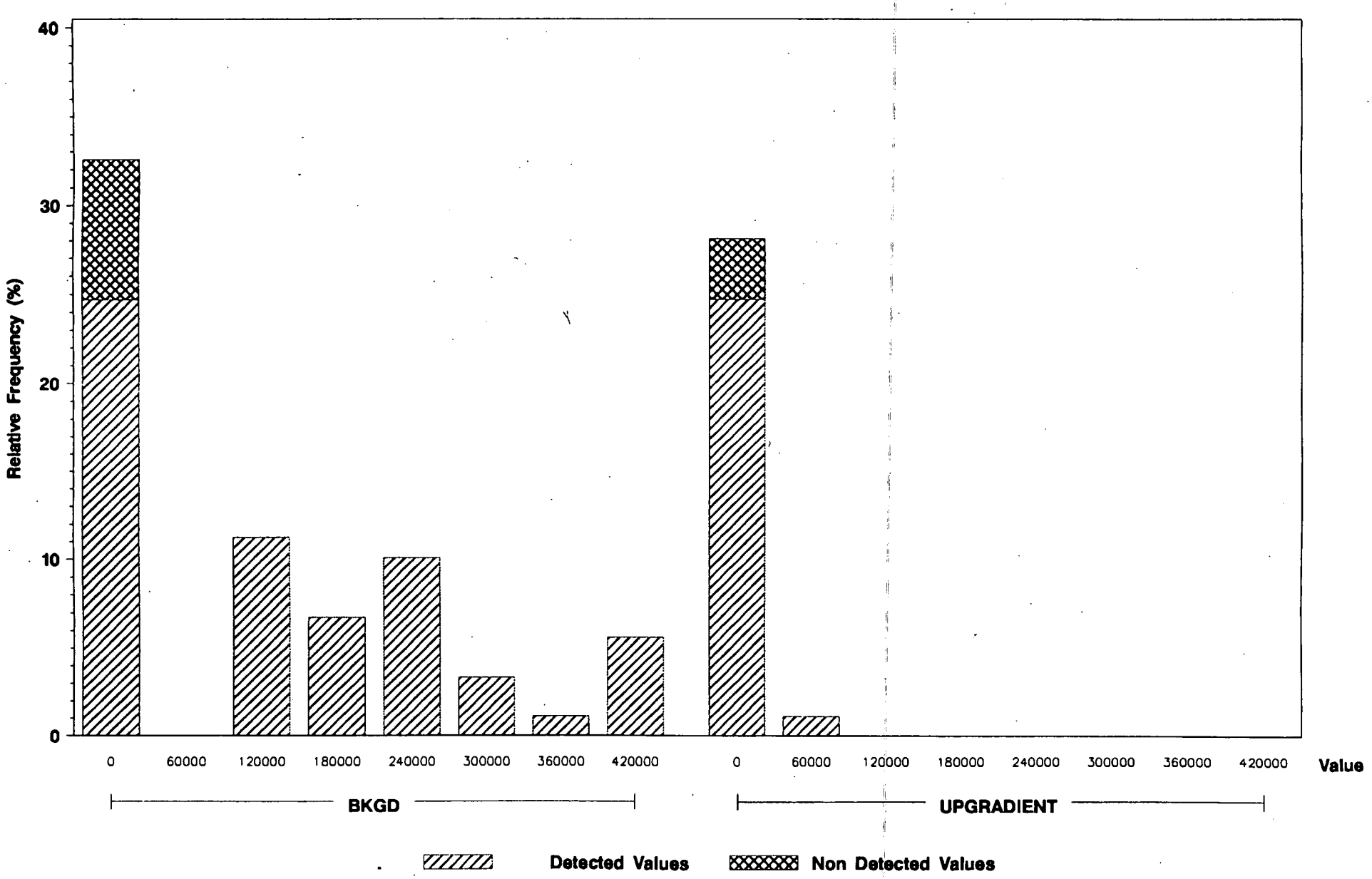
ANALYTE=CHEMICAL OXYGEN DEMAND



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total CHLORIDE (ug/L) in Groundwater

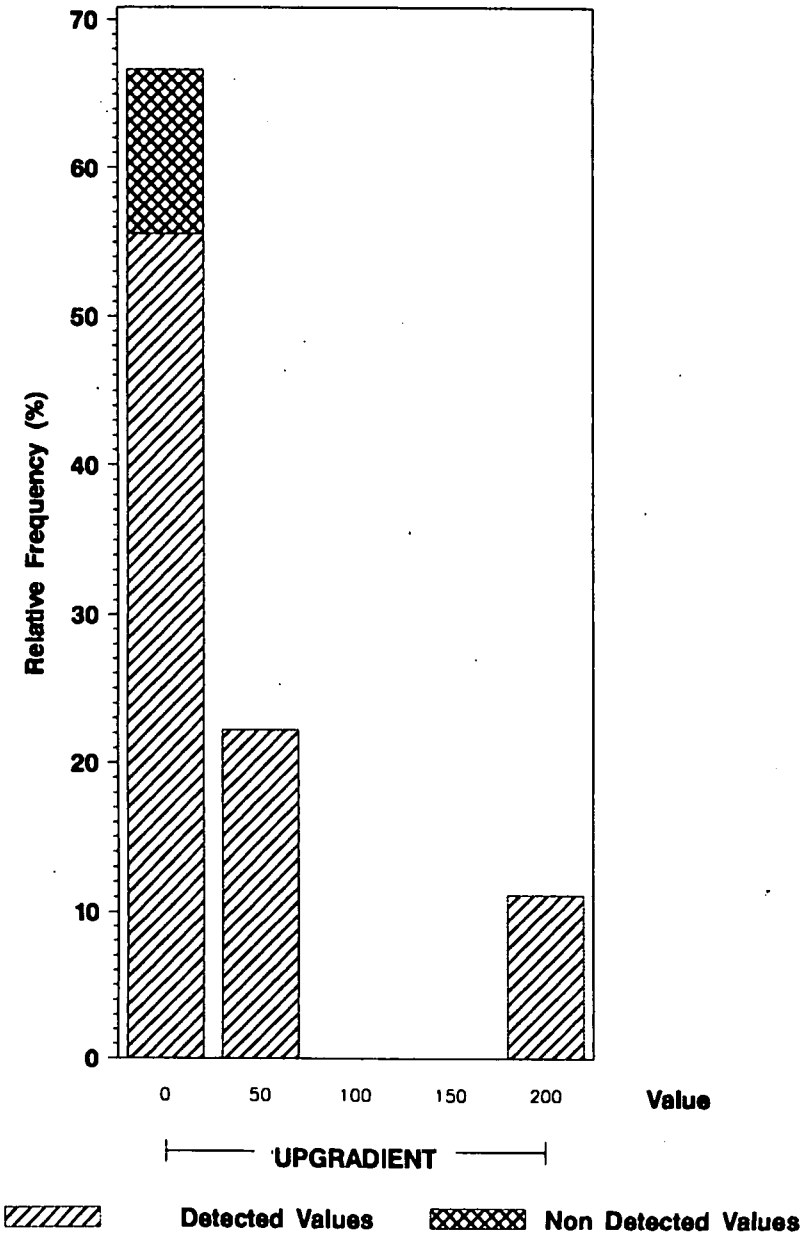
ANALYTE = CHLORIDE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total CHROMIUM (ug/L) in Groundwater

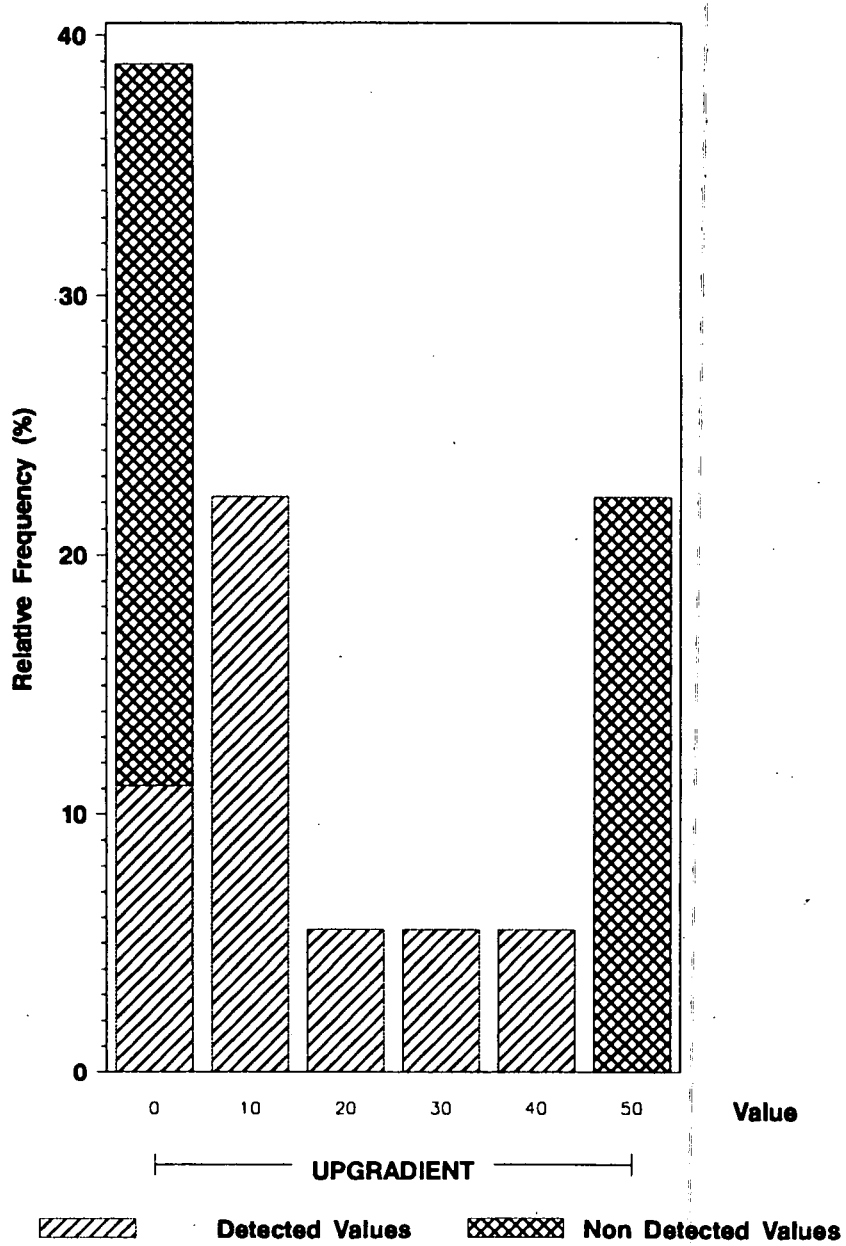
ANALYTE = CHROMIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total COBALT (ug/L) in Groundwater

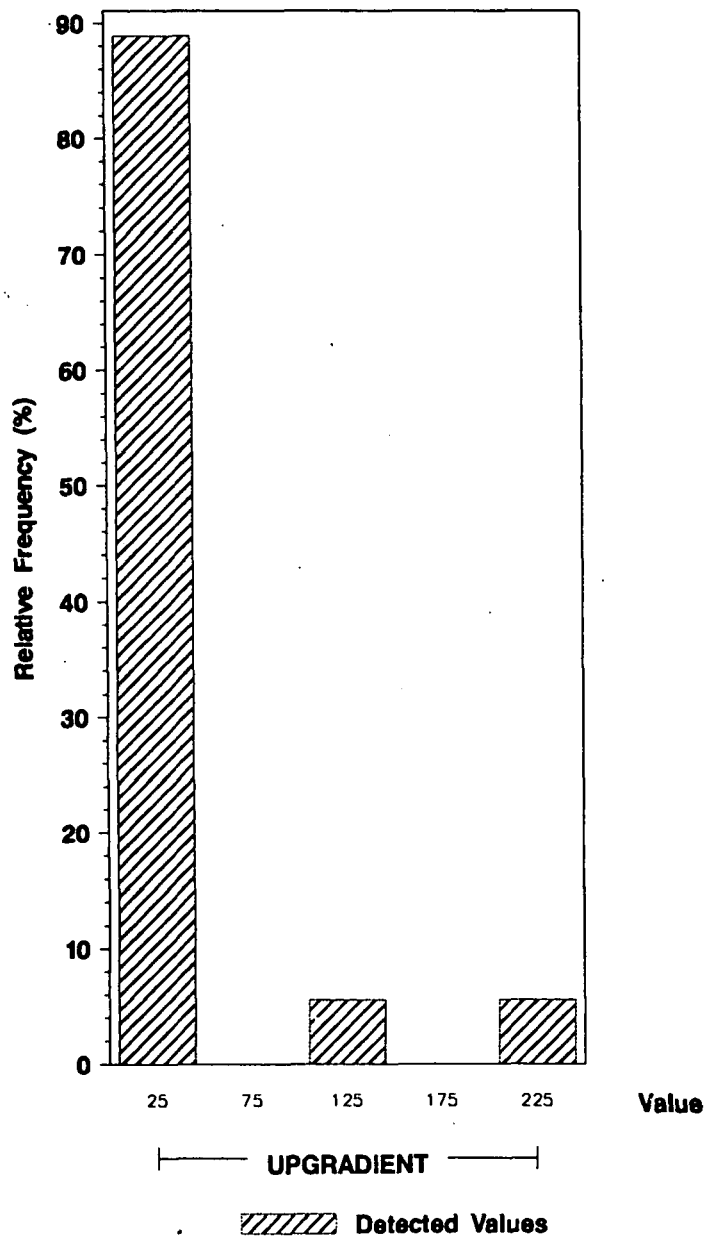
ANALYTE = COBALT



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total COPPER (ug/L) in Groundwater

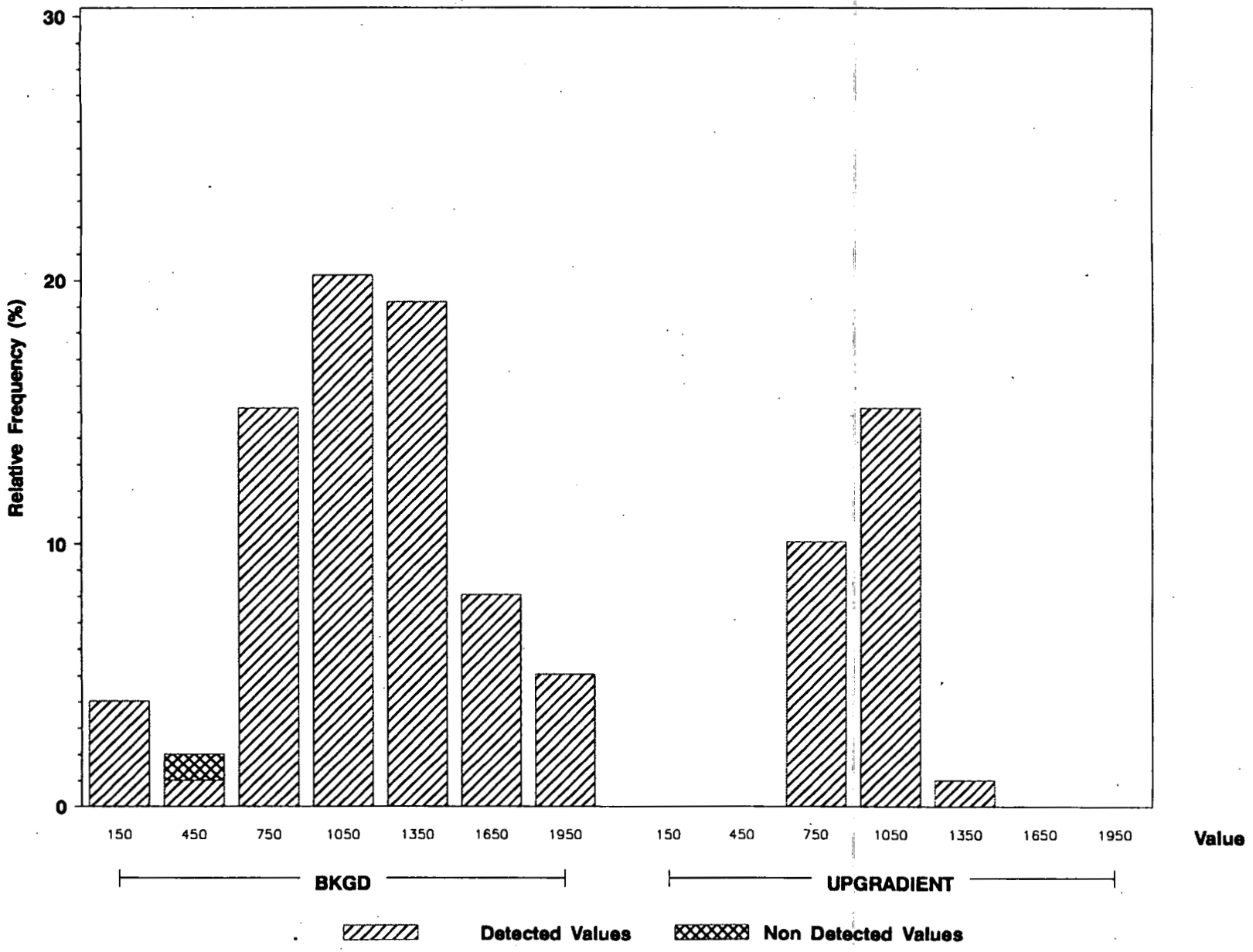
ANALYTE = COPPER



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total FLUORIDE (ug/L) in Groundwater

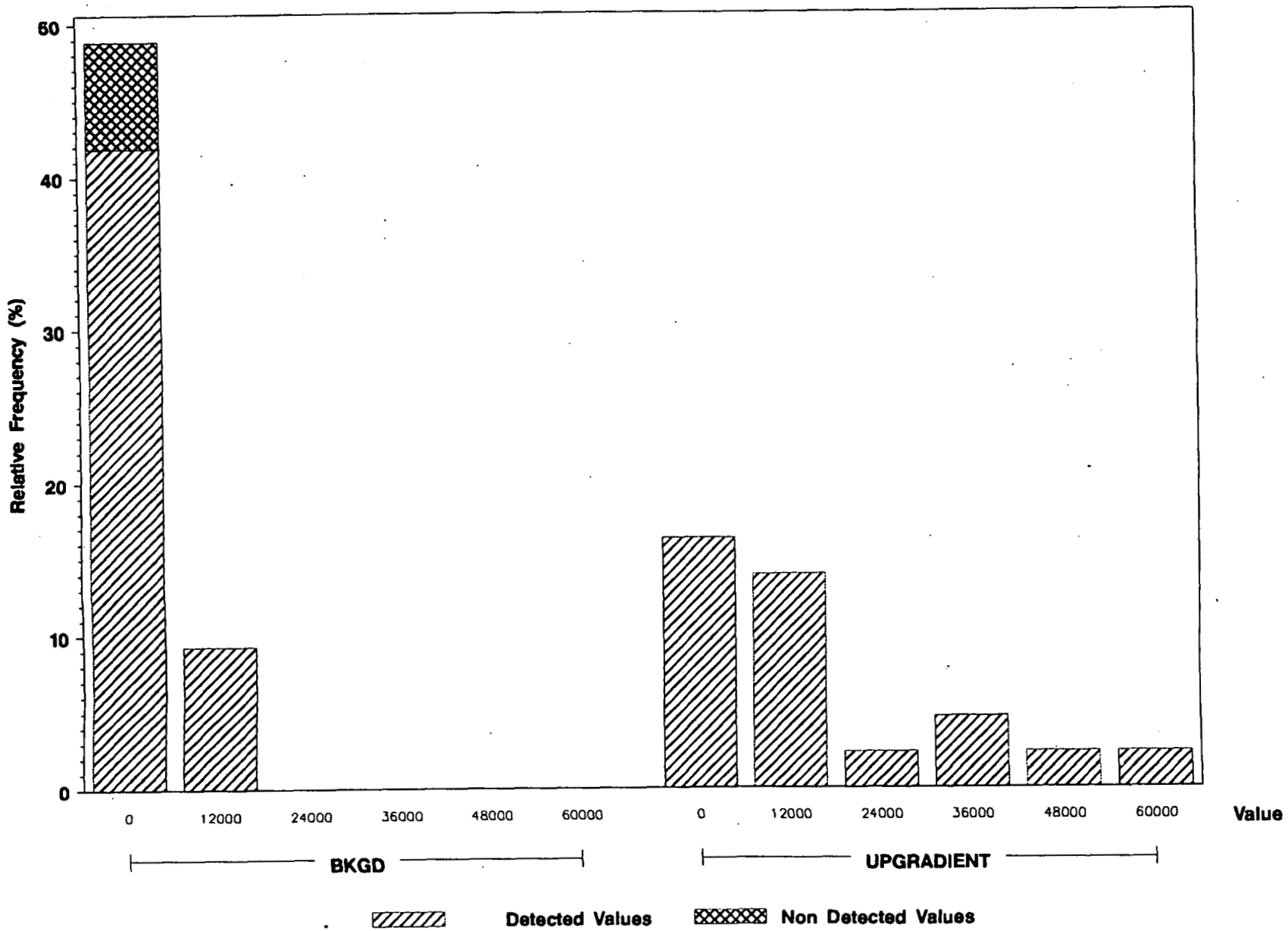
ANALYTE = FLUORIDE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total IRON (ug/L) in Groundwater

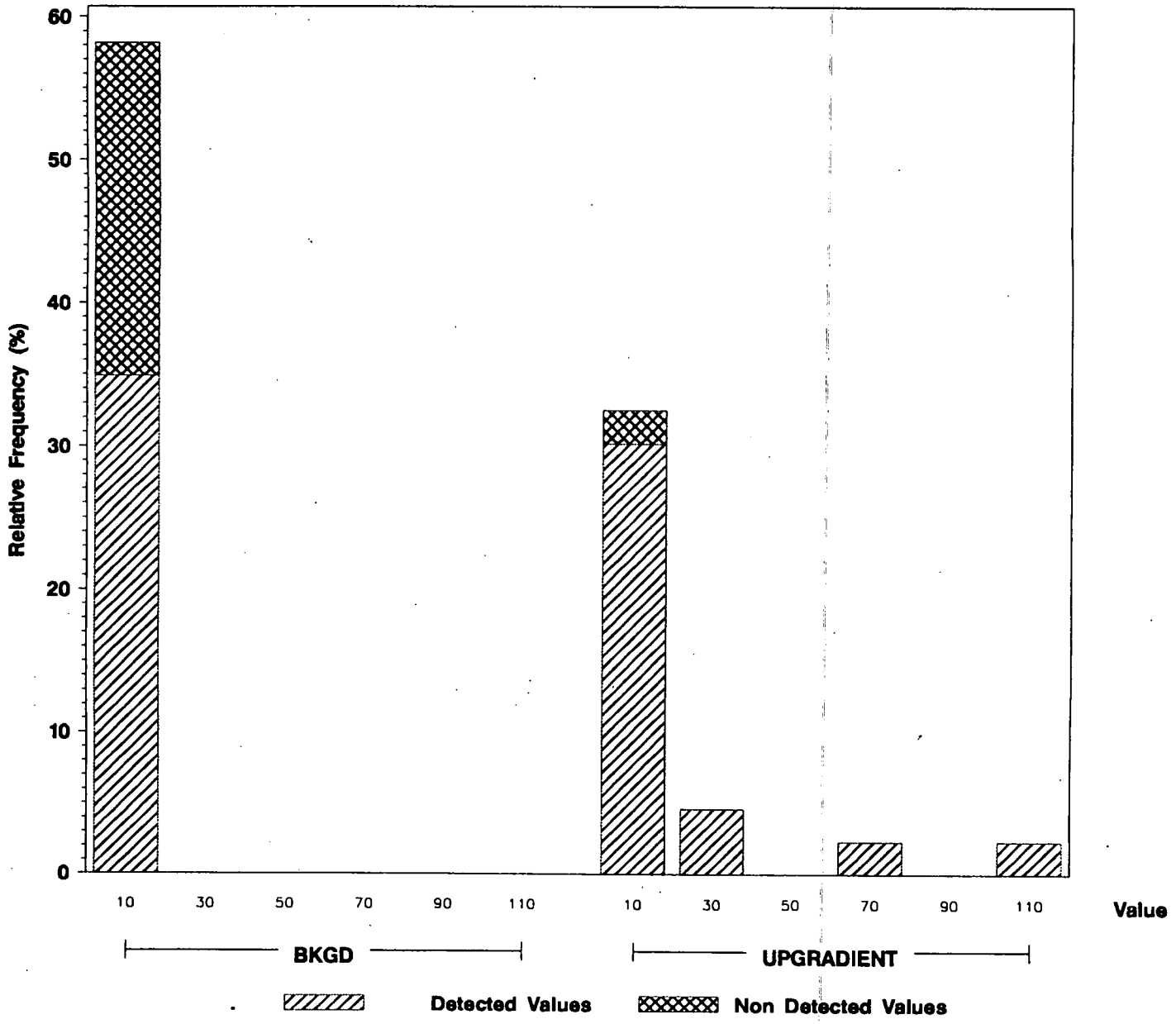
ANALYTE = IRON



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total LEAD (ug/L) in Groundwater

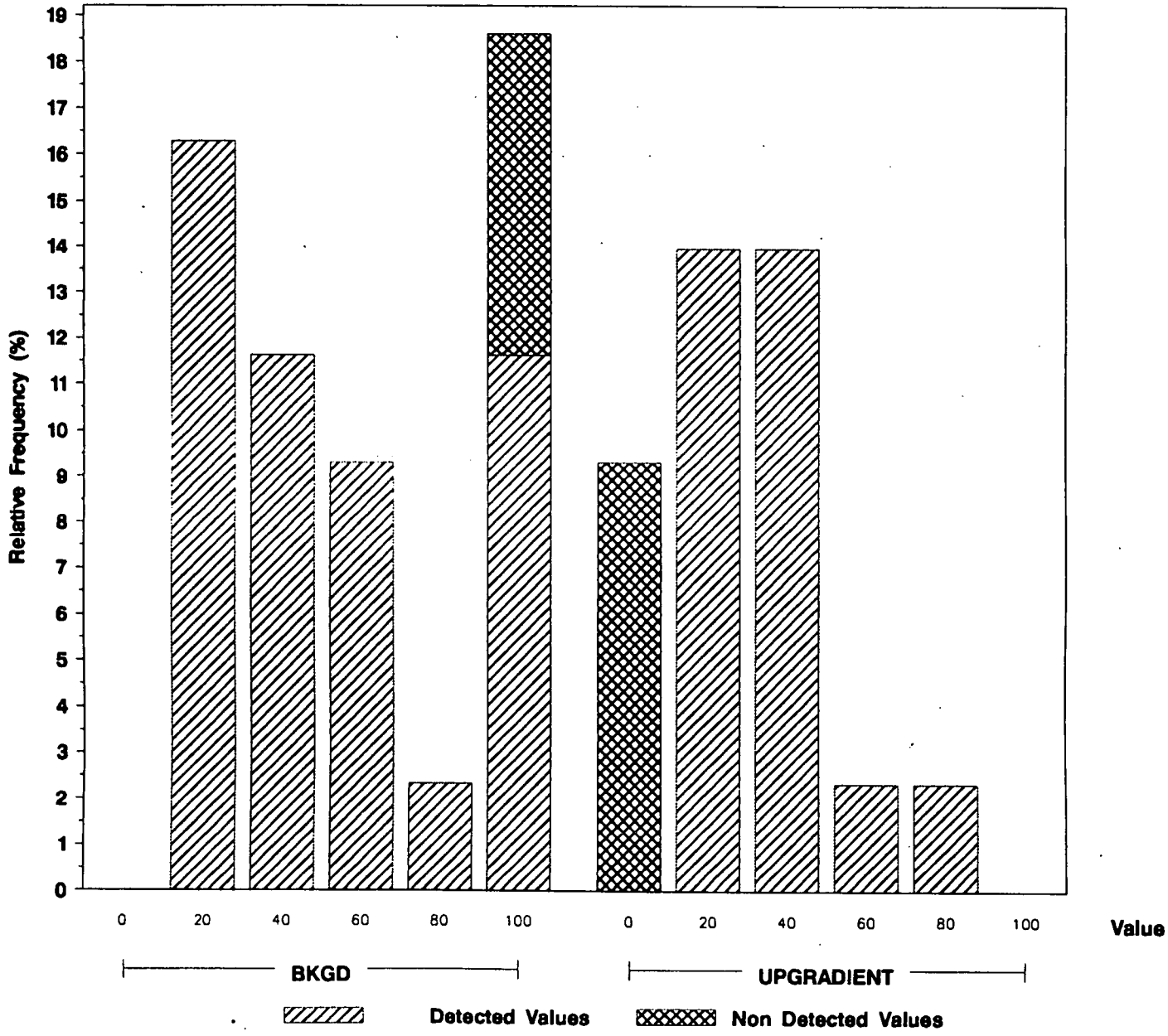
ANALYTE = LEAD



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total LITHIUM (ug/L) in Groundwater

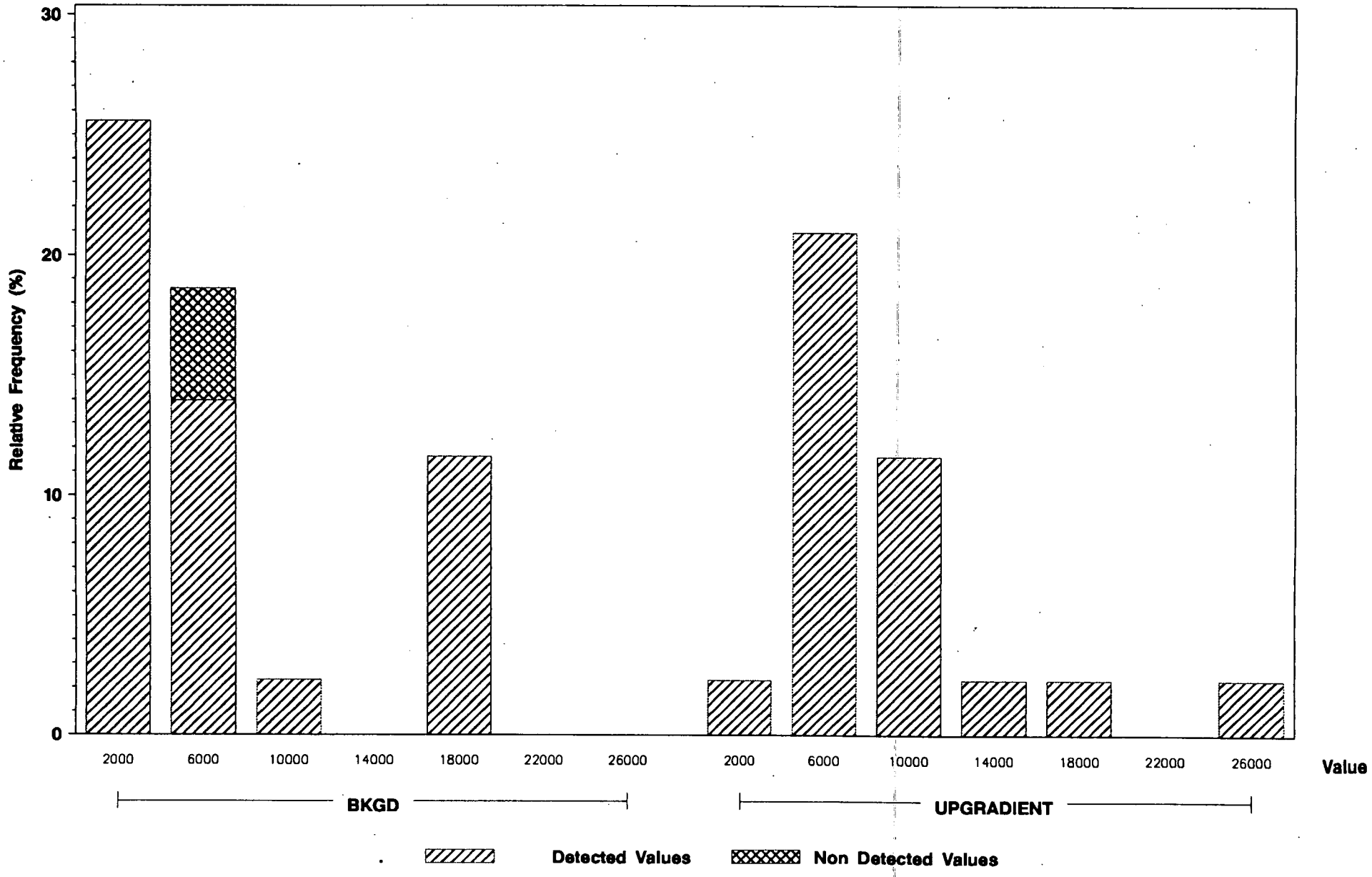
ANALYTE = LITHIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total MAGNESIUM (ug/L) in Groundwater

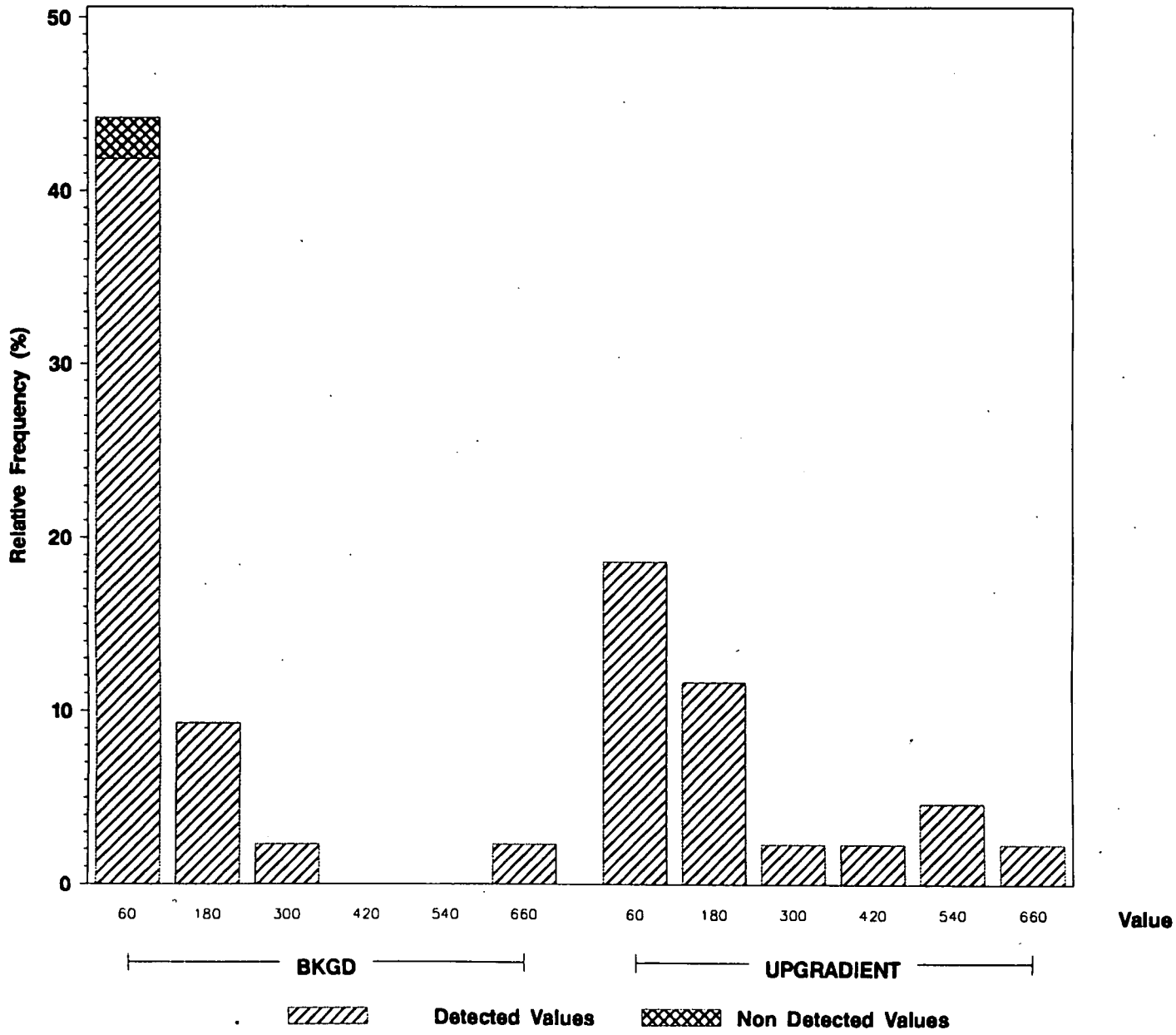
ANALYTE = MAGNESIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total MANGANESE (ug/L) in Groundwater

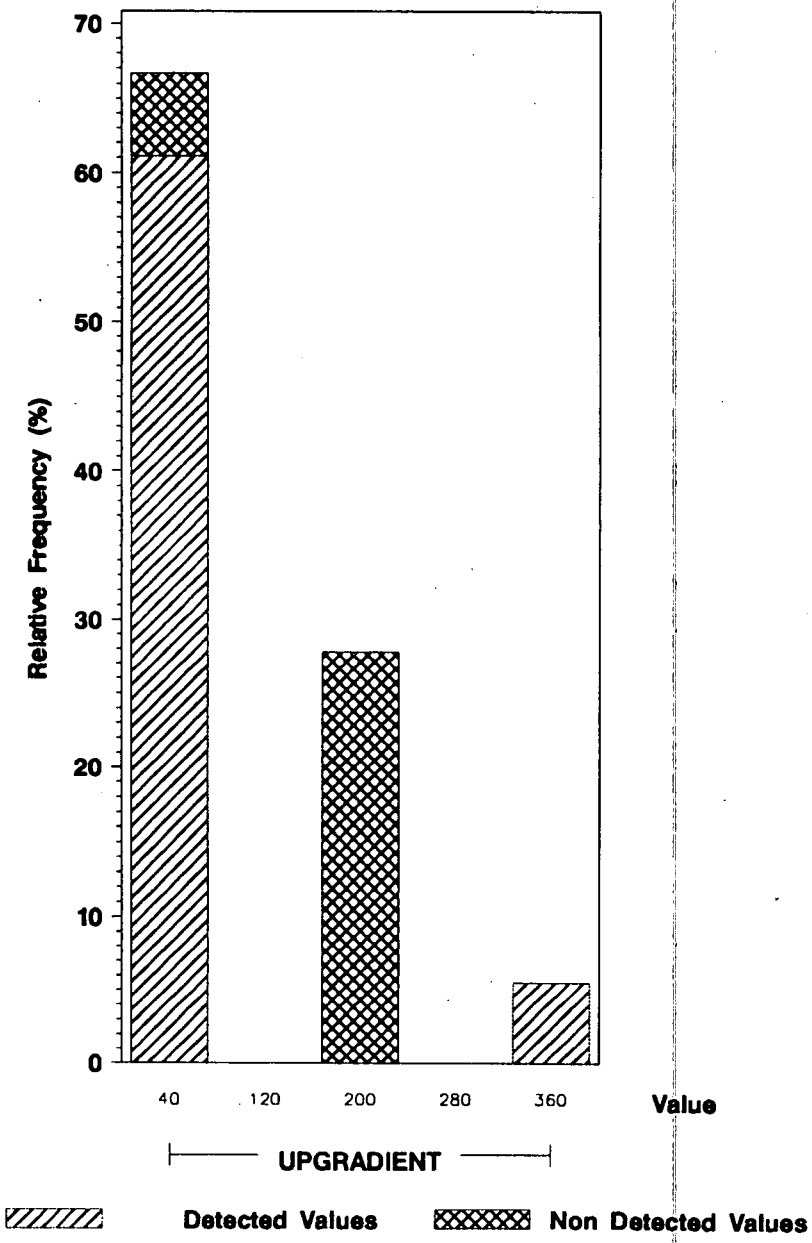
ANALYTE = MANGANESE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total MOLYBDENUM (ug/L) in Groundwater

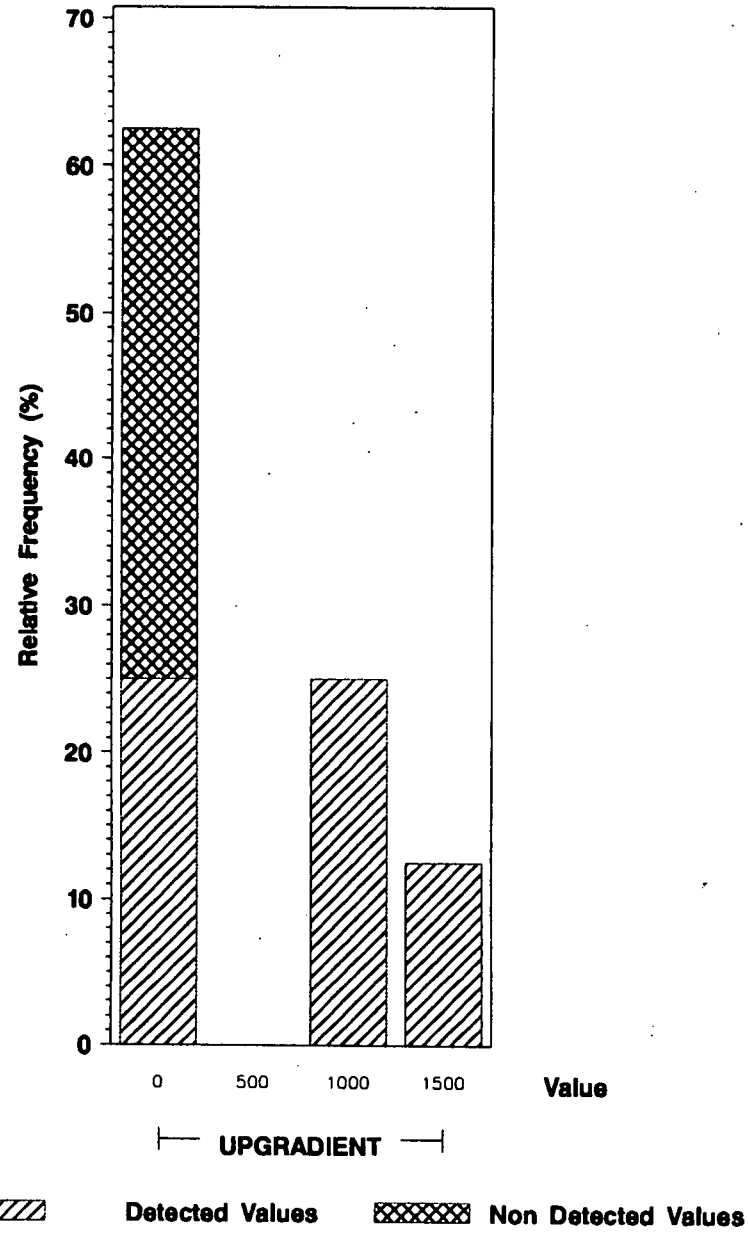
ANALYTE = MOLYBDENUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total NITRATE (ug/L) in Groundwater

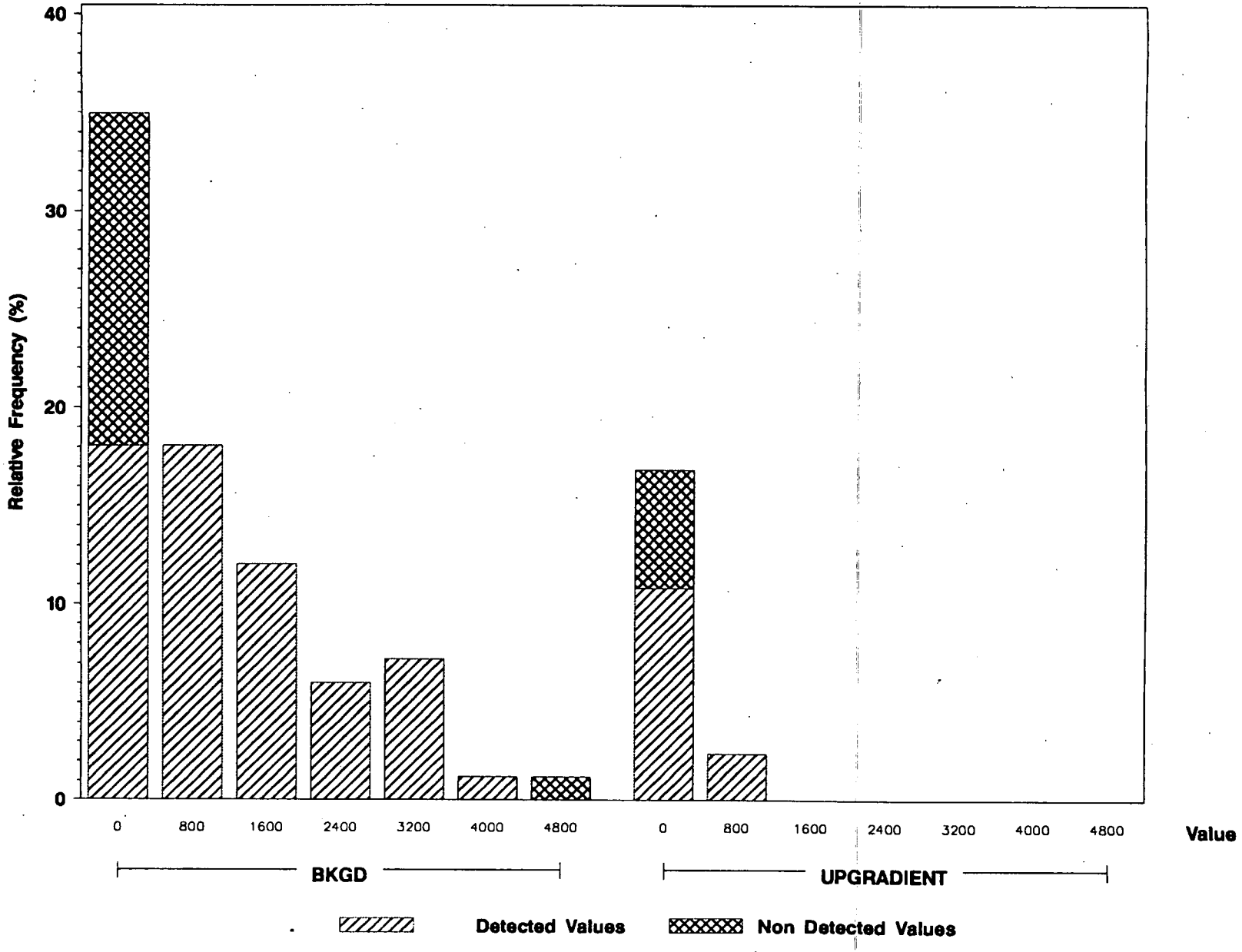
ANALYTE = NITRATE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Groundwater

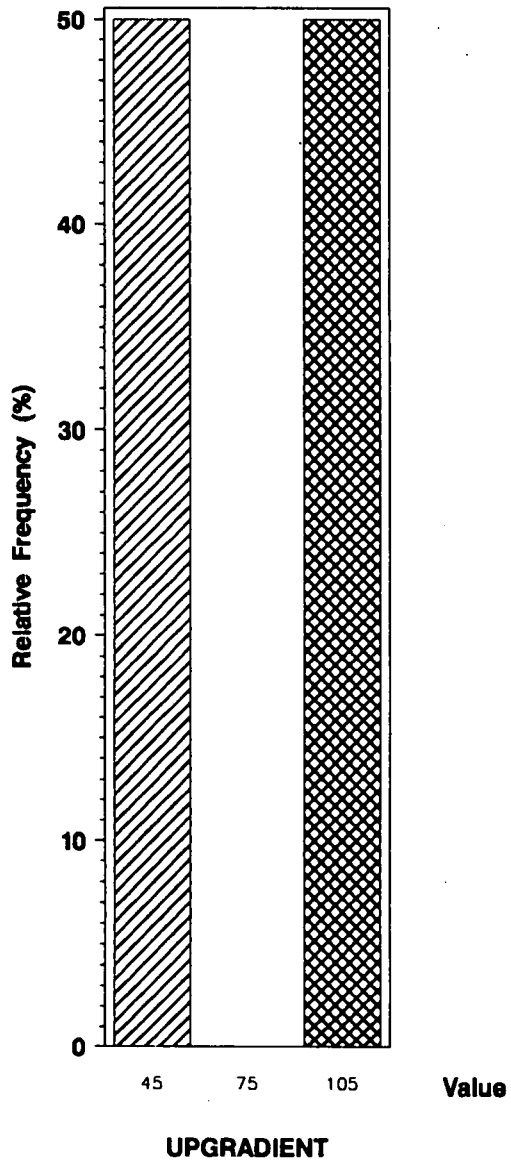
ANALYTE = NITRATE/NITRITE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total NITRITE (ug/L) in Groundwater

ANALYTE = NITRITE

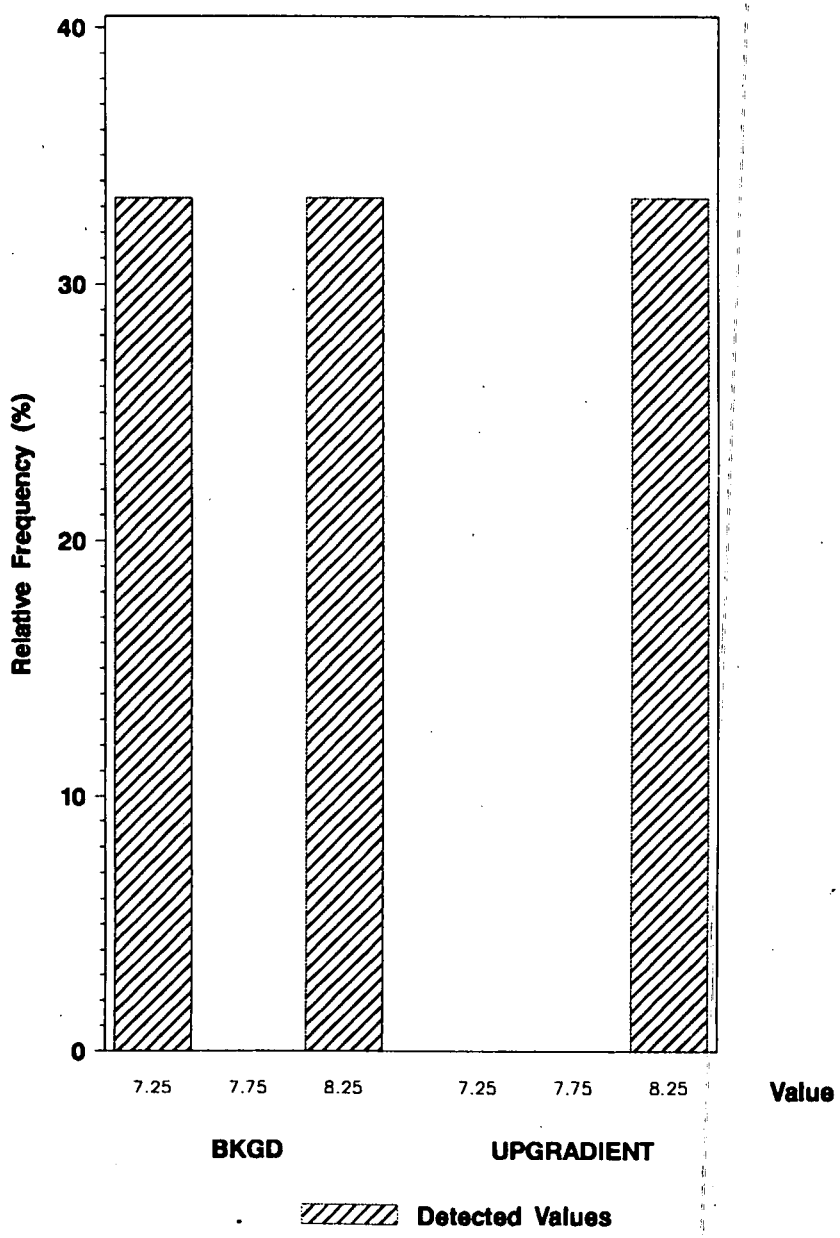



Detected Values  Non Detected Values

# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## pH (Standard Units) in Groundwater

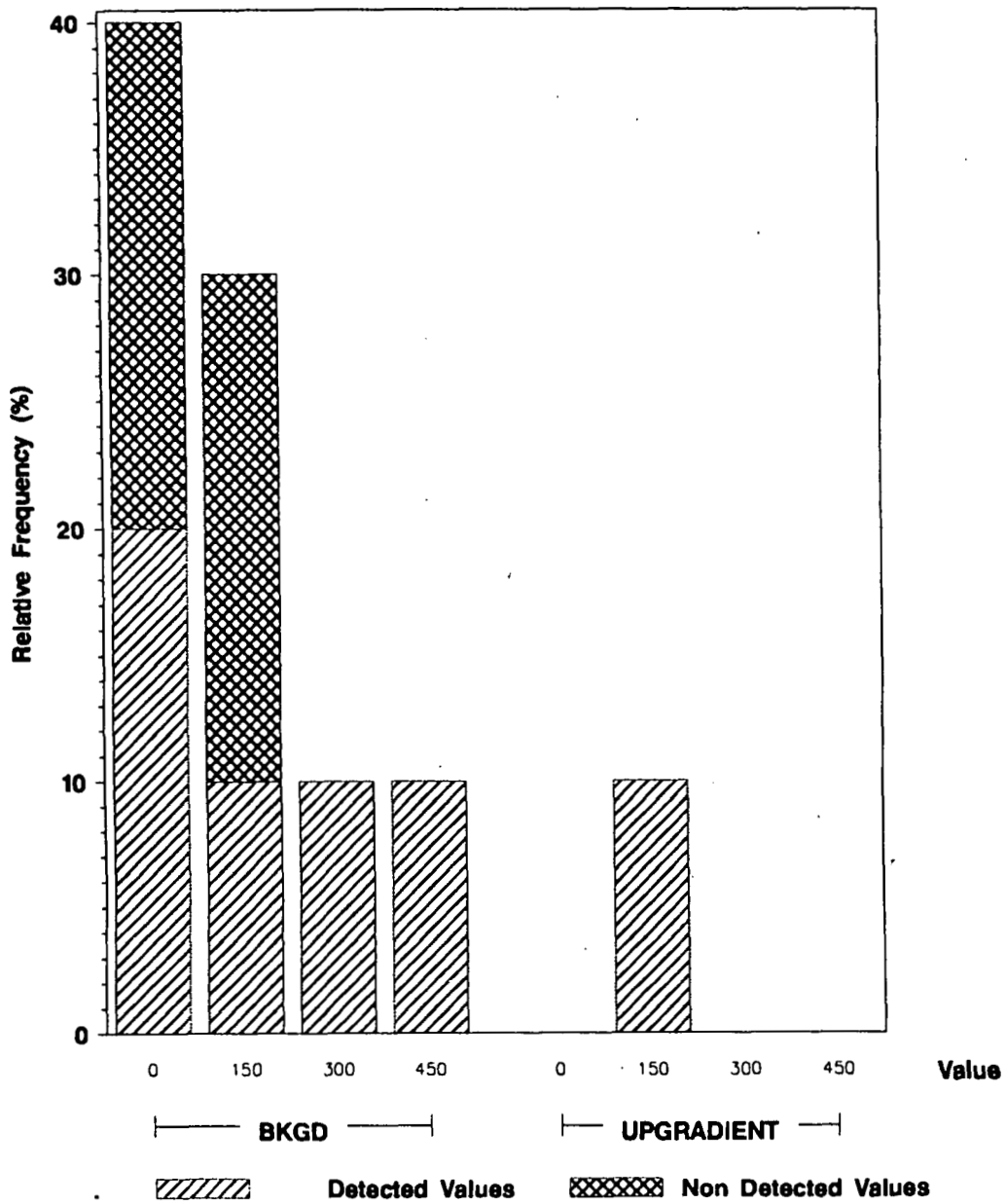
ANALYTE = pH



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total PHOSPHORUS (ug/L) in Groundwater

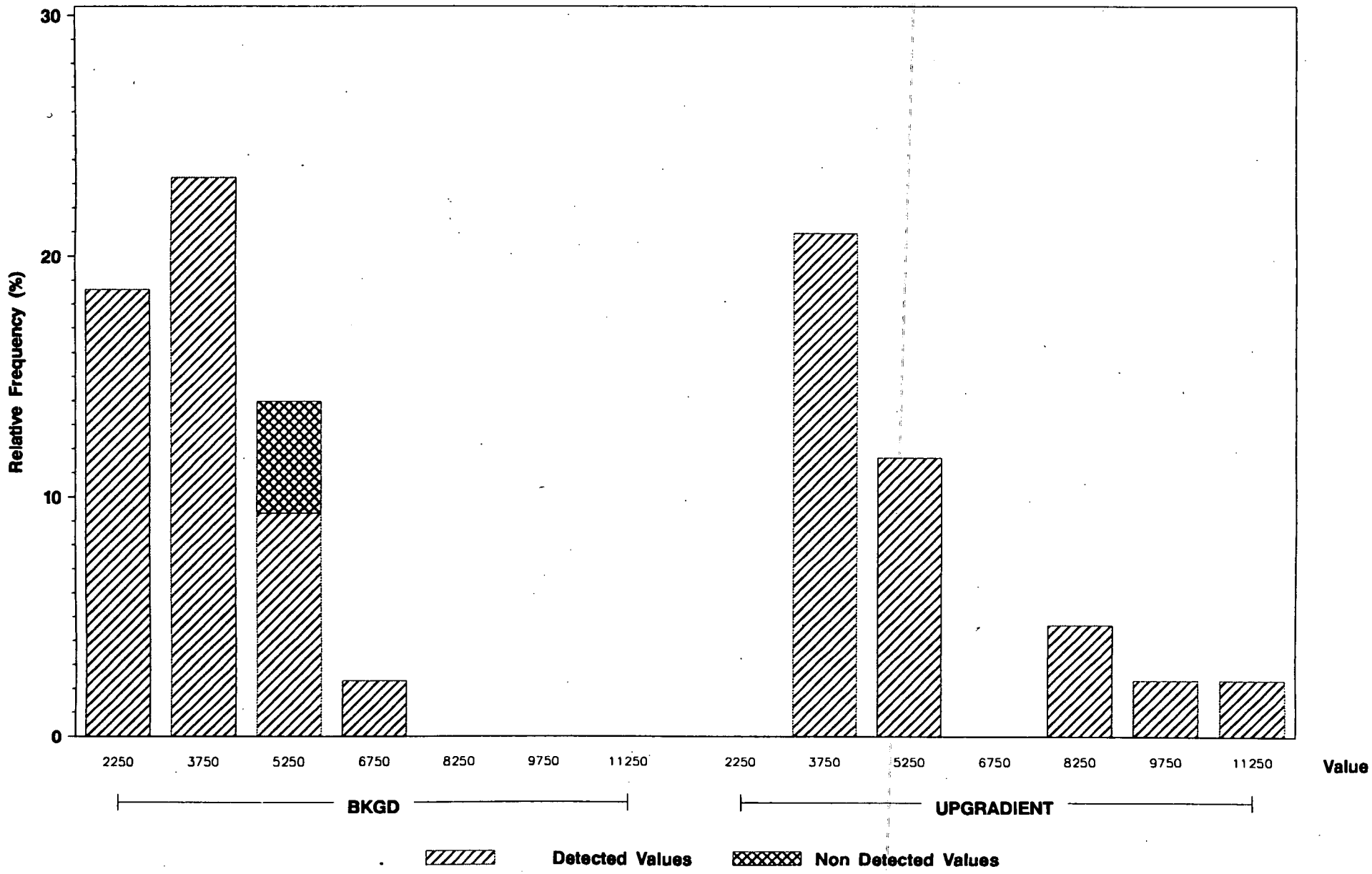
ANALYTE = PHOSPHORUS



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total POTASSIUM (ug/L) in Groundwater

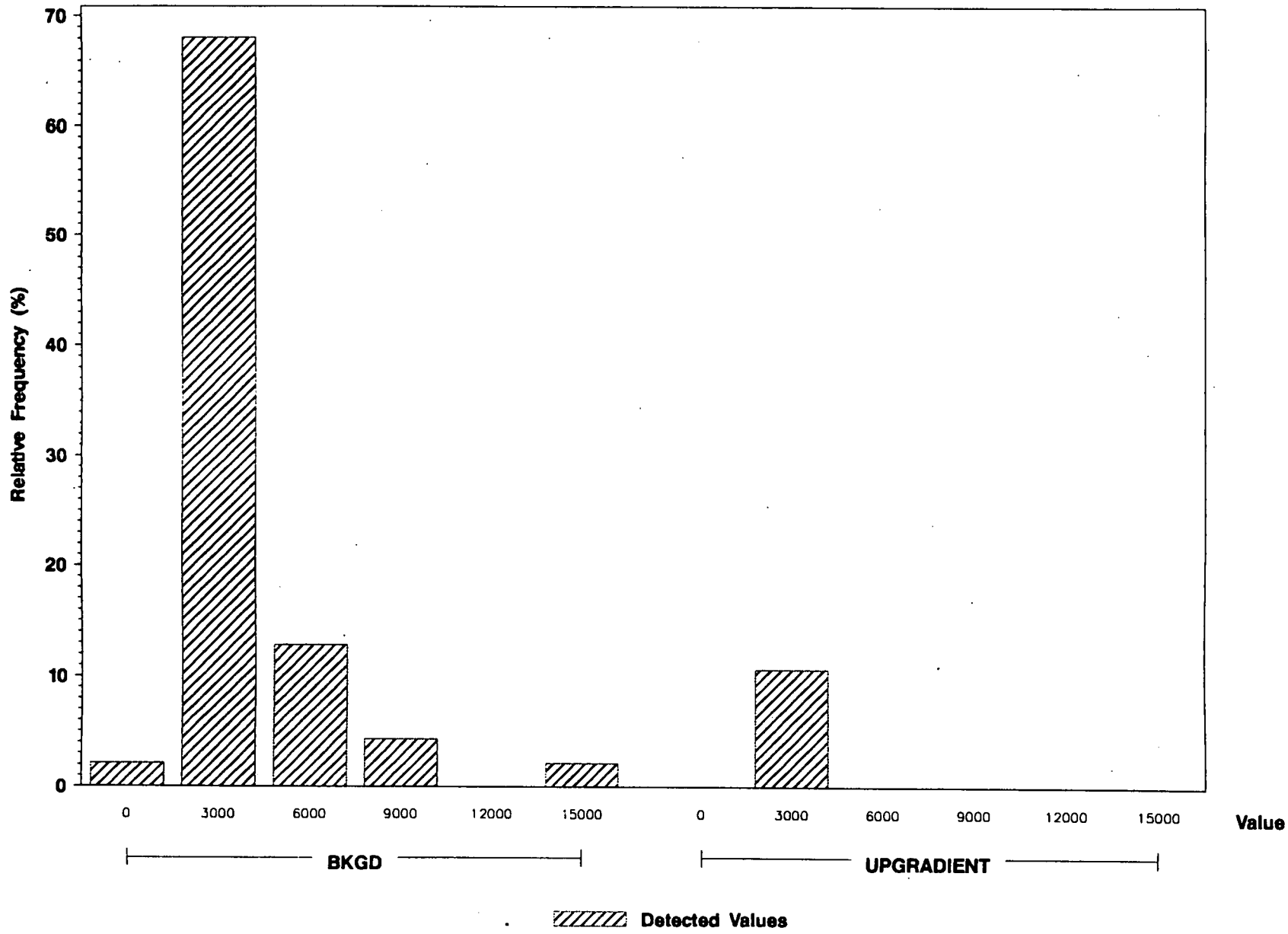
ANALYTE = POTASSIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SILICA (ug/L) in Groundwater

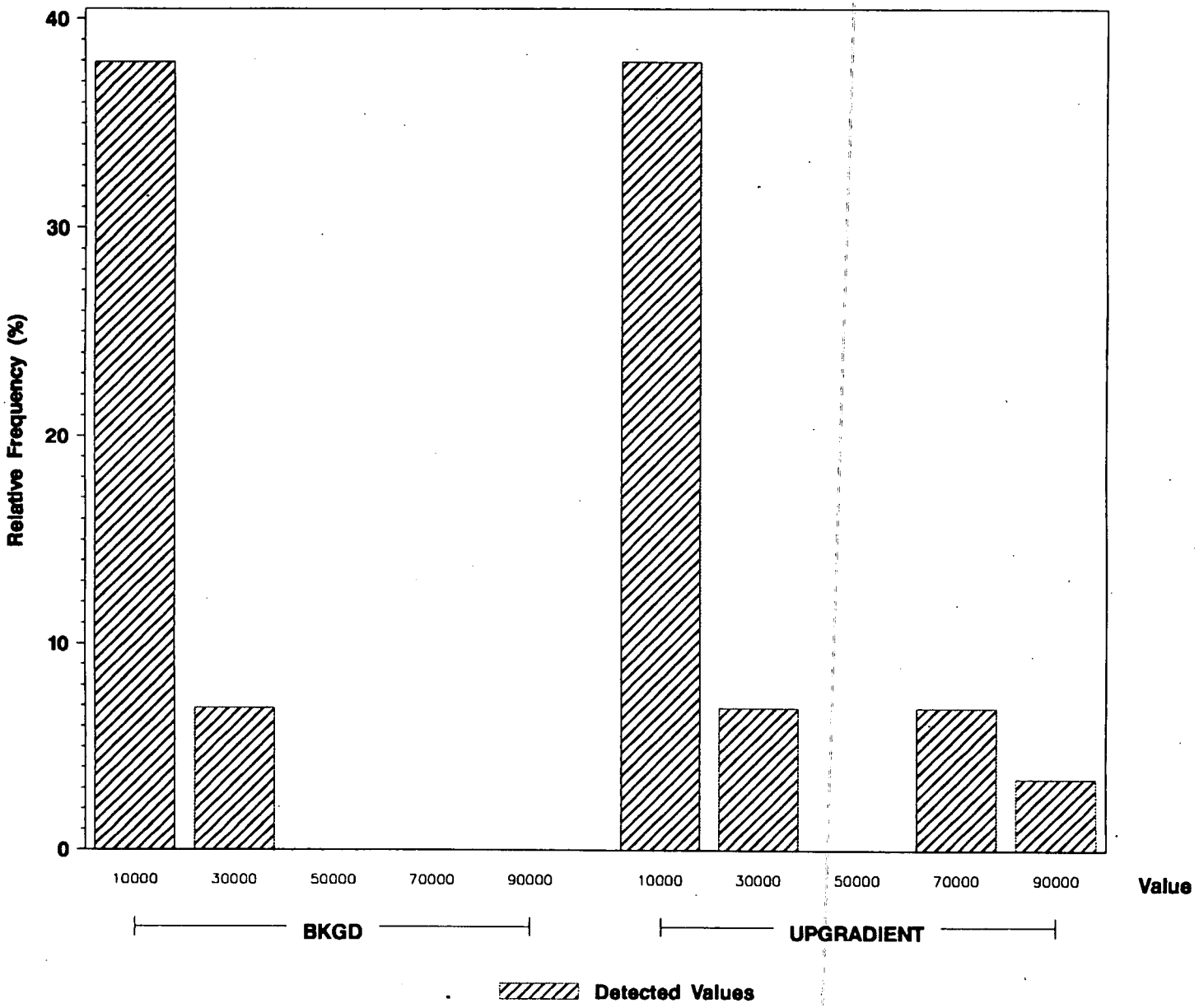
ANALYTE = SILICA



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SILICON (ug/L) in Groundwater

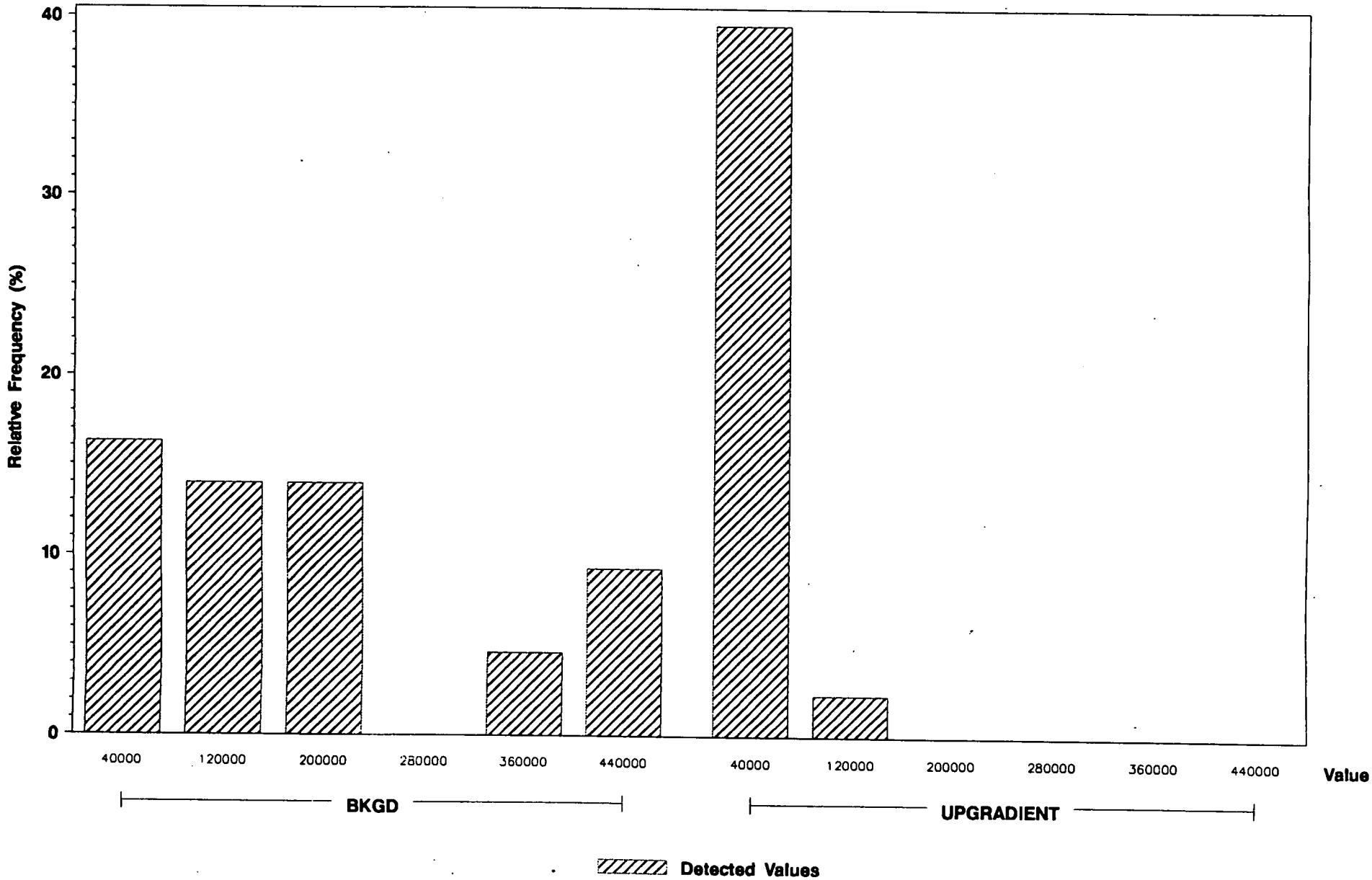
ANALYTE=SILICON



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SODIUM (ug/L) in Groundwater

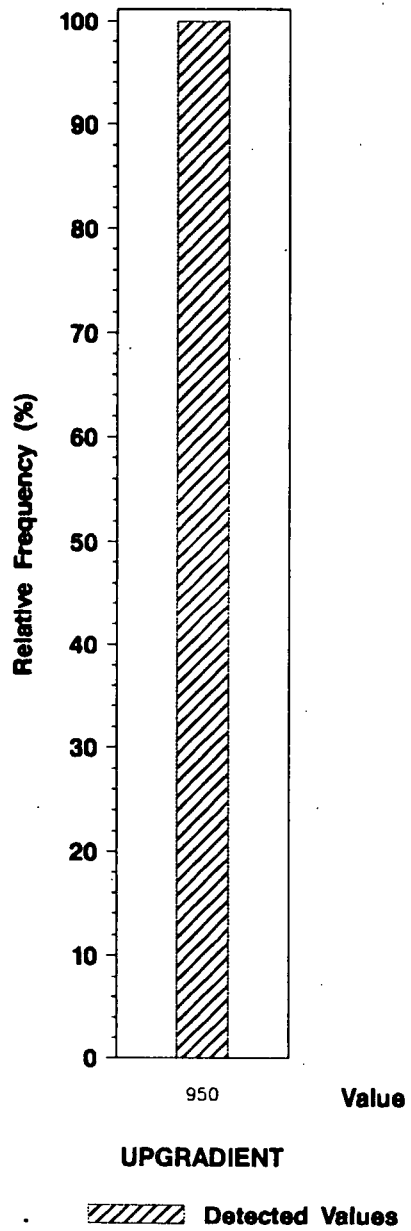
ANALYTE = SODIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SODIUM FLUORIDE (ug/L) in Groundwater

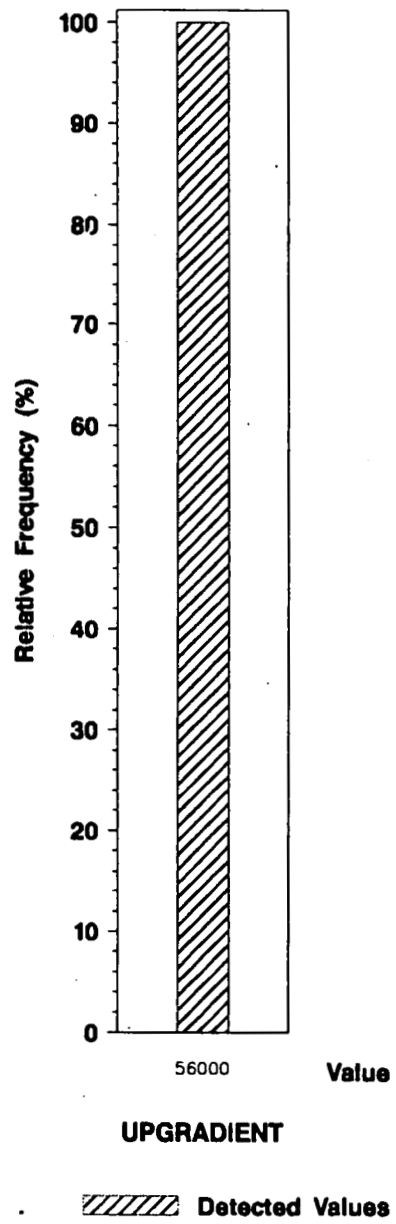
ANALYTE = SODIUM FLUORIDE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SODIUM SULFATE (ug/L) in Groundwater

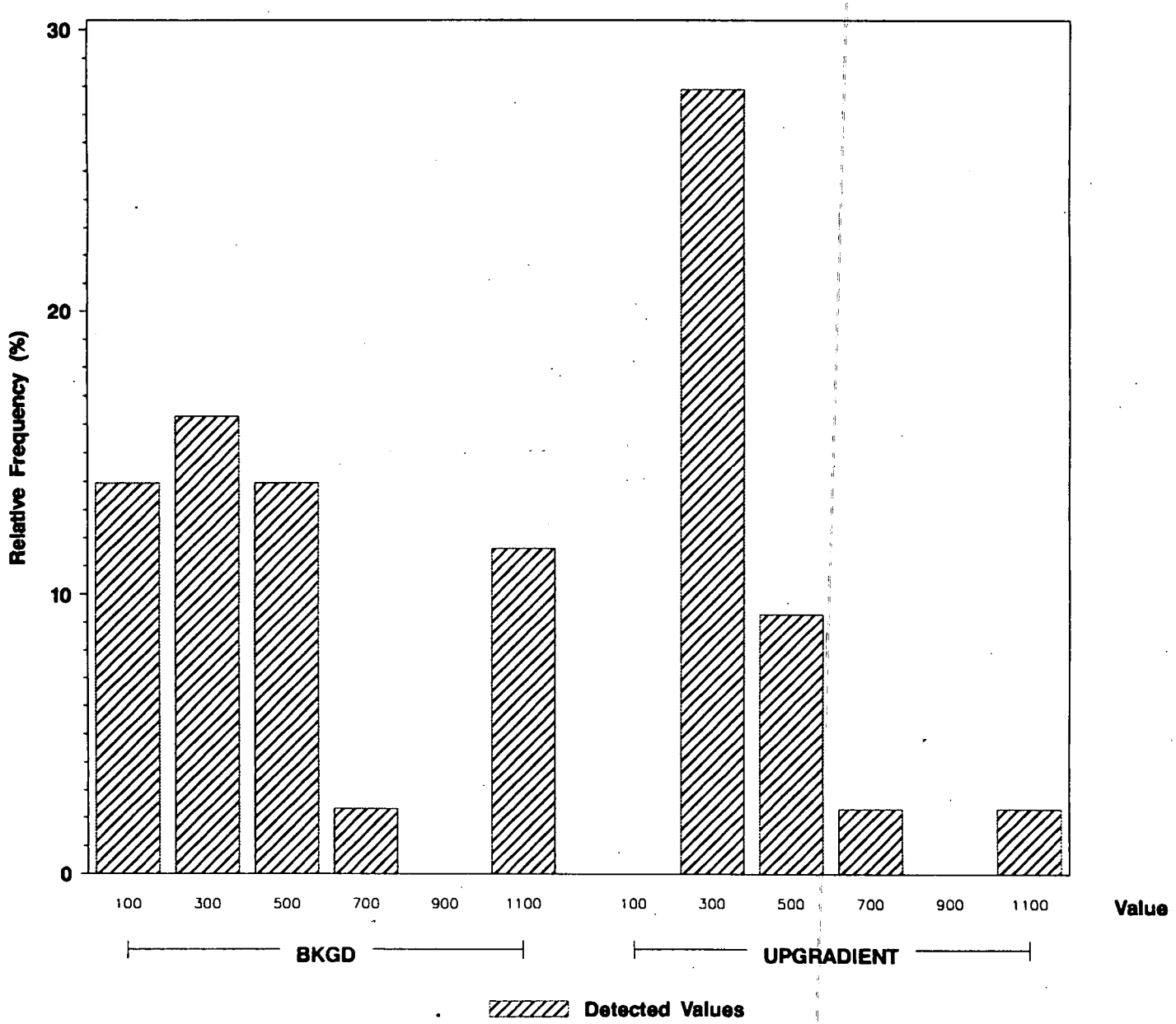
ANALYTE=SODIUM SULFATE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total STRONTIUM (ug/L) in Groundwater

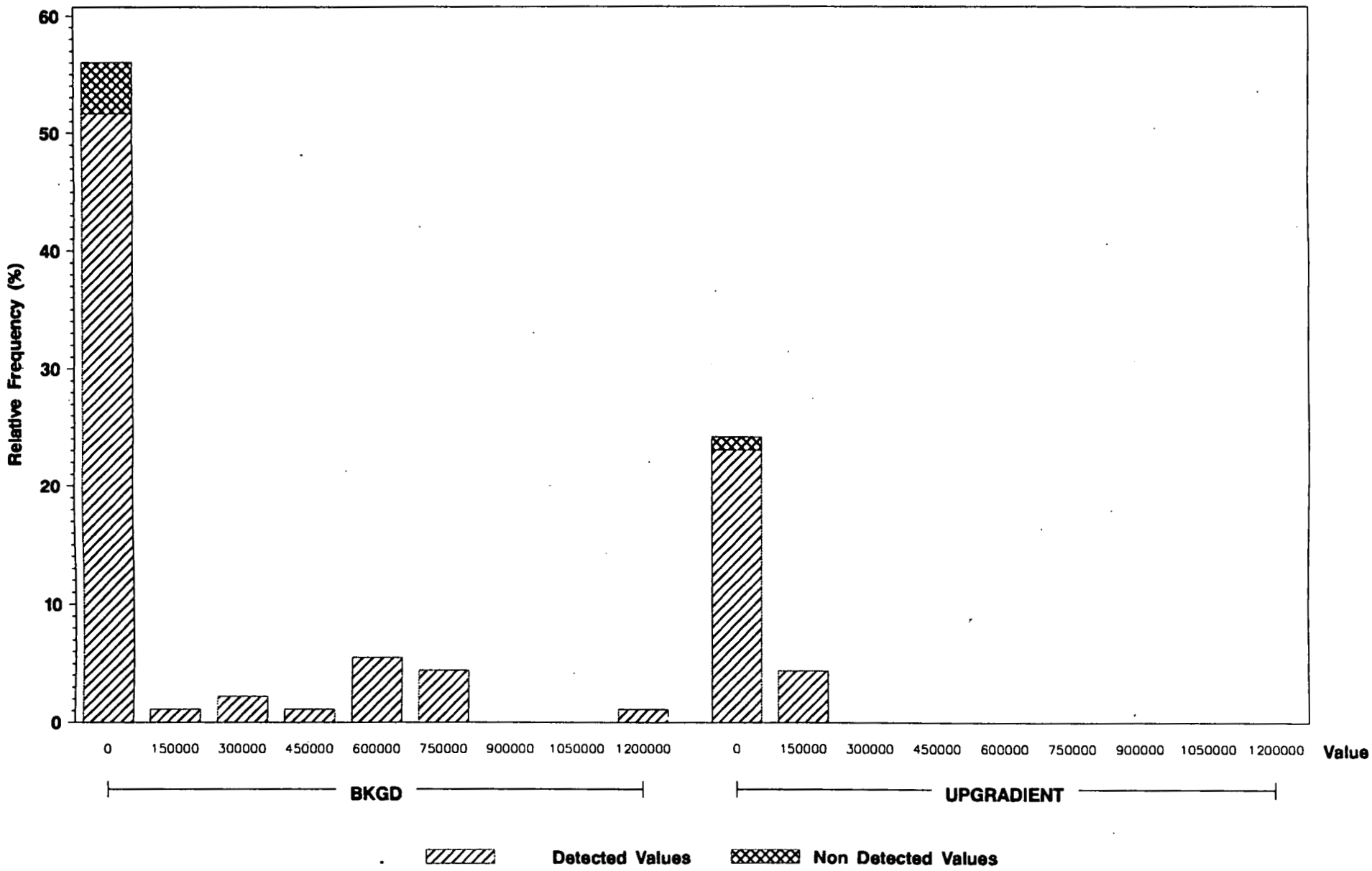
ANALYTE = STRONTIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SULFATE (ug/L) in Groundwater

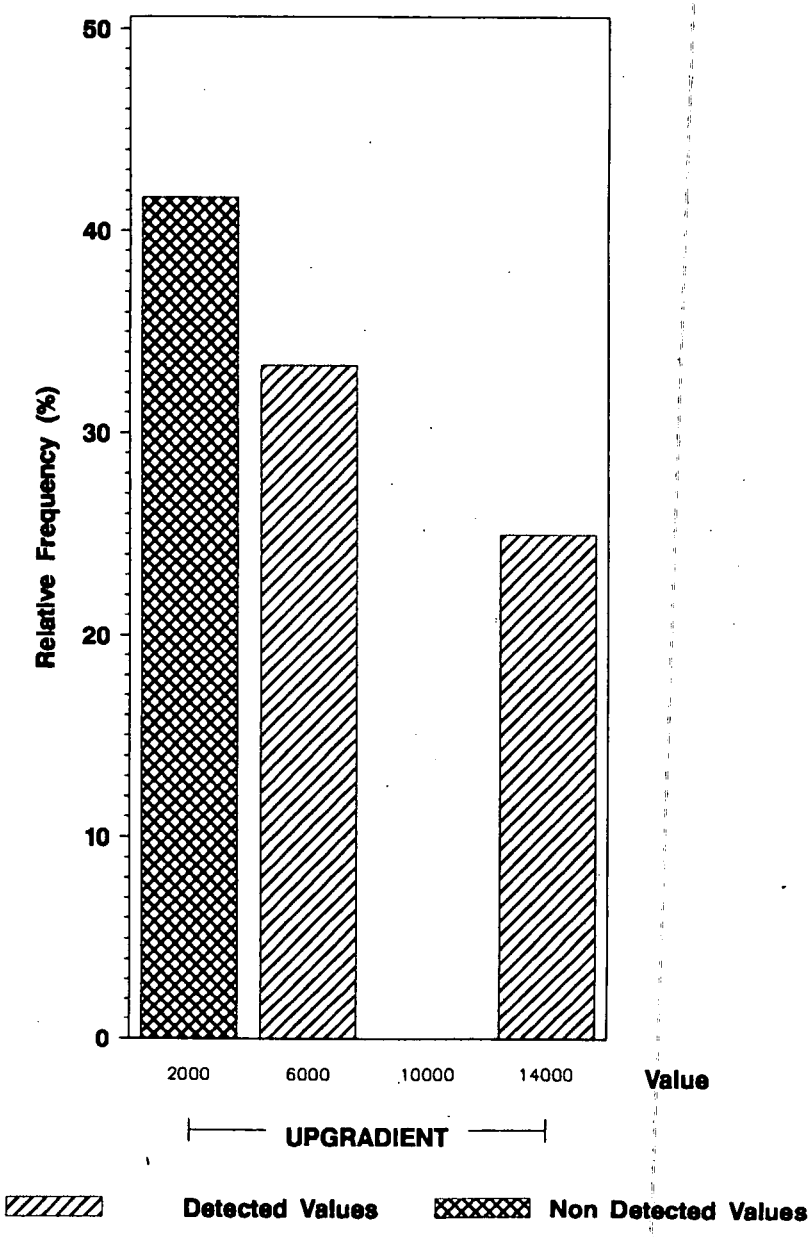
ANALYTE = SULFATE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total SULFIDE (ug/L) in Groundwater

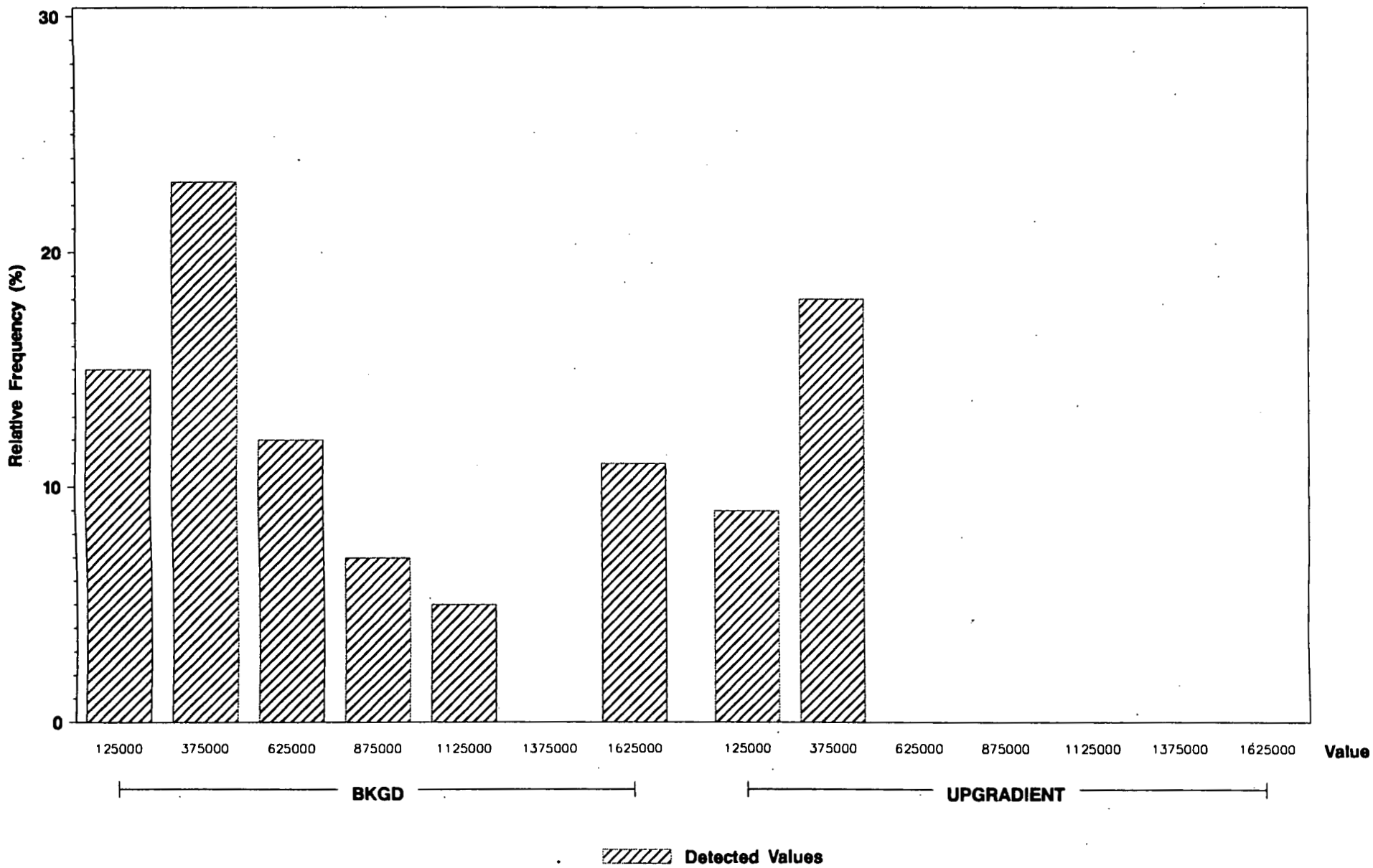
ANALYTE = SULFIDE



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## TOTAL DISSOLVED SOLIDS (ug/L) in Groundwater

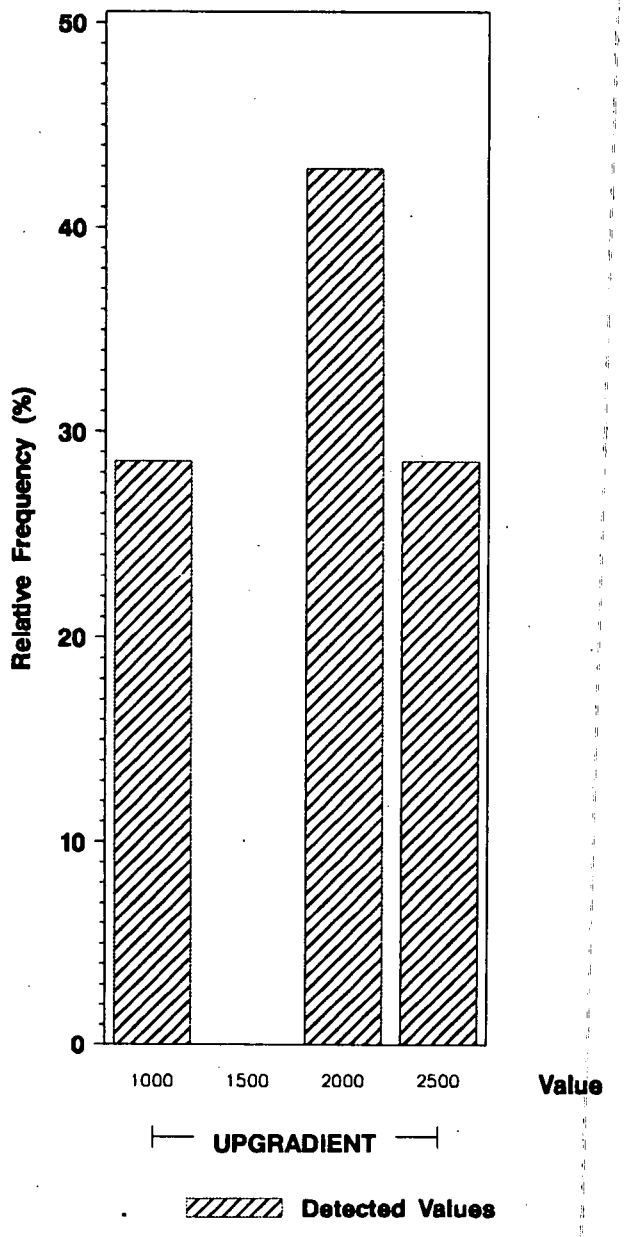
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## TOTAL ORGANIC CARBON (ug/L) in Groundwater

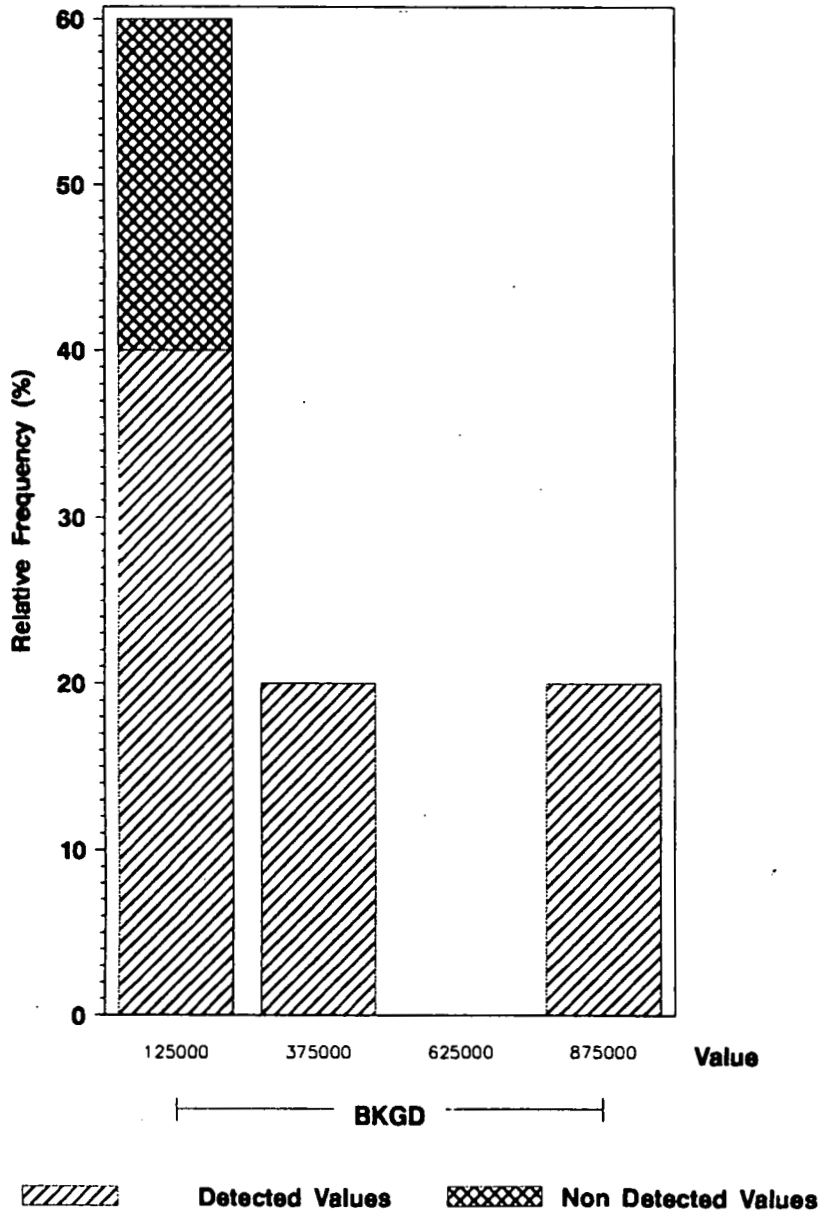
ANALYTE = TOTAL ORGANIC CARBON



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## TOTAL SOLIDS (ug/L) in Groundwater

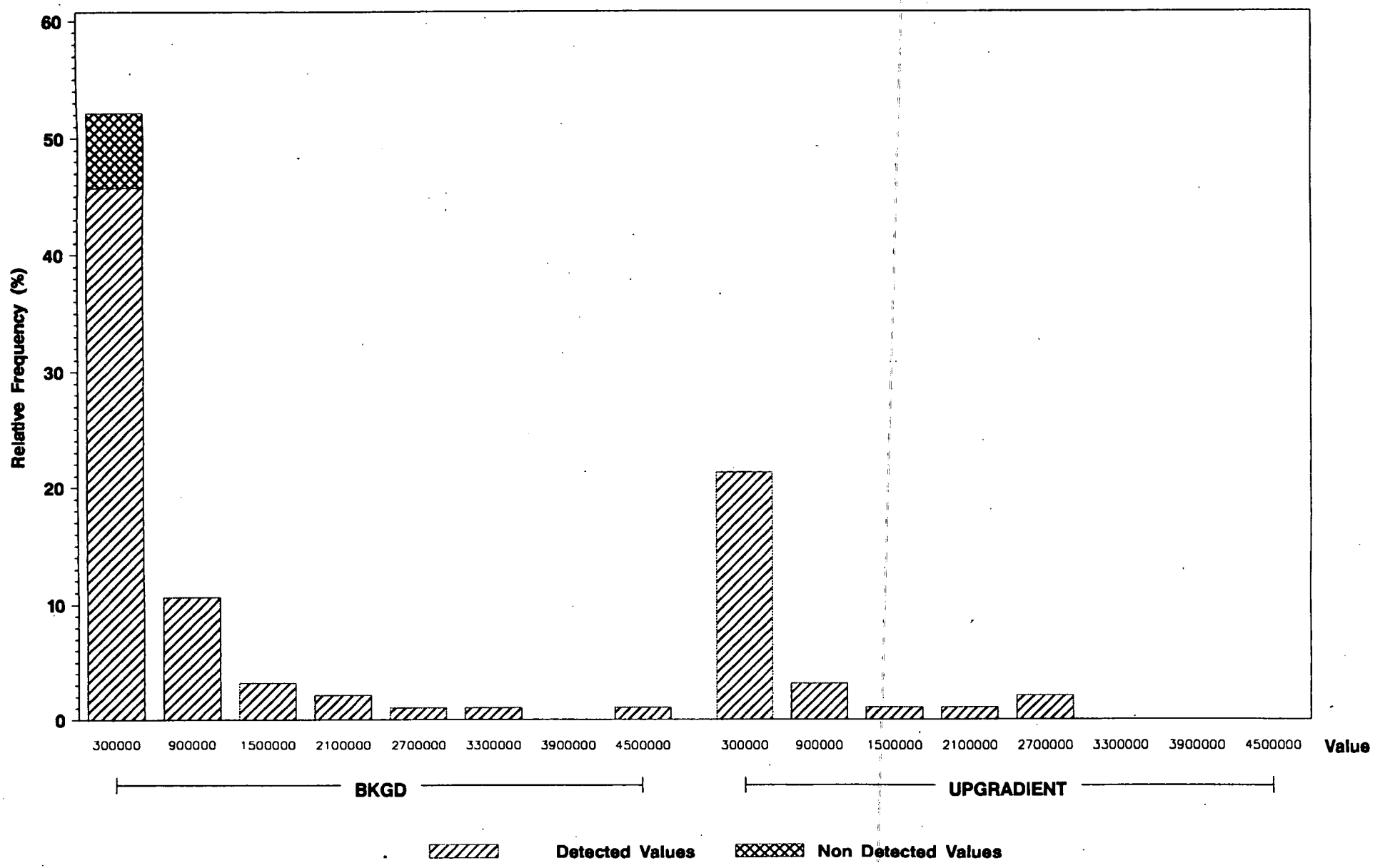
ANALYTE = TOTAL SOLIDS



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## TOTAL SUSPENDED SOLIDS (ug/L) in Groundwater

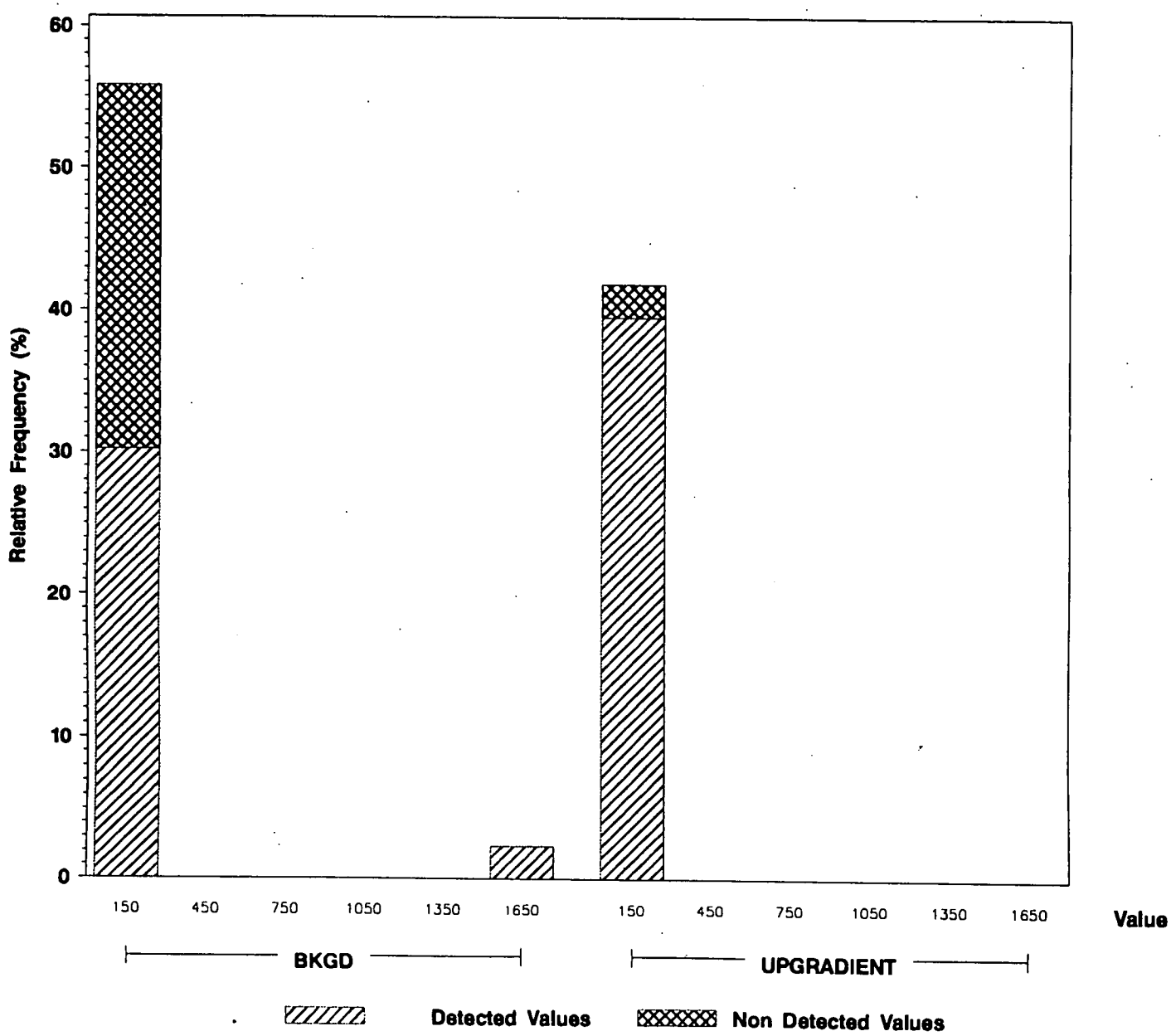
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total VANADIUM (ug/L) in Groundwater

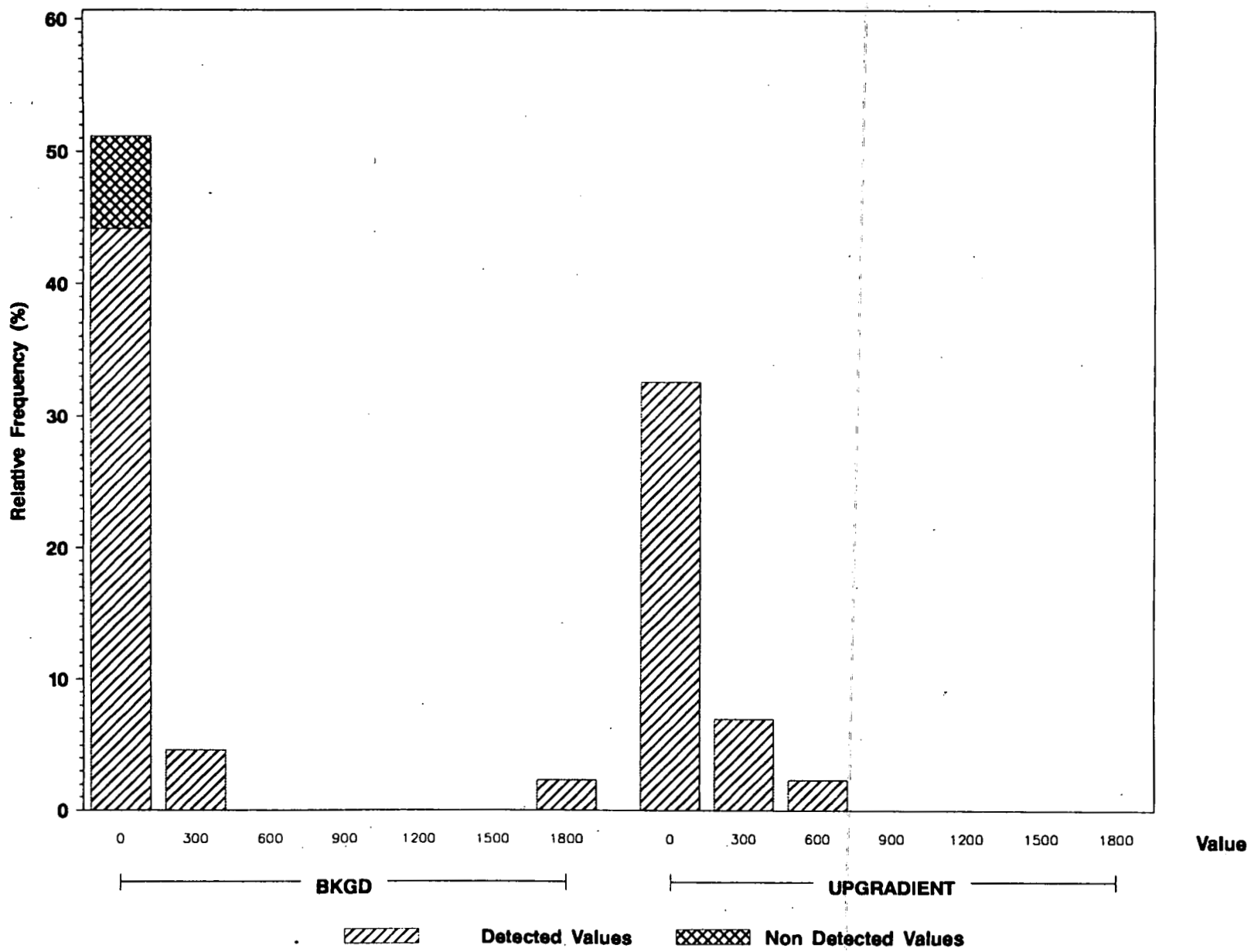
ANALYTE = VANADIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total ZINC (ug/L) in Groundwater

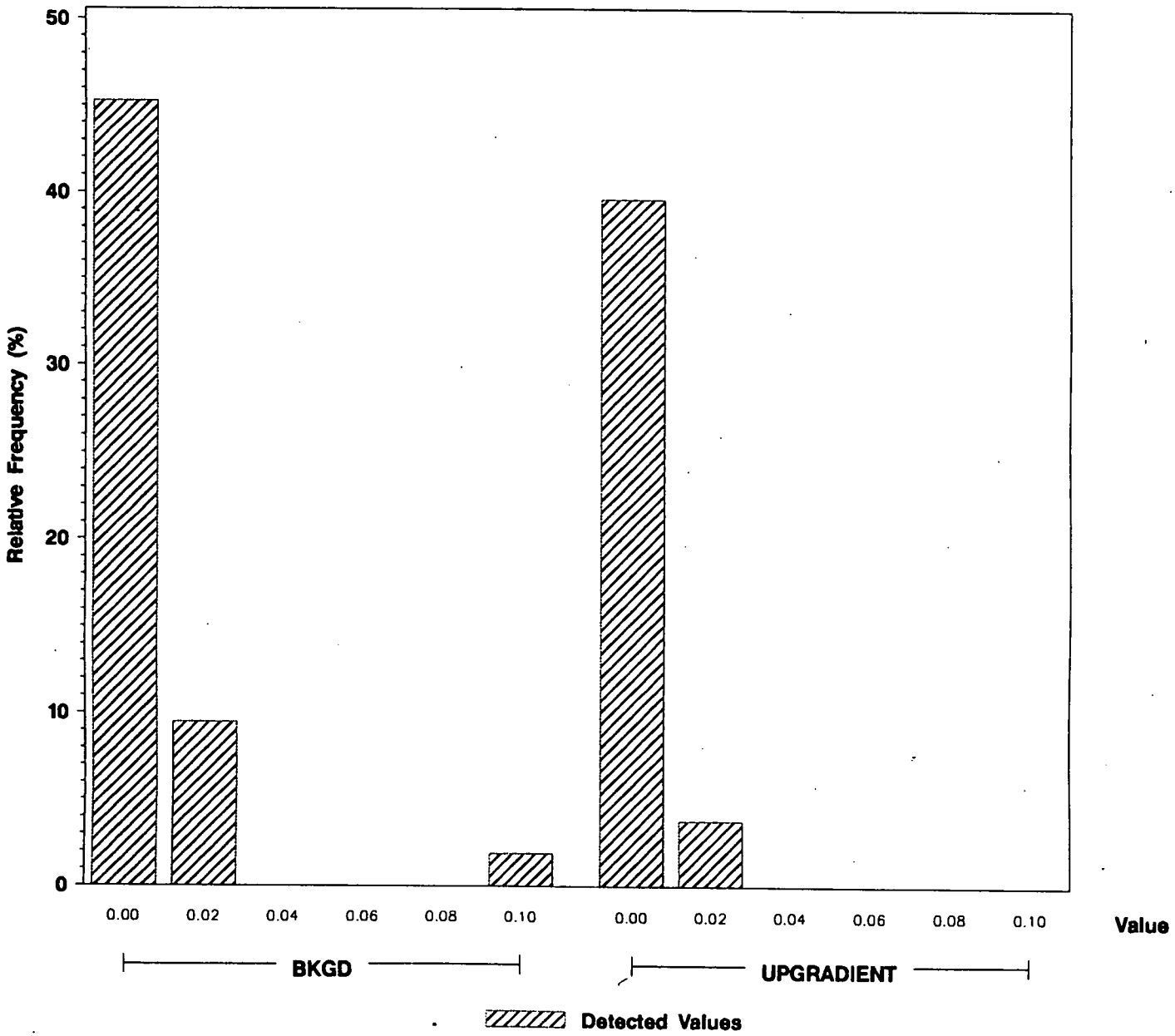
ANALYTE=ZINC



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Groundwater

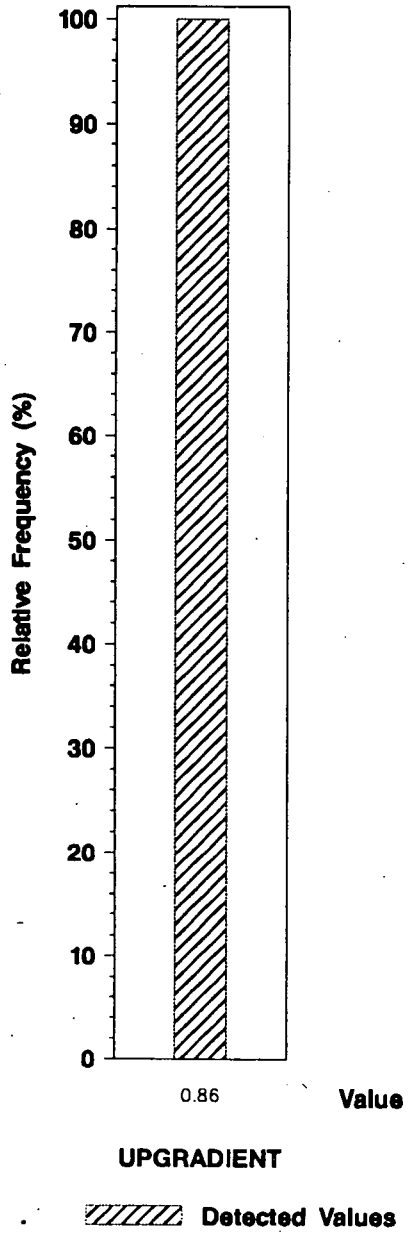
ANALYTE = AMERICIUM-241



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total CESIUM-134 (pCi/L) in Groundwater

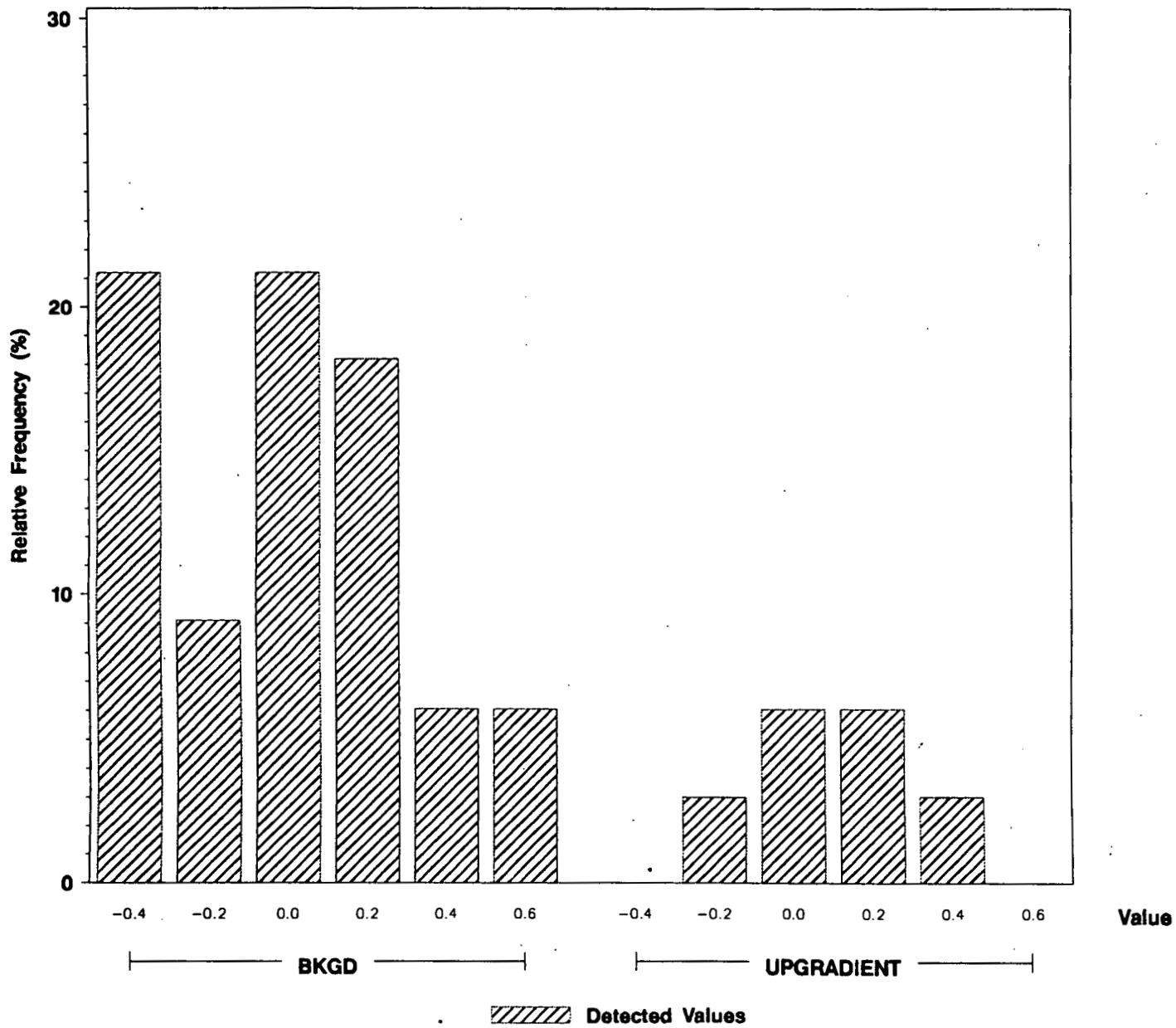
ANALYTE = CESIUM-134



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Groundwater

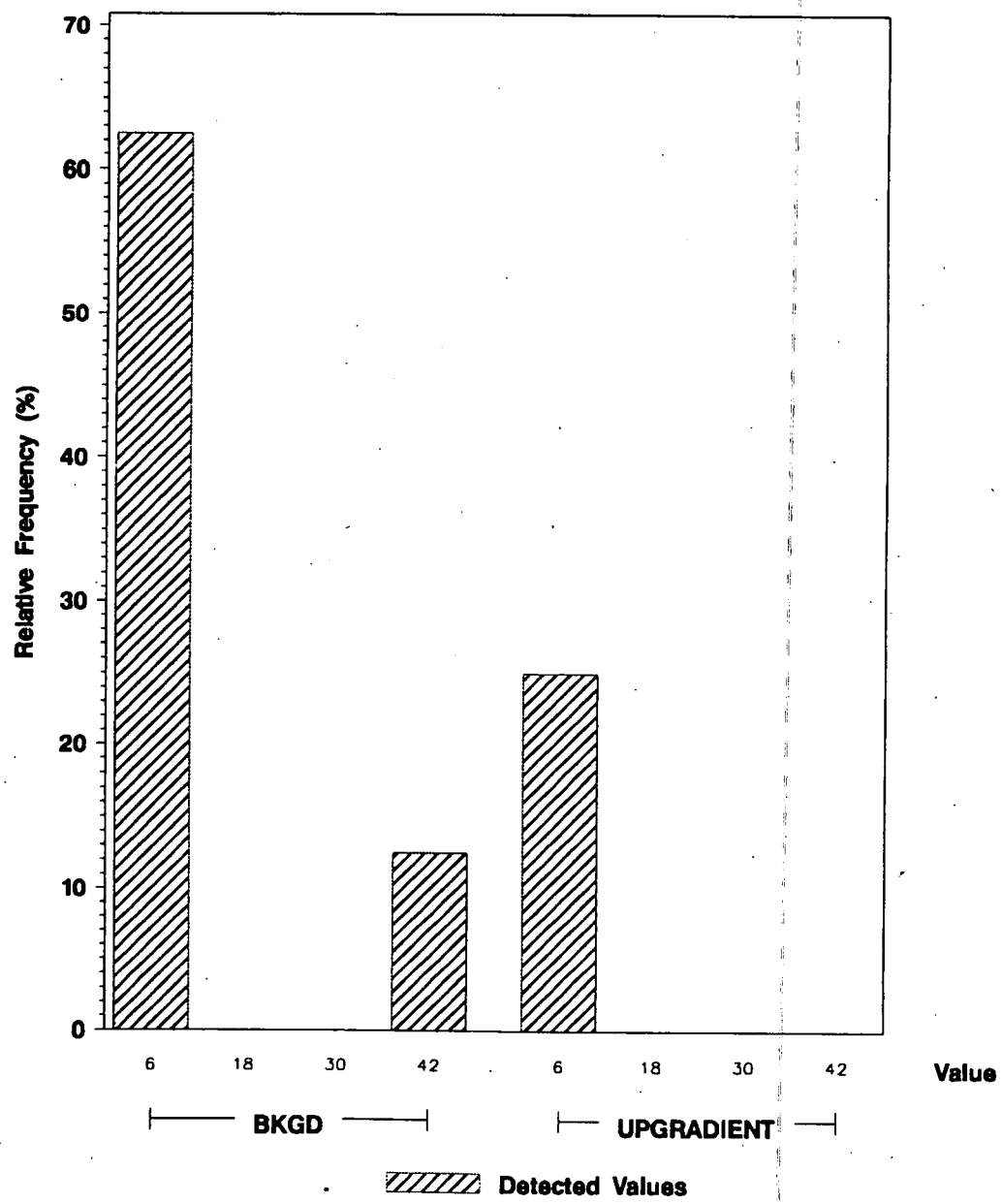
ANALYTE = CESIUM-137



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Groundwater

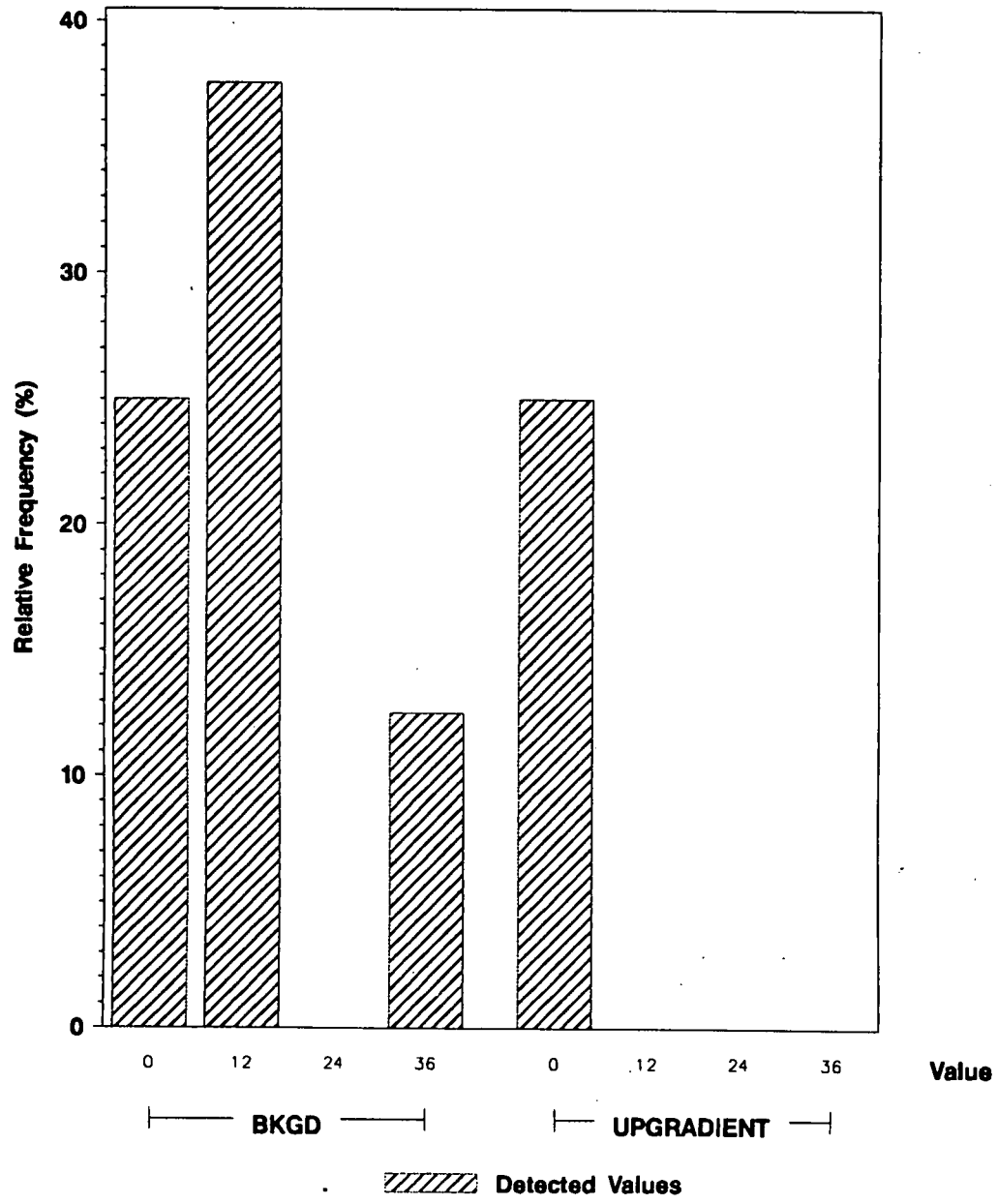
ANALYTE = GROSS ALPHA



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total GROSS BETA (pCi/L) in Groundwater

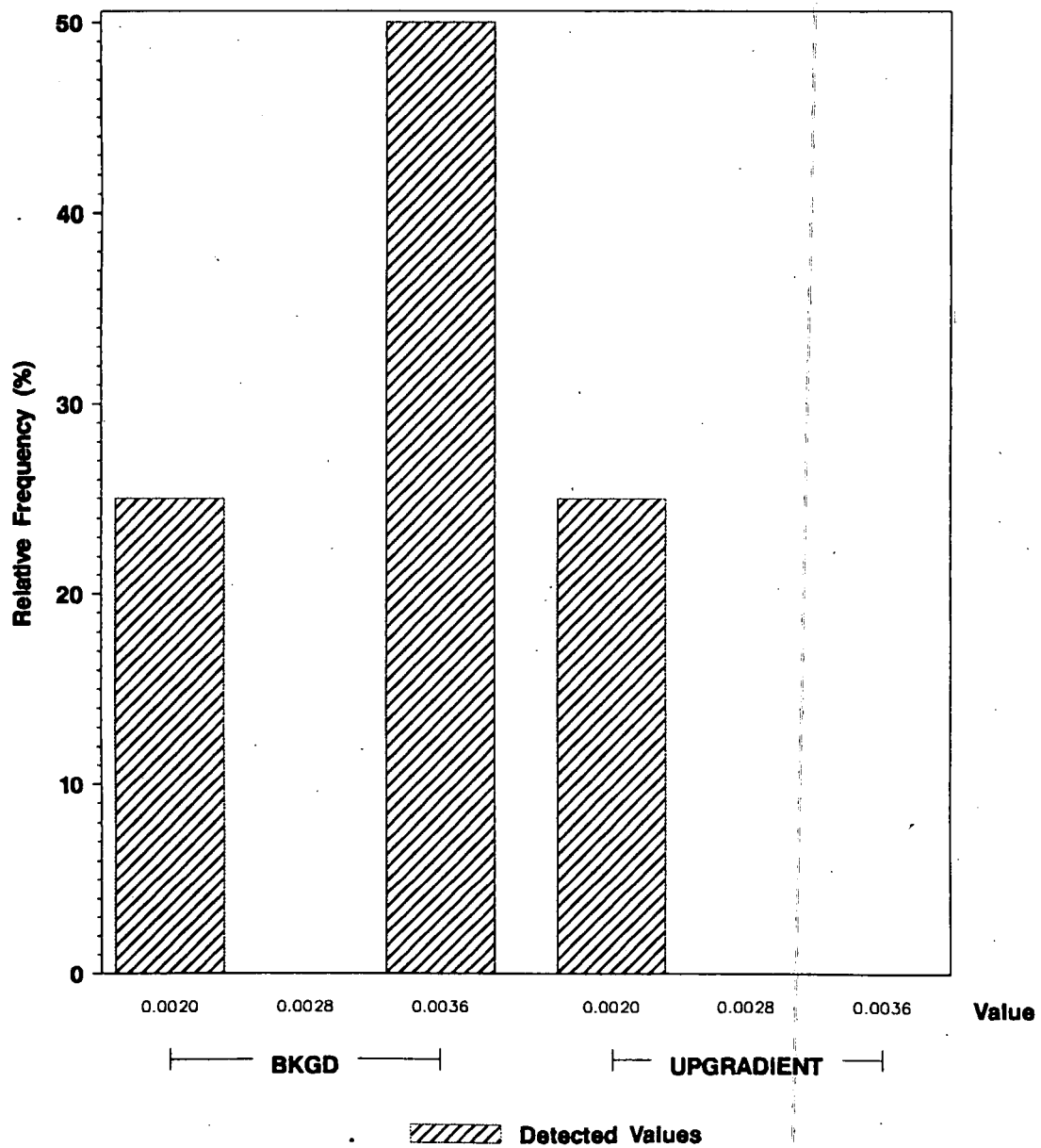
ANALYTE=GROSS BETA



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total PLUTONIUM – 238 (pCi/L) in Groundwater

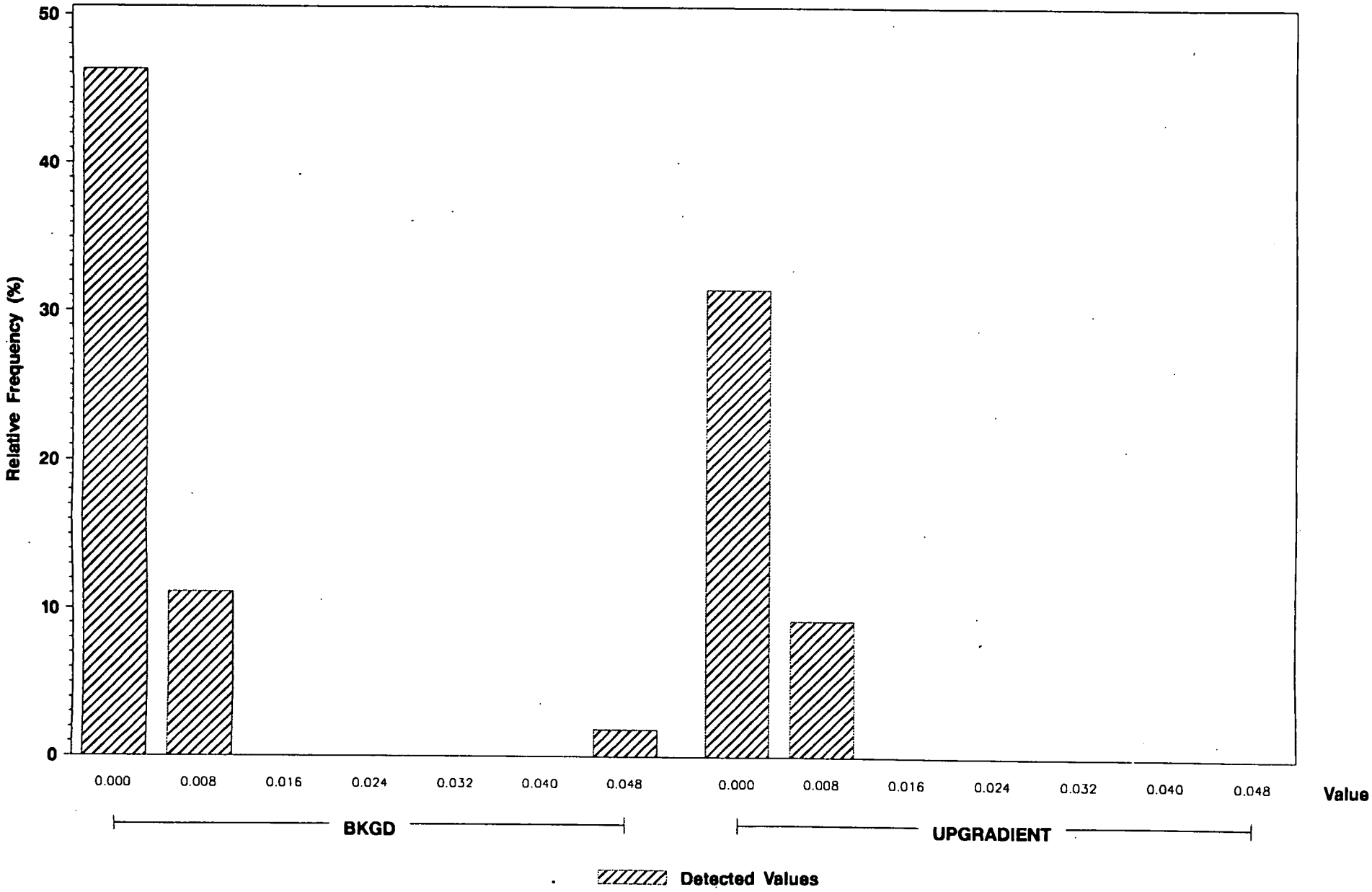
ANALYTE = PLUTONIUM – 238



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total PLUTONIUM – 239/240 (pCi/L) in Groundwater

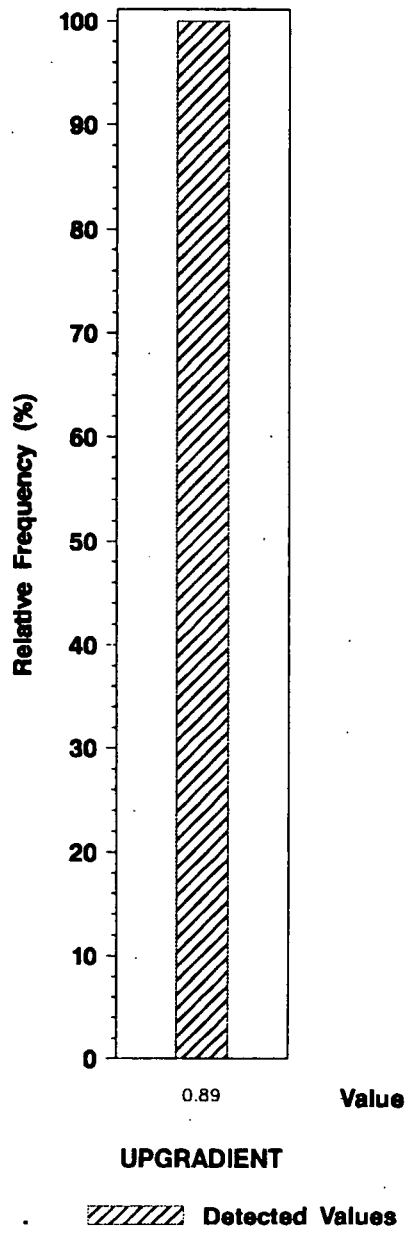
ANALYTE = PLUTONIUM – 239/240



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total TOTAL RADIOCESIUM (pCi/L) in Groundwater

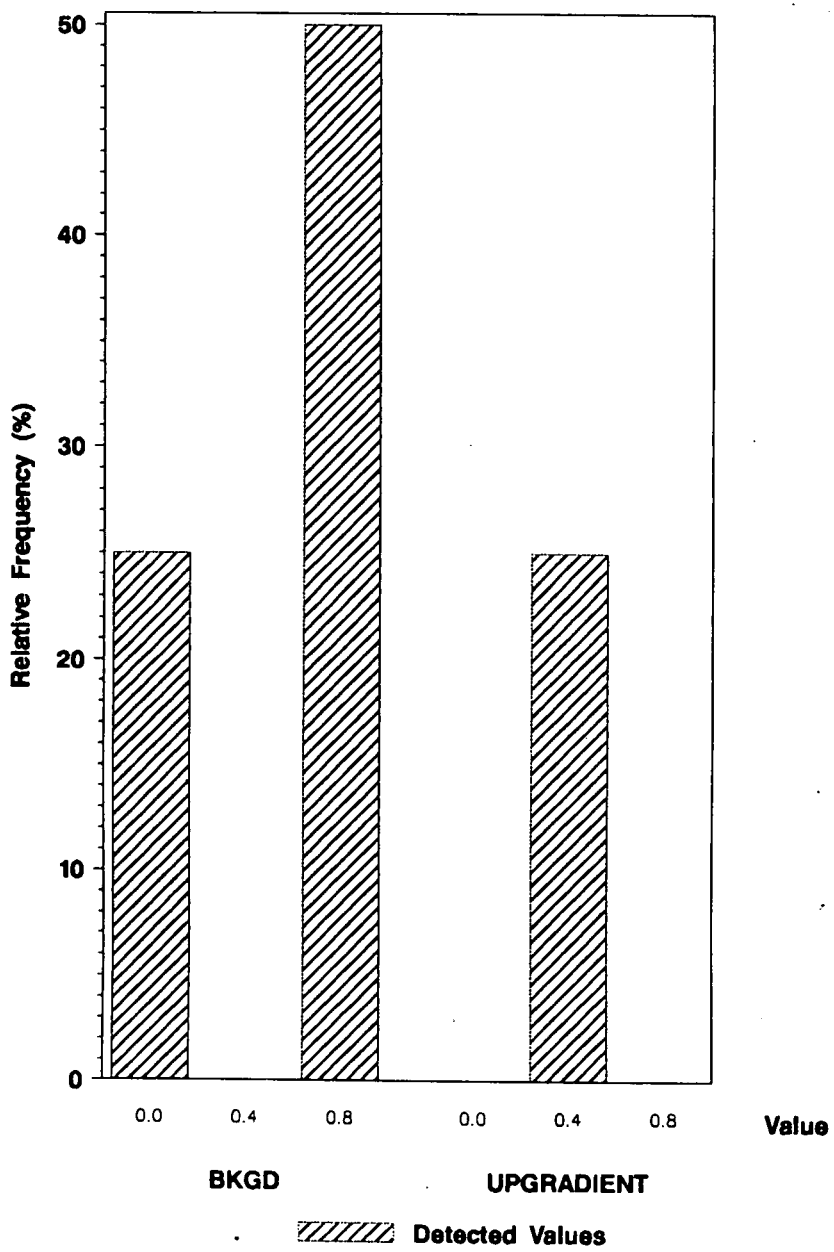
ANALYTE=TOTAL RADIOCESIUM



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total RADIUM-226 (pCi/L) in Groundwater

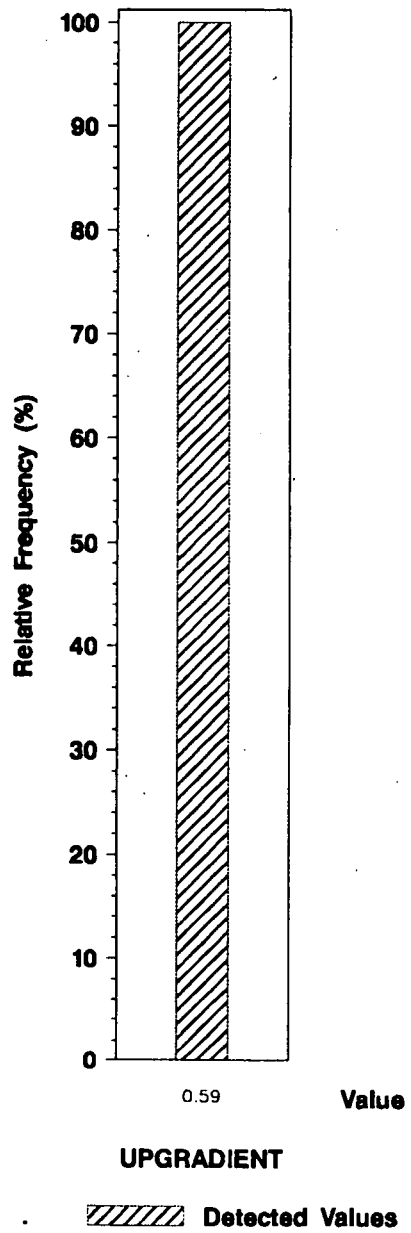
ANALYTE = RADIUM-226



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total RADIUM – 228 (pCi/L) in Groundwater

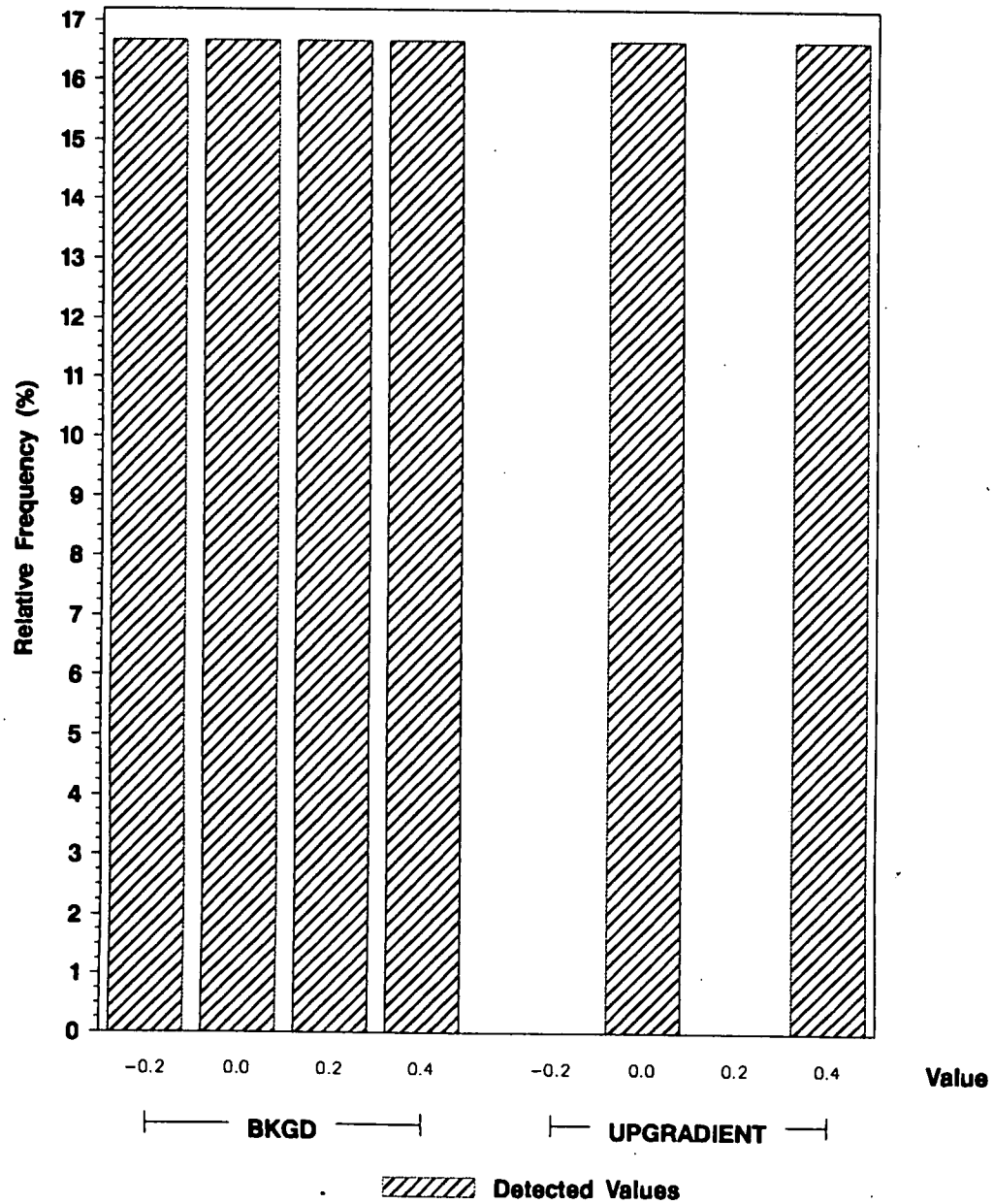
ANALYTE = RADIUM – 228



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Groundwater

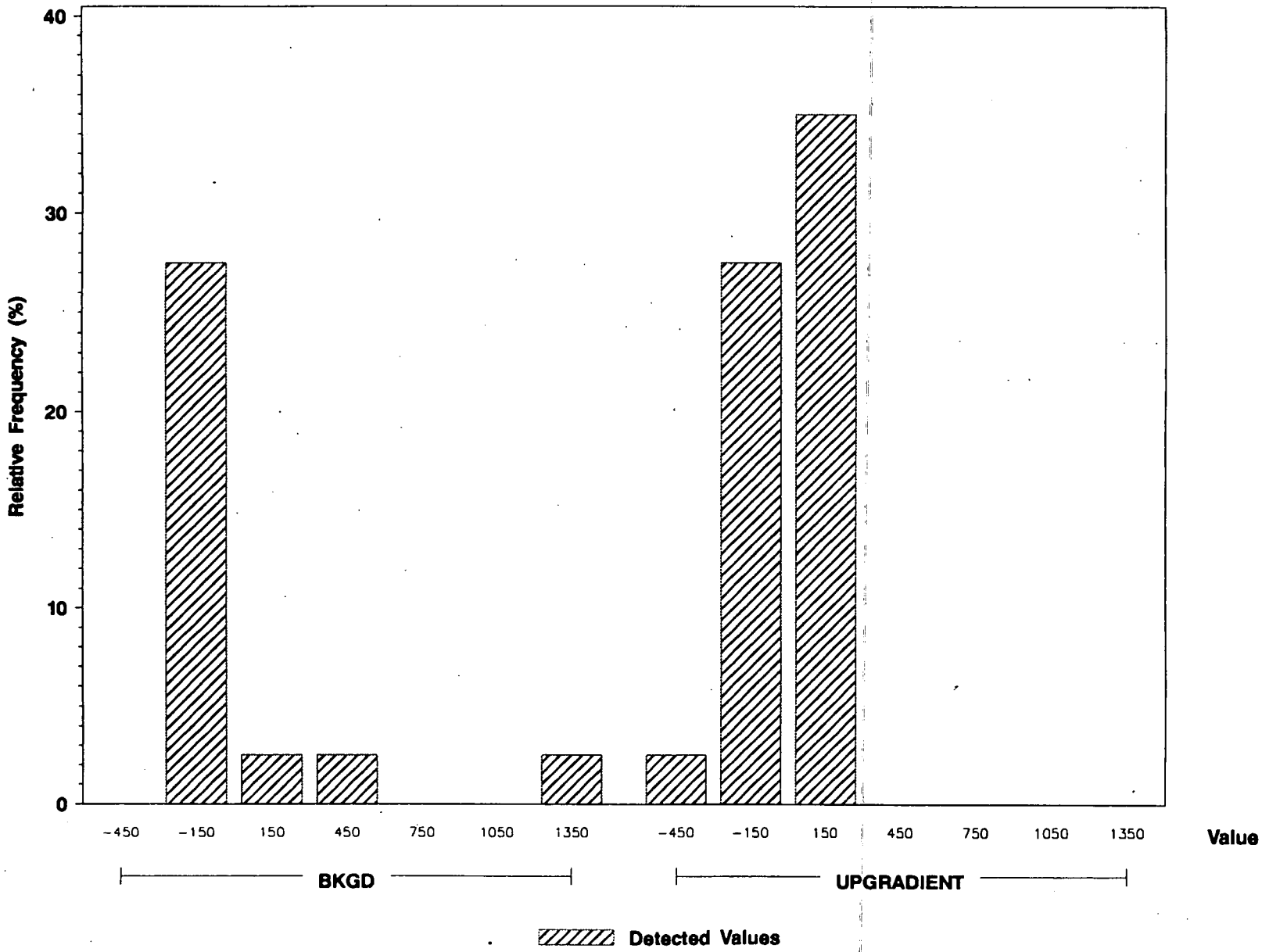
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Upgradient Groundwater (LHSU) Frequency Histogram

## Total TRITIUM (pCi/L) in Groundwater

ANALYTE = TRITIUM



# Groundwater

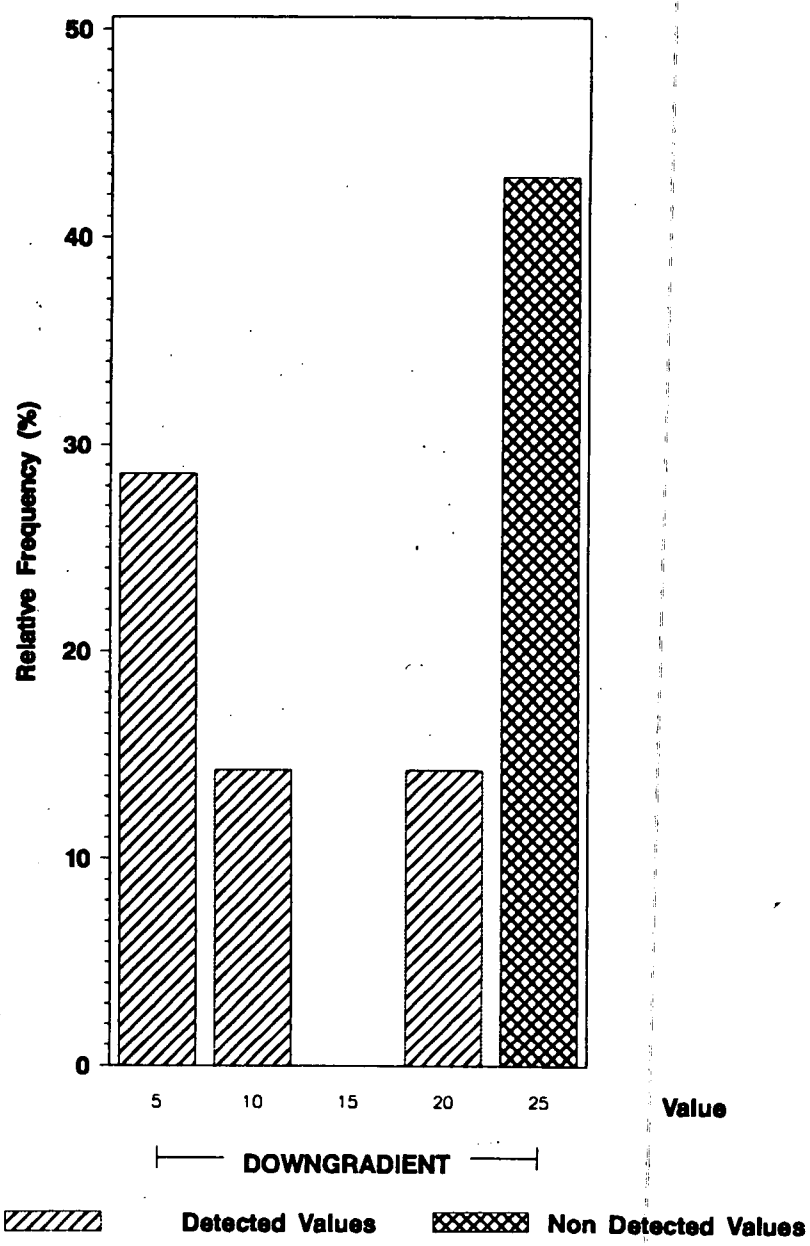
# (Dissolved)

# Background vs. OU 7 Downgradient LHSU

# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved COPPER (ug/L) in Groundwater

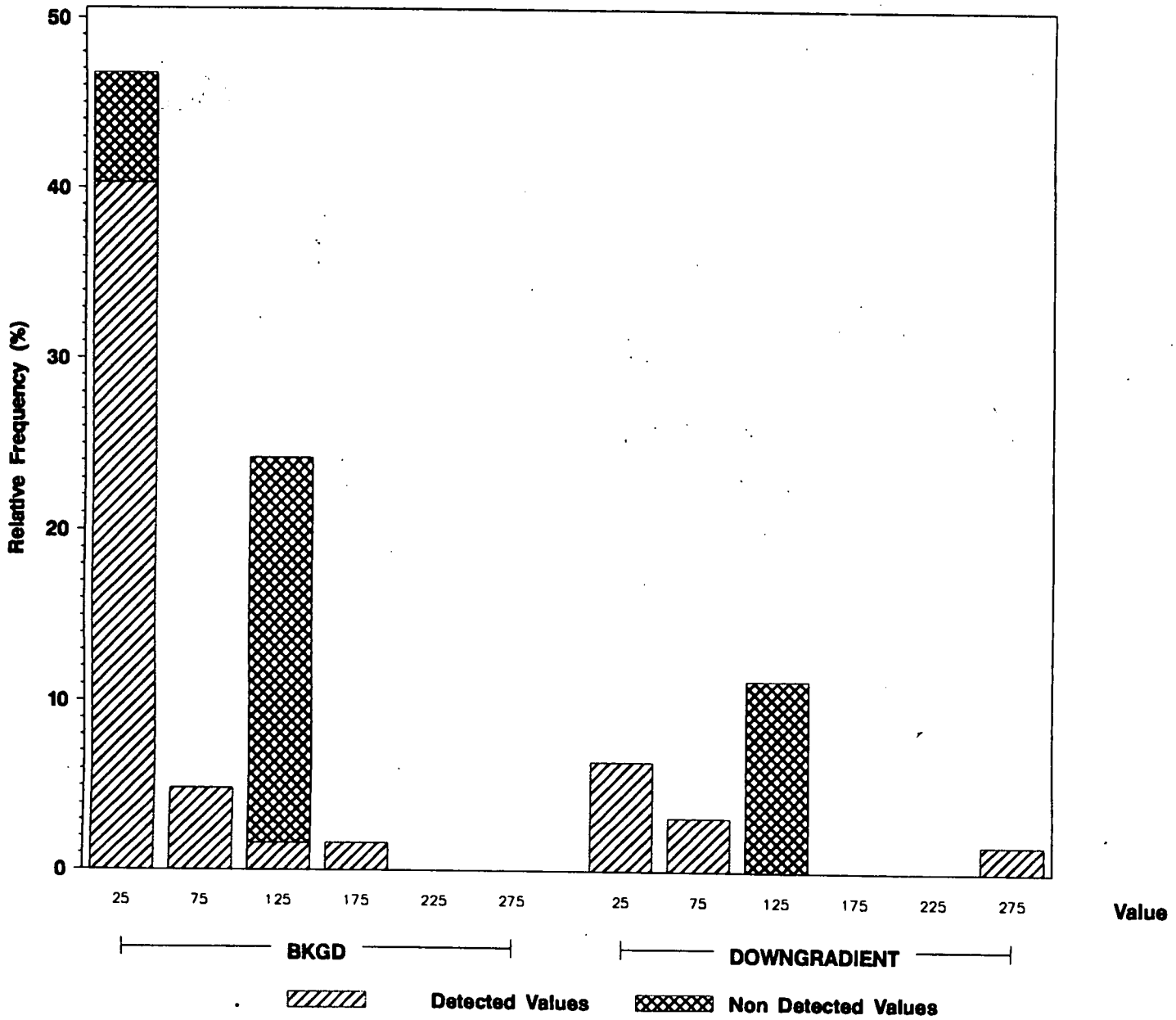
ANALYTE = COPPER



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved IRON (ug/L) in Groundwater

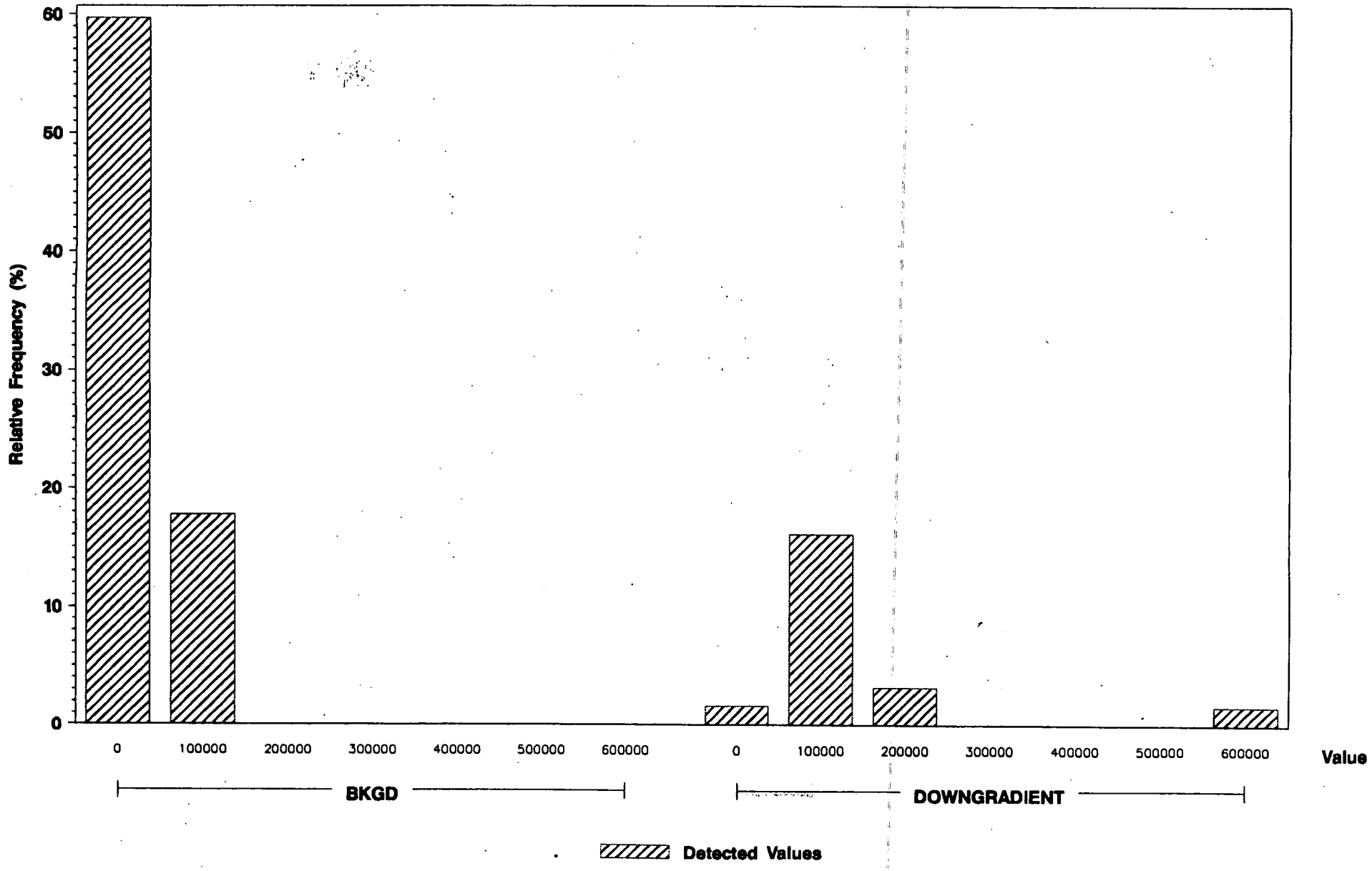
ANALYTE = IRON



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved CALCIUM (ug/L) in Groundwater

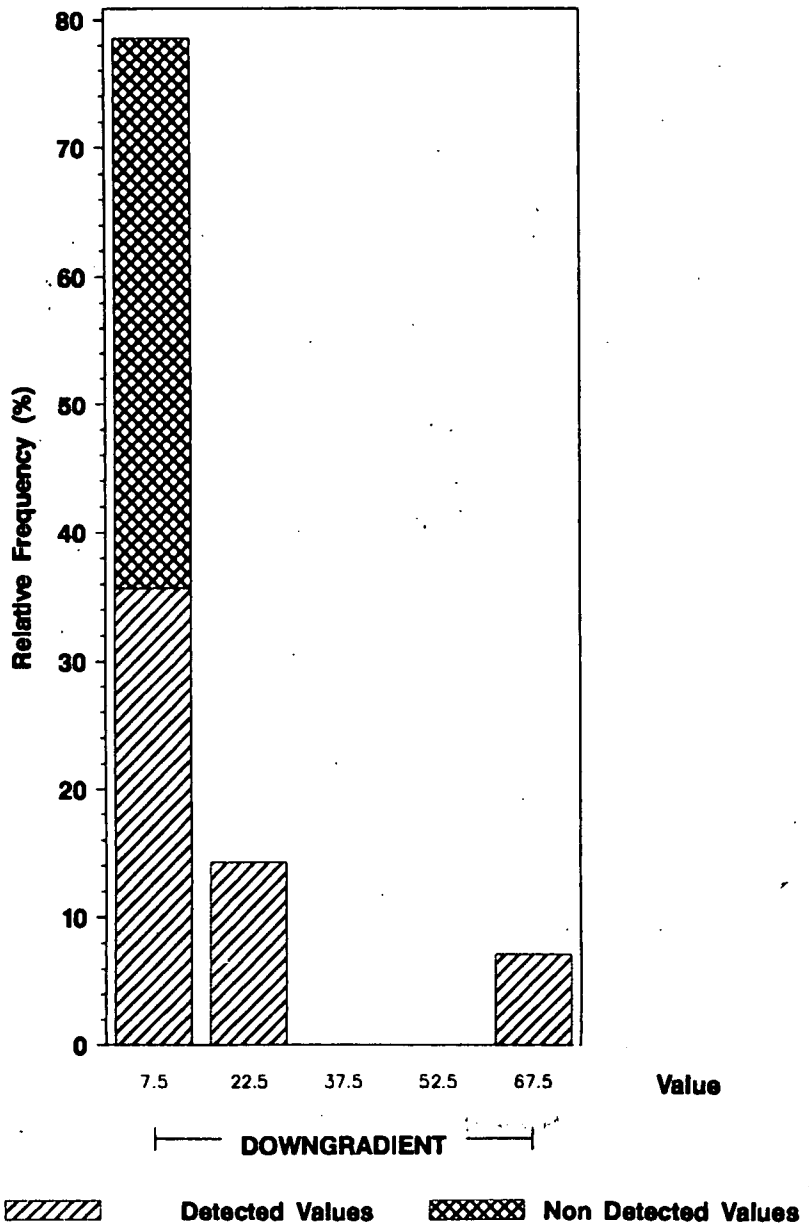
ANALYTE=CALCIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved CHROMIUM (ug/L) in Groundwater

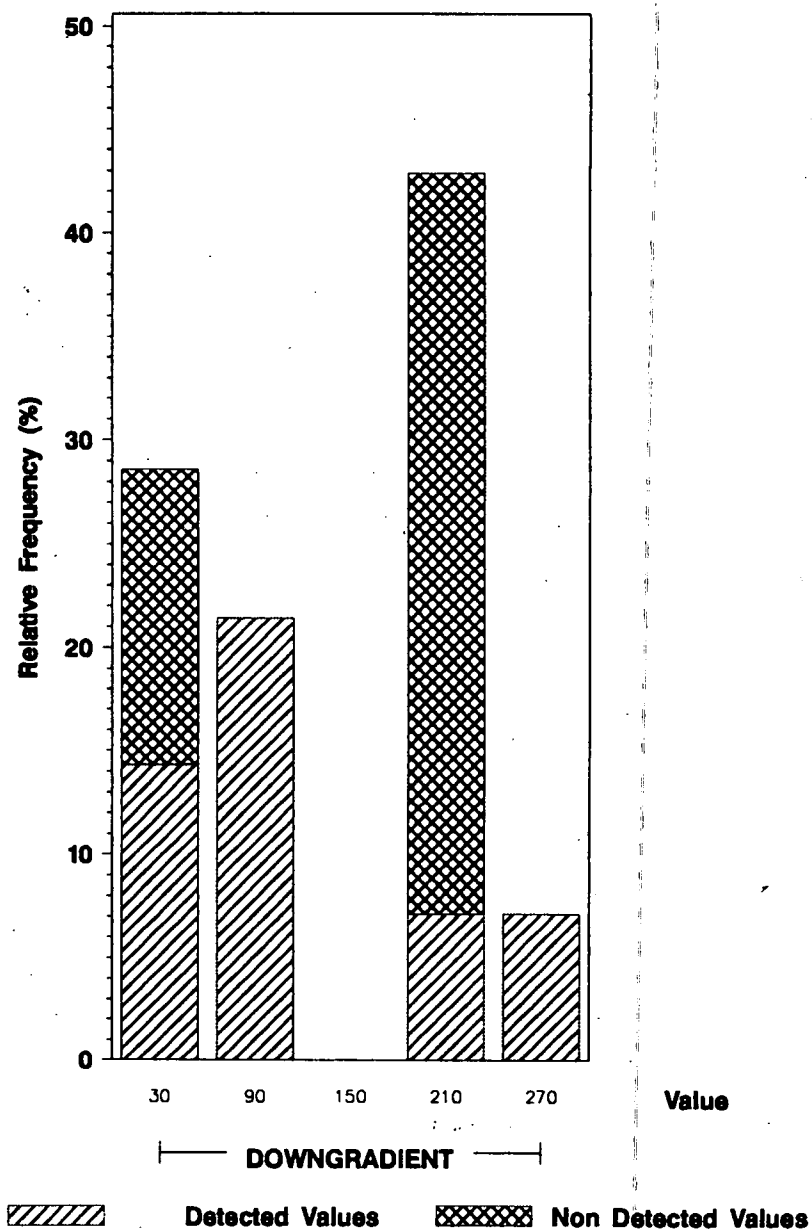
ANALYTE = CHROMIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved ALUMINUM (ug/L) in Groundwater

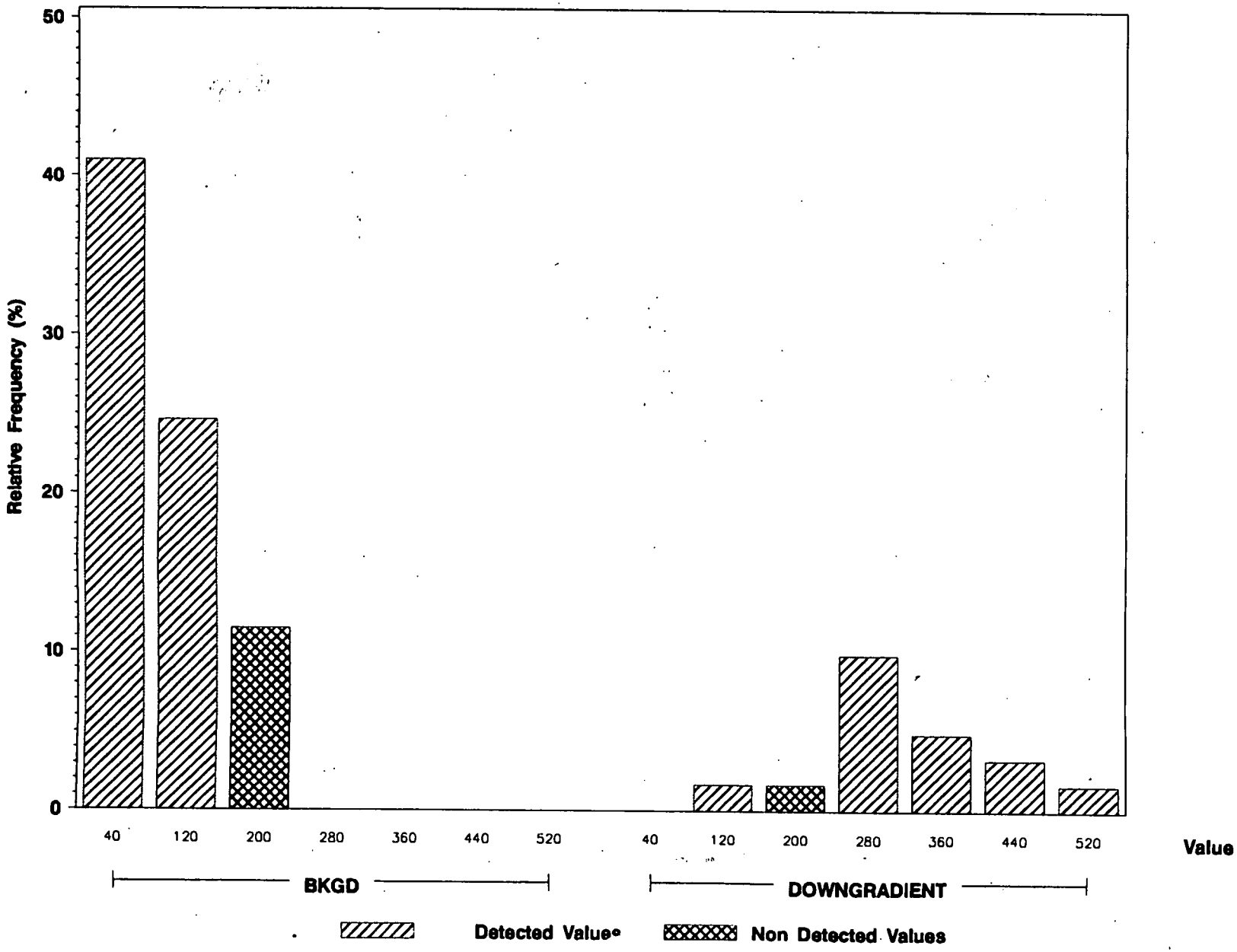
ANALYTE = ALUMINUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved BARIUM (ug/L) in Groundwater

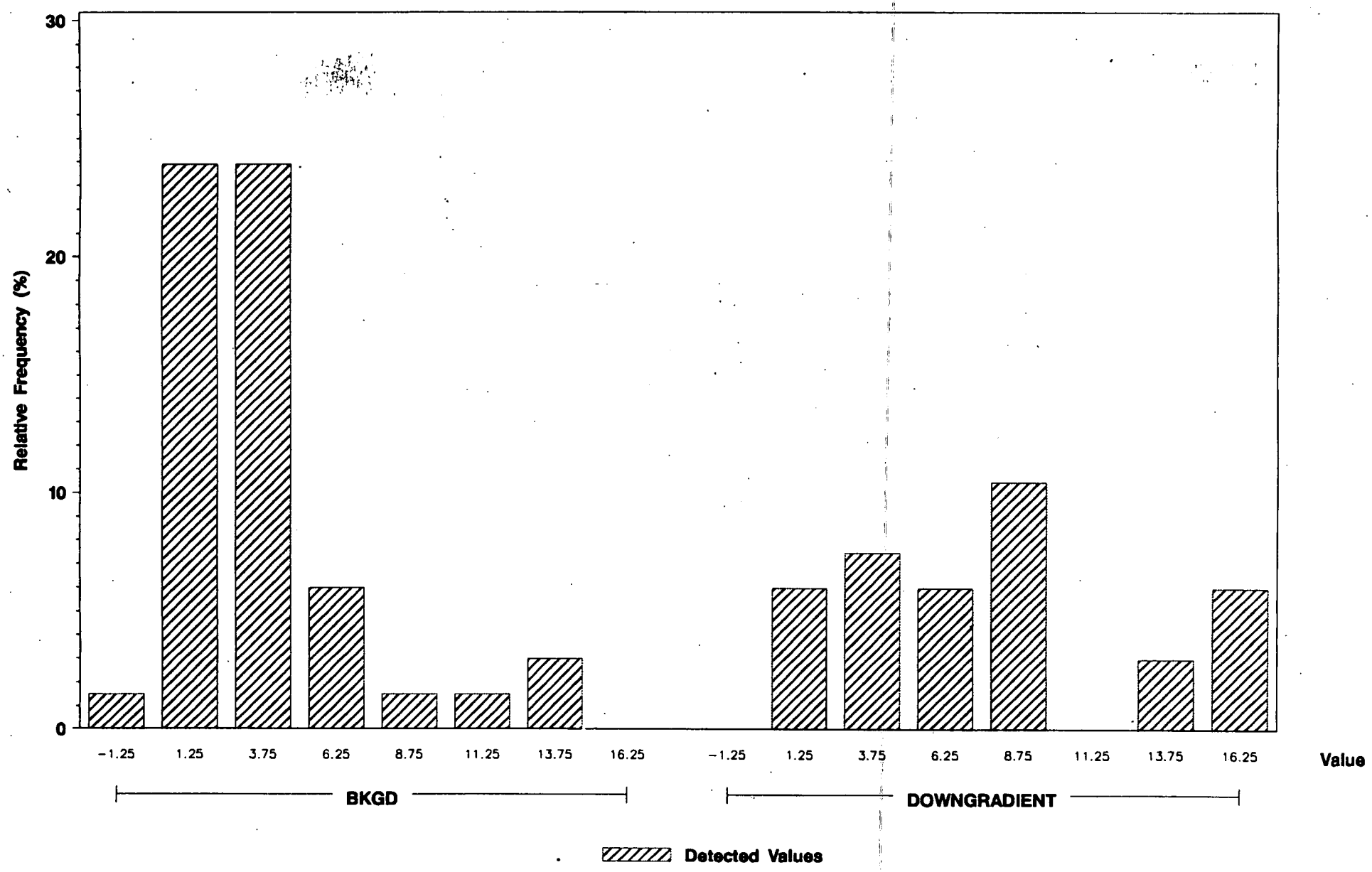
ANALYTE = BARIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved GROSS BETA (pCi/L) in Groundwater

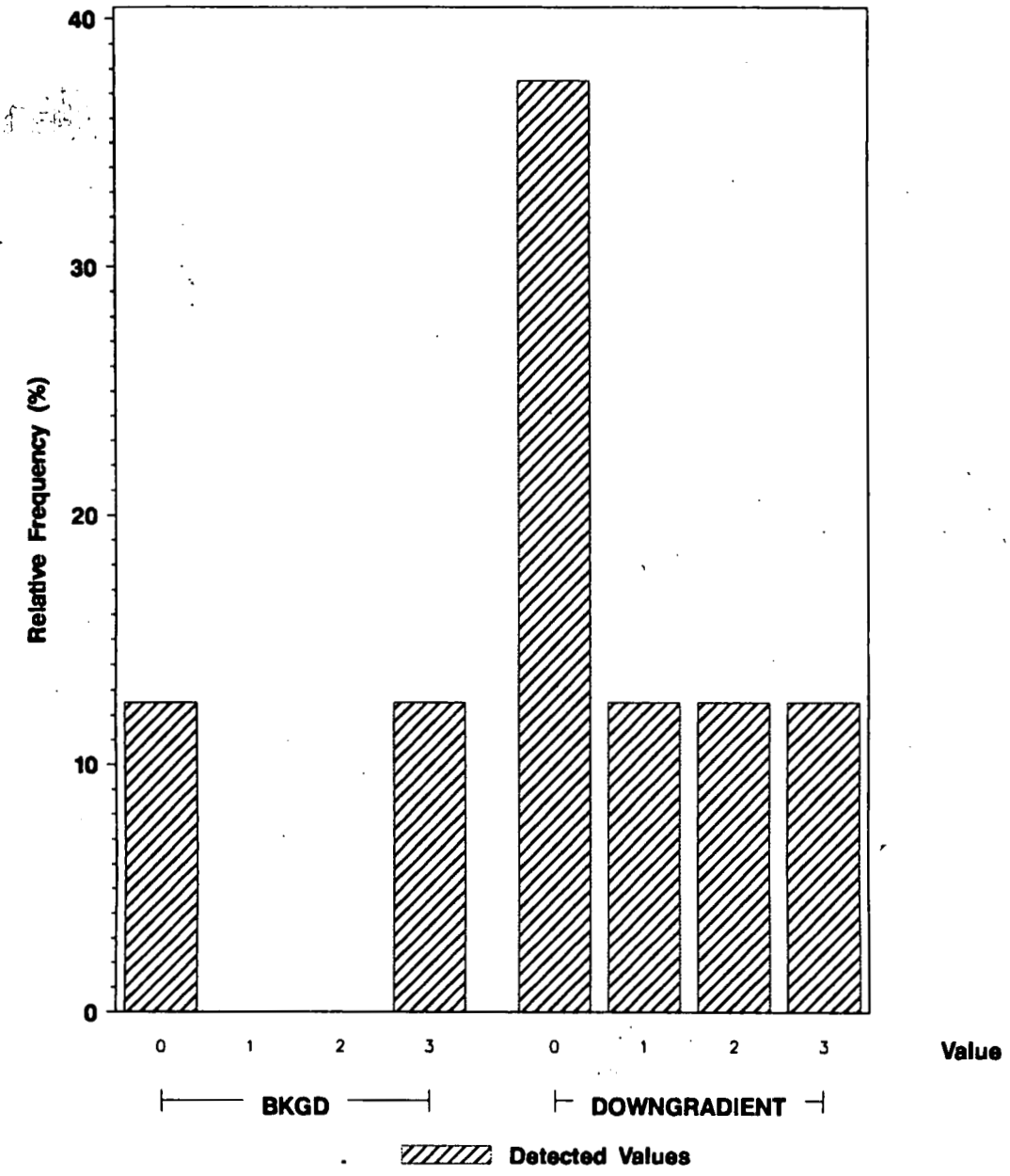
ANALYTE=GROSS BETA



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved RADIUM-226 (pCi/L) in Groundwater

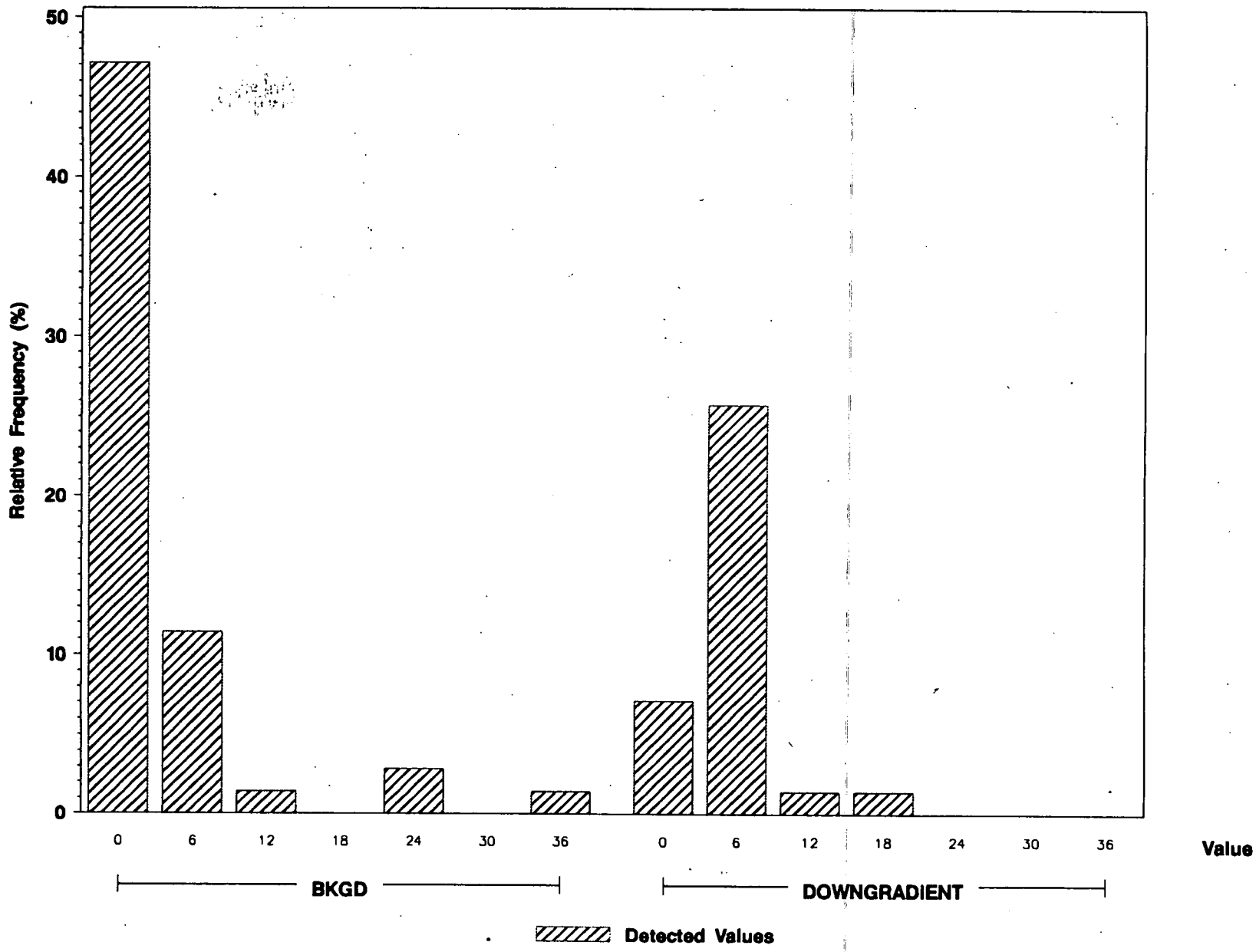
ANALYTE = RADIUM-226



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved GROSS ALPHA (pCi/L) in Groundwater

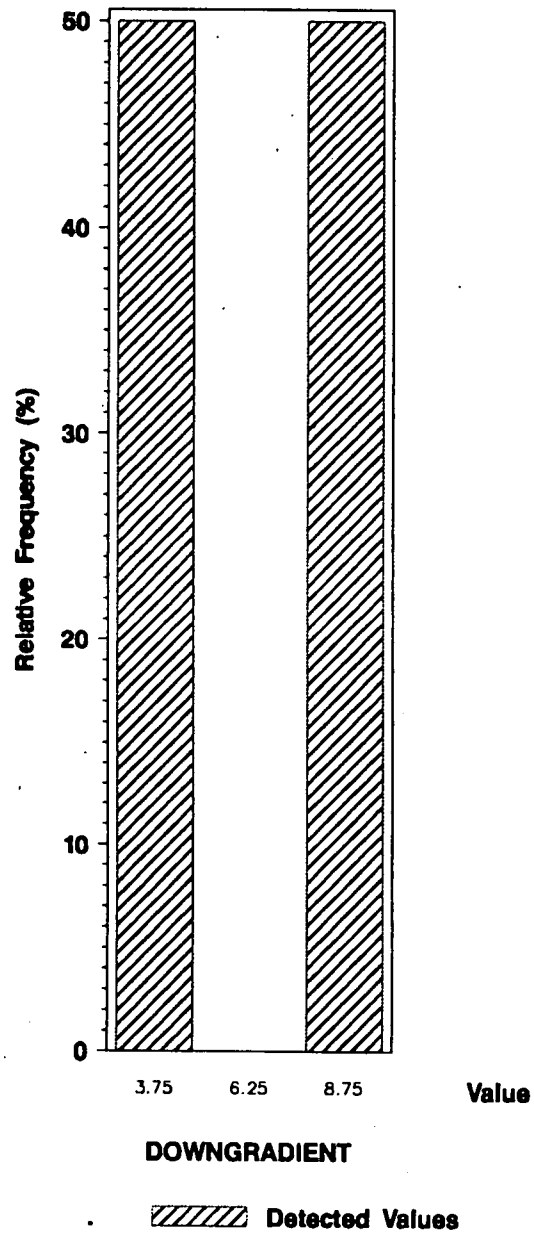
ANALYTE = GROSS ALPHA



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved GROSS ALPHA – SUSPENDED (pCi/L) in Groundwater

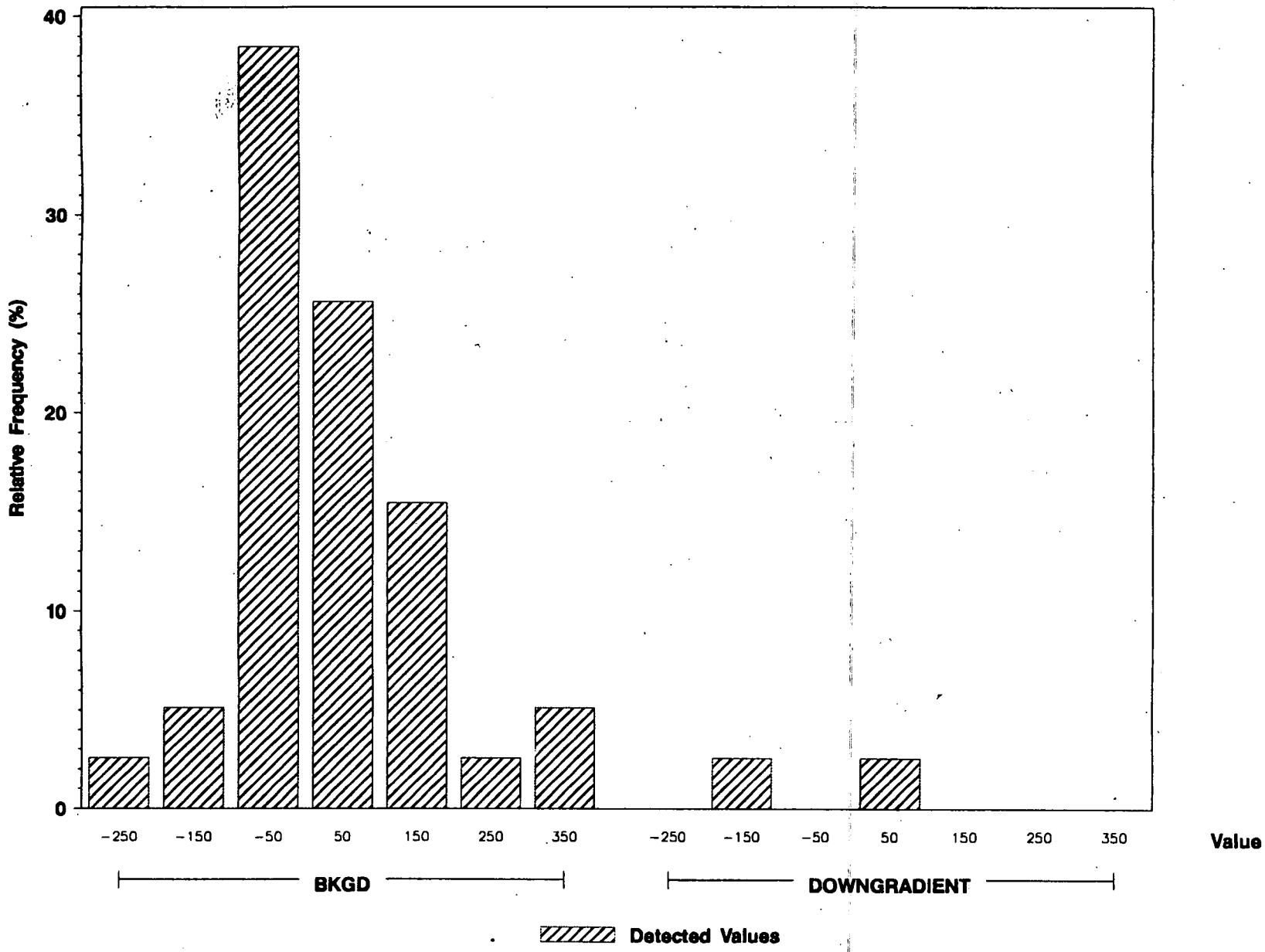
ANALYTE=GROSS ALPHA – SUSPENDED



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved TRITIUM (pCi/L) in Groundwater

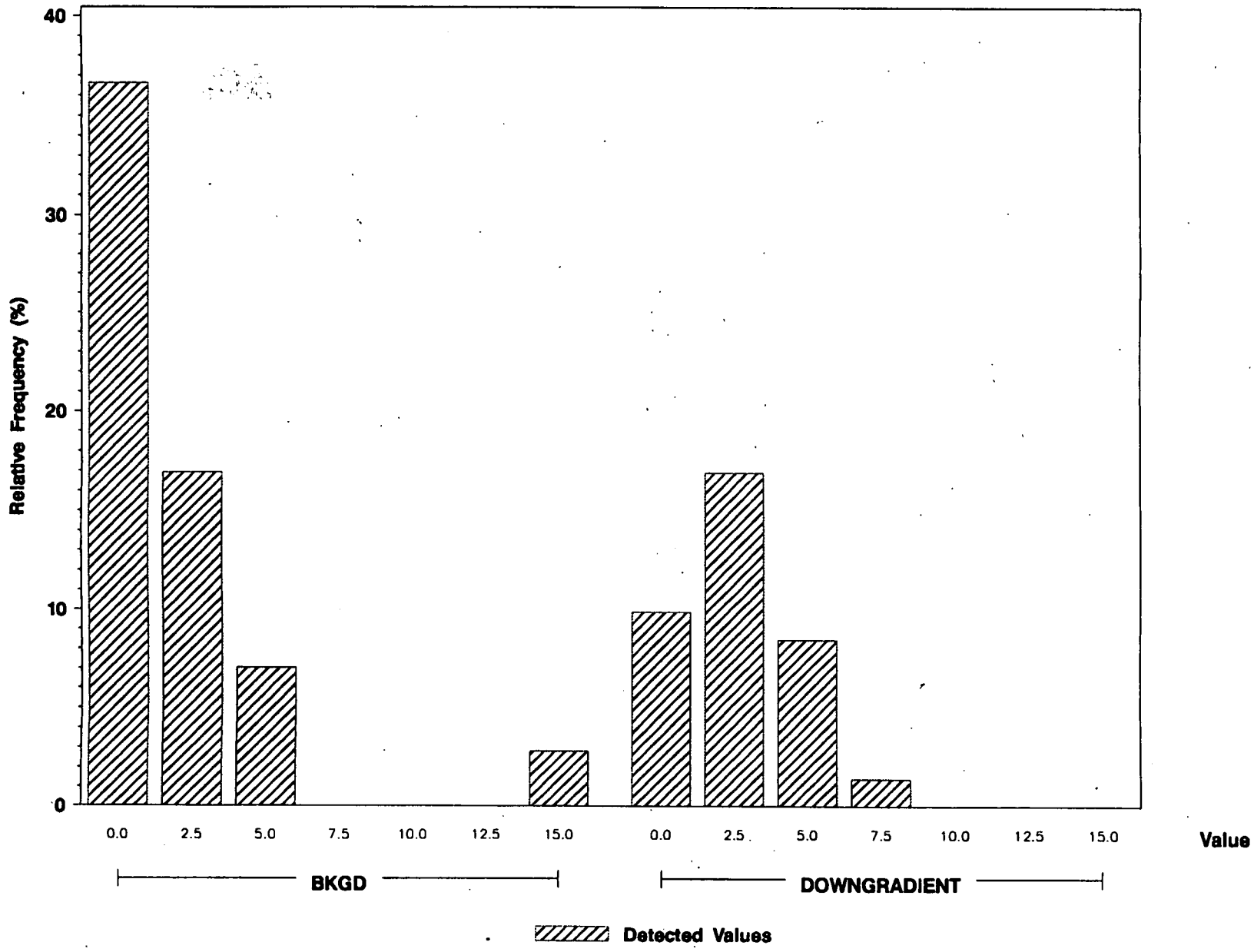
ANALYTE = TRITIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved URANIUM-233,-234 (pCi/L) in Groundwater

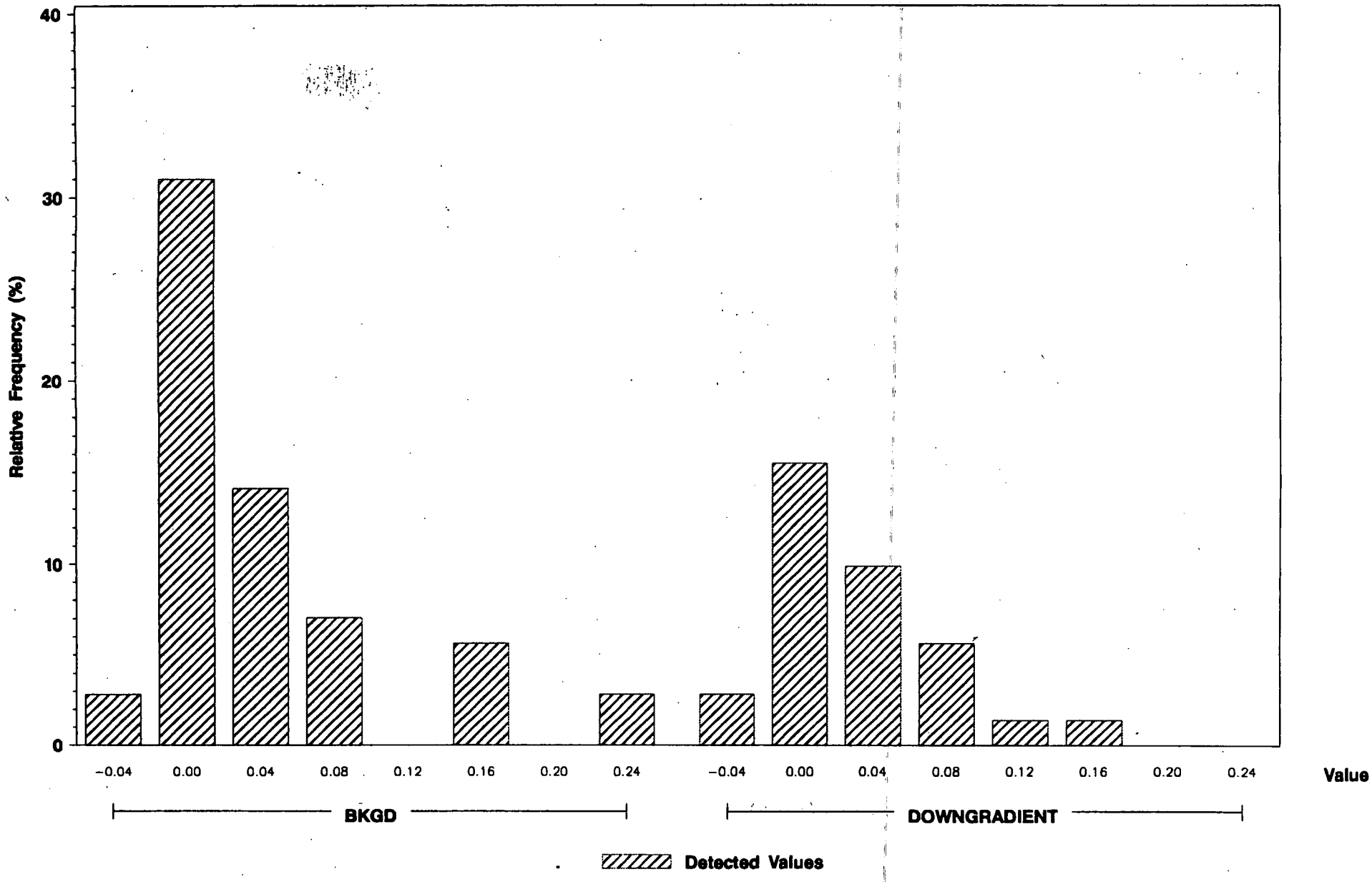
ANALYTE=URANIUM-233,-234



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved URANIUM-235 (pCi/L) in Groundwater

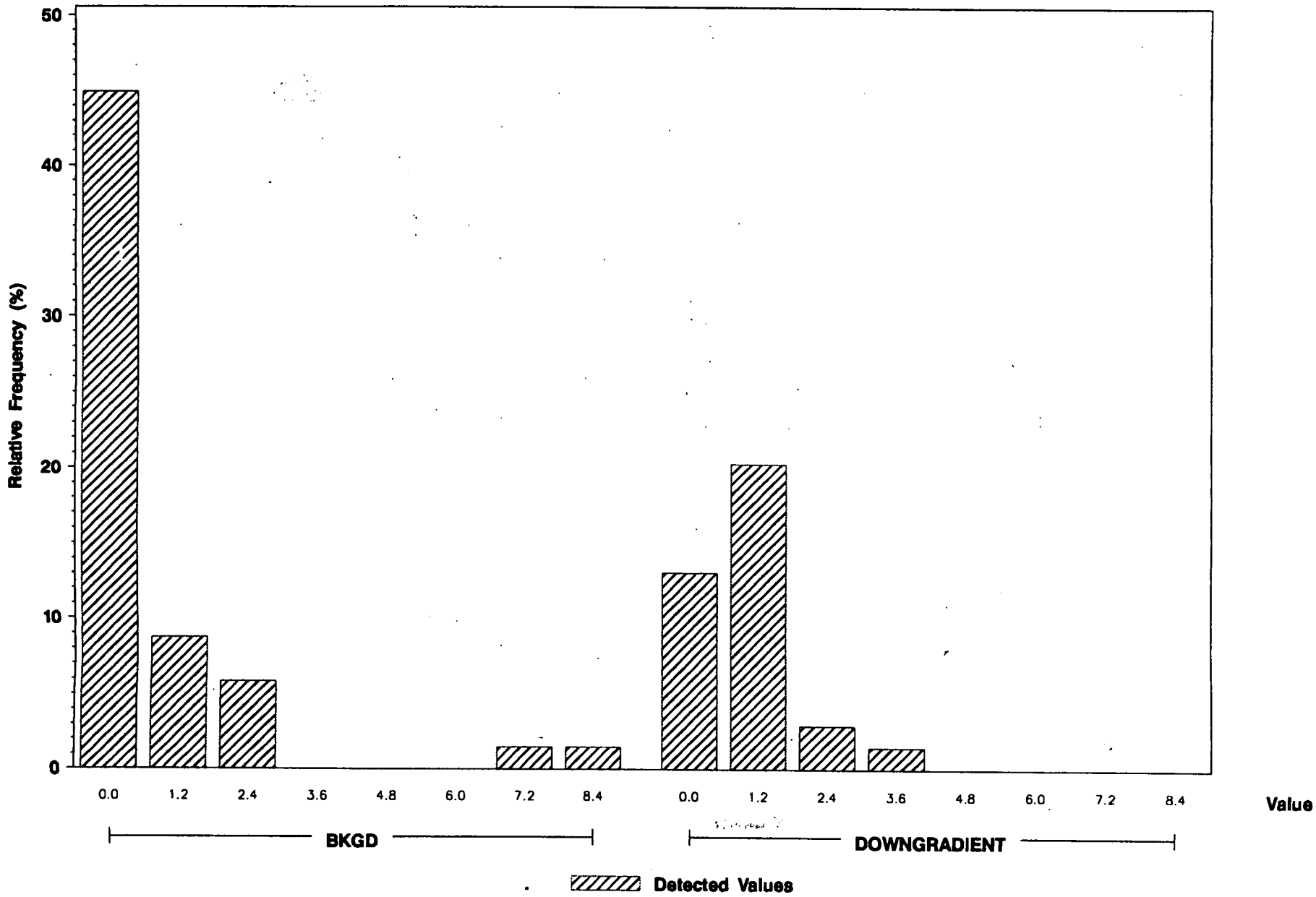
ANALYTE = URANIUM-235



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved URANIUM-238 (pCi/L) in Groundwater

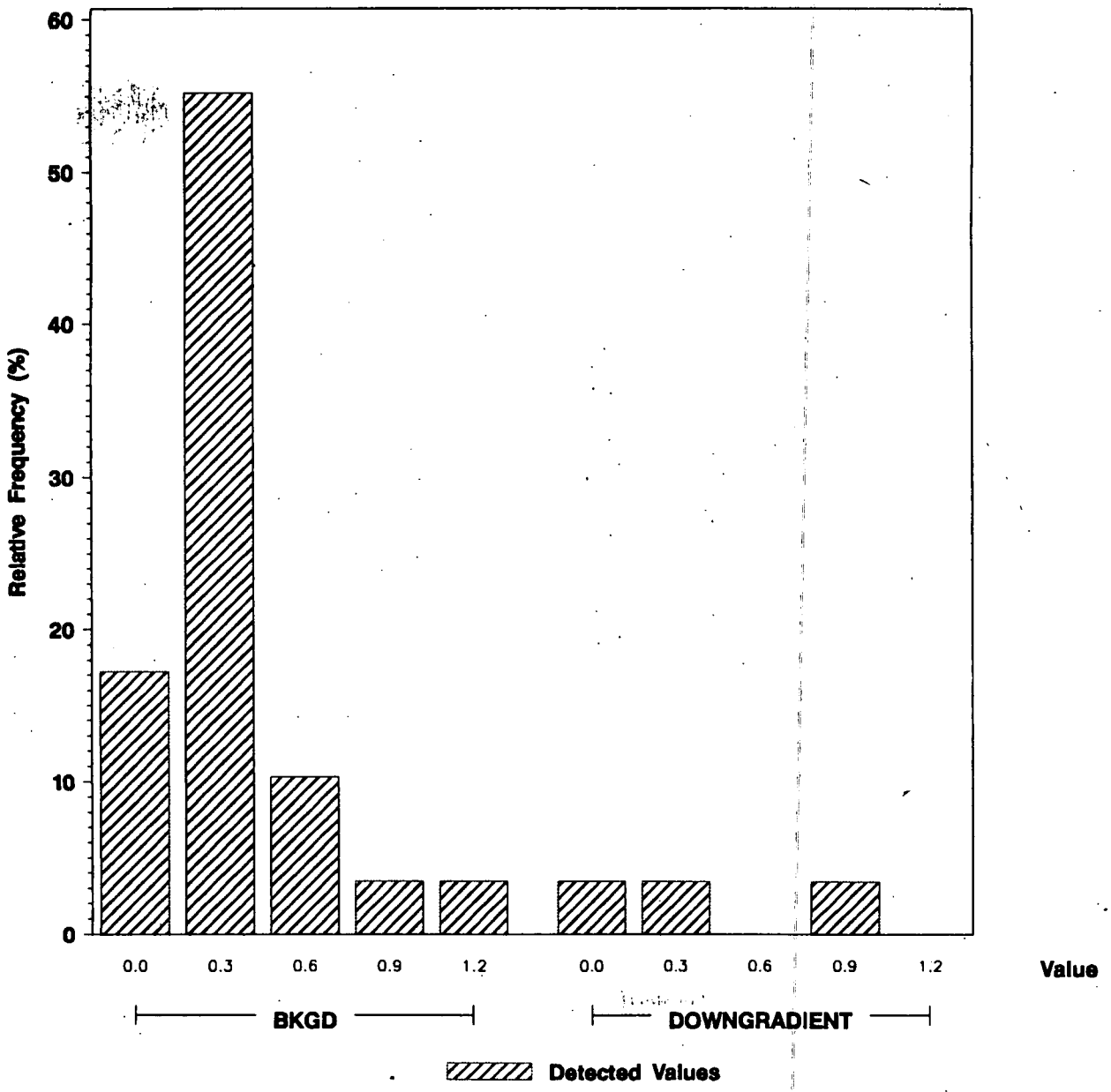
ANALYTE = URANIUM-238



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved STRONTIUM – 89,90 (pCi/L) in Groundwater

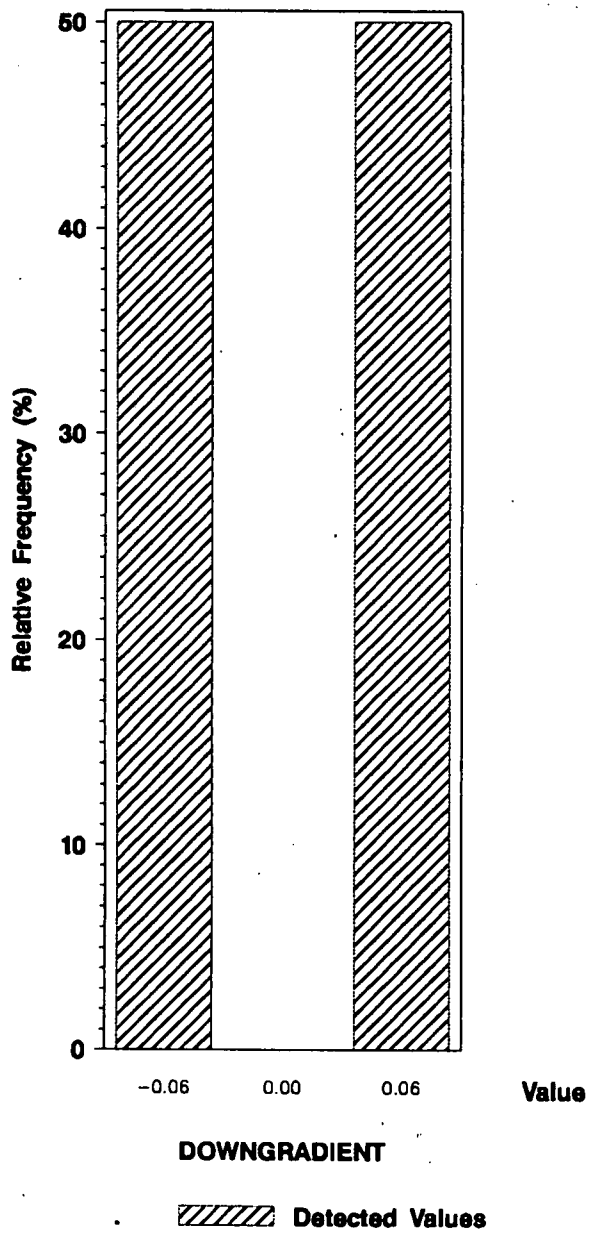
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved STRONTIUM-90 (pCi/L) in Groundwater

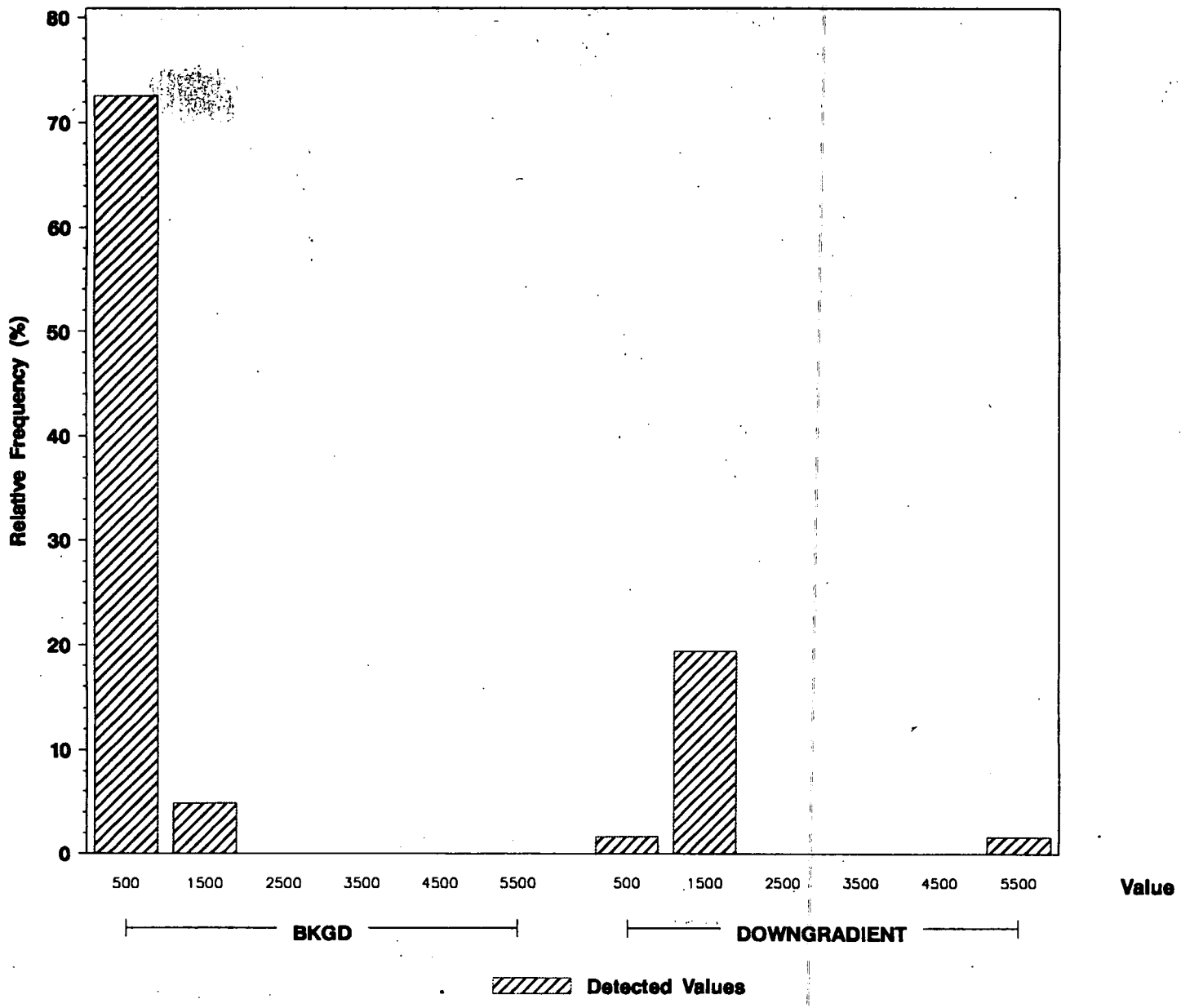
ANALYTE=STRONTIUM-90



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved STRONTIUM (ug/L) in Groundwater

ANALYTE = STRONTIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

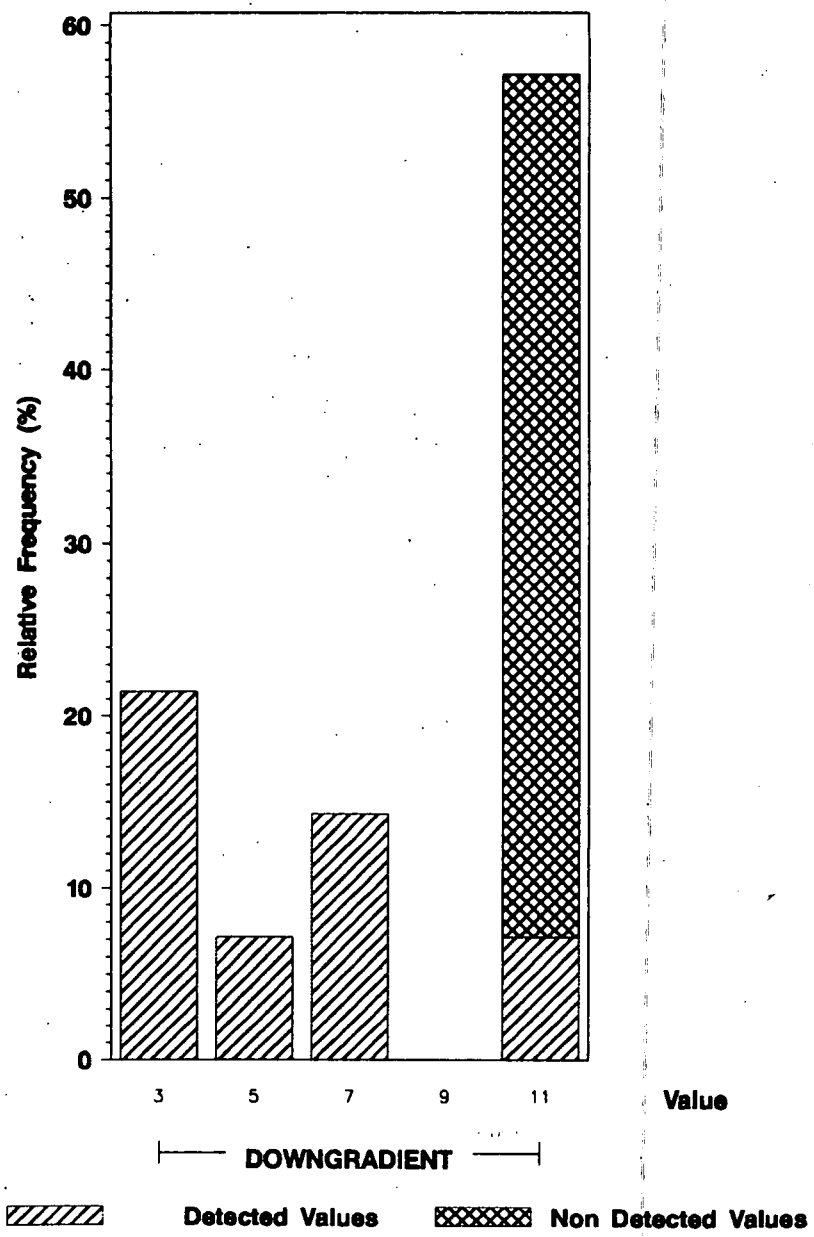
## Dissolved VANADIUM (ug/L) in Groundwater

ANALYTE = VANADIUM

# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved SILVER (ug/L) in Groundwater

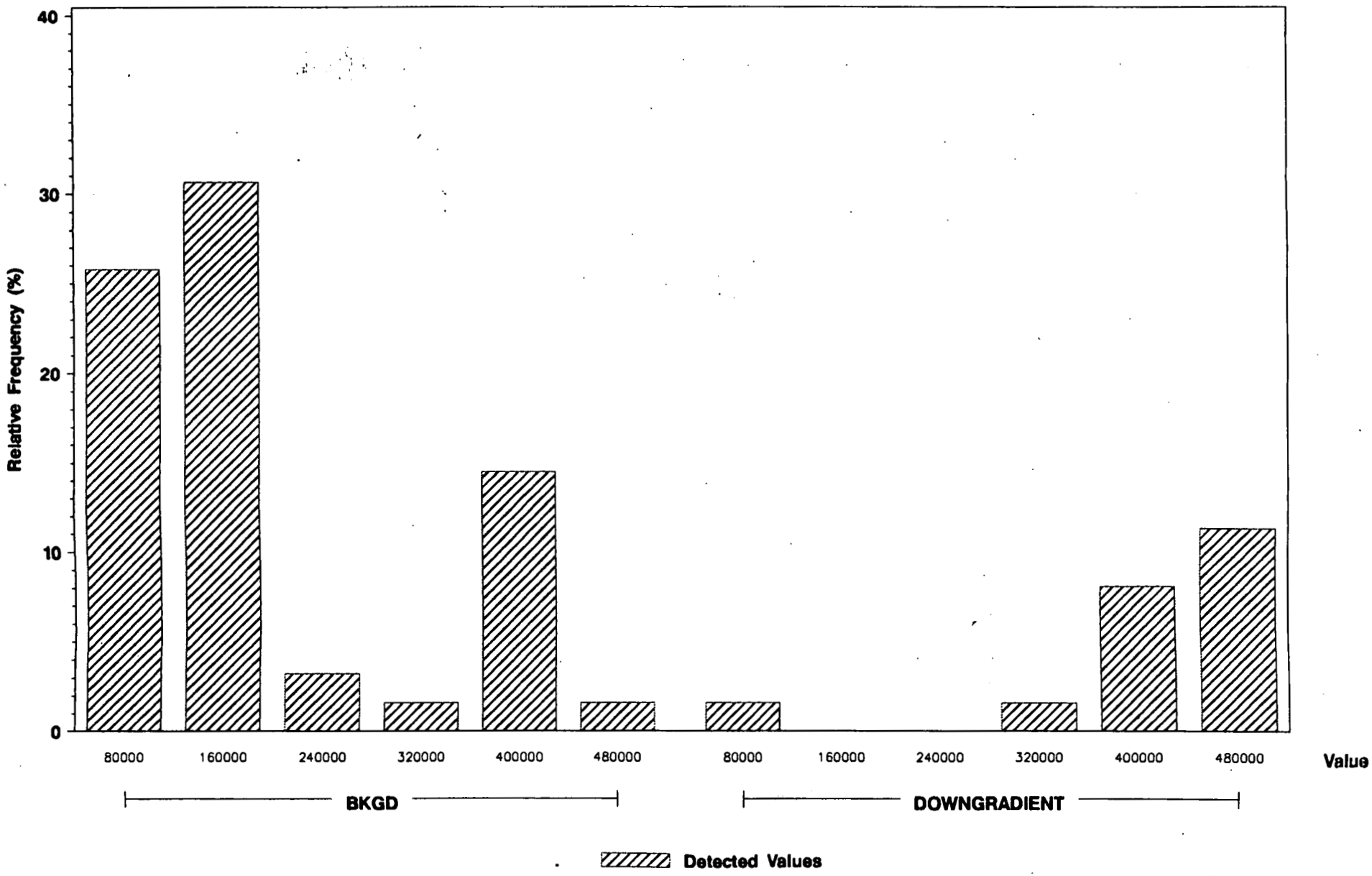
ANALYTE=SILVER



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved SODIUM (ug/L) in Groundwater

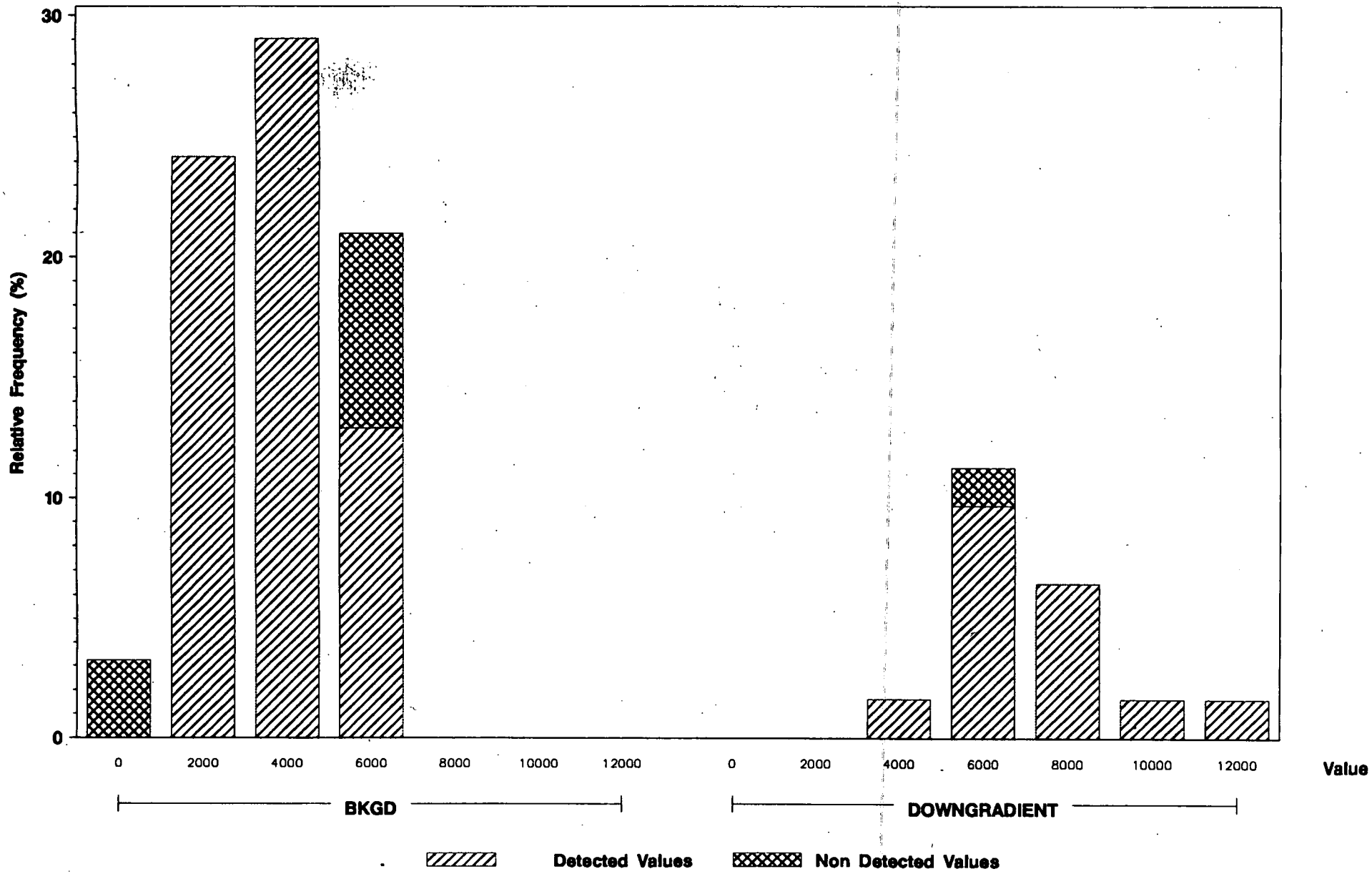
ANALYTE=SODIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved POTASSIUM (ug/L) in Groundwater

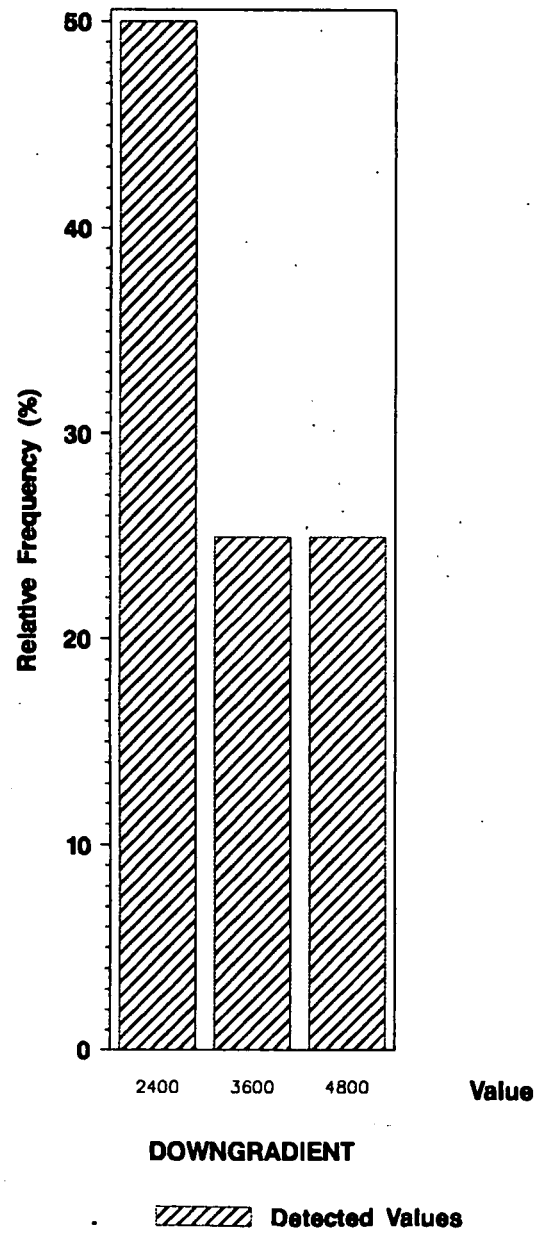
ANALYTE = POTASSIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved SILICON (ug/L) in Groundwater

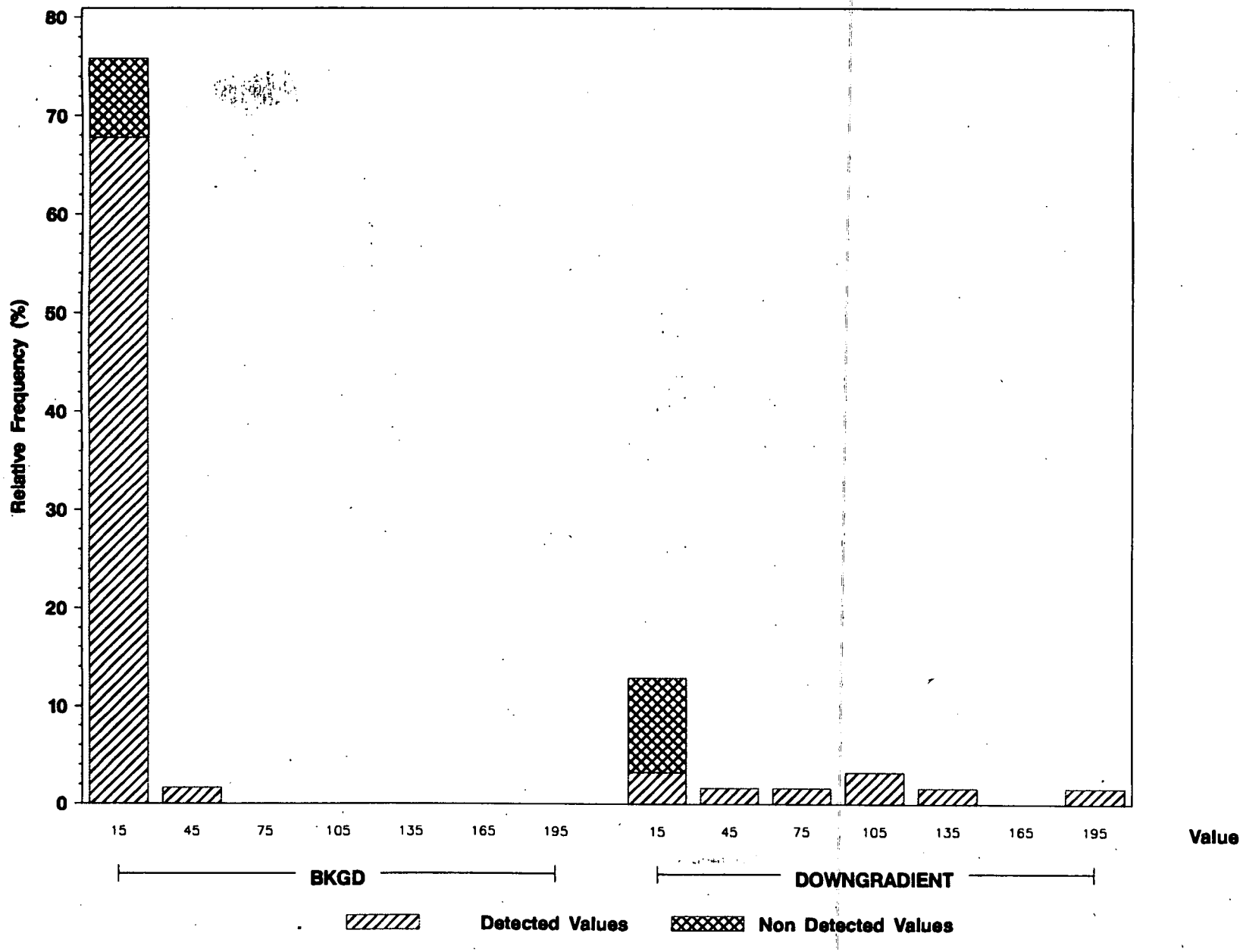
ANALYTE = SILICON



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved MANGANESE (ug/L) in Groundwater

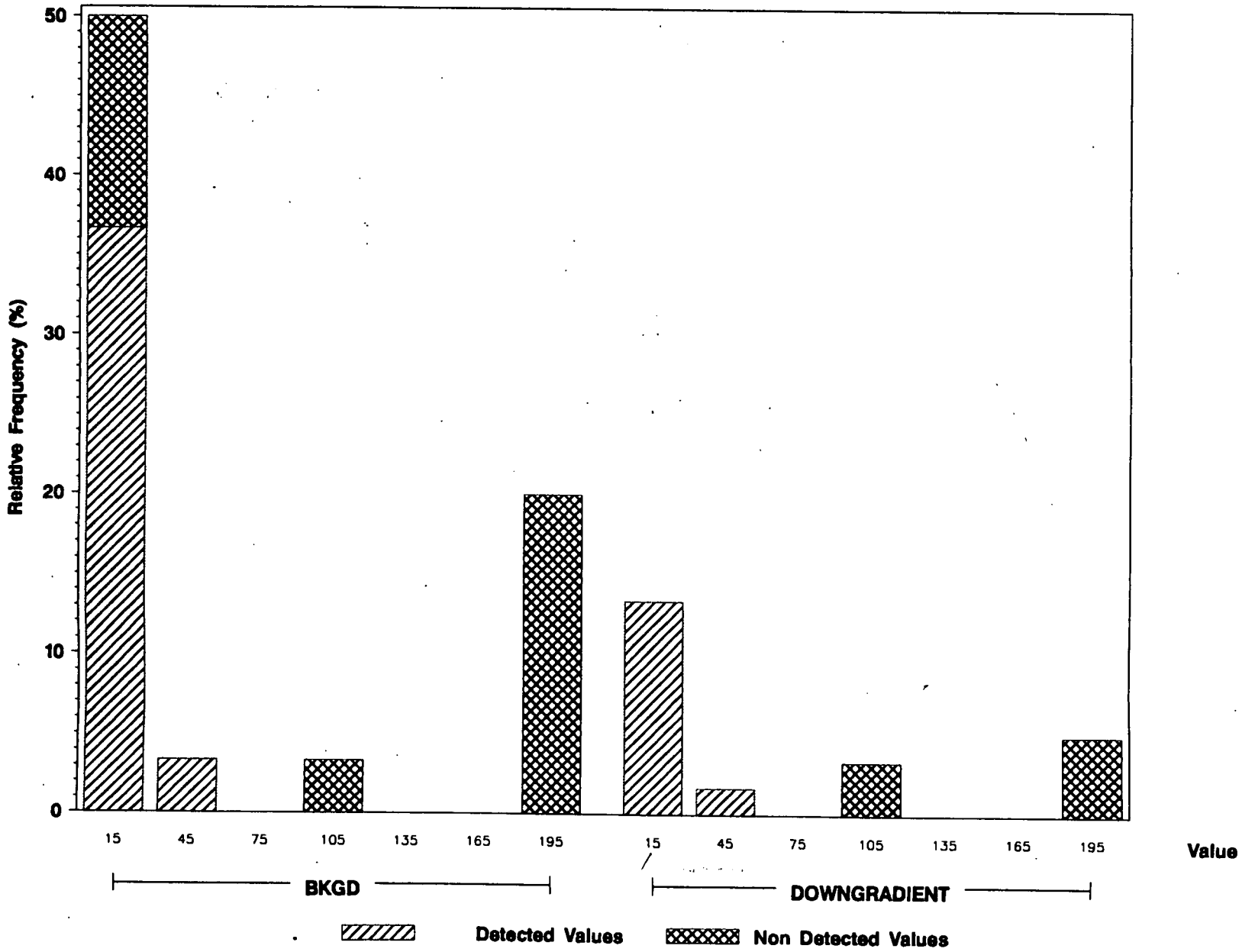
ANALYTE = MANGANESE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved MOLYBDENUM (ug/L) in Groundwater

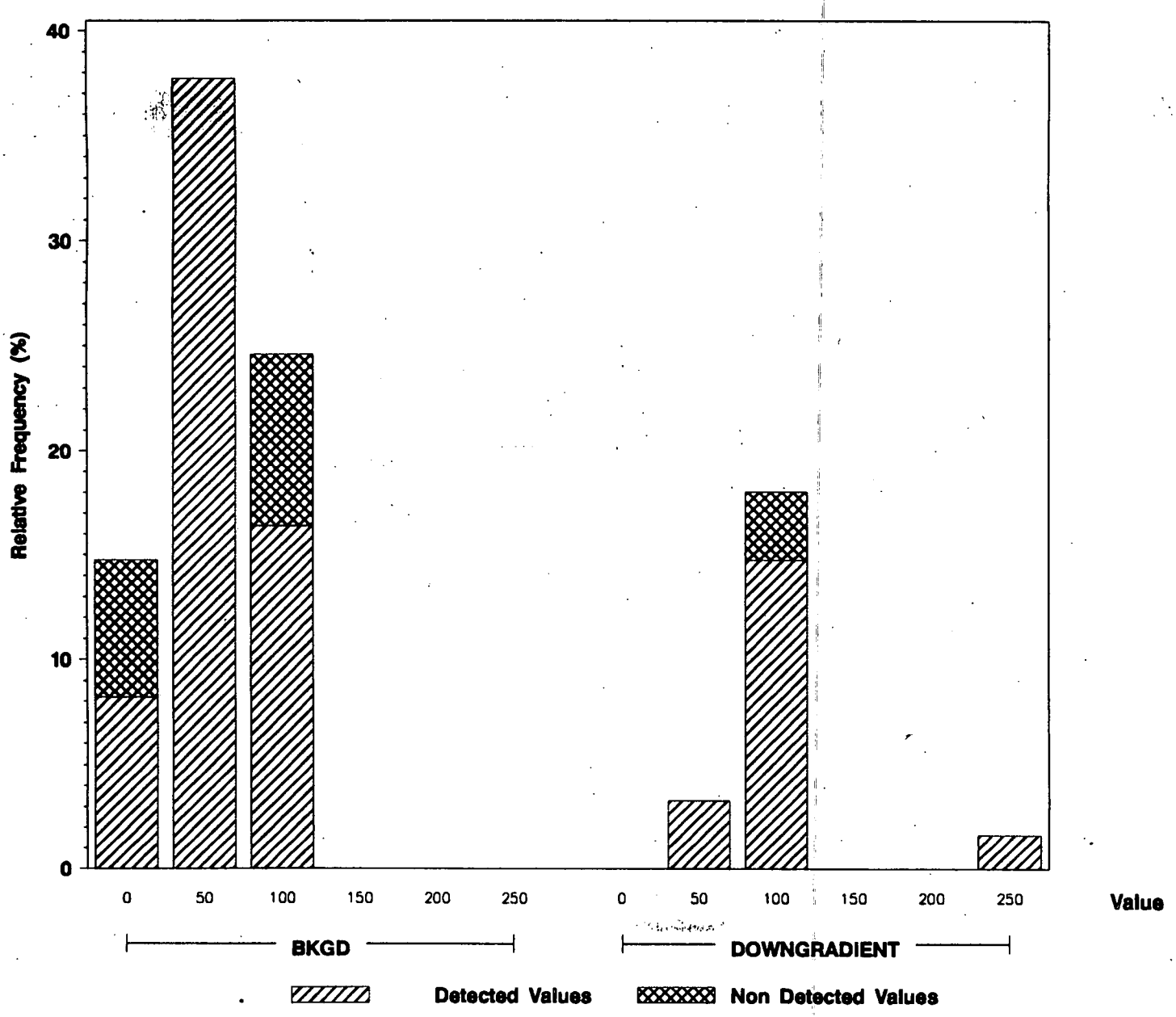
ANALYTE = MOLYBDENUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved LITHIUM (ug/L) in Groundwater

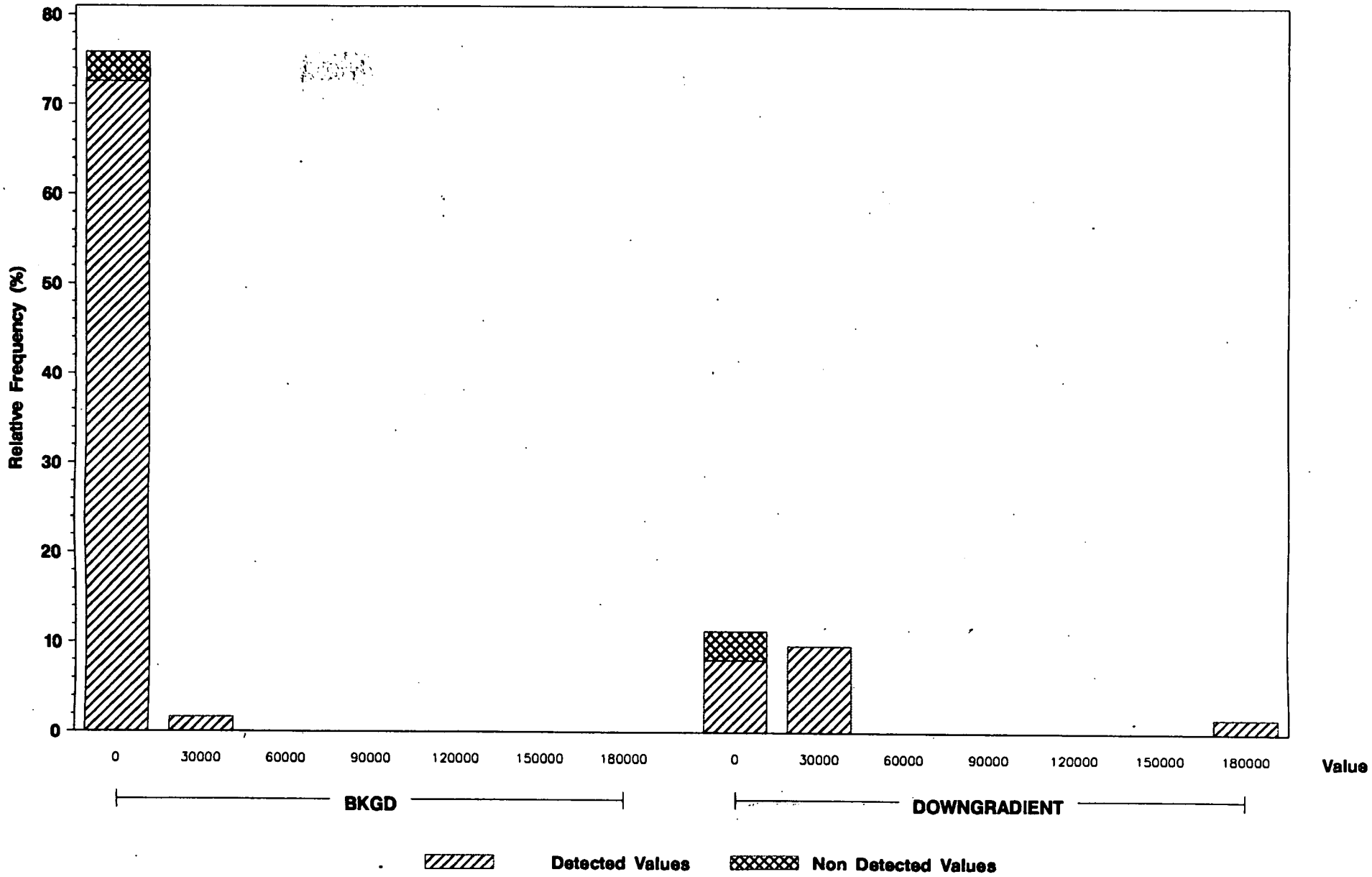
ANALYTE = LITHIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Dissolved MAGNESIUM (ug/L) in Groundwater

ANALYTE = MAGNESIUM



**Groundwater**

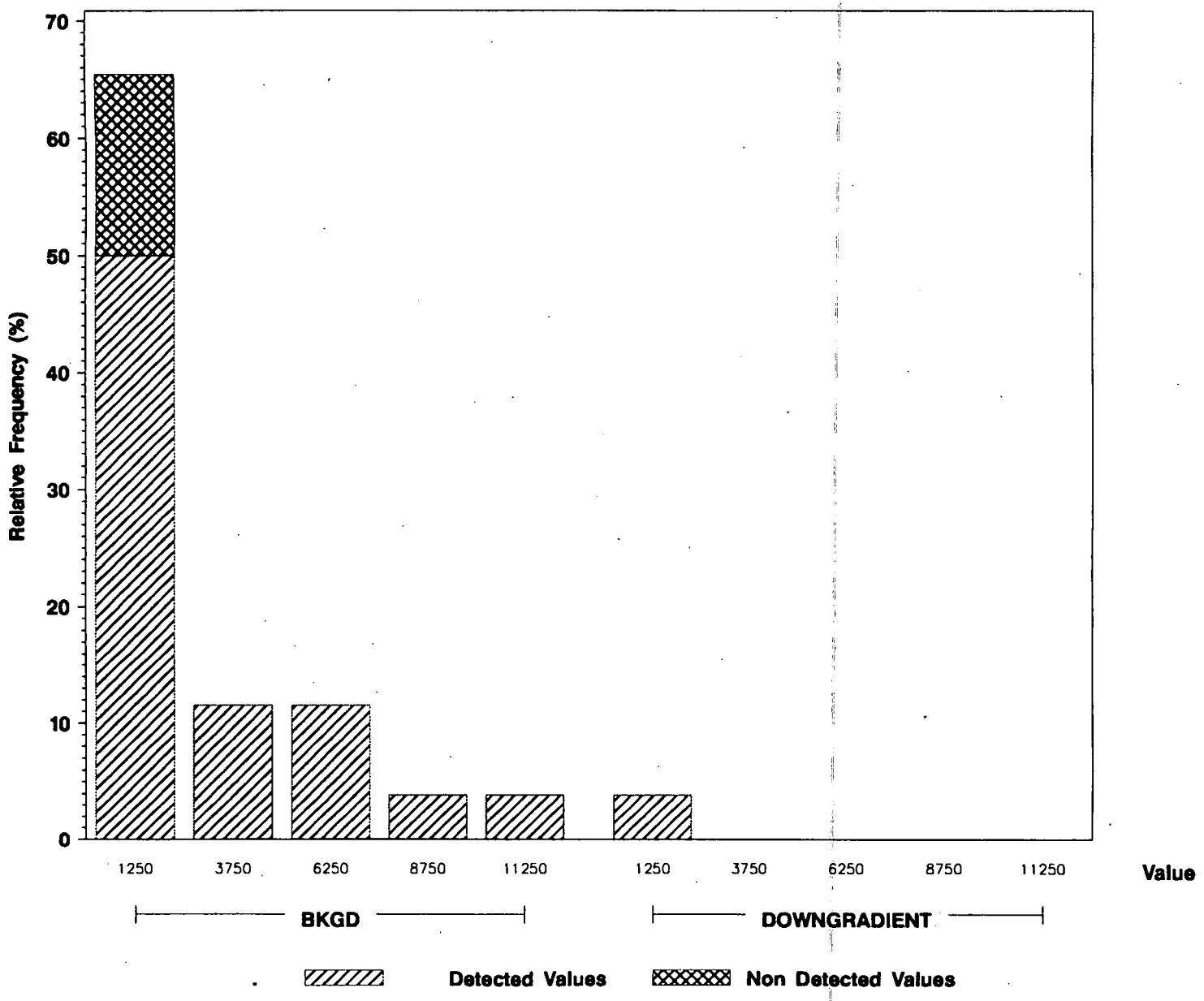
**(Total)**

**Background vs. OU 7 Downgradient LHSU**

# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total ALUMINUM (ug/L) in Groundwater

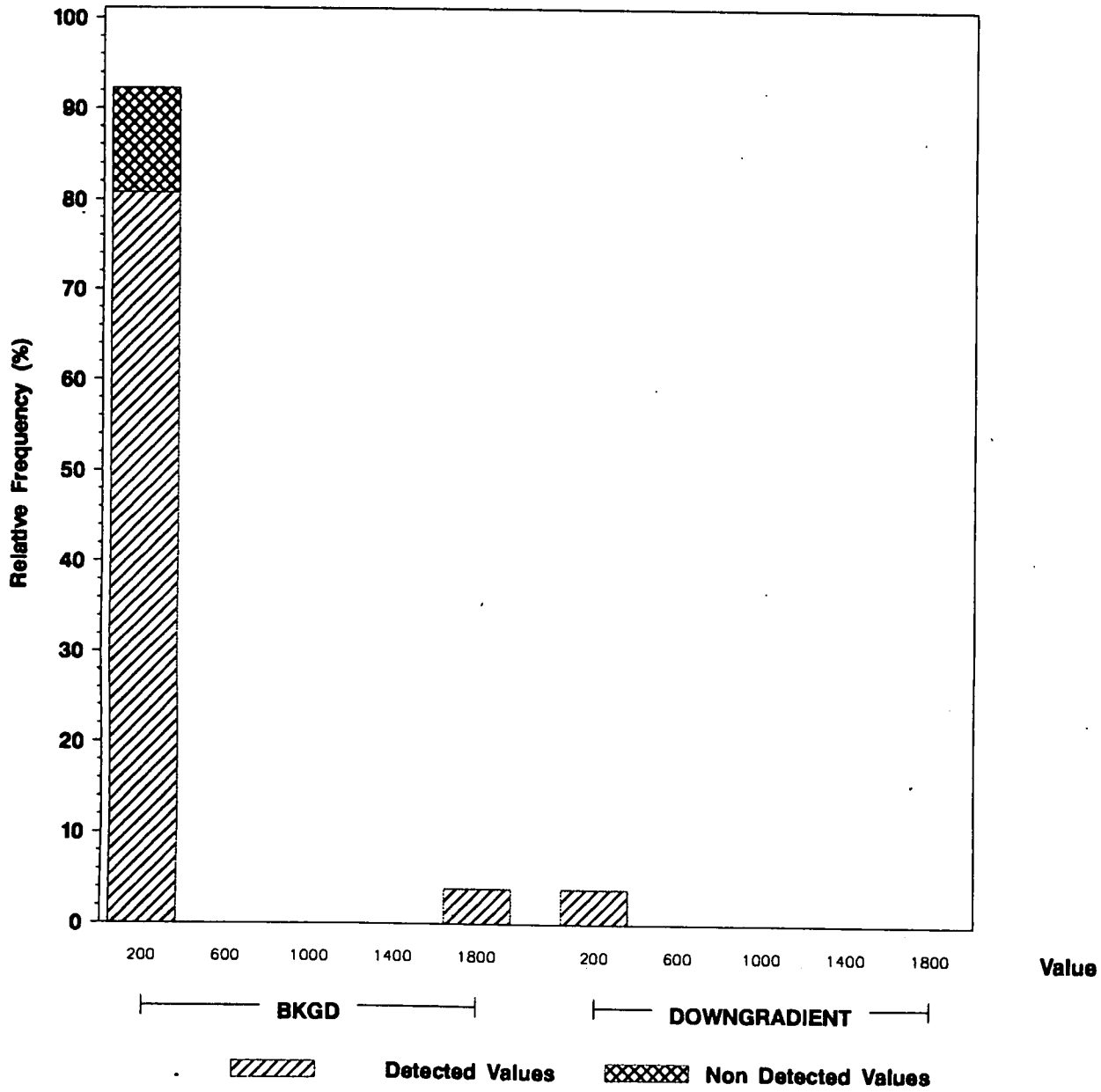
ANALYTE = ALUMINUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total BARIUM (ug/L) in Groundwater

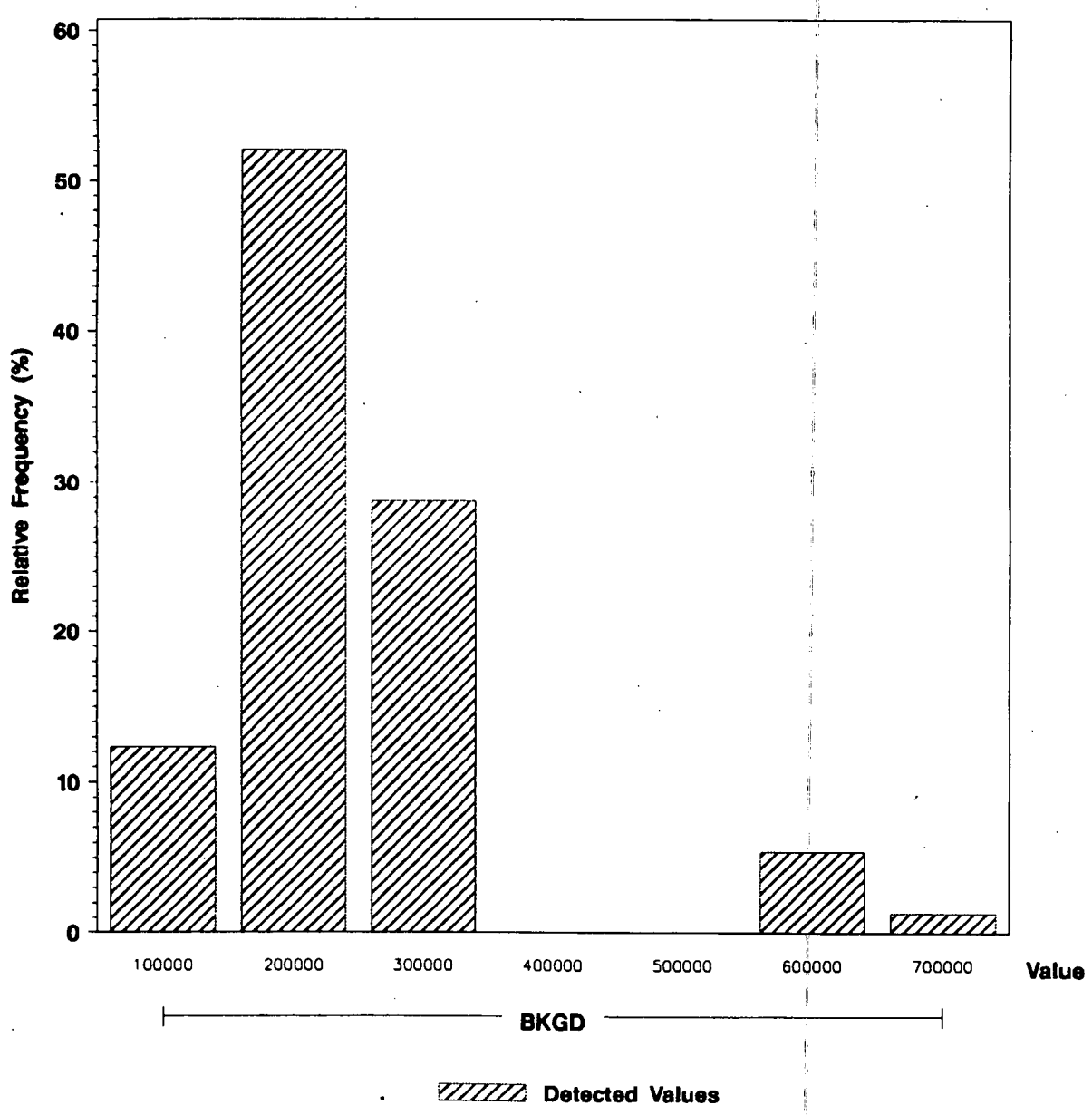
ANALYTE = BARIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total BICARBONATE (ug/L) in Groundwater

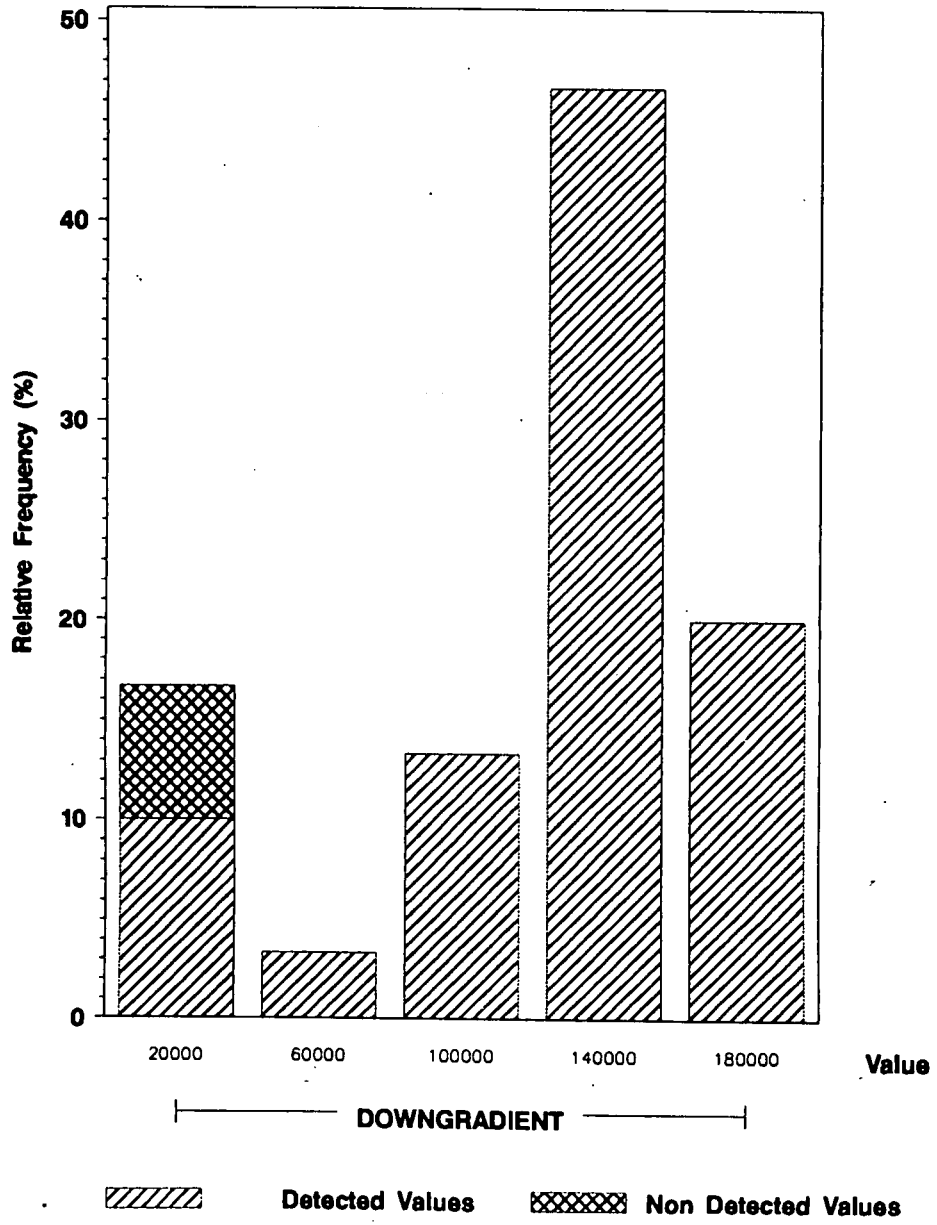
ANALYTE = BICARBONATE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total BICARBONATE AS CACO3 (ug/L) in Groundwater

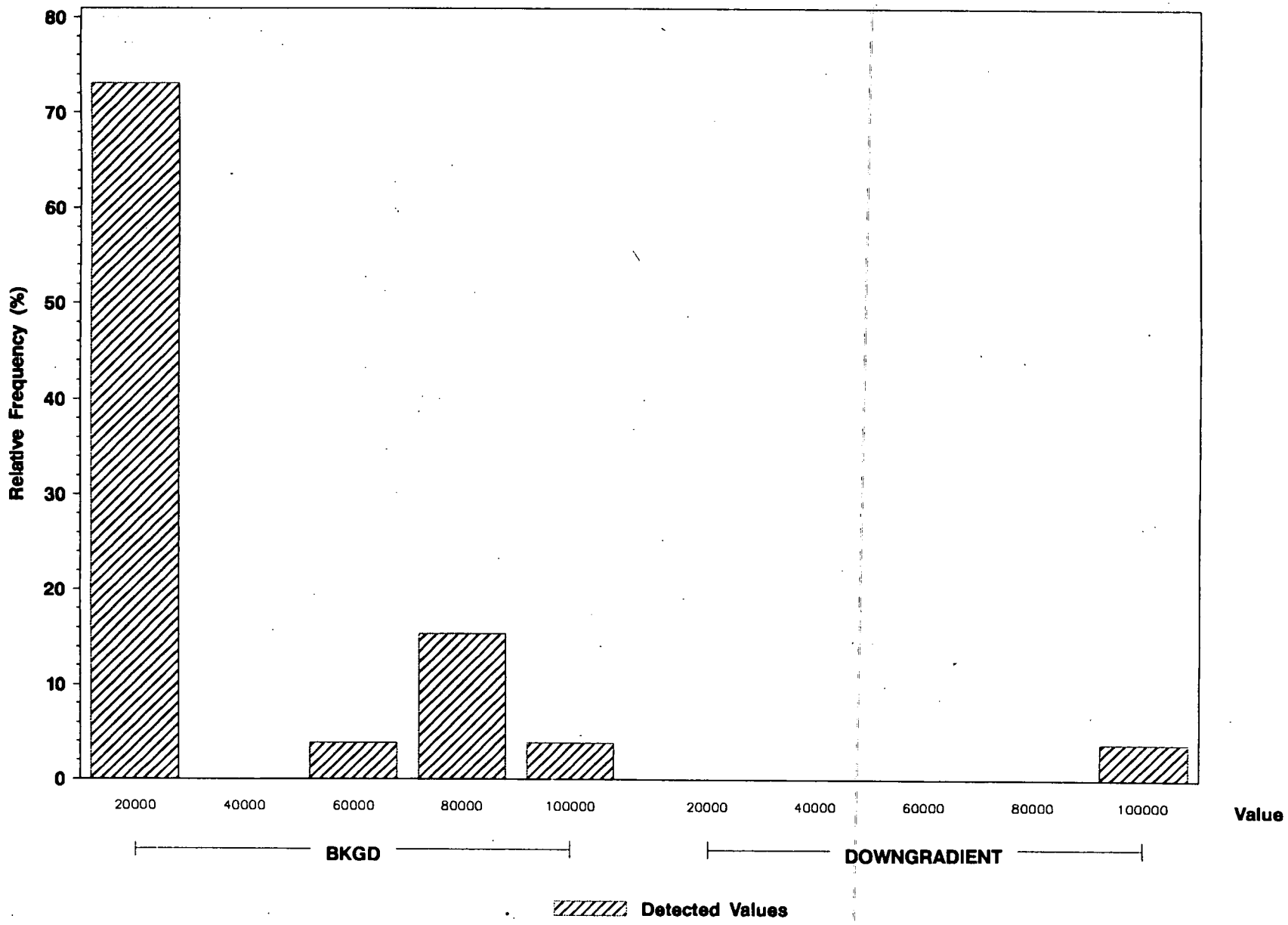
ANALYTE=BICARBONATE AS CACO3



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total CALCIUM (ug/L) in Groundwater

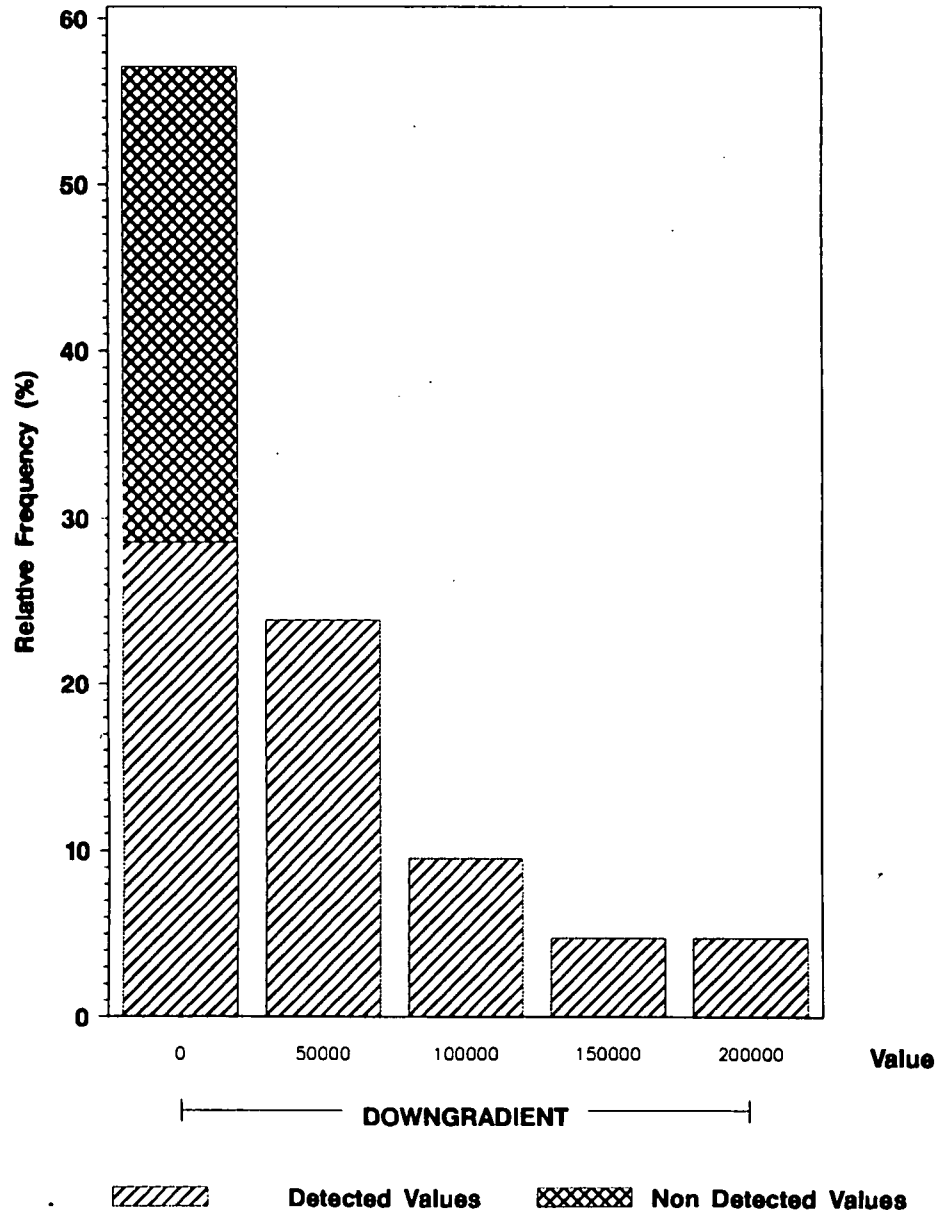
ANALYTE = CALCIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total CARBONATE AS CACO3 (ug/L) in Groundwater

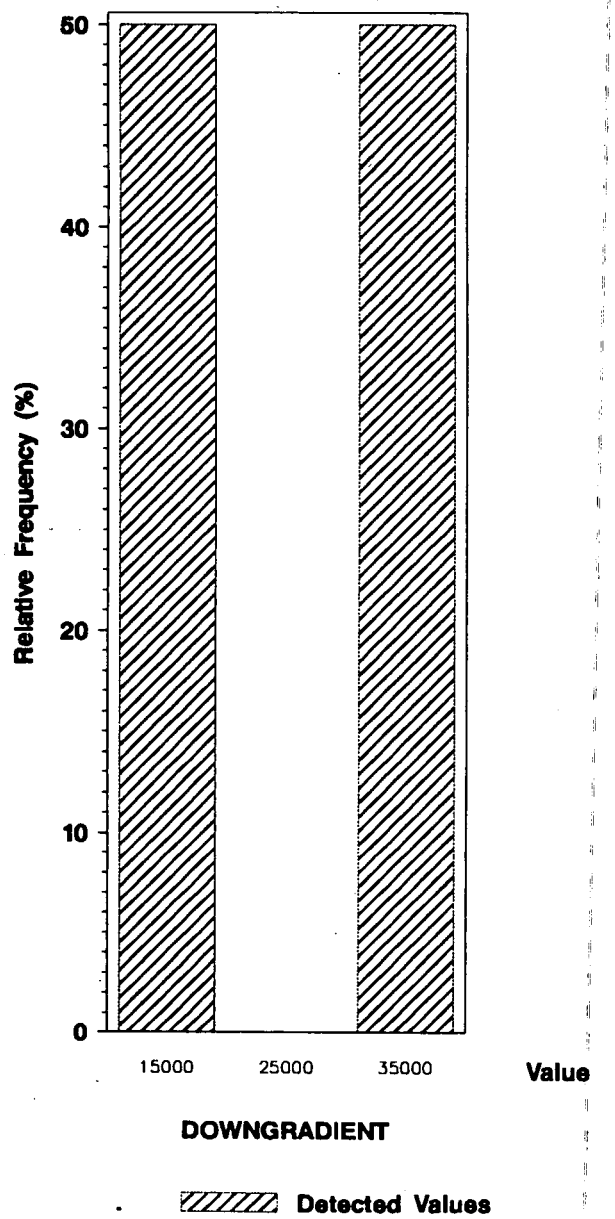
ANALYTE=CARBONATE AS CACO3



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total CHEMICAL OXYGEN DEMAND (ug/L) in Groundwater

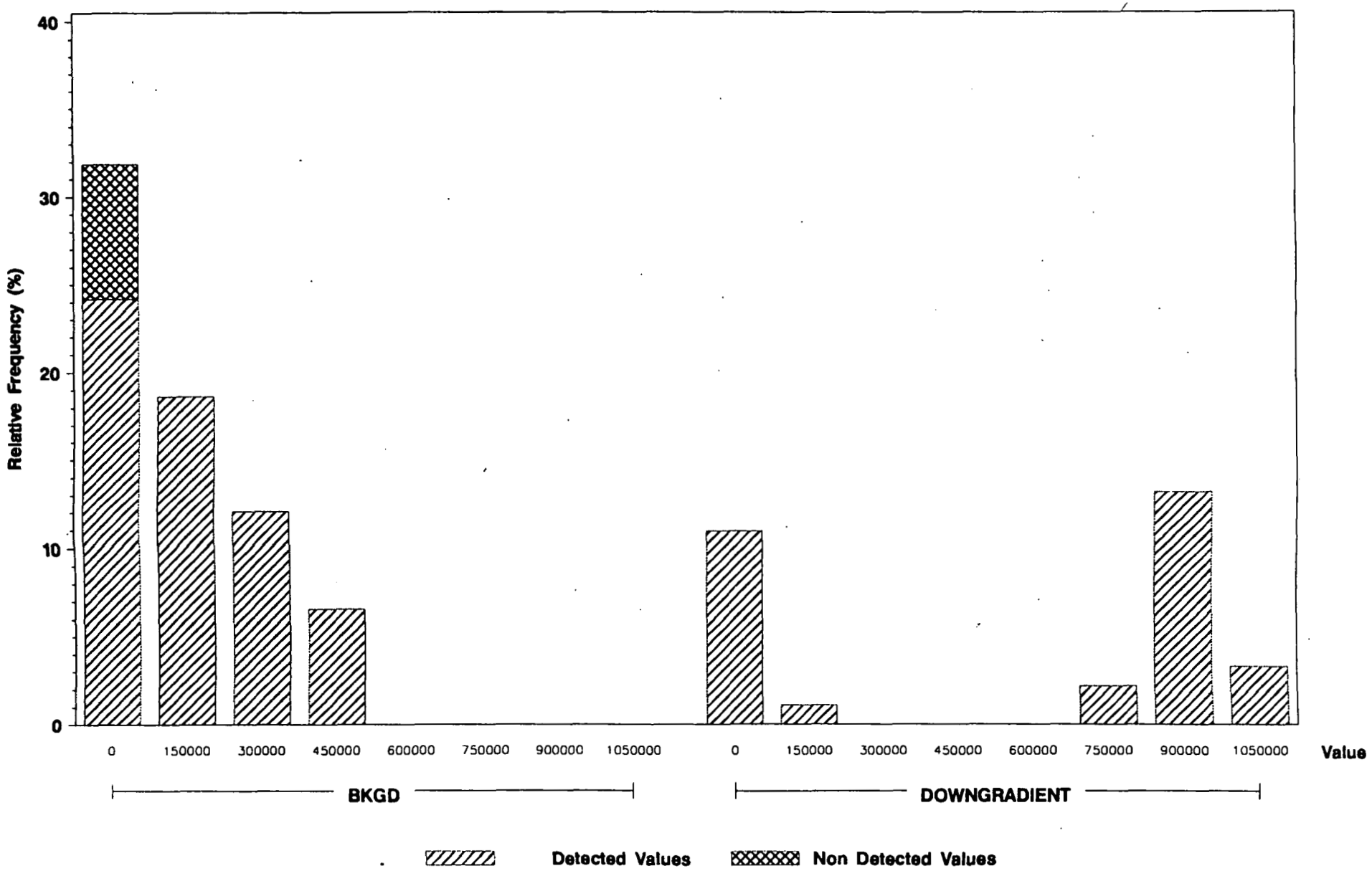
ANALYTE=CHEMICAL OXYGEN DEMAND



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total CHLORIDE (ug/L) In Groundwater

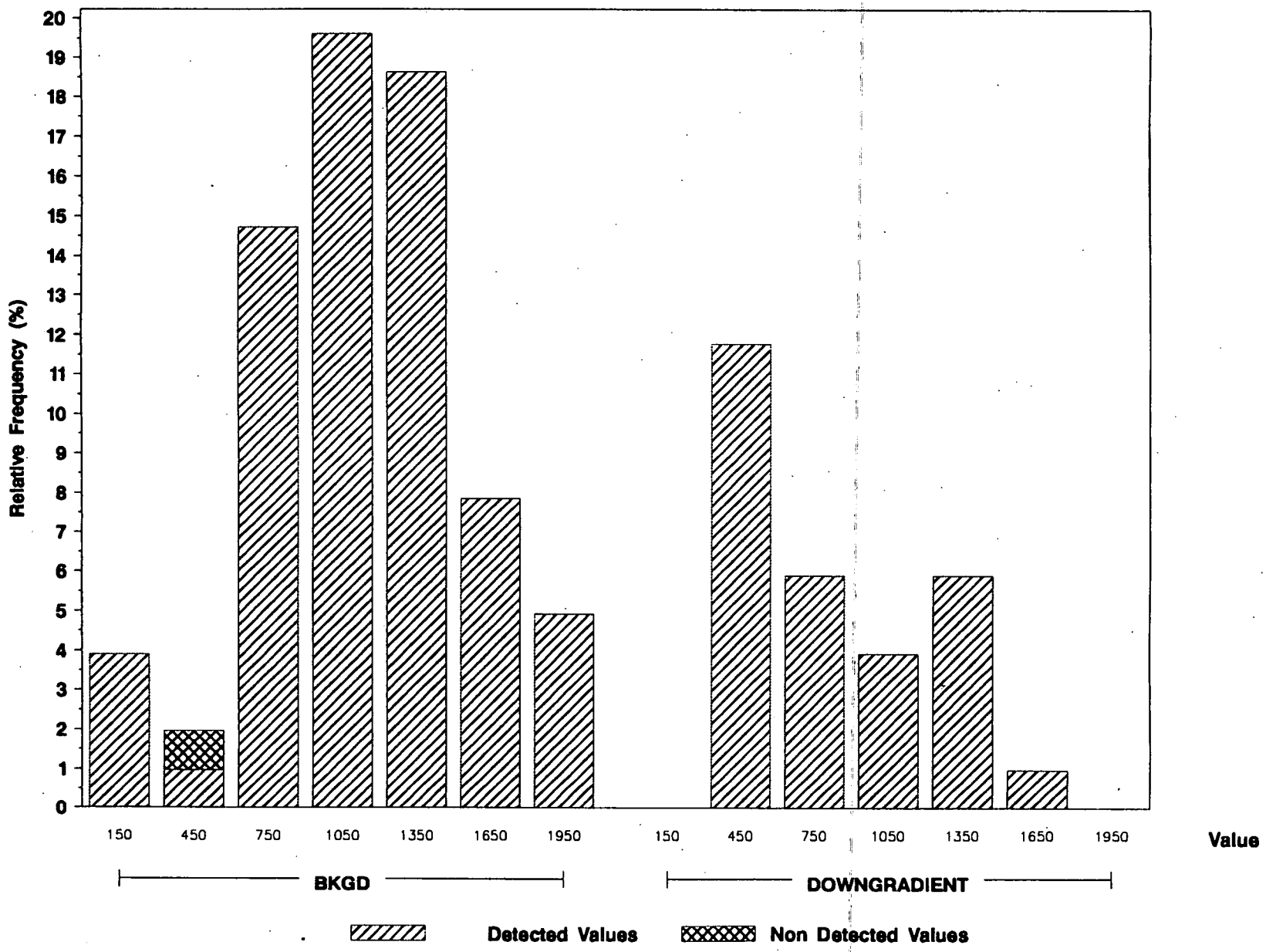
ANALYTE = CHLORIDE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total FLUORIDE (ug/L) in Groundwater

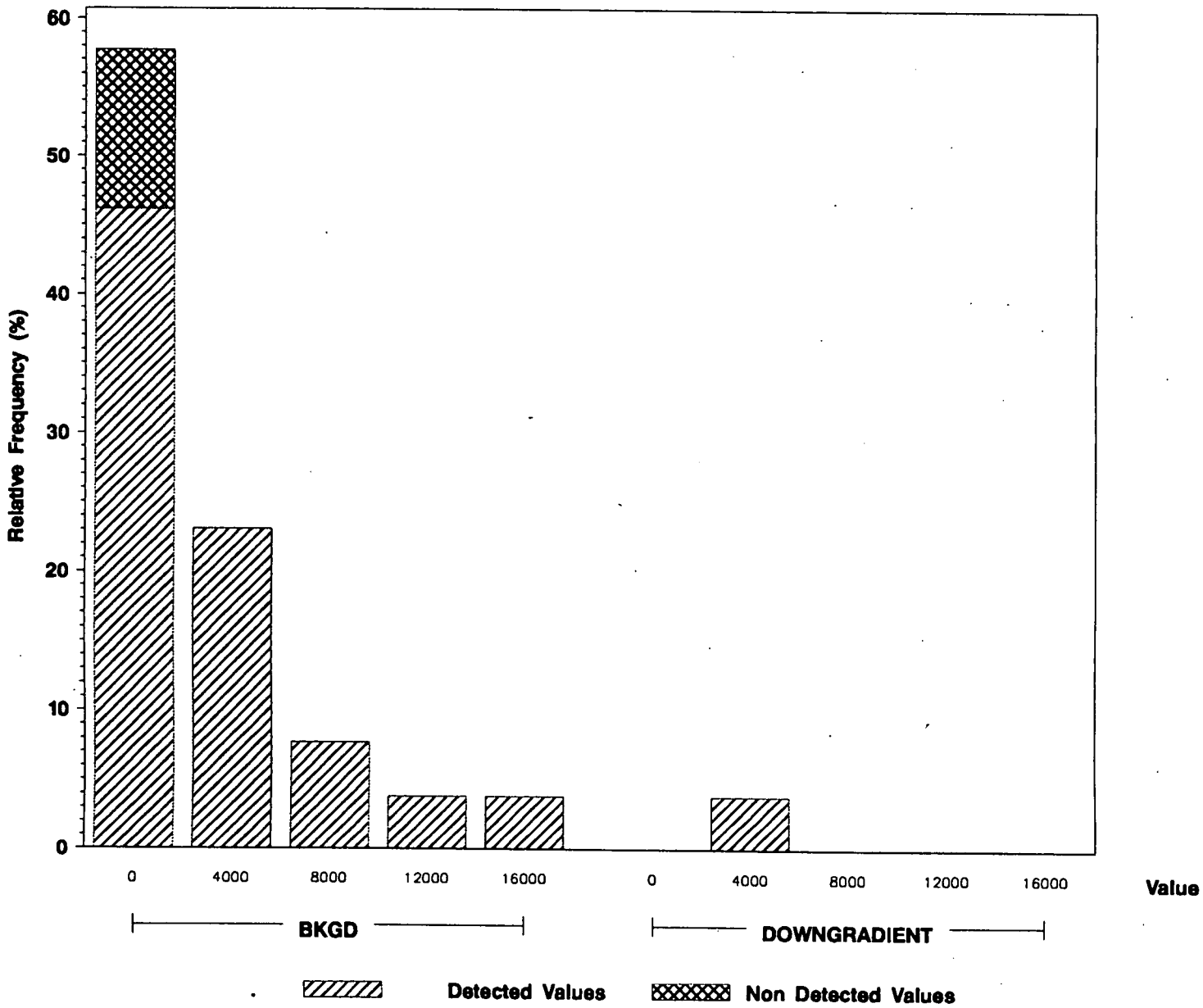
ANALYTE=FLUORIDE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total IRON (ug/L) in Groundwater

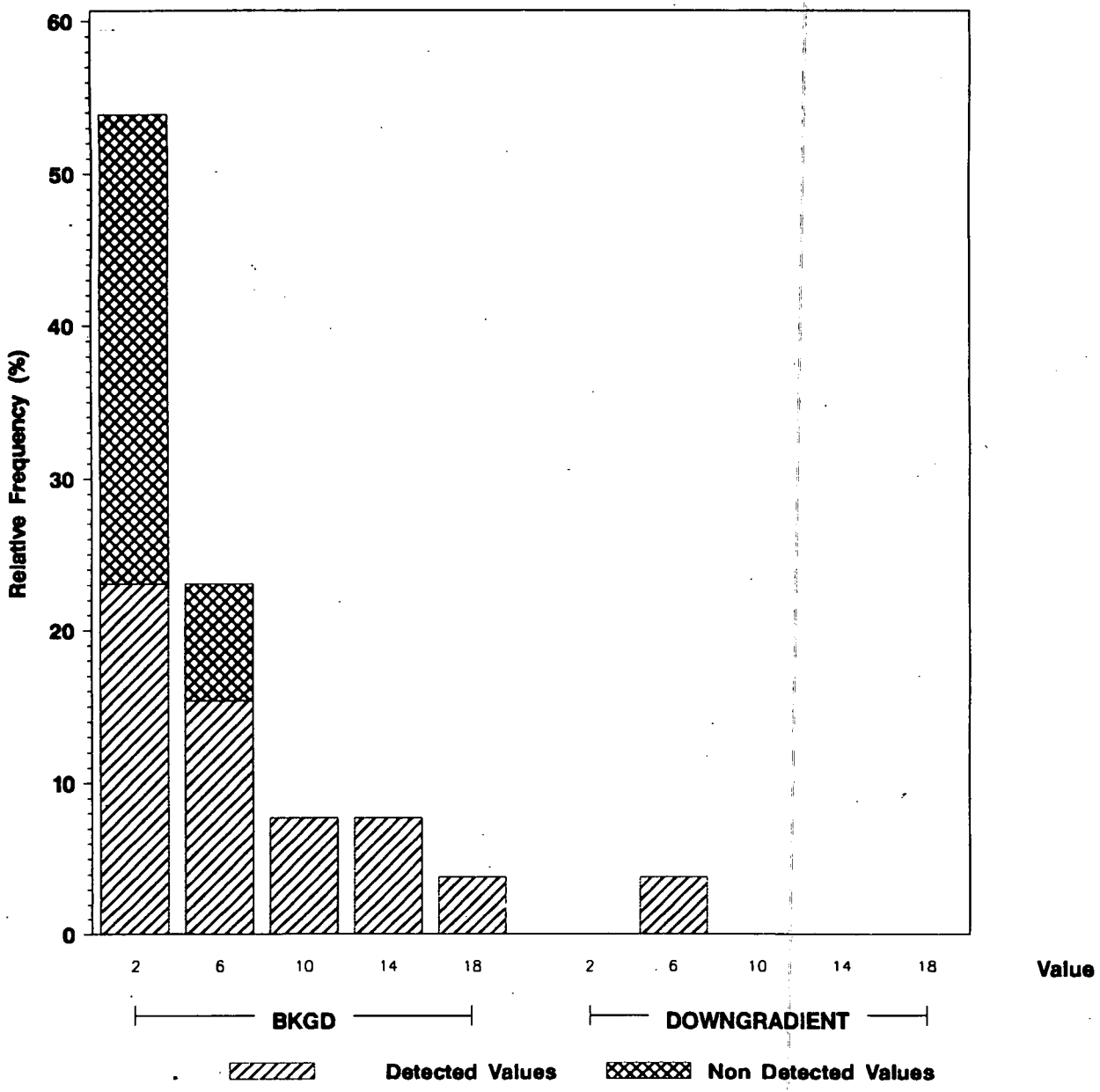
ANALYTE = IRON



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total LEAD (ug/L) in Groundwater

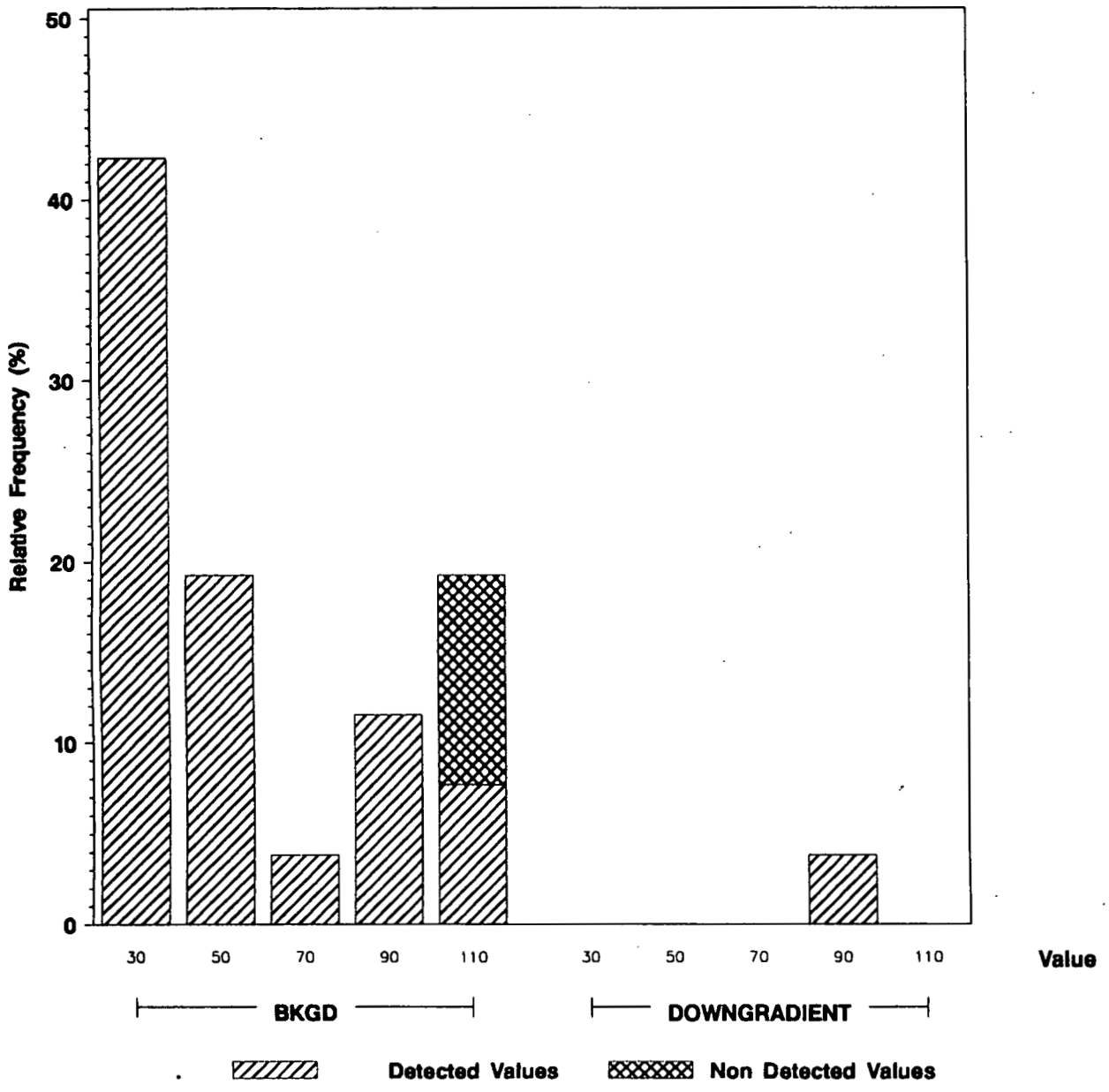
ANALYTE = LEAD



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total LITHIUM (ug/L) in Groundwater

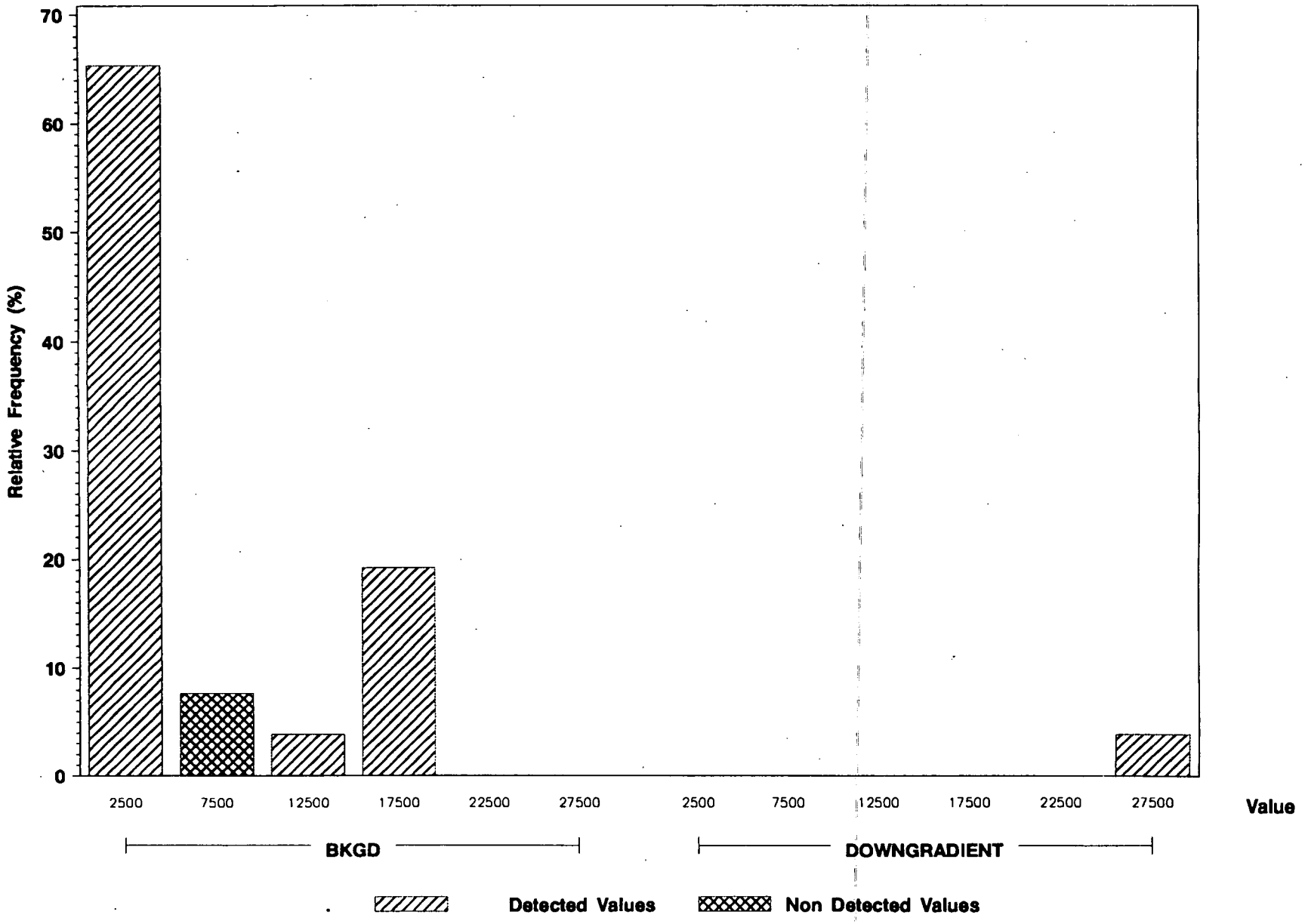
ANALYTE = LITHIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total MAGNESIUM (ug/L) in Groundwater

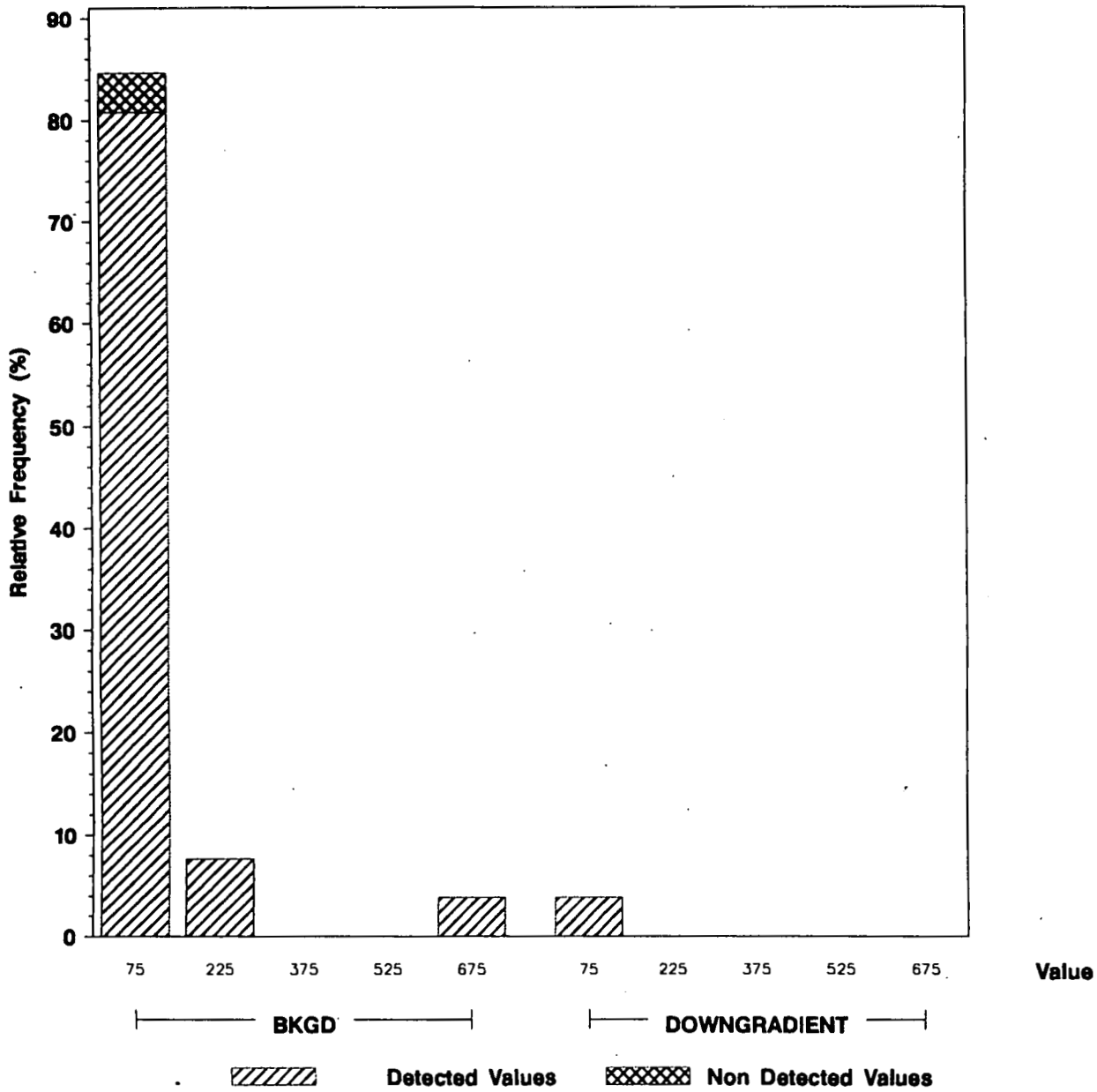
ANALYTE = MAGNESIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total MANGANESE (ug/L) in Groundwater

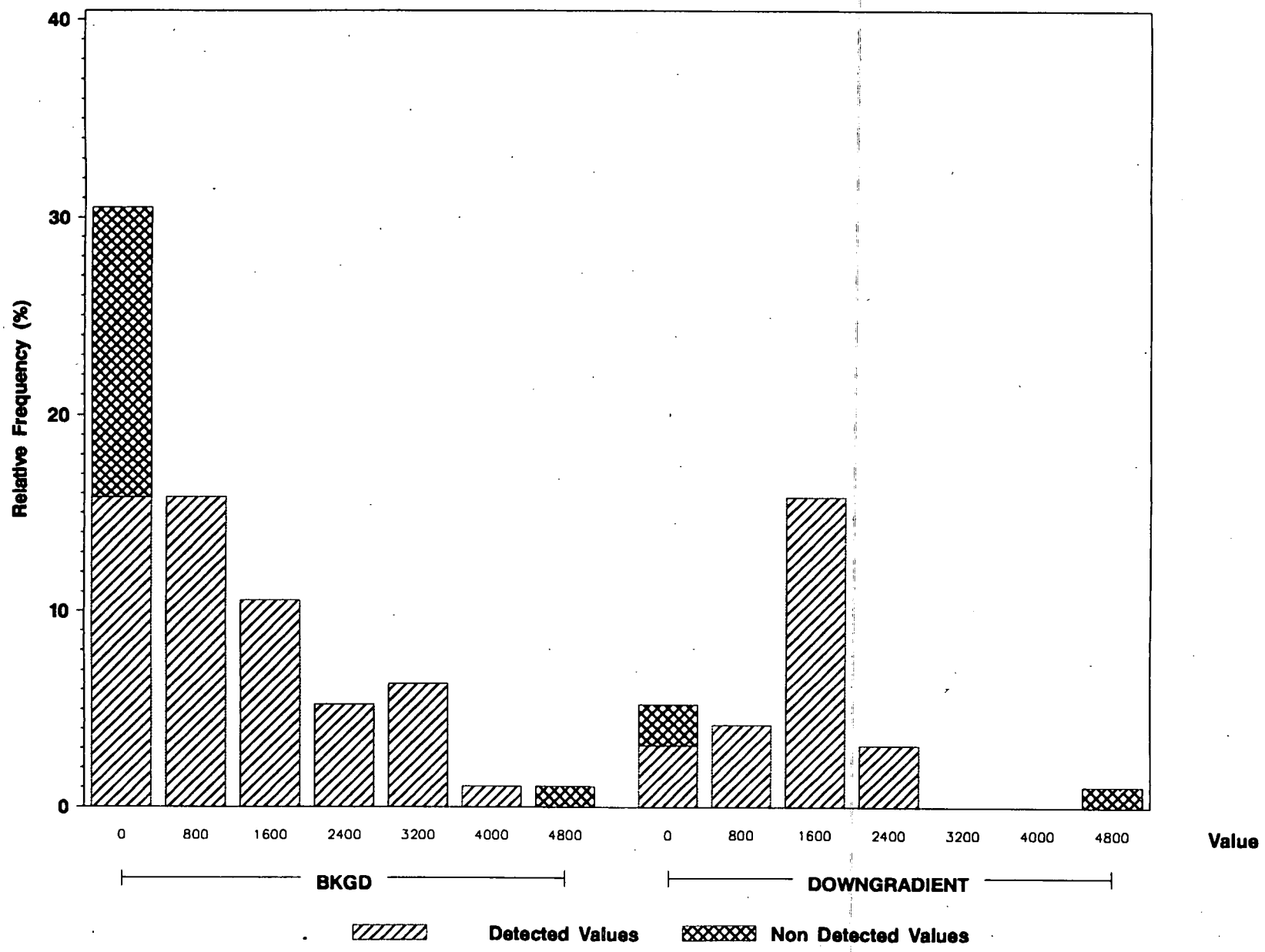
ANALYTE = MANGANESE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total NITRATE/NITRITE (ug/L) in Groundwater

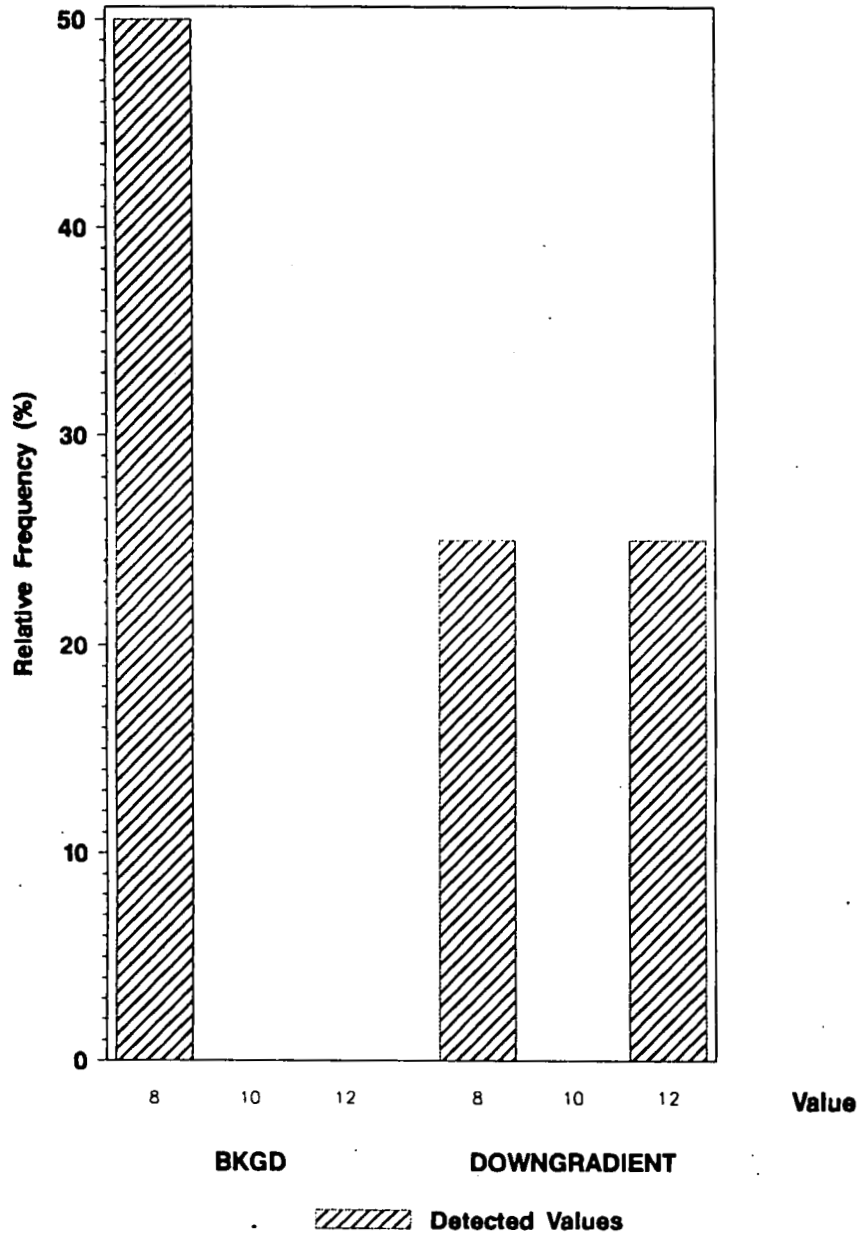
ANALYTE=NITRATE/NITRITE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## pH (Standard Units) in Groundwater

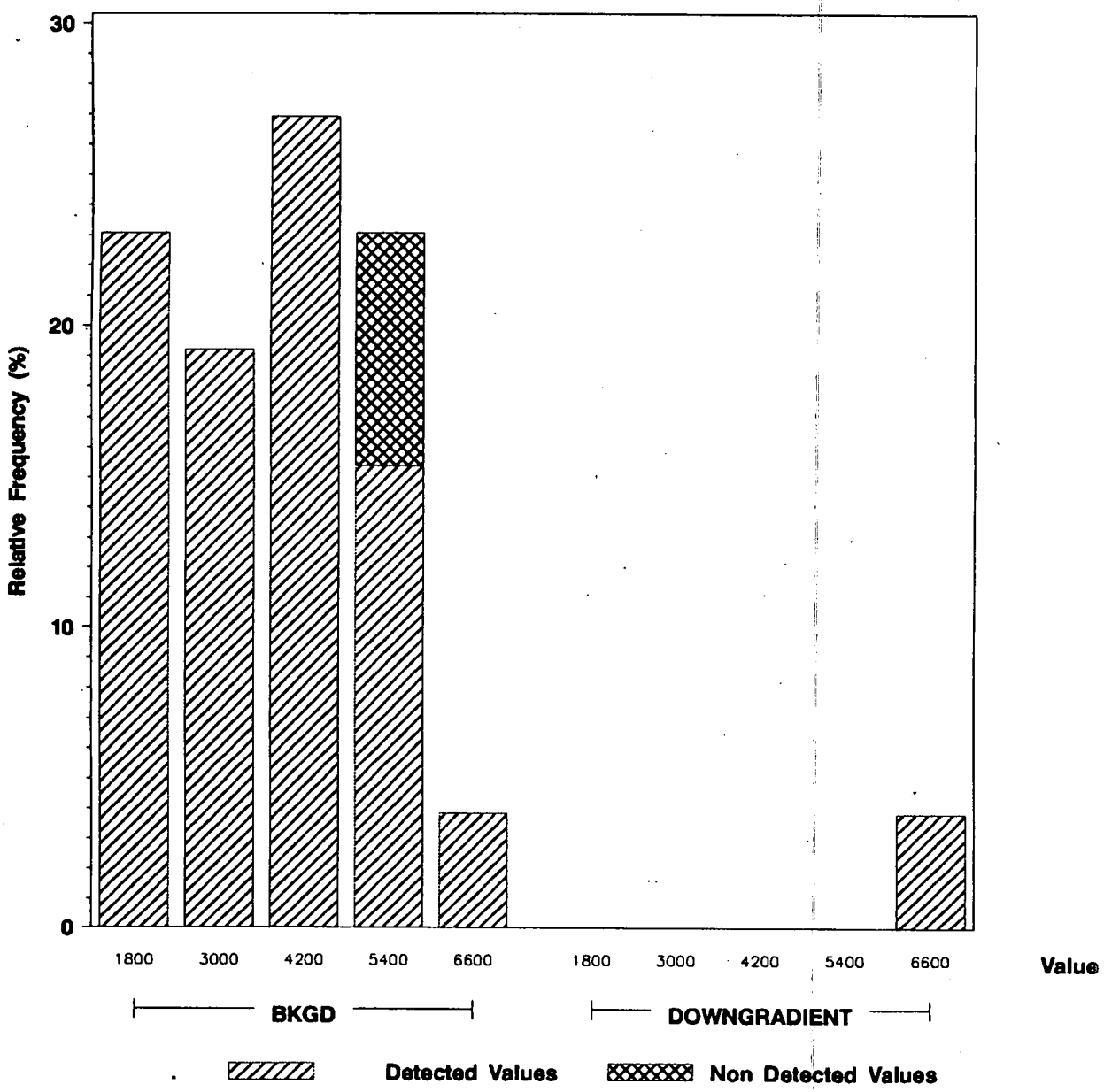
ANALYTE = pH



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total POTASSIUM (ug/L) in Groundwater

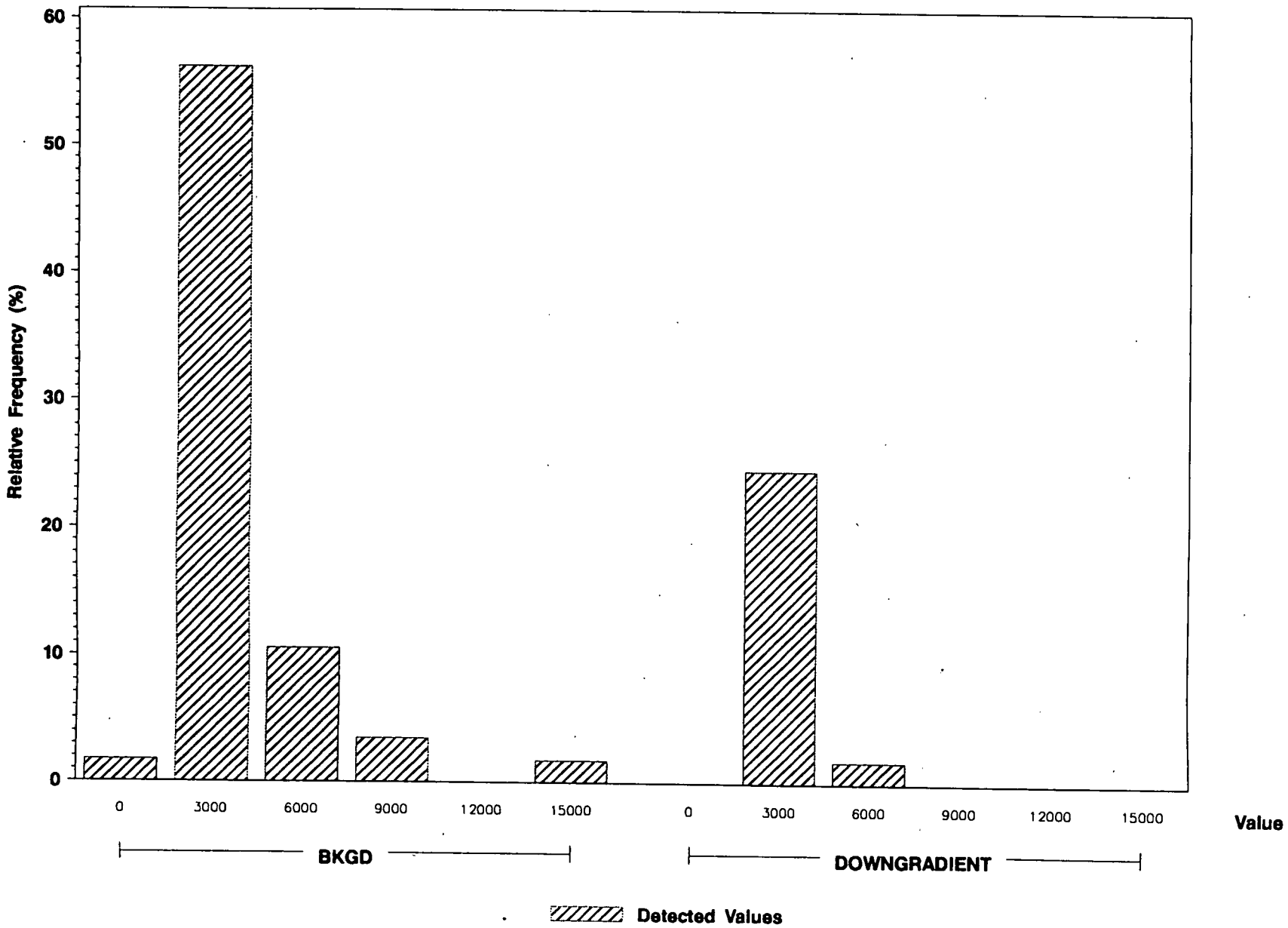
ANALYTE = POTASSIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total SILICA (ug/L) in Groundwater

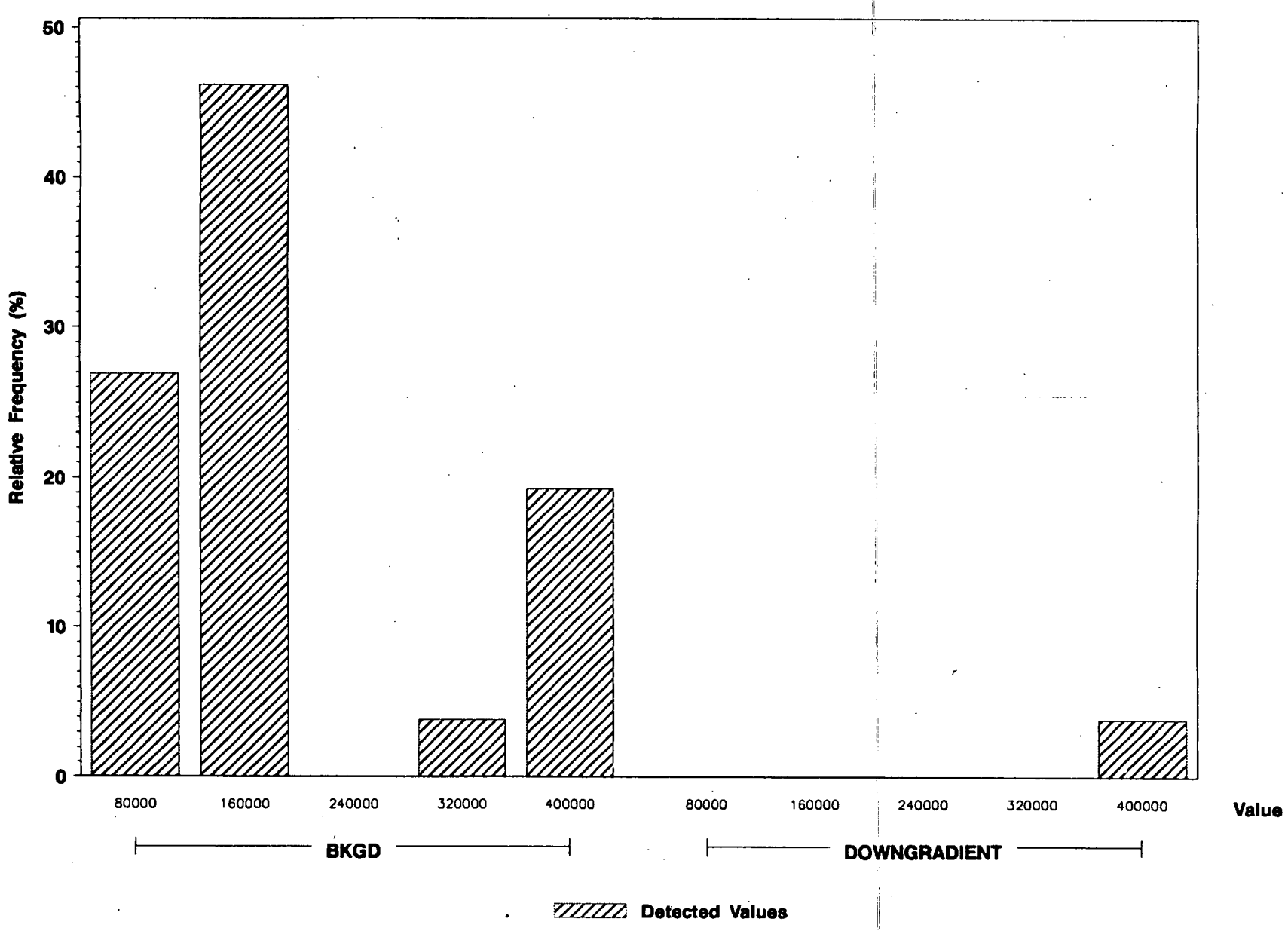
ANALYTE = SILICA



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total SODIUM (ug/L) in Groundwater

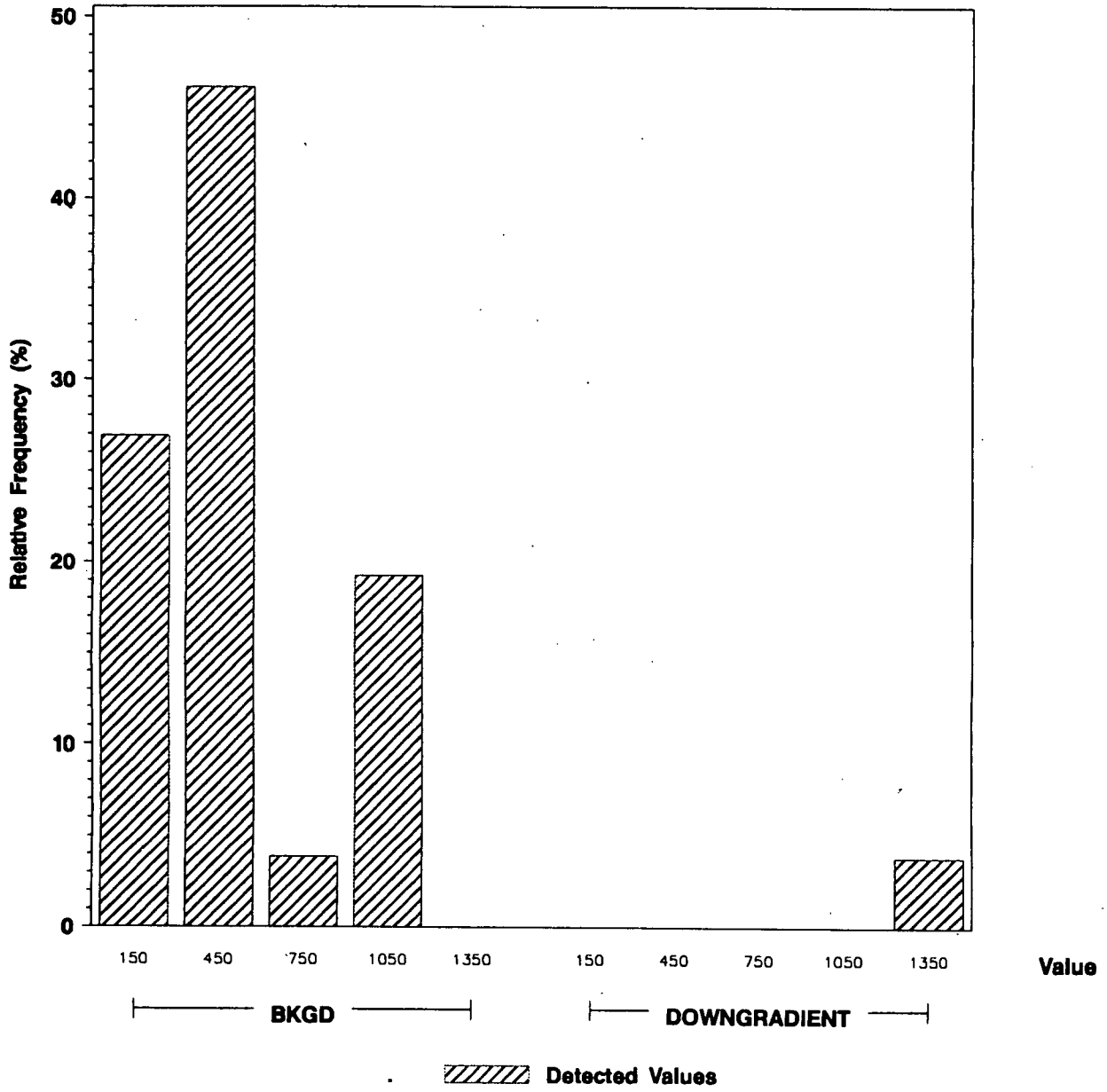
ANALYTE=SODIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total STRONTIUM (ug/L) in Groundwater

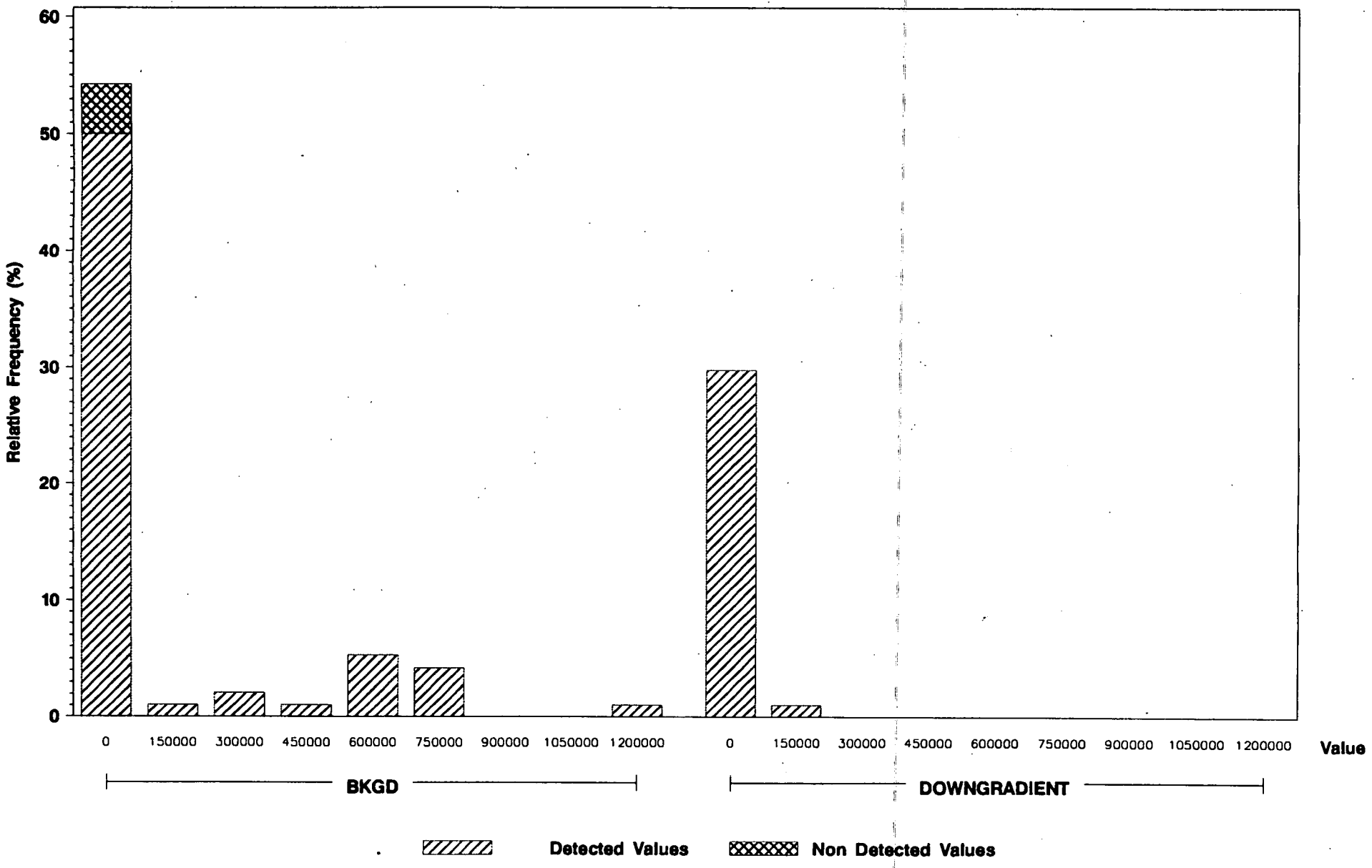
ANALYTE = STRONTIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total SULFATE (ug/L) in Groundwater

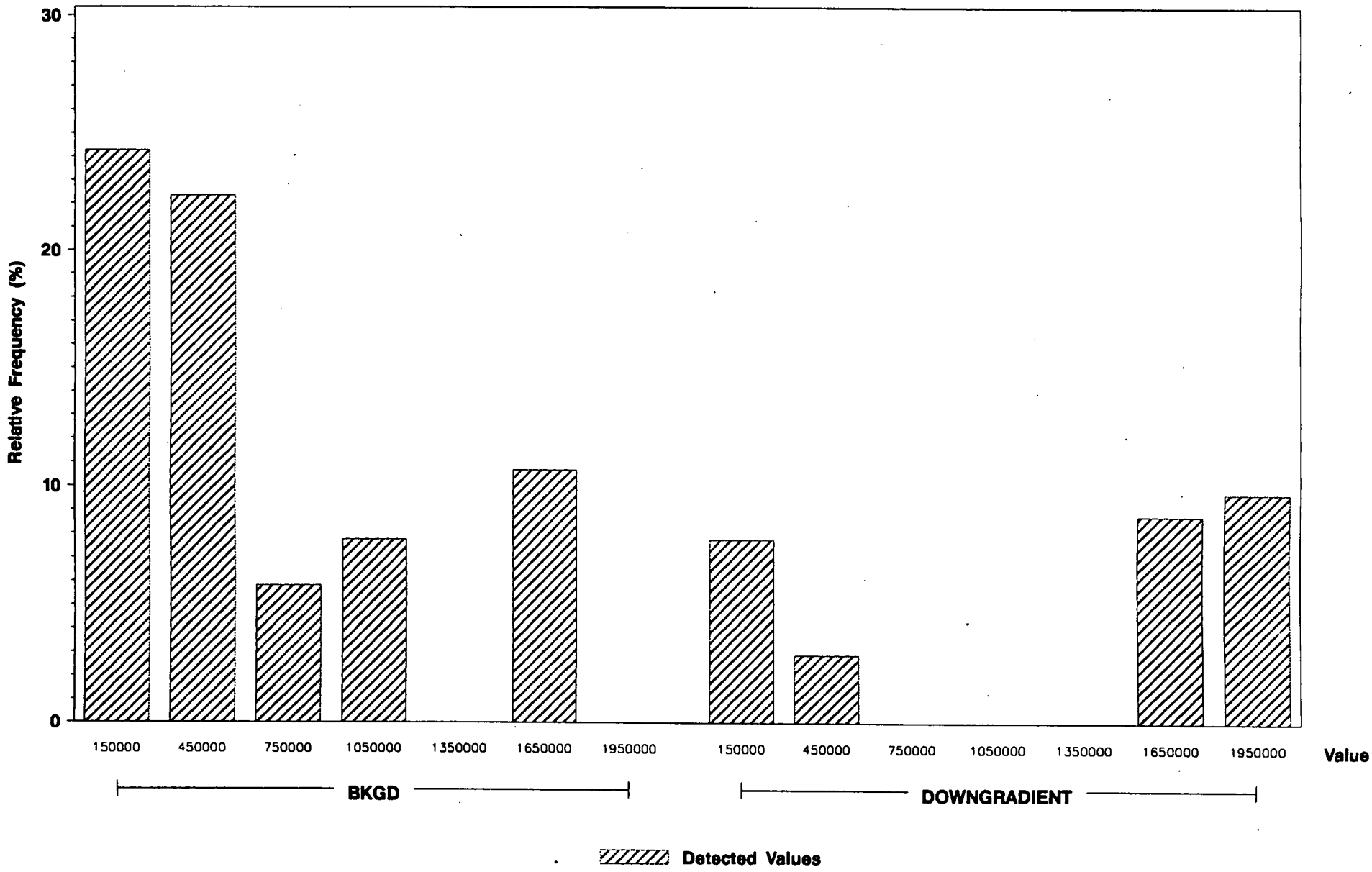
ANALYTE = SULFATE



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## TOTAL DISSOLVED SOLIDS (ug/L) in Groundwater

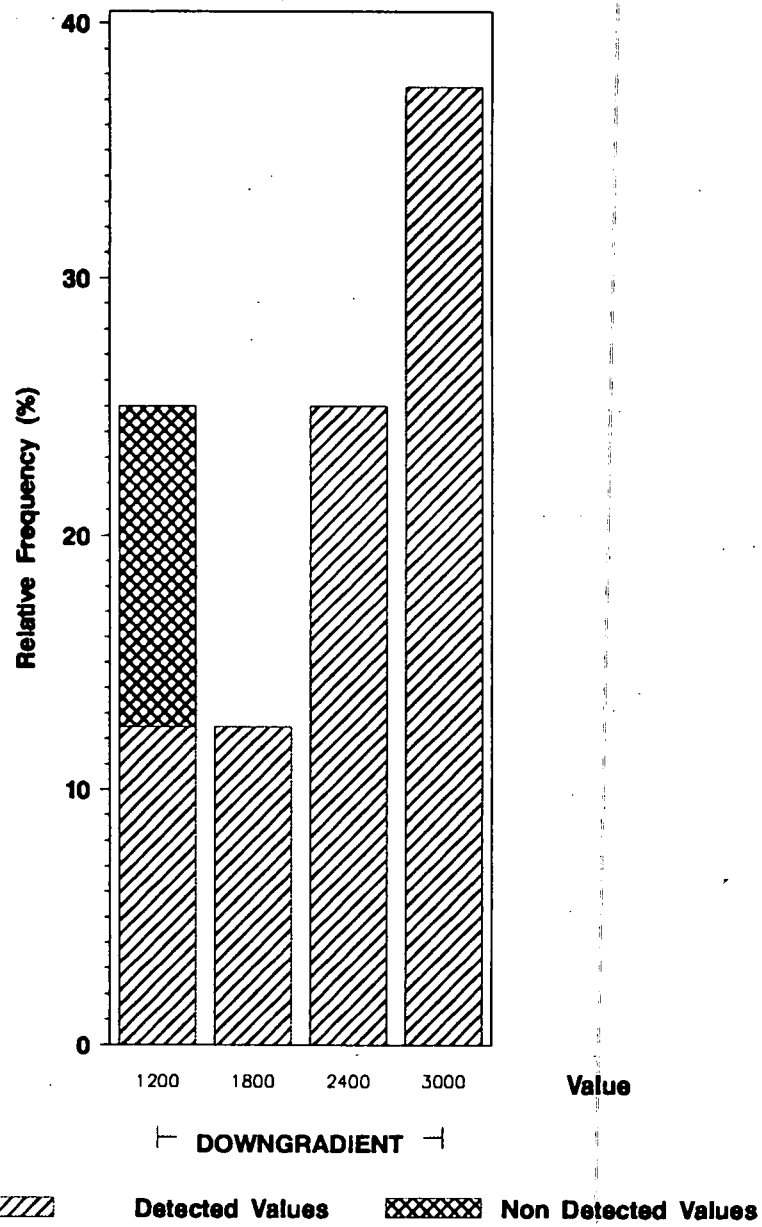
ANALYTE = TOTAL DISSOLVED SOLIDS



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## TOTAL ORGANIC CARBON (ug/L) in Groundwater

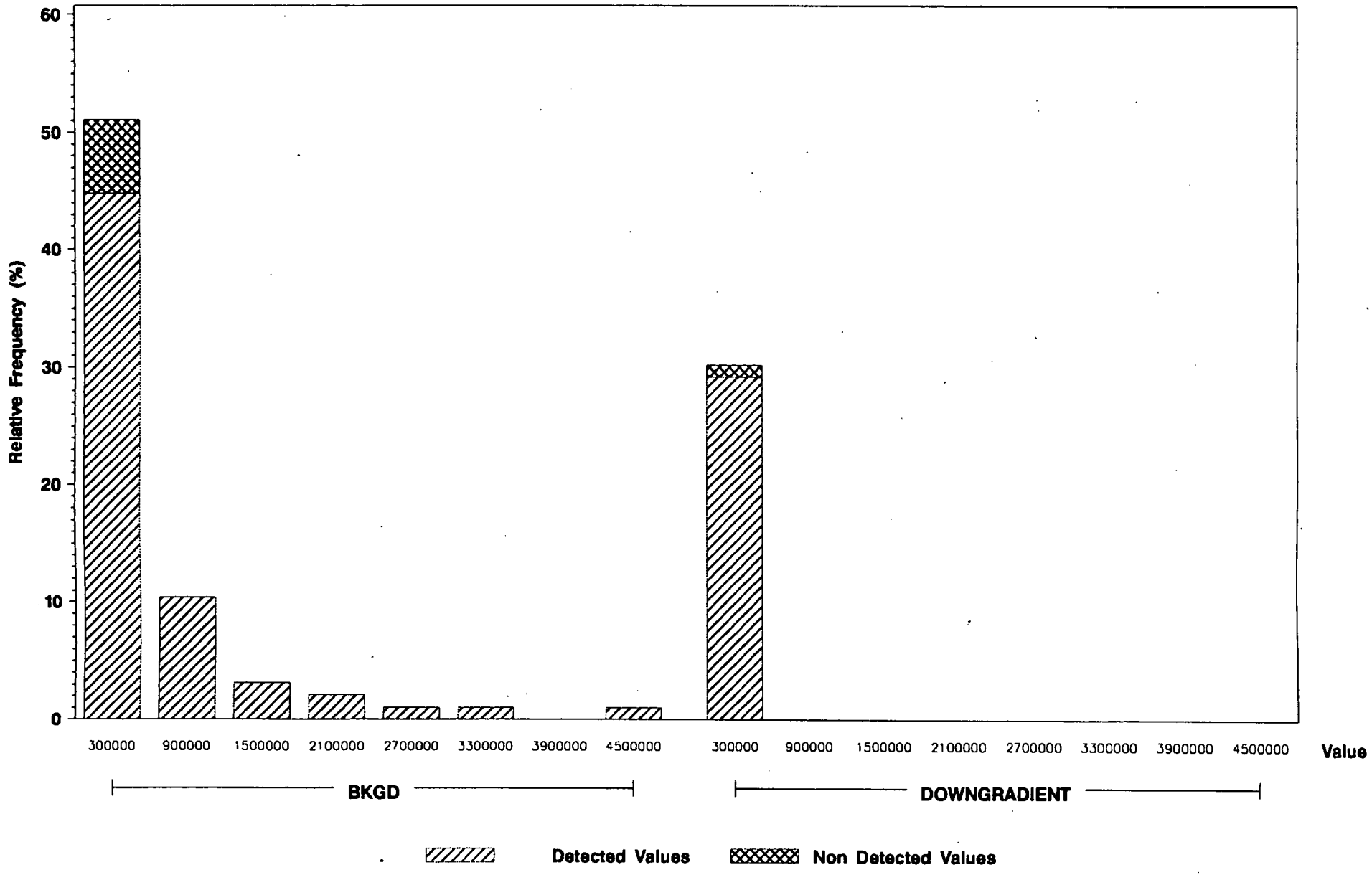
ANALYTE = TOTAL ORGANIC CARBON



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## TOTAL SUSPENDED SOLIDS (ug/L) in Groundwater

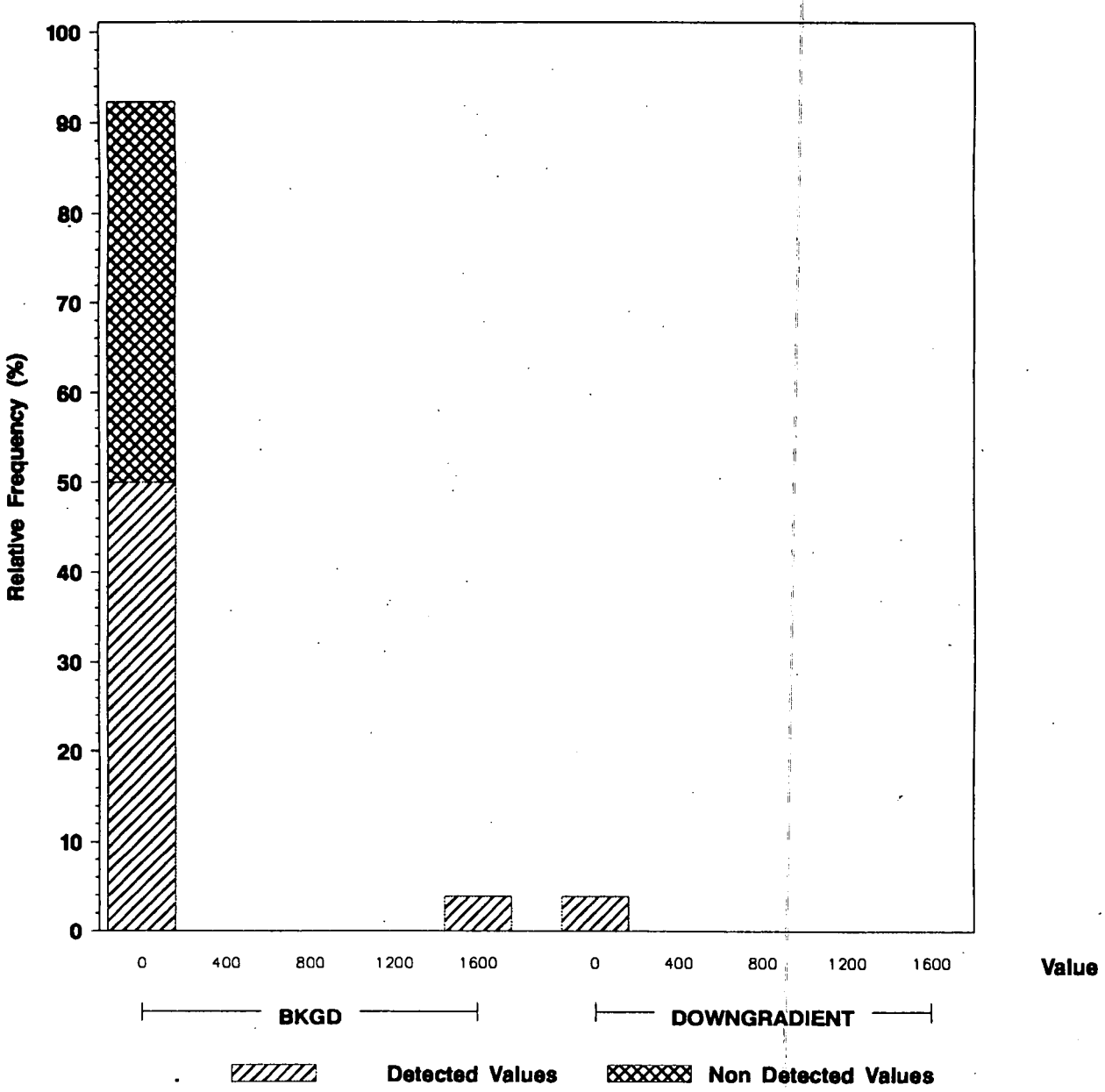
ANALYTE=TOTAL SUSPENDED SOLIDS



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total VANADIUM (ug/L) in Groundwater

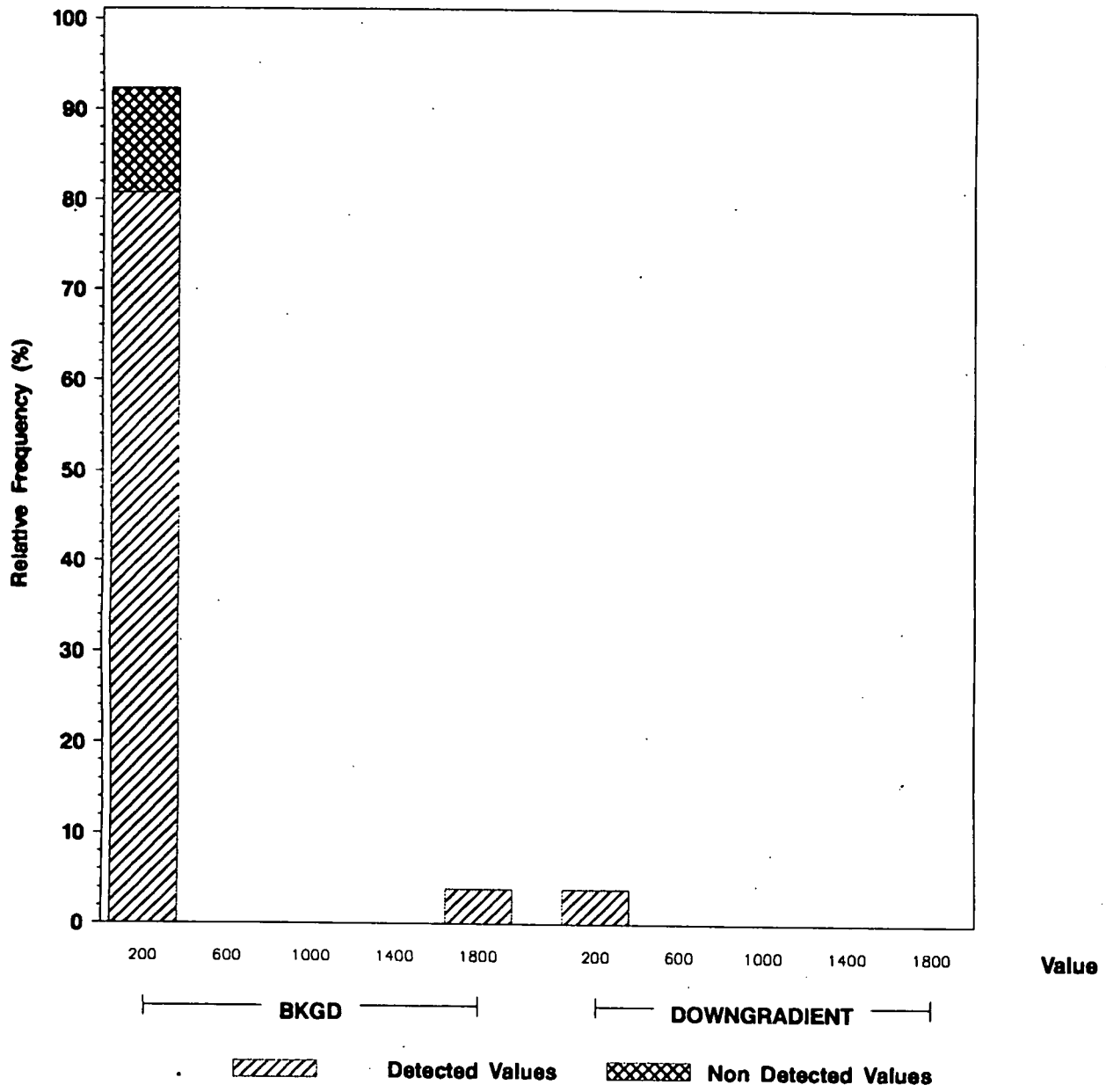
ANALYTE = VANADIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total ZINC (ug/L) in Groundwater

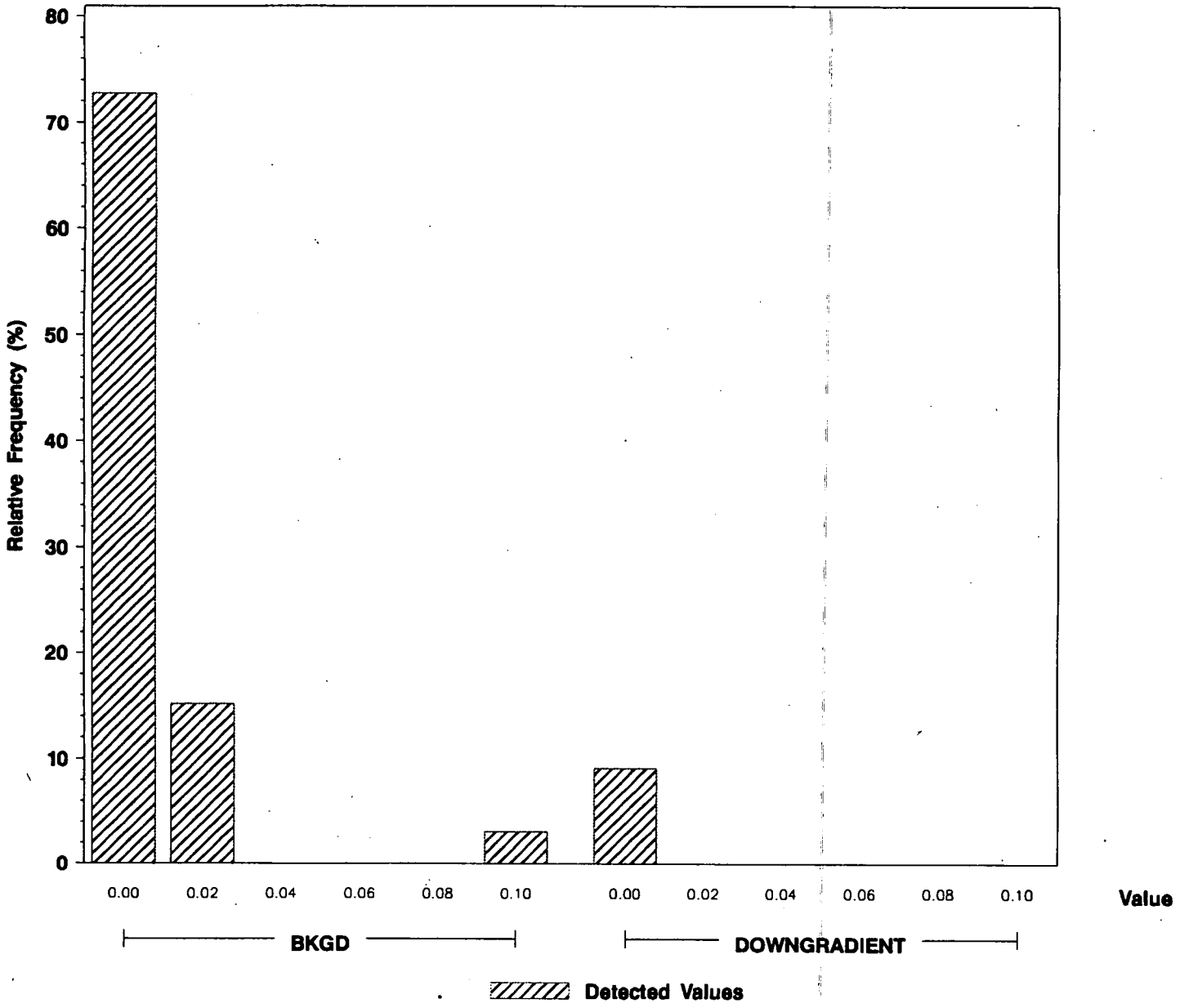
ANALYTE=ZINC



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total AMERICIUM-241 (pCi/L) in Groundwater

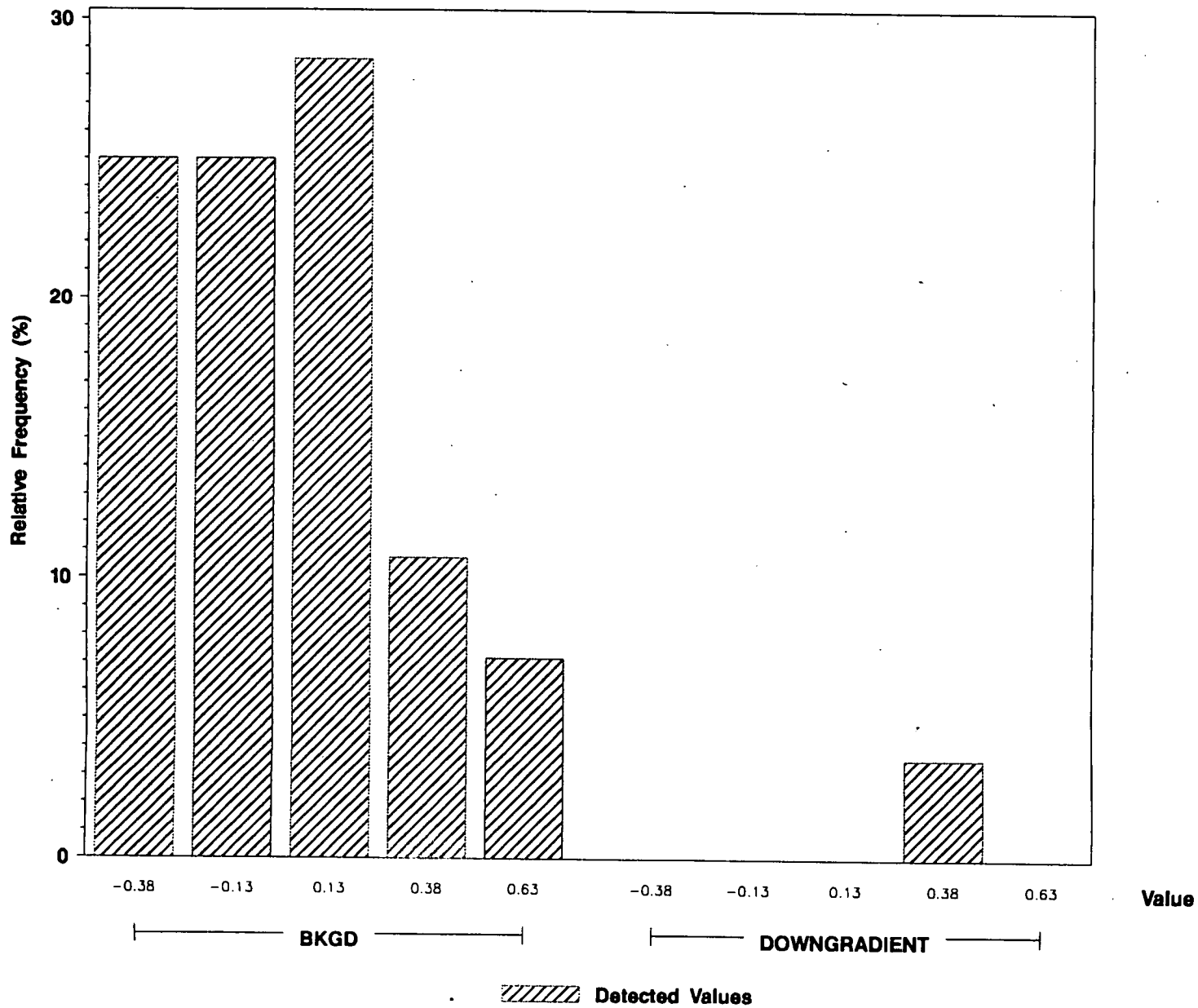
ANALYTE=AMERICIUM-241



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total CESIUM-137 (pCi/L) in Groundwater

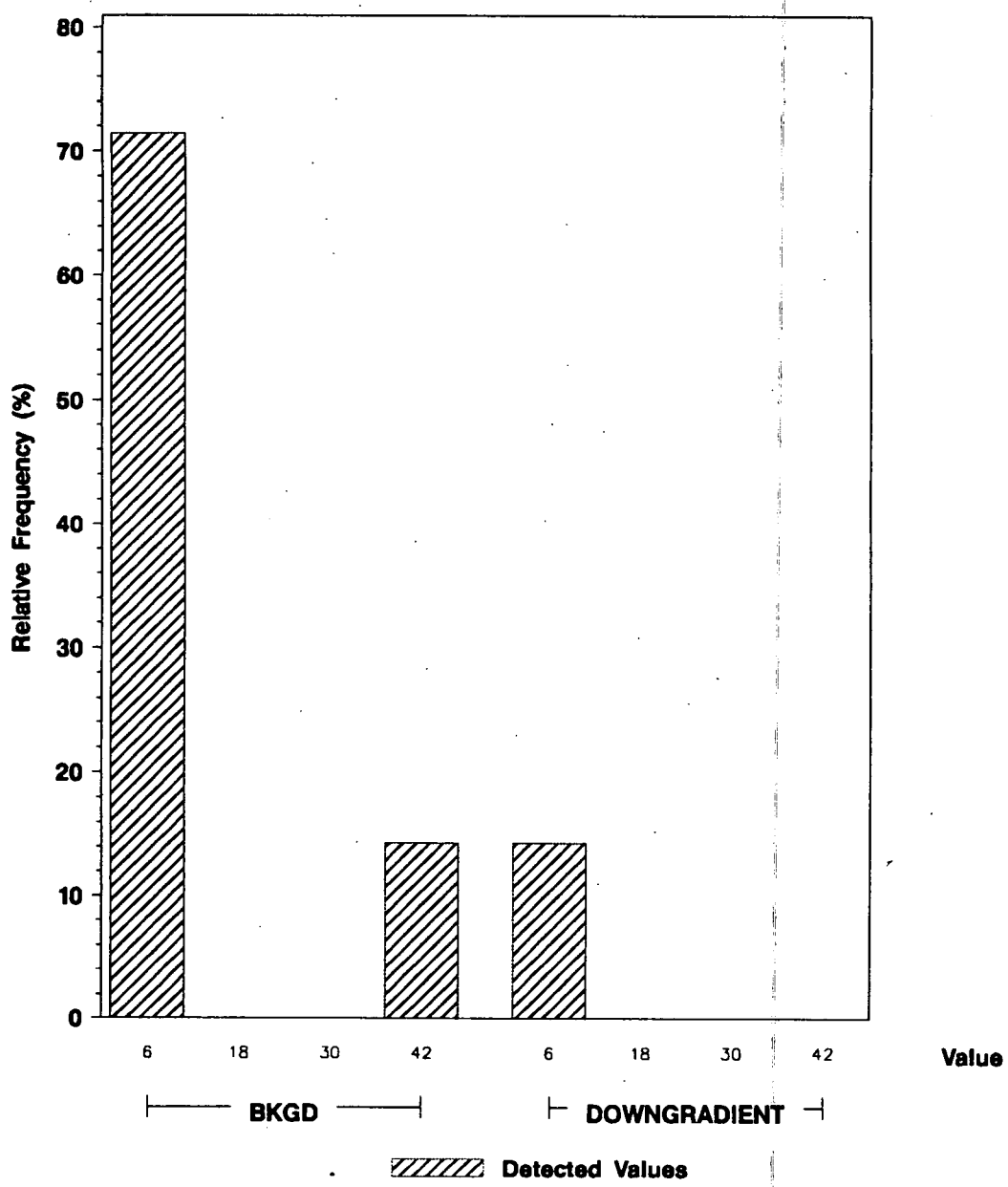
ANALYTE = CESIUM-137



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total GROSS ALPHA (pCi/L) in Groundwater

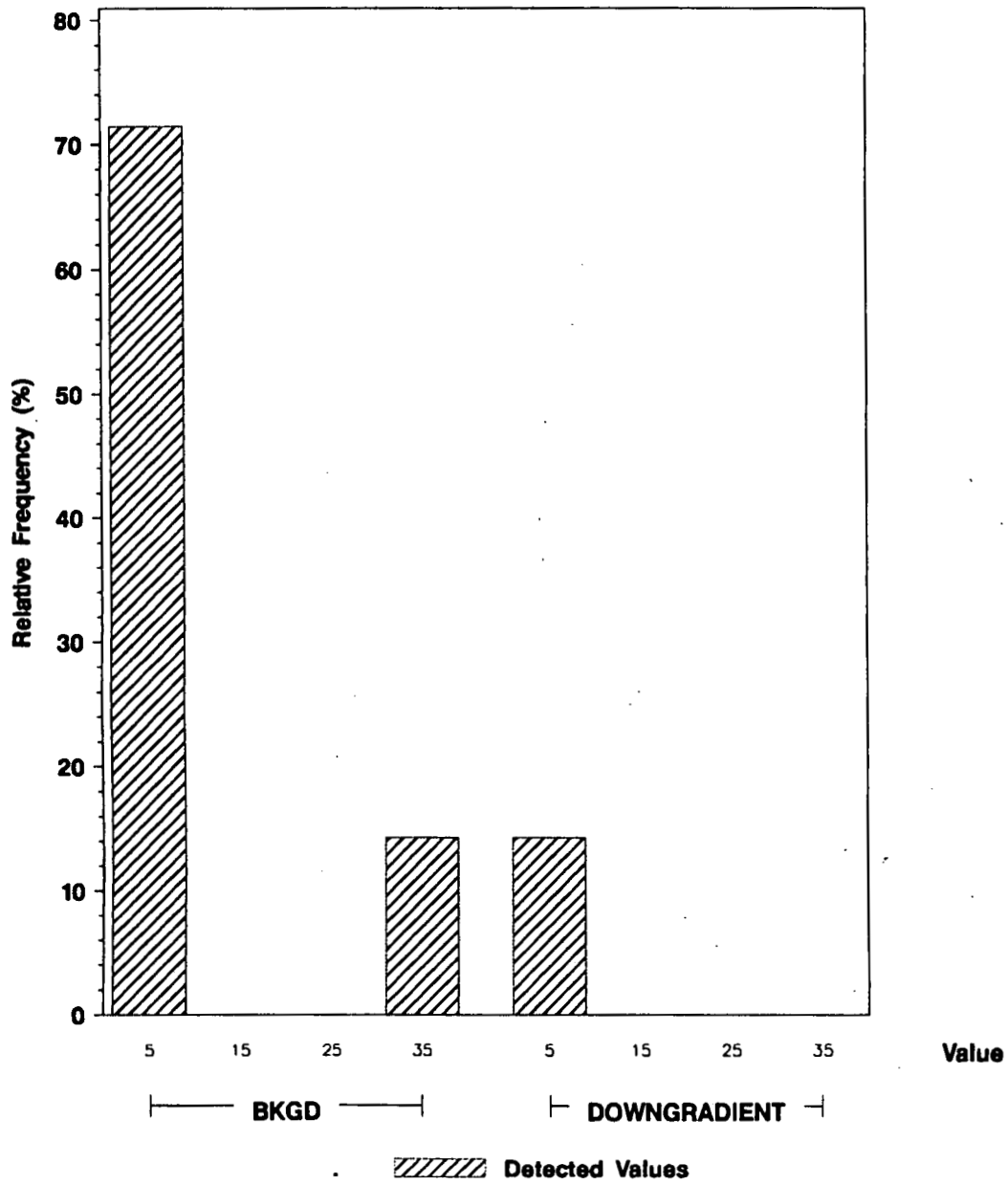
ANALYTE=GROSS ALPHA



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total GROSS BETA (pCi/L) in Groundwater

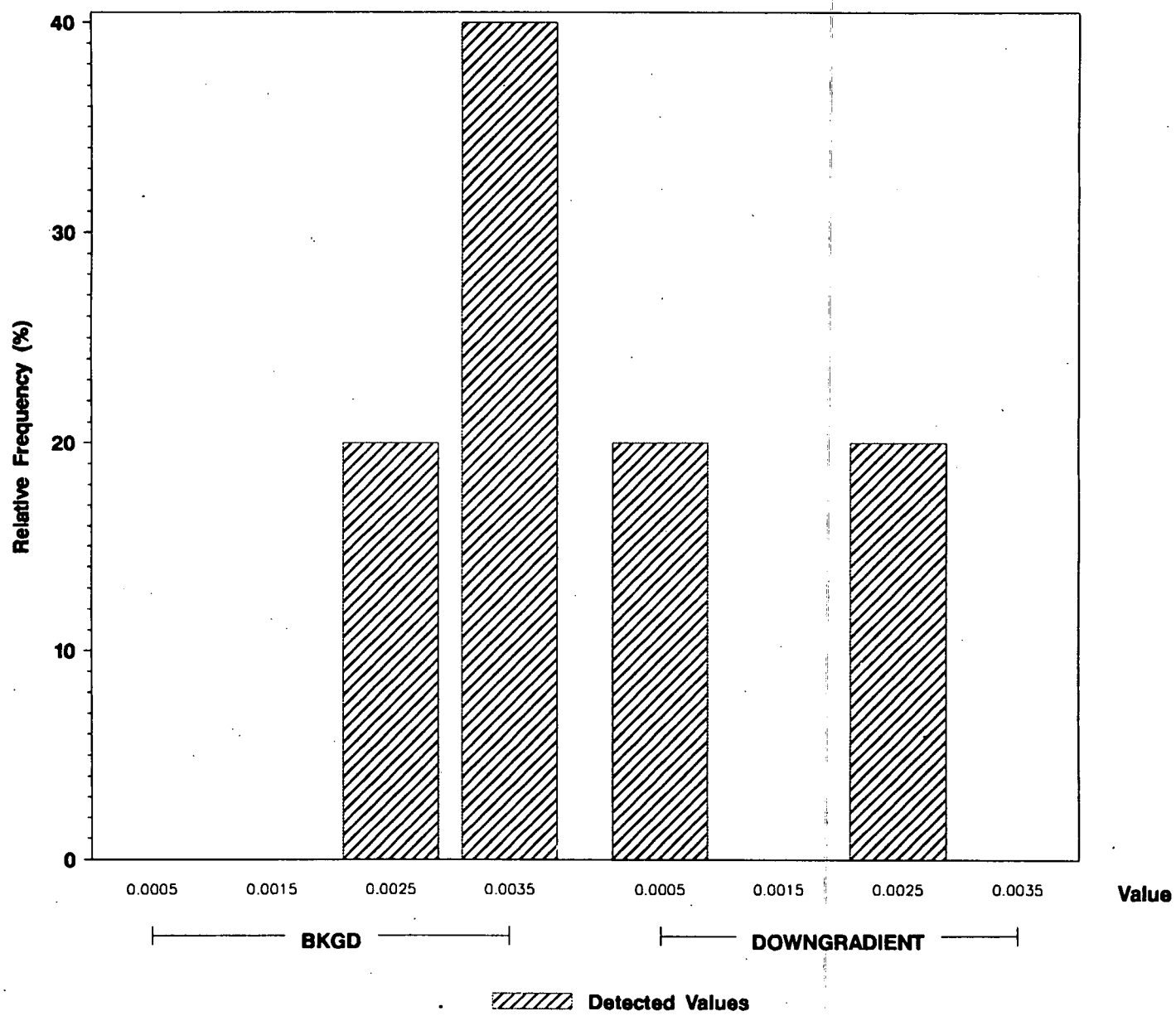
ANALYTE=GROSS BETA



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total PLUTONIUM-238 (pCi/L) in Groundwater

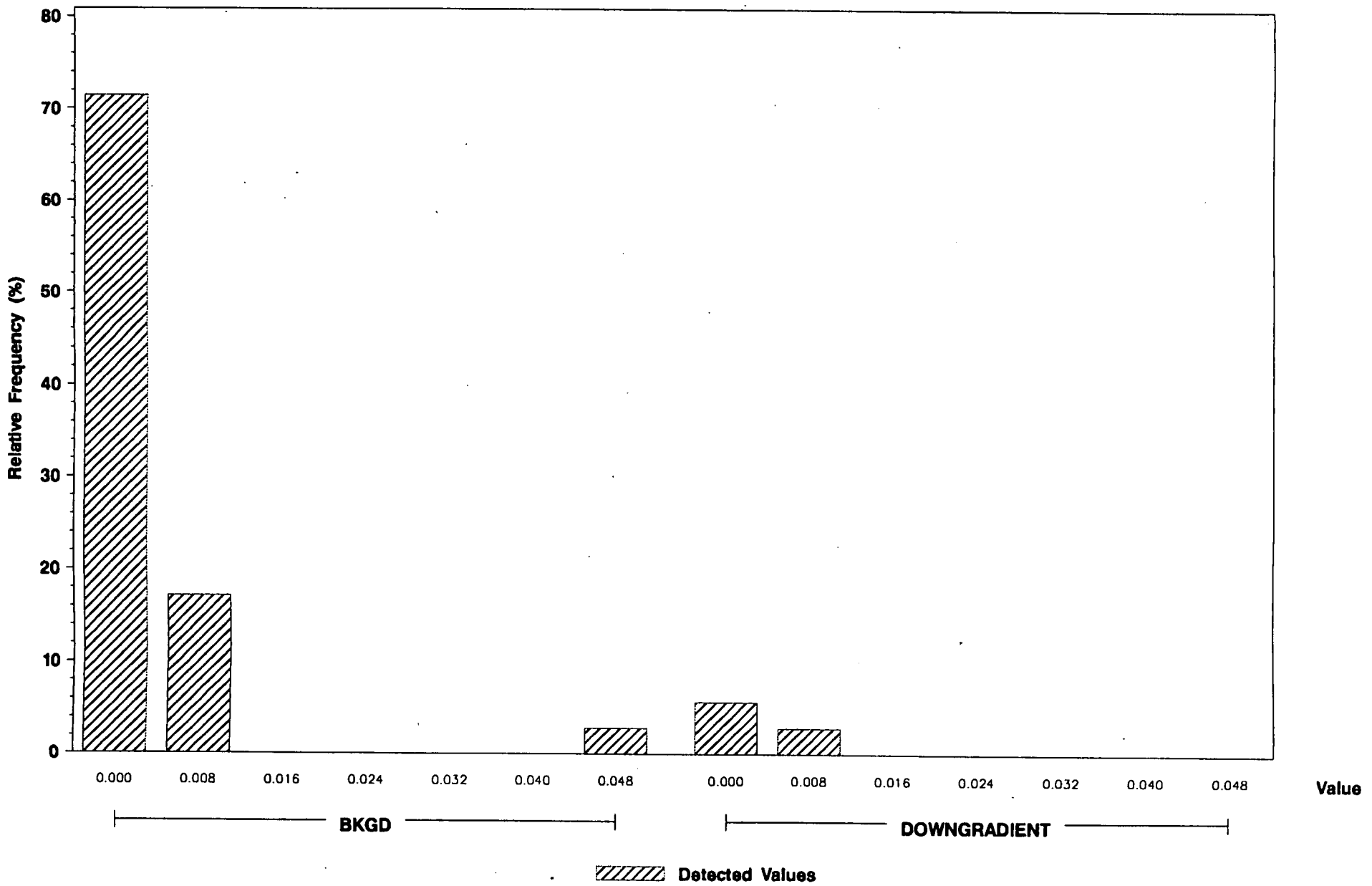
ANALYTE = PLUTONIUM-238



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total PLUTONIUM-239/240 (pCi/L) in Groundwater

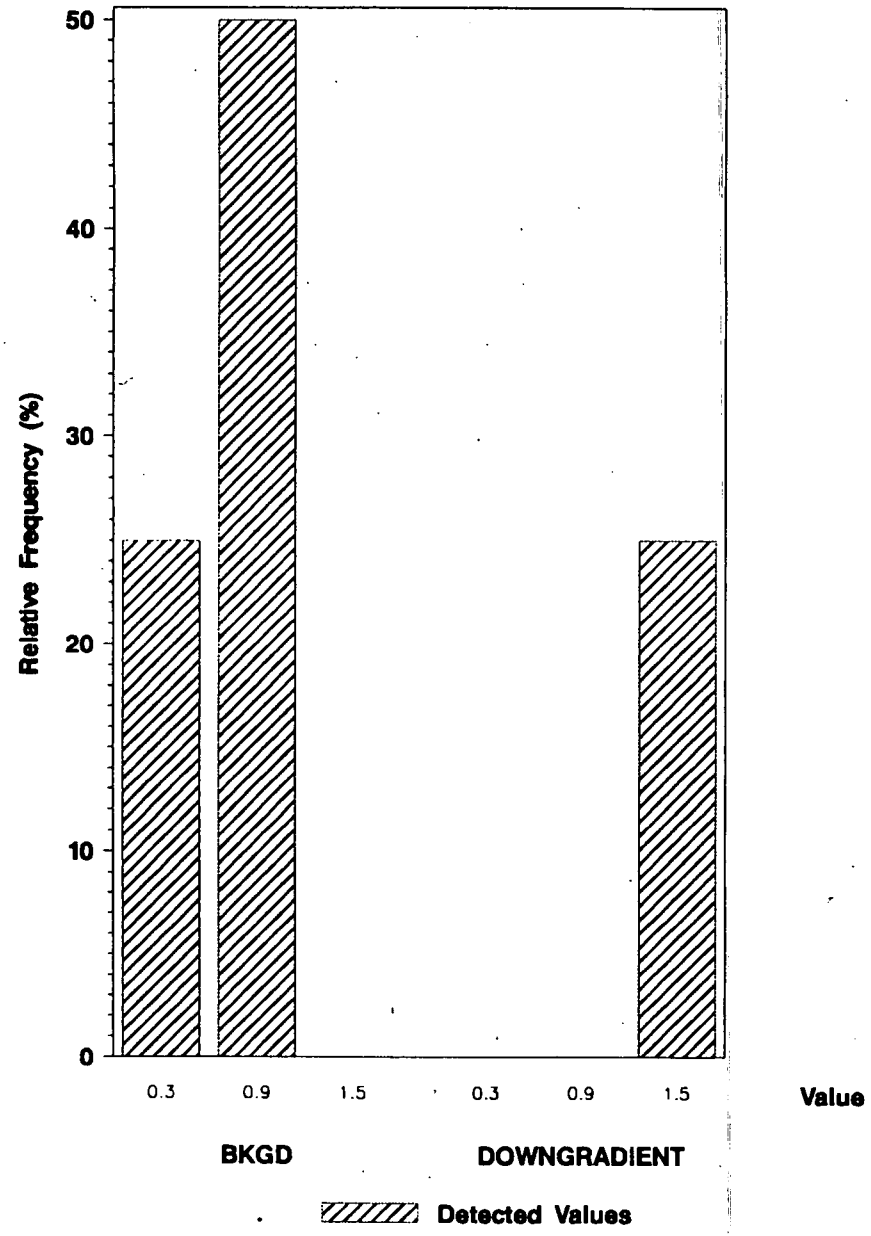
ANALYTE = PLUTONIUM-239/240



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total RADIUM – 226 (pCi/L) in Groundwater

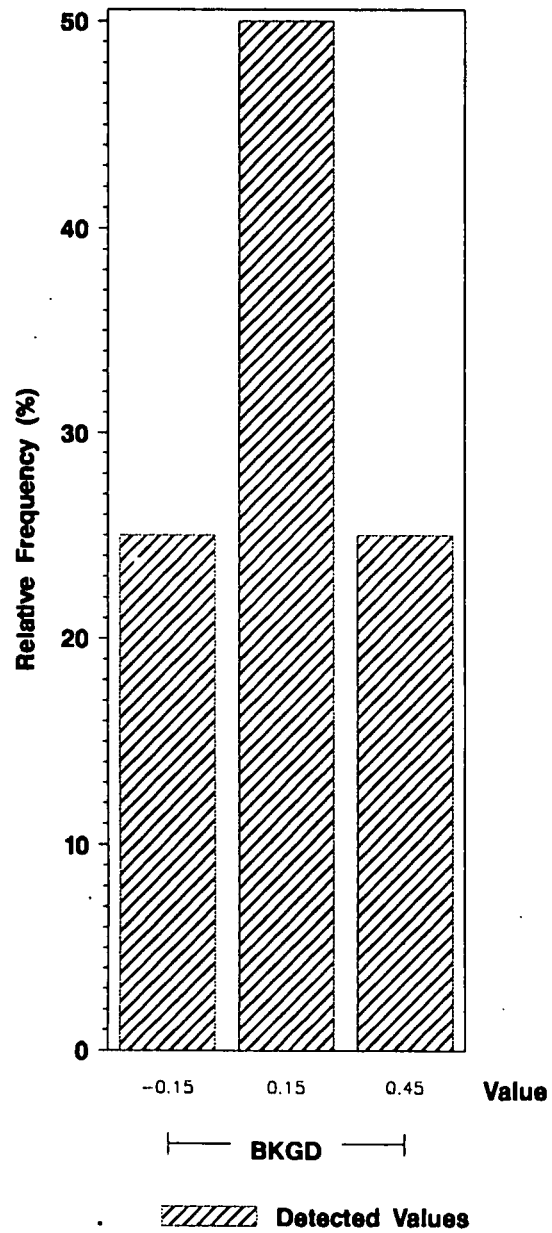
ANALYTE = RADIUM – 226



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total STRONTIUM – 89,90 (pCi/L) in Groundwater

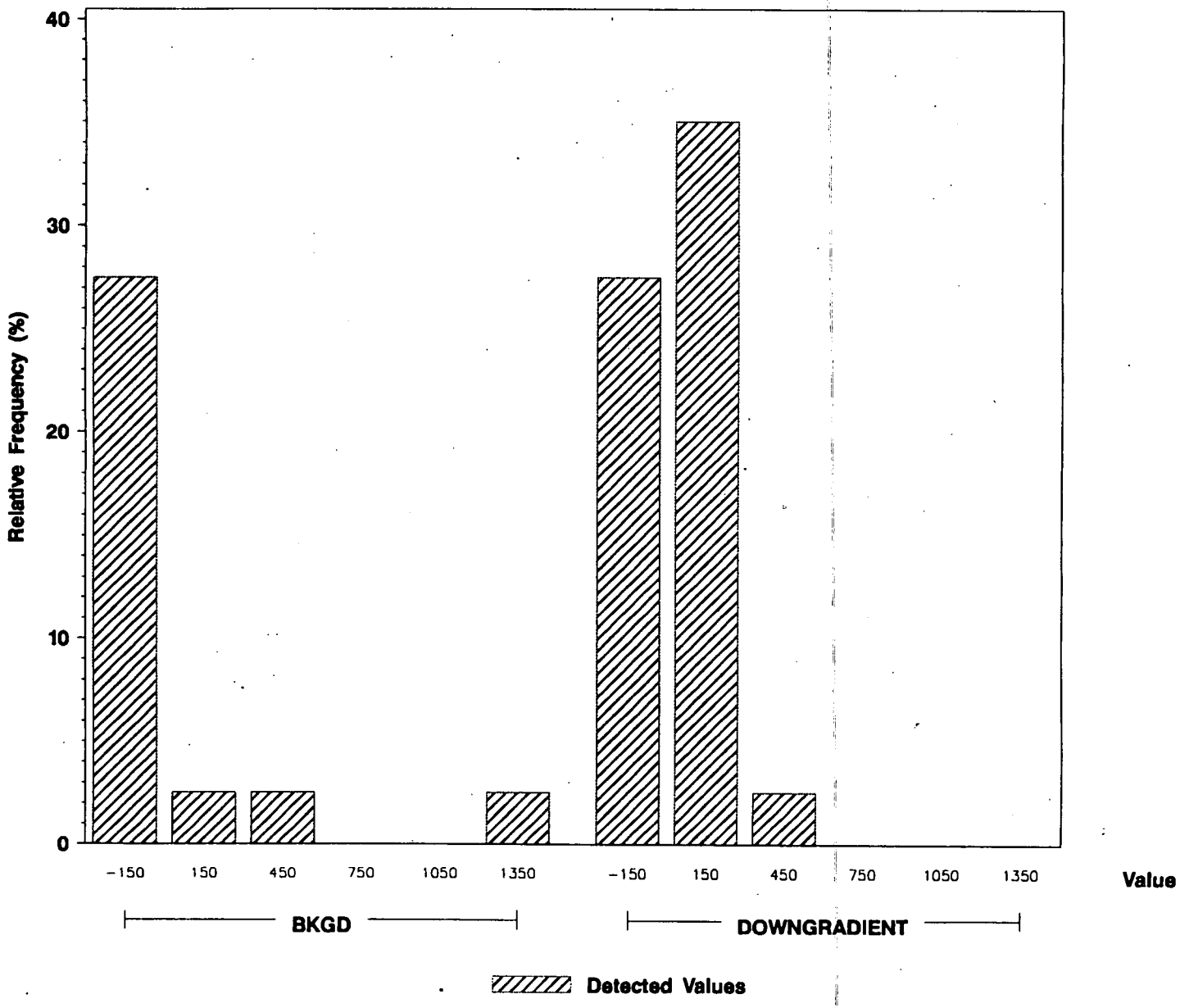
ANALYTE = STRONTIUM – 89,90



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total TRITIUM (pCi/L) in Groundwater

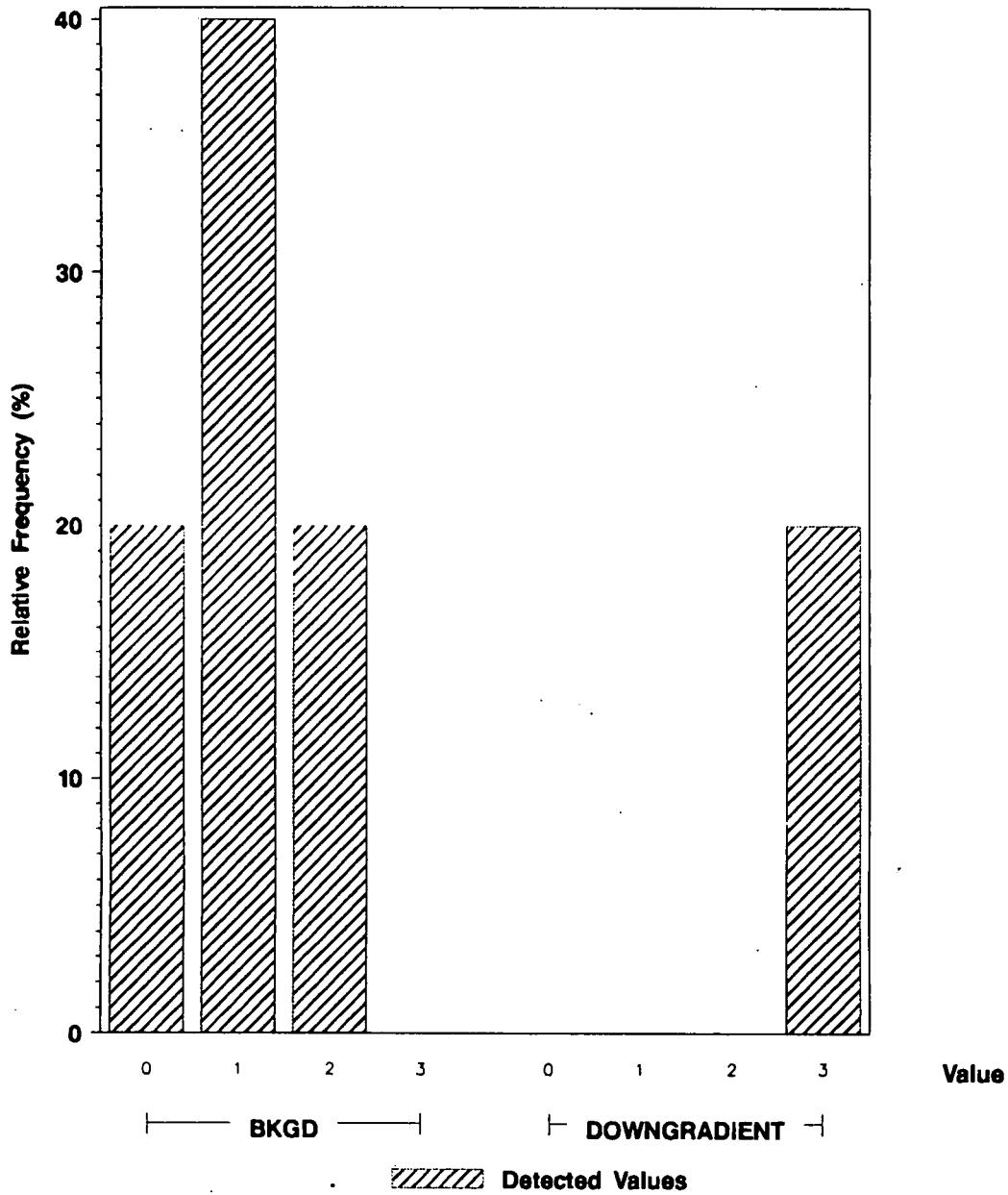
ANALYTE = TRITIUM



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total URANIUM-233,-234 (pCi/L) in Groundwater

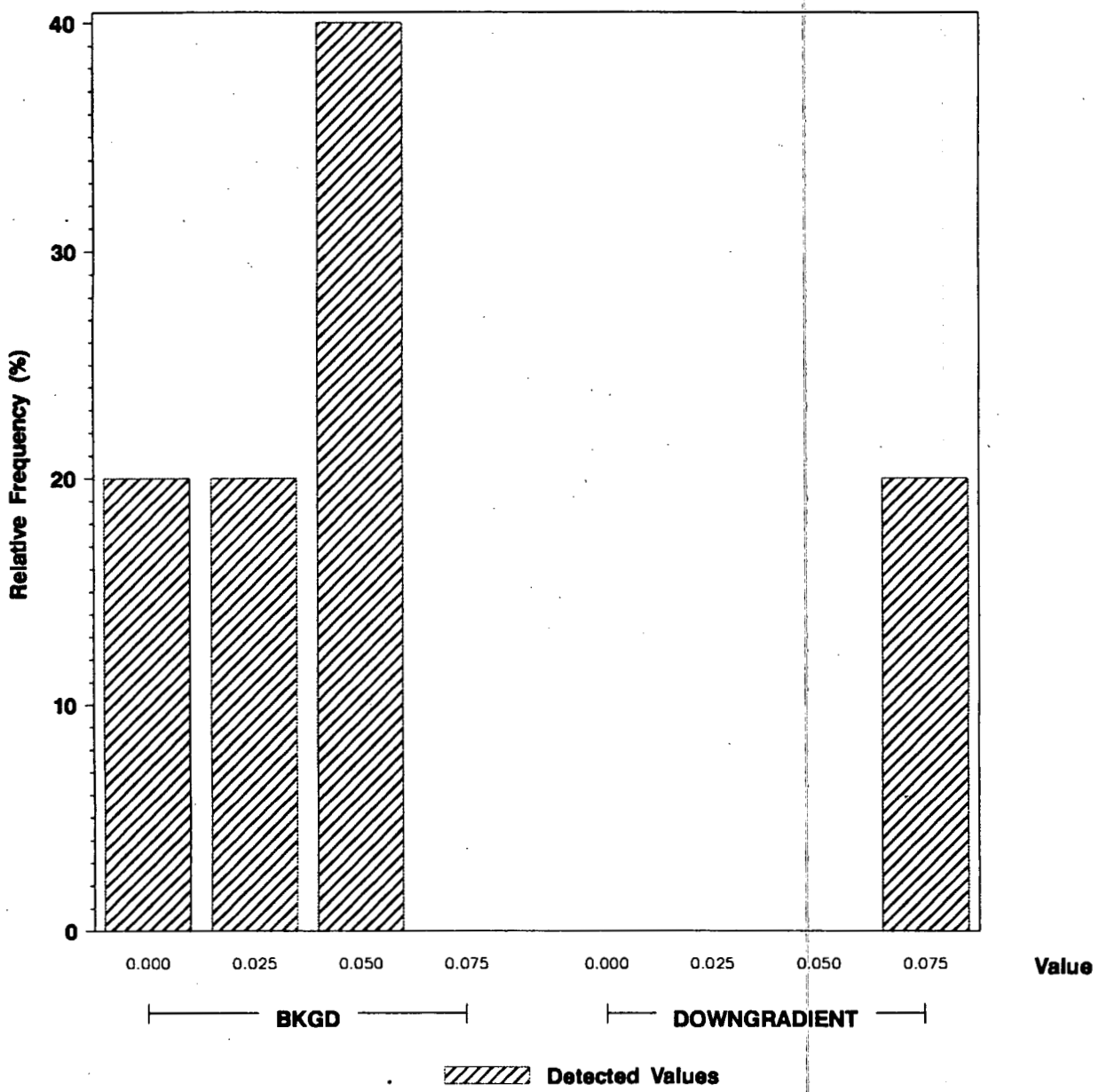
ANALYTE = URANIUM-233,-234



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total URANIUM-235 (pCi/L) in Groundwater

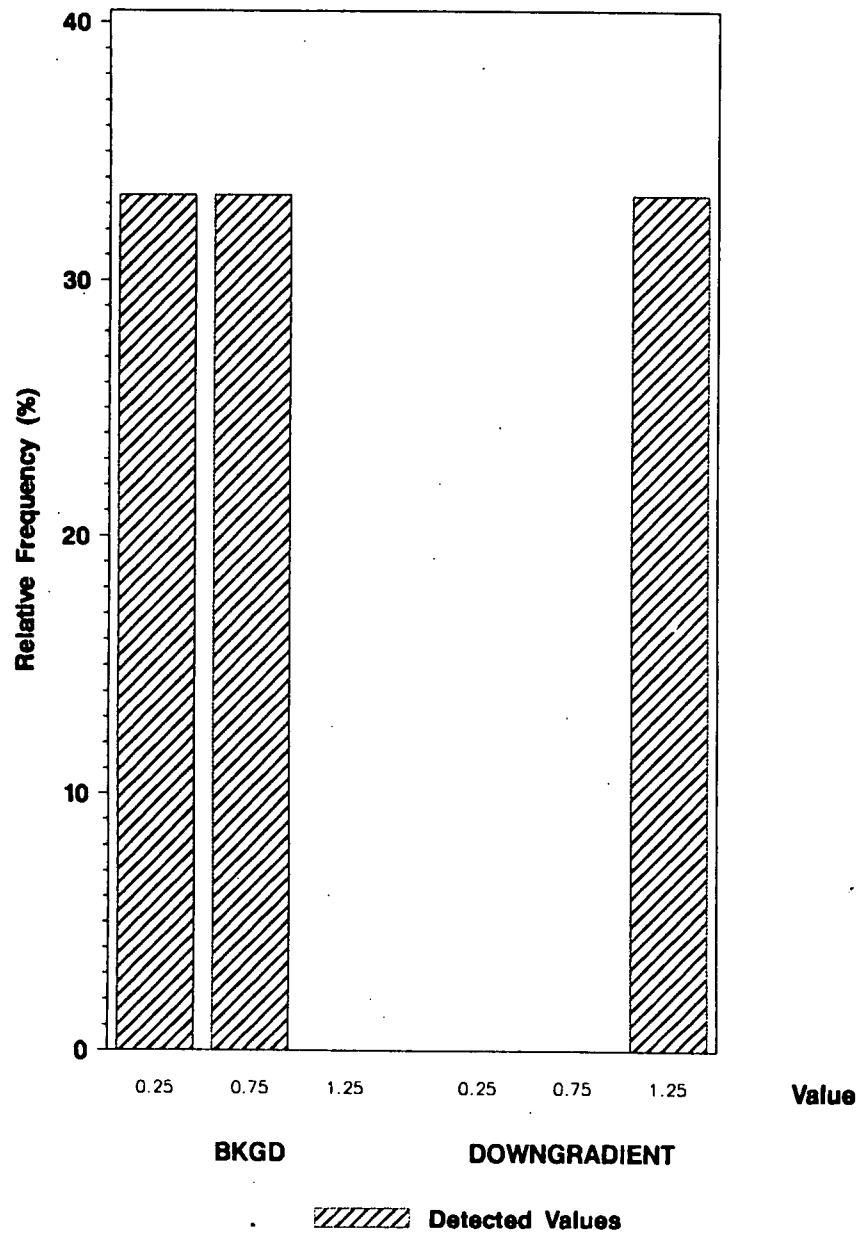
ANALYTE = URANIUM-235



# Background vs OU7 Downgradient Groundwater (LHSU) Frequency Histogram

## Total URANIUM-238 (pCi/L) in Groundwater

ANALYTE=URANIUM-238



# Appendix M

# Results of Statistical Analyses

# OU 7 Revised Work Plan

## Appendix M
## Results of Statistical Analyses

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# Results of Inferential Statistical Tests

**Results of Inferential Statistical Tests**
**IHSS 203 Surface Soils (0 to 2 inches) vs. Sitewide Background Surface Soils**
**(Totals)**
***P*-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 1.00000 | 1 | 1.00000 | 1.00000 | |
| Americium-241 | 0.78435 | 0.24508 | 0.36657 | 0.11793 | |
| Antimony | 0.5 | 1 | NA | NA | |
| Arsenic | 0.99999 | 1 | 0.99998 | 0.99994 | |
| Barium | 1.00000 | 1 | 1.00000 | 0.99999 | |
| Beryllium | 0.98373 | 1 | NA | NA | |
| Cadmium | 0.99799 | 1 | NA | NA | |
| Calcium | 0.056241 | 0.010467 | 0.038338 | 0.010150 | X |
| Cesium | 0.5 | 1 | NA | NA | |
| Cesium-137 | 1.00000 | 1 | 1.00000 | NA | |
| Chromium | 1.00000 | 1 | 1.00000 | 1.00000 | |
| Cobalt | 0.99497 | 0.71014 | 0.94319 | 0.96653 | |
| Copper | 0.028832 | 0.24508 | 0.15173 | 0.019288 | X |
| Gross Alpha | 0.95705 | 0.68732 | 0.97783 | 0.97036 | |
| Gross Beta | 0.38863 | 0.83051 | 0.34268 | 0.29522 | |
| Iron | 0.99795 | 1 | 0.97608 | 0.99972 | |
| Lead | 1.00000 | 1 | 1.00000 | 1 | |
| Lithium | 0.94178 | 1 | 1 | NA | |
| Magnesium | 0.92437 | 1 | 0.94319 | 0.95744 | |
| Manganese | 1.00000 | 1 | 0.99765 | 0.97515 | |
| Mercury | 0.36299 | 1 | NA | NA | |
| Molybdenum | 0.99940 | 1 | NA | NA | |
| Nickel | 0.97390 | 1 | 0.98626 | 0.98593 | |
| Nitrate/Nitrite | 1 | 1 | NA | NA | |
| Plutonium-239,240 | 0.099977 | 0.26969 | 0.98778 | 0.36277 | |

NA = Statistical Test Not Applicable

OU7/2030_2

**Results of Inferential Statistical Tests**
**IHSS 203 Surface Soils (0 to 2 inches) vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Potassium | 1.00000 | 1 | 1 | 1.00000 | |
| Radium-226 | 0.045833 | 0.050519 | 0.050519 | 0.071666 | X |
| Selenium | 1 | 1 | NA | NA | |
| Silicon | 0.43437 | 1 | 1 | NA | |
| Silver | 0.44750 | 1 | NA | NA | |
| Sodium | 0.45132 | 1 | NA | NA | |
| Strontium | 0.95068 | 1 | 1 | NA | |
| Thallium | 0.99762 | 1 | NA | NA | |
| Tin | 0.90821 | 1 | NA | NA | |
| Tritium | 0.99999 | 1 | NA | NA | |
| Uranium-233,234 | 0.99979 | 0.75385 | 0.99961 | 1.00000 | |
| Uranium-235 | 0.81555 | 0.75385 | 0.82676 | 0.56941 | |
| Uranium-238 | 0.99992 | 1 | 0.99984 | 0.99999 | |
| Vanadium | 0.97747 | 0.71014 | 0.98626 | 0.99112 | |
| Zinc | 1.00000 | 1 | 1.00000 | 1.00000 | |

NA = Statistical Test Not Applicable

**Results of Inferential Statistical Tests**
**IHSS 203 Surface Soils (0 to 10 inches) vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99894 | 1 | 0.99584 | 0.99838 | |
| Americium-241 | 0.88859 | 1 | 0.55300 | 0.95543 | |
| Antimony | 0.5 | 1 | NA | NA | |
| Arsenic | 0.97928 | 1 | 0.99584 | 0.98209 | |
| Barium | 1.00000 | 1 | 1 | NA | |
| Beryllium | 0.61583 | 1 | NA | NA | |
| Cadmium | 0.99929 | 1 | NA | NA | |
| Calcium | 0.067278 | 0.011586 | 0.058267 | 0.12895 | X |
| Cesium | 0.5 | 1 | NA | NA | |
| Cesium-137 | 1.00000 | 1 | 1 | 1.00000 | |
| Chromium | 0.99905 | 1 | 0.99822 | 0.99943 | |
| Cobalt | 0.93482 | 1 | 0.87800 | NA | |
| Copper | 0.0096166 | 0.030897 | 0.058267 | 0.013065 | X |
| Gross Alpha | 0.99848 | 1 | 0.98482 | 0.99912 | |
| Gross Beta | 0.81731 | 1 | 0.61267 | 0.65229 | |
| Iron | 0.71672 | 0.44444 | 0.51422 | 0.75554 | |
| Lead | 1.00000 | 1 | 1 | 1.0000 | |
| Lithium | 0.99999 | 1 | 1 | NA | |
| Magnesium | 0.71129 | 1 | 0.95485 | 0.82937 | |
| Manganese | 0.99406 | 1 | 0.80114 | NA | |
| Mercury | NA | 1 | NA | NA | |
| Molybdenum | 0.97289 | 1 | NA | NA | |
| Nickel | 0.40557 | 0.19048 | 0.80114 | 0.38997 | |
| Nitrate/Nitrite | 0.5 | 1 | NA | NA | |
| Potassium | 1.00000 | 1 | 1 | 1.00000 | |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**IHSS 203 Surface Soils (0 to 10 inches) vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.5 | 1 | 1 | NA | |
| Radium-228 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.99999 | 1 | NA | NA | |
| Silicon | 0.63692 | 1 | 1 | NA | |
| Silver | 0.5 | 1 | NA | NA | |
| Sodium | 0.094083 | 0.19048 | NA | NA | |
| Strontium | 0.25188 | 1 | 0.058267 | NA | |
| Strontium-89,90 | 0.99978 | 1 | 1 | NA | |
| Thallium | 0.93661 | 1 | NA | NA | |
| Tin | 0.99992 | 1 | NA | NA | |
| Uranium-233,234 | 0.16528 | 0.51515 | 0.50904 | 0.24400 | |
| Uranium-235 | 0.23563 | 1 | 0.53670 | NA | |
| Uranium-238 | 0.37287 | 1 | 0.82640 | 0.36228 | |
| Vanadium | 0.64290 | 0.44444 | 0.80114 | 0.77943 | |
| Zinc | 0.99999 | 1 | 0.99584 | 0.99998 | |

NA = Statistical Test Not Applicable

**Results of Inferential Statistical Tests**
**IHSS 114 Surface Soils (0 to 2 inches) vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99076 | 1 | 0.95325 | 0.99348 | |
| Americium-241 | 0.94370 | 0.26829 | 0.56503 | 0.82580 | |
| Antimony | 0.5 | 1 | NA | NA | |
| Arsenic | 0.98583 | 1 | 0.97759 | 0.98353 | |
| Barium | 1.00000 | 1 | 1 | 0.99993 | |
| Beryllium | 0.14693 | 1 | NA | NA | |
| Cadmium | 0.99945 | 1 | NA | NA | |
| Calcium | 0.0000039004 | 0.0011156 | 0.0011156 | 0.0000042329 | X |
| Cesium | 0.5 | 1 | NA | NA | |
| Cesium-134 | 1.00000 | 1 | NA | NA | |
| Cesium-137 | 1.00000 | 1 | 1 | 1.00000 | |
| Chromium | 0.99492 | 0.52381 | 0.95325 | 0.99097 | |
| Cobalt | 0.89854 | 1 | 0.97759 | 0.93503 | |
| Copper | 0.51005 | 0.26829 | 0.89646 | 0.14218 | |
| Gross Alpha | 0.99991 | 1 | 1 | 0.99999 | |
| Gross Beta | 0.86846 | 0.6875 | 0.62442 | NA | |
| Iron | 0.78993 | 1 | 0.70377 | 0.91029 | |
| Lead | 1.00000 | 1 | 1 | 1 | |
| Lithium | 0.99998 | 1 | 1 | 0.99998 | |
| Magnesium | 0.86338 | 1 | 0.99962 | 0.95588 | |
| Manganese | 1.00000 | 1 | 0.99962 | 0.98069 | |
| Mercury | NA | 1 | NA | NA | |
| Molybdenum | 0.90933 | 1 | NA | NA | |
| Nickel | 0.21372 | 1 | 0.81938 | 0.17262 | |
| Potassium | 1.00000 | 1 | 1 | 1.00000 | |

NA = Statistical Test Not Applicable

**Results of Inferential Statistical Tests**
**IHSS 114 Surface Soils (0 to 2 inches) vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.99870 | 1 | 0.97347 | 0.99944 | |
| Radium-228 | 0.98689 | 1 | 1 | 0.99277 | |
| Selenium | 1.00000 | 1 | NA | NA | |
| Silicon | 0.81440 | 1 | 1 | 0.99758 | |
| Silver | 0.5 | 1 | NA | NA | |
| Sodium | 0.59993 | 1 | NA | NA | |
| Strontium | 0.71023 | 1 | 0.81938 | 0.79663 | |
| Strontium-89,90 | 0.99963 | 0.61538 | 0.99909 | NA | |
| Thallium | 0.64312 | 1 | NA | NA | |
| Tin | 0.99996 | 1 | NA | NA | |
| Uranium-233,234 | 0.99963 | 1 | 0.95676 | 0.99993 | |
| Uranium-235 | 0.98619 | 1 | 0.99459 | 0.92678 | |
| Uranium-238 | 0.99845 | 1 | 0.99459 | 0.99957 | |
| Vanadium | 0.87158 | 1 | 0.95325 | 0.95097 | |
| Zinc | 1.00000 | 1 | 1 | 1.00000 | |

NA = Statistical Test Not Applicable

**Results of Inferential Statistical Tests**
**East Landfill Pond Surface Soils (0 to 2 inches) vs. Sitewide Background Surface Soils (Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99771 | 1 | 0.96174 | 0.99315 | |
| Americium-241 | 0.95096 | 0.19713 | 0.61981 | 0.23822 | |
| Antimony | 0.5 | 1 | NA | NA | |
| Arsenic | 0.99121 | 0.48891 | 0.99137 | 0.96800 | |
| Barium | 0.65264 | 0.86842 | 0.92058 | 0.64576 | |
| Beryllium | 0.54520 | 1 | NA | NA | |
| Cadmium | 0.99778 | 1 | NA | NA | |
| Calcium | 0.00024296 | 0.10768 | 0.17500 | 0.00010140 | X |
| Cesium | 0.5 | 1 | NA | NA | |
| Cesium-137 | 1.00000 | 1 | 1.00000 | NA | |
| Chromium | 0.99999 | 0.86842 | 1.00000 | 0.99983 | |
| Cobalt | 0.12382 | 1 | 0.38106 | 0.62718 | |
| Copper | 0.10444 | 0.86842 | 0.61459 | 0.13151 | |
| Gross Alpha | 0.99809 | 1 | 0.99938 | 0.99817 | |
| Gross Beta | 1.00000 | 1 | 0.99997 | 0.99691 | |
| Iron | 0.99969 | 0.75340 | 0.99977 | 0.99764 | |
| Lead | 0.99999 | 0.48891 | 0.99327 | 0.99999 | |
| Lithium | 0.99951 | 1 | 1 | NA | |
| Magnesium | 0.82081 | 0.86842 | 0.99137 | 0.88443 | |
| Manganese | 1.00000 | 1 | 0.99977 | 0.97781 | |
| Mercury | 0.35590 | 1 | NA | NA | |
| Molybdenum | 0.97979 | 1 | NA | NA | |
| Nickel | 0.96089 | 0.86842 | 0.99327 | 0.93009 | |
| Nitrate/Nitrite | 0.35197 | 0.076651 | 0.10803 | NA | |
| Plutonium-239,240 | 0.99314 | 0.14607 | 0.84148 | 0.61968 | |

NA = Statistical Test Not Applicable

ou7/elp0_2

**Results of Inferential Statistical Tests**
**East Landfill Pond Surface Soils (0 to 2 inches) vs. Sitewide Background Surface Soils (Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Potassium | 1.00000 | 1 | 1.00000 | 1.00000 | |
| Radium-226 | 0.27922 | 0.014801 | 0.072643 | 0.24473 | X |
| Radium-228 | 0.99737 | 1 | 0.99991 | 0.99356 | |
| Selenium | 0.91353 | 1 | NA | NA | |
| Silicon | 0.45948 | 1 | 1 | NA | |
| Silver | 0.33057 | 1 | 1 | NA | |
| Sodium | 0.96372 | 0.86842 | NA | NA | |
| Strontium | 0.0068164 | 1 | 0.038350 | 0.0065623 | X |
| Strontium-89,90 | 0.99996 | 0.92908 | 1.00000 | NA | |
| Thallium | 0.99965 | 1 | NA | NA | |
| Tin | 0.99909 | 1 | NA | NA | |
| Tritium | 1 | 1 | NA | NA | |
| Uranium-233,234 | 1.00000 | 0.89041 | 0.99999 | 1.00000 | |
| Uranium-238 | 1.00000 | 0.89041 | 1.00000 | 1.00000 | |
| Vanadium | 0.84271 | 0.65295 | 0.61459 | 0.74091 | |
| Zinc | 0.49783 | 0.75340 | 0.32442 | 0.65981 | |

NA = Statistical Test Not Applicable

ou7/elp0_2

**Results of Inferential Statistical Tests**
**East Landfill Pond Surface Soils (0 to 10 inches)**
**vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.67297 | 0.77273 | 0.36700 | 0.54085 | |
| Americium-241 | 0.99999 | 0.77011 | 0.99999 | 0.99971 | |
| Antimony | 0.5 | 1 | NA | NA | |
| Arsenic | 0.94113 | 0.45670 | 0.93166 | 0.83755 | |
| Barium | 0.70633 | 0.59509 | 0.36700 | 0.50641 | |
| Beryllium | 0.99988 | 1 | NA | NA | |
| Cadmium | 1.00000 | 1 | NA | NA | |
| Calcium | 0.020366 | 0.15271 | 0.12820 | 0.0057992 | X |
| Cesium | 0.5 | 1 | NA | NA | |
| Cesium-137 | 1.00000 | 1 | NA | NA | |
| Chromium | 0.90899 | 0.59509 | 0.61387 | 0.88849 | |
| Cobalt | 0.86611 | 1 | 0.36700 | NA | |
| Copper | 0.19725 | 1 | 0.55744 | 0.23519 | |
| Gross Alpha | 0.99982 | 1 | 1.00000 | 0.99990 | |
| Gross Beta | 1.00000 | 1 | 0.99998 | NA | |
| Iron | 0.99519 | 0.77273 | 0.81496 | 0.99246 | |
| Lead | 1.00000 | 1 | 1.00000 | 1.00000 | |
| Lithium | 0.99998 | 1 | 0.99993 | 0.99997 | |
| Magnesium | 0.74766 | 1 | 0.98080 | 0.85423 | |
| Manganese | 1.00000 | 1 | 1.00000 | 0.98978 | |
| Mercury | 0.27310 | 1 | NA | NA | |
| Molybdenum | 0.71308 | 1 | NA | NA | |
| Nickel | 0.50795 | 0.45670 | 0.81496 | 0.46554 | |
| Nitrate/Nitrite | 0.73834 | 0.30548 | 0.53377 | NA | |
| Plutonium-239,240 | 1.00000 | 0.74444 | 1.00000 | 0.99966 | |

NA = Statistical Test Not Applicable

OU7/elp1_10

**Results of Inferential Statistical Tests**
**East Landfill Pond Surface Soils (0 to 10 inches)**
**vs. Sitewide Background Surface Soils**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Potassium | 1.00000 | 1 | 1.00000 | 1.00000 | |
| Radium-226 | 0.96954 | 0.5 | 0.84461 | 0.97474 | |
| Radium-228 | 0.99905 | 1 | 1.00000 | 0.99822 | |
| Selenium | 0.99595 | 0.59509 | NA | NA | |
| Silicon | 0.74447 | 1 | 0.99936 | 0.99537 | |
| Silver | NA | 1 | NA | NA | |
| Sodium | 0.78644 | 1 | NA | NA | |
| Strontium | 0.0017643 | 1 | 0.15789 | 0.052902 | |
| Strontium-89,90 | 0.99997 | 1 | 1.00000 | NA | |
| Thallium | 0.82853 | 1 | NA | NA | |
| Tin | 1.00000 | 1 | NA | NA | |
| Tritium | 1 | 1 | NA | NA | |
| Uranium-233,234 | 0.99999 | 1 | 1.00000 | 1.00000 | |
| Uranium-235 | 0.89376 | 1 | 0.93248 | NA | |
| Uranium-238 | 0.99984 | 1 | 0.99960 | 0.99992 | |
| Vanadium | 0.45047 | 0.11500 | 0.61387 | 0.34448 | |
| Zinc | 0.97863 | 1 | 0.61387 | 0.97427 | |

NA = Statistical Test Not Applicable

OU7/elp1_10

**Results of Inferential Statistical Tests**
**Upgradient Subsurface Geologic Materials (70493 and 70593)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Rocky Flats Alluvium**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99041 | 1 | 0.98821 | NA | |
| Americium-241 | 0.014956 | 0.012821 | 0.57692 | 0.051281 | X |
| Antimony | 0.99777 | 1 | NA | NA | |
| Arsenic | 0.15479 | 1 | 0.46864 | NA | |
| Barium | 0.88363 | 1 | 0.98733 | NA | |
| Beryllium | 1.00000 | 1 | 1 | NA | |
| Cadmium | 0.92666 | 1 | NA | NA | |
| Calcium | 0.99062 | 1 | 1 | NA | |
| Cesium-137 | 0.016023 | 0.23404 | 0.00047549 | NA | X |
| Cesium | NA | 1 | NA | NA | |
| Chromium | 0.25357 | 1 | 0.46864 | NA | |
| Cobalt | 0.87202 | 1 | NA | NA | |
| Copper | 0.72502 | 1 | 0.46864 | NA | |
| Gross Alpha | 0.99941 | 1 | 1 | 0.99941 | |
| Gross Beta | 0.0047686 | 1 | 0.039367 | 0.0023122 | X |
| Iron | 0.34925 | 1 | 0.74046 | NA | |
| Lead | 0.92219 | 1 | 0.91398 | NA | |
| Lithium | 0.99998 | 1 | NA | NA | |
| Magnesium | 0.99891 | 1 | 0.99075 | NA | |
| Manganese | 0.82397 | 1 | 0.73060 | NA | |
| Mercury | 0.99933 | 1 | NA | NA | |
| Molybdenum | 1.00000 | 1 | NA | NA | |
| Nickel | 0.96938 | 1 | 0.98987 | NA | |
| Nitrate/Nitrite | 1.00000 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/45BKRFT

**Results of Inferential Statistical Tests**
**Upgradient Subsurface Geologic Materials (70493 and 70593)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Rocky Flats Alluvium**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.99628 | 1 | NA | NA | |
| Radium-226 | 0.0090150 | 1 | 0.35587 | NA | X |
| Radium-228 | 0.058975 | 0.060908 | 0.033824 | 0.042549 | X |
| Selenium | 0.71361 | 1 | NA | NA | |
| Silicon | 0.82417 | 1 | NA | NA | |
| Silver | 0.99573 | 1 | NA | NA | |
| Sodium | 0.99999 | 1 | NA | NA | |
| Strontium-89,90 | 0.11102 | 1 | 0.94815 | 1.00000 | |
| Strontium | 0.97020 | 1 | NA | NA | |
| Thallium | 0.97464 | 1 | NA | NA | |
| Tin | 0.99205 | 1 | NA | NA | |
| Tritium | 0.97355 | 1 | 0.95091 | 0.93783 | |
| Uranium-233,234 | 0.5 | 1 | 1 | NA | |
| Uranium-235 | 0.017614 | 1 | 0.16350 | NA | X |
| Uranium-238 | 0.0000076481 | 1 | 0.00047549 | NA | X |
| Vanadium | 0.94098 | 1 | 0.91398 | NA | |
| Zinc | 0.91552 | 1 | 0.98821 | NA | |

NA = Statistical Test Not Applicable

OU7/45BKRFT

**Results of Inferential Statistical Tests**
**Upgradient Subsurface Geologic Materials (70493 and 70593)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Weathered Bedrock**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99734 | 1 | 1 | 0.99860 | |
| Americium-241 | 1.00000 | 1 | NA | NA | |
| Antimony | 0.5 | 1 | 1 | NA | |
| Arsenic | 0.93232 | 1 | 0.94706 | 0.92058 | |
| Barium | 0.021654 | 0.47059 | 0.24118 | 0.042097 | X |
| Beryllium | 0.99973 | 1 | 1 | 1.00000 | |
| Cadmium | NA | 1 | NA | NA | |
| Calcium | 0.00026391 | 0.000041135 | 0.029412 | NA | X |
| Cesium-137 | 1.00000 | 1 | NA | NA | |
| Cesium | NA | 1 | NA | NA | |
| Chromium | 0.99947 | 1 | 1 | 0.99962 | |
| Cobalt | 0.77125 | 1 | NA | NA | |
| Copper | 0.16796 | 1 | 0.24118 | 0.37693 | |
| Gross Alpha | 1.00000 | 1 | NA | NA | |
| Gross Beta | 1.00000 | 1 | NA | NA | |
| Iron | 0.99737 | 1 | 1 | 0.99022 | |
| Lead | 0.00026600 | 0.000041135 | 0.029412 | 0.00000048725 | X |
| Lithium | 0.99962 | 1 | 1 | 0.99908 | |
| Magnesium | 0.42369 | 1 | 0.66471 | 0.54615 | |
| Manganese | 0.99647 | 1 | 0.94706 | 0.99635 | |
| Mercury | 0.24587 | 1 | NA | NA | |
| Molybdenum | 0.99952 | 1 | NA | NA | |
| Nickel | 0.91130 | 1 | 0.66471 | NA | |
| Nitrate/Nitrite | 0.99826 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/45BKWCT

**Results of Inferential Statistical Tests**
**Upgradient Subsurface Geologic Materials (70493 and 70593)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Weathered Bedrock**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.99205 | 1 | NA | NA | |
| Radium-226 | 0.0086106 | 0.010101 | 0.25455 | 0.033042 | X |
| Radium-228 | 0.99992 | 1 | NA | NA | |
| Selenium | 0.5 | 1 | NA | NA | |
| Silicon | 0.5 | 1 | NA | NA | |
| Silver | 0.99983 | 1 | 1 | NA | |
| Sodium | 0.98709 | 1 | NA | NA | |
| Strontium-89,90 | 0.28161 | 1 | 0.94706 | 0.99905 | |
| Strontium | 0.00083879 | 0.0022624 | 0.029412 | NA | X |
| Thallium | 0.5 | 1 | NA | NA | |
| Tin | 0.99984 | 1 | 1 | NA | |
| Tritium | 1.00000 | 1 | NA | NA | |
| Uranium-235 | 1.00000 | 1 | NA | NA | |
| Uranium-238 | 1.00000 | 1 | NA | NA | |
| Vanadium | 0.99973 | 1 | 1 | 0.99973 | |
| Zinc | 0.021654 | 0.0022624 | 0.029412 | 0.020381 | |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (70993)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Colluvium**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.15016 | 1 | 1 | 0.015481 | X |
| Americium-241 | 1.00000 | 1 | NA | NA | |
| Antimony | NA | 1 | NA | NA | |
| Arsenic | 0.064631 | 0.096774 | 0.54972 | NA | |
| Barium | 0.054387 | 1 | 0.54972 | NA | |
| Beryllium | 0.98958 | 1 | 1 | NA | |
| Cadmium | 0.65983 | 1 | NA | NA | |
| Calcium | 0.60538 | 1 | 1 | NA | |
| Cesium-137 | 0.00016517 | 1 | NA | NA | X |
| Cesium | 0.63816 | 1 | NA | NA | |
| Chromium | 0.47335 | 1 | 1 | 0.54135 | |
| Cobalt | 0.76286 | 1 | NA | NA | |
| Copper | 0.29647 | 1 | 1 | 0.18825 | |
| Gross Alpha | 0.99742 | 1 | 1 | 1.00000 | |
| Gross Beta | 0.85970 | 1 | 1 | 0.90839 | |
| Iron | 0.48667 | 1 | 1 | 0.074426 | |
| Lead | 0.058060 | 1 | 0.11991 | 0.079216 | |
| Lithium | 0.22996 | 1 | NA | NA | |
| Magnesium | 0.42956 | 1 | 1 | NA | |
| Manganese | 0.096282 | 1 | 0.54972 | 0.0011113 | X |
| Mercury | 0.80393 | 1 | NA | NA | |
| Molybdenum | 0.99972 | 1 | NA | NA | |
| Nickel | 0.60544 | 1 | 1 | 0.59078 | |
| Nitrate/Nitrite | 0.96634 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (70993)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Colluvium**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.71361 | 1 | NA | NA | |
| Radium-226 | 0.82418 | 1 | 1 | NA | |
| Radium-228 | 0.44767 | 1 | 0.52125 | 0.50246 | |
| Selenium | 0.65496 | 1 | NA | NA | |
| Silicon | 0.99848 | 1 | NA | NA | |
| Silver | 0.90854 | 1 | 1 | NA | |
| Sodium | 0.46125 | 1 | NA | NA | |
| Strontium-89,90 | 0.11295 | 1 | 1 | 0.99999 | |
| Strontium | 0.42056 | 1 | 1 | 0.46805 | |
| Thallium | NA | 1 | NA | NA | |
| Tin | 0.84963 | 1 | NA | NA | |
| Tritium | 0.066120 | 0.10345 | 0.51533 | 0.11941 | |
| Uranium-233,234 | 0.5 | 1 | 1 | NA | |
| Uranium-235 | 0.21337 | 1 | 1 | NA | |
| Uranium-238 | 0.097173 | 1 | 0.51533 | 0.016185 | X |
| Vanadium | 0.87204 | 1 | 1 | 0.99374 | |
| Zinc | 0.36916 | 1 | 1 | 0.14547 | |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (71093)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Colluvium**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.077112 | 1 | 0.20050 | 0.032194 | X |
| Americium-241 | 1.00000 | 1 | NA | NA | |
| Antimony | NA | 1 | NA | NA | |
| Arsenic | 0.10838 | 1 | 0.64822 | NA | |
| Barium | 0.043673 | 0.125 | 0.025306 | NA | X |
| Beryllium | 0.99792 | 1 | 1 | NA | |
| Cadmium | 0.68165 | 1 | NA | NA | |
| Calcium | 0.56787 | 1 | 1 | NA | |
| Cesium-137 | 0.11570 | 0.10345 | NA | NA | |
| Cesium | 0.65845 | 1 | NA | NA | |
| Chromium | 0.22930 | 1 | 1 | 0.17358 | |
| Cobalt | 0.14675 | 1 | NA | NA | |
| Copper | 0.24704 | 1 | 1 | 0.19963 | |
| Gross Alpha | 0.99742 | 1 | 1 | 0.99386 | |
| Gross Beta | 0.98453 | 1 | 1 | 0.99811 | |
| Iron | 0.21247 | 1 | 0.64822 | 0.19552 | |
| Lead | 0.0026065 | 1 | 0.00097330 | 0.0000050629 | X |
| Lithium | 0.21810 | 1 | NA | NA | |
| Magnesium | 0.36621 | 1 | 1 | NA | |
| Manganese | 0.33455 | 1 | 1 | 0.40729 | |
| Mercury | 0.82634 | 1 | NA | NA | |
| Molybdenum | 0.99992 | 1 | NA | NA | |
| Nickel | 0.29401 | 1 | 1 | 0.17432 | |
| Nitrate/Nitrite | 0.5 | 0.10345 | NA | NA | |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (71093)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Colluvium**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.66810 | 1 | NA | NA | |
| Radium-226 | 0.91543 | 1 | 1 | NA | |
| Radium-228 | 0.17854 | 1 | 0.52125 | 0.085116 | |
| Selenium | 0.67490 | 1 | NA | NA | |
| Silicon | 0.99171 | 1 | NA | NA | |
| Silver | 0.93649 | 1 | 1 | NA | |
| Sodium | 0.92967 | 1 | NA | NA | |
| Strontium-89,90 | 0.078851 | 1 | 0.65740 | 0.82864 | |
| Strontium | 0.049208 | 1 | 0.20050 | 0.061564 | X |
| Thallium | NA | 1 | NA | NA | |
| Tin | 0.88244 | 1 | NA | NA | |
| Tritium | 0.066120 | 1 | 0.51533 | 0.022256 | X |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.23721 | 1 | 1 | NA | |
| Uranium-238 | 0.11015 | 1 | 0.51533 | 0.086375 | |
| Vanadium | 0.26536 | 1 | 0.64822 | 0.27113 | |
| Zinc | 0.15253 | 1 | 0.64822 | 0.025674 | X |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (70993)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Weathered Bedrock**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99831 | 1 | 1 | 0.99992 | |
| Americium-241 | 0.99998 | 1 | NA | NA | |
| Antimony | NA | 1 | NA | NA | |
| Arsenic | 0.39475 | 1 | 0.81538 | 0.76433 | |
| Barium | 0.32037 | 0.14286 | 0.34066 | 0.10729 | |
| Beryllium | 0.99865 | 1 | 1 | 1.00000 | |
| Cadmium | NA | 0.4 | NA | NA | |
| Calcium | 0.0046225 | 0.043956 | 0.043956 | 0.0087938 | X |
| Cesium-137 | 0.99999 | 1 | NA | NA | |
| Cesium | NA | 1 | NA | NA | |
| Chromium | 0.99865 | 1 | 1 | 0.99999 | |
| Cobalt | 0.29756 | 0.043956 | 0.043956 | NA | X |
| Copper | 0.035930 | 1 | 0.34066 | 0.0033277 | X |
| Gross Alpha | 0.99999 | 1 | NA | NA | |
| Gross Beta | 0.99999 | 1 | NA | NA | |
| Iron | 0.72575 | 0.14286 | 0.34066 | 0.57732 | |
| Lead | 0.0013499 | 0.0019980 | 0.010989 | 0.00024301 | X |
| Lithium | 0.76832 | 1 | 1 | 0.92733 | |
| Magnesium | 0.23168 | 1 | 0.81538 | 0.34029 | |
| Manganese | 0.87146 | 0.043956 | 0.043956 | 0.32043 | |
| Mercury | 0.18555 | 1 | NA | NA | |
| Molybdenum | 0.99872 | 1 | NA | NA | |
| Nickel | 0.89786 | 0.043956 | 0.043956 | 0.36449 | X |
| Nitrate/Nitrite | 0.99444 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

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**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (70993)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Weathered Bedrock**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.99292 | 1 | NA | NA | |
| Radium-226 | 0.0069515 | 0.0047619 | 0.33333 | 0.010044 | X |
| Radium-228 | 0.99976 | 1 | NA | NA | |
| Selenium | 0.10030 | 0.010989 | 0.010989 | NA | X |
| Silicon | 0.5 | 1 | NA | NA | |
| Silver | 0.99879 | 1 | 1 | NA | |
| Sodium | 0.0099727 | 1 | NA | NA | X |
| Strontium-89,90 | 0.32000 | 1 | 0.81538 | 0.85315 | |
| Strontium | 0.00023591 | 0.00019980 | 0.043956 | NA | X |
| Thallium | NA | 1 | NA | NA | |
| Tin | 0.99868 | 1 | 1 | NA | |
| Tritium | 0.99999 | 1 | NA | NA | |
| Uranium-235 | 0.99999 | 1 | NA | NA | |
| Uranium-238 | 0.99999 | 1 | NA | NA | |
| Vanadium | 0.99687 | 1 | 1 | 0.96471 | |
| Zinc | 0.0013499 | 0.00019980 | 0.043956 | 0.0000014980 | X |

NA = Statistical Test Not Applicable

OU7/9BKWCT.OUT

**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (71093)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Weathered Bedrock**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99904 | 1 | 1 | 0.99992 | |
| Americium-241 | 0.99999 | 1 | NA | NA | |
| Antimony | NA | 1 | NA | NA | |
| Arsenic | 0.74194 | 1 | 0.81538 | 0.76433 | |
| Barium | 0.033750 | 0.14286 | 0.34066 | 0.10729 | X |
| Beryllium | 0.99928 | 1 | 1 | 1.00000 | |
| Cadmium | 0.12793 | 0.4 | NA | NA | |
| Calcium | 0.0047290 | 0.043956 | 0.043956 | 0.0087938 | X |
| Cesium-137 | 1.00000 | 1 | NA | NA | |
| Chromium | 0.99927 | 1 | 1 | 0.99999 | |
| Cobalt | 0.035585 | 0.043956 | 0.043956 | NA | X |
| Copper | 0.012572 | 1 | 0.34066 | 0.0033277 | X |
| Gross Alpha | 1.00000 | 1 | NA | NA | |
| Gross Beta | 1.00000 | 1 | NA | NA | |
| Iron | 0.27784 | 0.14286 | 0.34066 | 0.57732 | |
| Lead | 0.0010816 | 0.0019980 | 0.010989 | 0.00024301 | X |
| Lithium | 0.92154 | 1 | 1 | 0.92733 | |
| Magnesium | 0.31868 | 1 | 0.81538 | 0.34029 | |
| Manganese | 0.17289 | 0.043956 | 0.043956 | 0.32043 | X |
| Mercury | 0.11863 | 1 | NA | NA | |
| Molybdenum | 0.99923 | 1 | NA | NA | |
| Nickel | 0.17267 | 0.043956 | 0.043956 | 0.36449 | X |
| Nitrate/Nitrite | 0.99590 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |

NA = Statistical Test Not Applicable

OU7/10BKWCT.OUT

**Results of Inferential Statistical Tests**
**Downgradient Subsurface Geologic Materials (71093)**
**vs. Sitewide Background Subsurface Geologic Materials**
**Weathered Bedrock**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Potassium | 0.97935 | 1 | NA | NA | |
| Radium-226 | 0.0051410 | 0.0047619 | 0.33333 | 0.010044 | X |
| Radium-228 | 0.99985 | 1 | NA | NA | |
| Selenium | 0.0032008 | 0.010989 | 0.010909 | NA | X |
| Silicon | 0.5 | 1 | NA | NA | |
| Silver | 0.99940 | 1 | 1 | NA | |
| Sodium | 0.010973 | 1 | NA | NA | X |
| Strontium-89,90 | 0.11888 | 1 | 0.81538 | 0.85315 | X |
| Strontium | 0.00016549 | 0.0019980 | 0.043956 | NA | X |
| Thallium | 0.5 | 1 | NA | NA | |
| Tin | 0.99950 | 1 | 1 | NA | |
| Tritium | 1.00000 | 1 | NA | NA | |
| Uranium-235 | 1.00000 | 1 | NA | NA | |
| Uranium-238 | 1.00000 | 1 | NA | NA | |
| Vanadium | 0.93725 | 1 | 1 | 0.96471 | |
| Zinc | 0.00073136 | 0.00019980 | 0.043956 | 0.0000014980 | X |

NA = Statistical Test Not Applicable

OU7/10BKWCT.OUT

**Results of Inferential Statistical Tests**
**East Landfill Pond Sediments vs. Background Stream Sediments**
**(Total)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.019068 | 1 | 0.038574 | NA | X |
| Americium-241 | 0.37645 | 1 | 1 | NA | |
| Antimony | 0.69412 | 1 | NA | NA | |
| Arsenic | 0.014503 | 1 | 0.099006 | 0.015382 | X |
| Barium | 0.0032537 | 1 | 0.0071299 | NA | X |
| Beryllium | 0.000052600 | 1 | NA | NA | X |
| Cadmium | 0.69472 | 1 | NA | NA | |
| Calcium | 0.041752 | 1 | 0.038574 | NA | X |
| Cesium-137 | 0.068085 | 1 | 0.051120 | 0.049393 | X |
| Cesium | 0.56188 | 1 | NA | NA | |
| Chromium | 0.017902 | 1 | 0.099006 | NA | X |
| Cobalt | 0.13494 | 1 | NA | NA | |
| Copper | 0.032953 | 1 | 0.099006 | NA | X |
| Gross Alpha | 0.50929 | 1 | 1 | NA | |
| Gross Beta | 0.94909 | 1 | 1 | 0.99997 | |
| Iron | 0.053402 | 1 | 0.36821 | 0.028003 | X |
| Lead | 0.029874 | 1 | 0.099006 | NA | X |
| Lithium | 0.089993 | 1 | NA | NA | |
| Magnesium | 0.038000 | 1 | 0.36821 | 0.042710 | X |
| Manganese | 0.42525 | 1 | 1 | NA | |
| Mercury | 0.5 | 1 | NA | NA | |
| Molybdenum | 0.93408 | 1 | NA | NA | |
| Nickel | 0.010683 | 1 | 0.10552 | NA | X |
| Nitrate | 1 | 1 | NA | NA | |
| Nitrate/Nitrite | 0.98068 | 1 | NA | NA | |
| Plutonium-239,240 | 0.22794 | 1 | 0.51226 | NA | |

NA = Statistical Test Not Applicable

OU7/sdbkgh

**Results of Inferential Statistical Tests**
**East Landfill Pond Sediments vs. Background Stream Sediments**
**(Total)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Potassium | 0.012473 | 1 | NA | NA | X |
| Radium-228 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.021771 | 1 | NA | NA | X |
| Silicon | 0.20083 | 1 | 0.42857 | 0.24814 | |
| Silver | 0.46394 | 1 | NA | NA | |
| Sodium | 0.012581 | 1 | NA | NA | X |
| Strontium-89,90 | 0.45571 | 1 | 1 | 0.64846 | |
| Strontium | 0.011546 | 1 | 0.039927 | 0.012544 | X |
| Thallium | 0.5 | 1 | NA | NA | |
| Tin | 0.83149 | 1 | NA | NA | |
| Tritium | 0.5 | 1 | 1 | NA | |
| Uranium-233,234 | 0.84159 | 1 | 1 | NA | |
| Uranium-235 | 0.45760 | 1 | 1 | NA | |
| Uranium-238 | 0.61586 | 1 | 1 | NA | |
| Vanadium | 0.013486 | 1 | 0.10552 | 0.00012480 | X |
| Zinc | 0.018485 | 1 | 0.099006 | NA | X |

NA = Statistical Test Not Applicable

OU7/sdbkgh

**Results of Inferential Statistical Tests**
**Leachate Seep Water (SW097) vs. Sitewide Background Seep Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.73781 | 1 | NA | NA | |
| Americium-241 | 0.54322 | 0.88187 | 0.57454 | NA | |
| Antimony | 0.34520 | 1 | NA | NA | |
| Arsenic | 0.84016 | 1 | NA | NA | |
| Barium | 5.218E-14 | 1 | NA | NA | X |
| Beryllium | 0.10783 | 1 | NA | NA | |
| Cadmium | 0.35139 | 1 | NA | NA | |
| Calcium | 0.0000000011531 | 1 | 0.0000014291 | 0 | X |
| Cesium | 0.5 | 1 | NA | NA | |
| Cesium-137 | 0.12165 | 0.22222 | 0.77778 | NA | |
| Chromium | 0.34540 | 1 | NA | NA | |
| Cobalt | 0.29882 | 1 | NA | NA | |
| Copper | 0.97688 | 1 | NA | NA | |
| Gross Alpha | 0.27825 | 1 | 0.27473 | 0.21455 | |
| Gross Beta | 0.010319 | 1 | 0.53457 | 0.037248 | X |
| Iron | 2.8662E-11 | 1 | NA | NA | X |
| Lead | 0.5 | 1 | NA | NA | |
| Lithium | 0.000000071160 | 1 | NA | NA | X |
| Magnesium | 5.548E-11 | 1 | NA | NA | X |
| Manganese | 0.00000000011412 | 1 | NA | 0.000000011979 | X |
| Mercury | 0.98338 | 1 | NA | NA | |
| Molybdenum | 0.63410 | 1 | NA | NA | |
| Nickel | 0.20772 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.0000000021863 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/seepdiss

**Results of Inferential Statistical Tests**
**Leachate Seep Water (SW097) vs. Sitewide Background Seep Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.5 | 1 | 1 | 0.38199 | |
| Radium-228 | 0.15866 | 0.5 | 0.5 | NA | |
| Selenium | 0.90999 | 1 | NA | NA | |
| Silicon | 0.82220 | 1 | NA | NA | |
| Silver | 0.14644 | 1 | NA | NA | |
| Sodium | 5.9753E-11 | 5.3513E-14 | 0.00000000039607 | 1.7764E-14 | X |
| Strontium | 0.00000000025958 | 0.000037257 | NA | NA | X |
| Strontium-89,90 | 0.0013926 | 0.0015608 | 0.0.098099 | 0.0013296 | X |
| Thallium | NA | 1 | NA | NA | |
| Tin | 0.018704 | 1 | NA | NA | X |
| Tritium | 0.5 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | 1 | NA | |
| Uranium-235 | 0.82237 | 0.54545 | 0.95666 | 0.85227 | |
| Uranium-238 | 0.98185 | 1 | 0.98627 | 0.99327 | |
| Vanadium | 0.76689 | 1 | NA | NA | |
| Zinc | 1.4222E-12 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/seepdiss

**Results of Inferential Statistical Tests**
**Leachate Seep Water (SW097) vs. Sitewide Background Seep Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99335 | 1 | NA | 0.99264 | |
| Americium-241 | 0.61724 | 1 | 0.90492 | 0.91196 | |
| Antimony | 0.73747 | 1 | NA | NA | |
| Arsenic | 0.98202 | 1 | NA | NA | |
| Barium | 0.00091711 | 1 | NA | 0.96560 | X |
| Beryllium | 0.97496 | 1 | NA | NA | |
| Cadmium | 0.87641 | 1 | NA | NA | |
| Calcium | 0.0000059742 | 1 | 0.24511 | 0.0050702 | X |
| Cesium | 0.88899 | 1 | NA | NA | |
| Cesium-137 | 0.60658 | 1 | 0.98723 | 0.69027 | |
| Chromium | 0.82404 | 1 | NA | NA | |
| Cobalt | 0.66503 | 1 | NA | NA | |
| Copper | 0.97739 | 1 | NA | NA | |
| Cyanide | 0.53927 | 1 | NA | NA | |
| Gross Alpha | 0.73444 | 1 | 1 | 0.92171 | |
| Gross Beta | 0.00072421 | 0.00019980 | 0.043956 | 0.00025916 | X |
| Iron | 0.0000062403 | 1 | 0.20772 | 0.90741 | X |
| Lead | 0.98202 | 1 | NA | NA | |
| Lithium | 0.0000037804 | 1 | NA | NA | X |
| Magnesium | 3.5458E-11 | 1 | NA | 0.70858 | X |
| Manganese | 0.0000073530 | 1 | NA | 0.71872 | X |
| Mercury | 0.64633 | 1 | NA | NA | |
| Molybdenum | 0.45768 | 1 | NA | NA | |
| Nickel | 0.88880 | 1 | NA | NA | |
| Nitrate/Nitrite | 0.5 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/seeptot

**Results of Inferential Statistical Tests**
**Leachate Seep Water (SW097) vs. Sitewide Background Seep Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.0021252 | 0.375 | 0.047431 | NA | X |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.000024585 | 1 | NA | NA | X |
| Radium-226 | 0.90958 | 1 | 1 | NA | |
| Radium-228 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.58883 | 1 | NA | NA | |
| Silicon | 0.011110 | 0.047101 | 0.047101 | NA | X |
| Silver | 0.26715 | 1 | NA | NA | |
| Sodium | 1.8628E-11 | -1.0436E-14 | 5.9322E-11 | 1.1102E-16 | X |
| Strontium | 0.00037488 | 1 | NA | NA | X |
| Strontium-89,90 | 0.000061402 | 0.010453 | 0.0024727 | NA | X |
| Sulfide | 0.84134 | 1 | NA | NA | |
| Thallium | 0.86892 | 1 | NA | NA | |
| Tin | 0.54793 | 1 | NA | NA | |
| Tritium | 0.000077629 | 0.18857 | 0.013186 | 0.044523 | X |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.71163 | 1 | 1 | 0.99781 | |
| Uranium-238 | 0.84749 | 1 | 0.87303 | NA | |
| Vanadium | 0.92981 | 1 | NA | NA | |
| Zinc | 0.00000000015427 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/seeptot

**Results of Inferential Statistical Tests**
**East Landfill Pond Water (SW098) vs. Sitewide Background Surface Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.96621 | 1 | NA | NA | |
| Americium-241 | 0.97670 | 1 | 0.88032 | NA | |
| Antimony | 0.00090772 | 1 | NA | NA | X |
| Arsenic | 0.00033223 | 1 | NA | NA | X |
| Barium | 0 | 1 | NA | NA | X |
| Beryllium | 0.96460 | 1 | NA | NA | |
| Cadmium | 0.82110 | 1 | NA | NA | |
| Calcium | 0.00000000010744 | 1 | 1.8981E-11 | 5.092E-12 | X |
| Cesium | 0.99946 | 1 | NA | NA | |
| Cesium-137 | 0.86114 | 1 | 1 | NA | |
| Chromium | 0.12957 | 1 | NA | NA | |
| Cobalt | 0.88568 | 1 | NA | NA | |
| Copper | 0.56309 | 1 | NA | NA | |
| Gross Alpha | 0.0051653 | 1 | 0.027676 | 0.0019860 | X |
| Gross Beta | 0.000030570 | 1 | 0.0000042729 | NA | X |
| Iron | 0.99036 | 1 | NA | NA | |
| Lead | 0.41512 | 1 | NA | NA | |
| Lithium | 0 | 1 | NA | NA | X |
| Magnesium | 5.5511E-16 | 1 | NA | 0.68733 | X |
| Manganese | 0.023962 | 1 | NA | NA | X |
| Mercury | 0.92190 | 1 | NA | NA | |
| Molybdenum | 0.027532 | 1 | NA | NA | X |
| Nickel | 0.0054682 | 1 | NA | NA | X |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/SW098DIS

**Results of Inferential Statistical Tests**
**East Landfill Pond Water (SW098) vs. Sitewide Background Surface Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.74365 | 1 | 1 | 0.92205 | |
| Radium-228 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.94463 | 1 | NA | NA | |
| Silicon | 1.00000 | 1 | NA | NA | |
| Silver | 0.11677 | 1 | NA | NA | |
| Sodium | 2.1094E-15 | 8.1157E-14 | 0 | 0 | X |
| Strontium | 0 | 1 | NA | 0.95608 | X |
| Strontium-89,90 | 0.016081 | 1 | 0.14927 | NA | X |
| Thallium | 0.24413 | 1 | NA | NA | |
| Tin | 0.0092145 | 1 | NA | NA | X |
| Tritium | 0.5 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.67596 | 1 | 0.77157 | 0.73506 | |
| Uranium-238 | 0.00000038527 | 1 | 0.00000031447 | NA | X |
| Vanadium | 0.0042383 | 1 | NA | NA | X |
| Zinc | 0.98708 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/SW098DIS

**Results of Inferential Statistical Tests**
**East Landfill Pond Water (SW098) vs. Sitewide Background Surface Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99978 | 1 | NA | NA | |
| Americium-241 | 0.0084110 | 0.14876 | 0.29985 | NA | X |
| Antimony | 0.75074 | 1 | NA | NA | |
| Arsenic | 0.0012852 | 1 | NA | NA | X |
| Barium | 3.7859E-14 | 1 | NA | 0.98556 | |
| Beryllium | 0.79971 | 1 | NA | NA | |
| Cadmium | 0.30106 | 1 | NA | NA | |
| Calcium | 0.00000000070613 | 1 | 1.2331E-12 | 0.000000020630 | X |
| Cesium | 0.91605 | 1 | NA | NA | |
| Cesium-137 | 0.99180 | 1 | 1 | 0.99992 | |
| Chromium | 0.72351 | 1 | NA | NA | |
| Cobalt | 0.91519 | 1 | NA | NA | |
| Copper | 0.31343 | 1 | NA | NA | |
| Cyanide | 0.69539 | 1 | NA | NA | |
| Gross Alpha | 0.46098 | 1 | 0.80283 | 0.024854 | X |
| Gross Beta | 0.000034089 | 1 | 0.00000068747 | NA | X |
| Iron | 0.69842 | 1 | NA | 0.99596 | |
| Lead | 0.59444 | 1 | NA | NA | |
| Lithium | 0 | 1 | NA | NA | X |
| Magnesium | 1.3101E-14 | 1 | NA | 0.72618 | X |
| Manganese | 0.0064598 | 1 | NA | 0.87002 | X |
| Mercury | 0.21646 | 1 | NA | NA | |
| Molybdenum | 0.026871 | 1 | NA | NA | X |
| Nickel | 4.6715E-11 | 1 | NA | NA | X |
| Nitrate/Nitrite | 0.30316 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/sw098bkg

**Results of Inferential Statistical Tests**
**East Landfill Pond Water (SW098) vs. Sitewide Background Surface Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.77029 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0 | 1 | NA | NA | X |
| Radium-226 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.83479 | 1 | NA | NA | |
| Silicon | 0.99999 | 1 | 1 | NA | |
| Silver | 0.20340 | 1 | NA | NA | |
| Sodium | 2.4425E-15 | -3.0864E-14 | 0 | 0 | X |
| Strontium | 2.7423E-14 | 1 | NA | 0.95911 | X |
| Strontium-89,90 | 0.0072384 | 1 | 0.0050270 | NA | X |
| Sulfide | 0.84388 | 1 | NA | NA | |
| Thallium | 0.020407 | 1 | NA | NA | X |
| Tin | 0.0016492 | 1 | NA | NA | |
| Tritium | 0.010610 | 1 | 0.067423 | 0.0099277 | X |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.040019 | 1 | 0.033141 | NA | X |
| Uranium-238 | 0.000047745 | 0.16667 | 0.020561 | NA | X |
| Vanadium | 0.26504 | 1 | NA | NA | |
| Zinc | 0.57587 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/sw098bkg

**Results of Inferential Statistical Tests**
**Northern Groundwater-Intercept System Discharge (SW099)**
**vs. Sitewide Background Surface Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.97359 | 1 | NA | NA | |
| Americium-241 | 0.95901 | 1 | 1 | 0.93026 | |
| Antimony | 0.59348 | 1 | NA | NA | |
| Arsenic | 0.29366 | 1 | NA | NA | |
| Barium | 0.0000000036814 | 1 | NA | NA | X |
| Beryllium | 0.95449 | 1 | NA | NA | |
| Cadmium | 0.96355 | 1 | NA | NA | |
| Calcium | 0.00000000013580 | 0.0000060728 | 3.153E-14 | NA | X |
| Cesium-137 | 0.89989 | 1 | 1 | NA | |
| Cesium | 0.99871 | 1 | NA | NA | |
| Chromium | 0.86992 | 1 | NA | NA | |
| Cobalt | 0.55128 | 1 | NA | NA | |
| Copper | 0.55837 | 1 | NA | NA | |
| Gross Alpha | 0.050175 | 1 | 0.20690 | NA | |
| Gross Beta | 0.20312 | 1 | 1 | NA | |
| Iron | 0.99865 | 1 | NA | NA | |
| Lead | 0.017646 | 1 | NA | NA | X |
| Lithium | 0.0000029956 | 1 | NA | NA | X |
| Magnesium | 3.6953E-12 | 1 | NA | NA | X |
| Manganese | 0.99988 | 1 | NA | NA | |
| Mercury | 0.67758 | 1 | NA | NA | |
| Molybdenum | 0.61466 | 1 | NA | NA | |
| Nickel | 0.33566 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.93259 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/SWBK99D

**Results of Inferential Statistical Tests**
**Northern Groundwater-Intercept System Discharge (SW099)**
**vs. Sitewide Background Surface Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.74365 | 1 | 1 | 0.90660 | |
| Radium-228 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.19502 | 1 | NA | NA | |
| Silicon | 1 | 1 | NA | NA | |
| Silver | 0.035772 | 1 | NA | NA | X |
| Sodium | 0.0021923 | 0.0000064547 | 0.029650 | NA | X |
| Strontium-89,90 | 0.035391 | 1 | 0.28961 | NA | X |
| Strontium | 2.4269E-13 | 1 | NA | NA | X |
| Thallium | 0.95709 | 1 | NA | NA | |
| Tin | 0.99791 | 1 | NA | NA | |
| Tritium | 0.5 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.099302 | 1 | 0.28120 | 0.055771 | |
| Uranium-238 | 0.0011516 | 1 | 0.005091 | NA | X |
| Vanadium | 0.94228 | 1 | NA | NA | |
| Zinc | 0.13327 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/SWBK99D

**Results of Inferential Statistical Tests**
**Northern Groundwater-Intercept System Discharge (SW099)**
**vs. Sitewide Background Surface Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.99961 | 1 | NA | NA | |
| Americium-241 | 0.083564 | 0.010069 | 0.44484 | NA | X |
| Antimony | 0.81634 | 1 | NA | NA | |
| Arsenic | 0.85320 | 1 | NA | NA | |
| Barium | 0.0000000073584 | 1 | NA | NA | X |
| Beryllium | 0.80421 | 1 | NA | NA | |
| Cadmium | 0.21382 | 1 | NA | NA | |
| Calcium | 8.5617E-12 | 0.00012105 | 3.3307E-16 | 1.1879E-14 | X |
| Cesium-137 | 0.89545 | 1 | 0.33166 | 0.15574 | |
| Cesium | 0.89022 | 1 | NA | NA | |
| Chromium | 0.95277 | 1 | NA | NA | |
| Cobalt | 0.91465 | 1 | NA | NA | |
| Copper | 0.47843 | 1 | NA | NA | |
| Cyanide | 0.66234 | 1 | NA | NA | |
| Gross Alpha | 0.036055 | 1 | 0.038095 | 0.029398 | X |
| Gross Beta | 0.23912 | 1 | 1 | NA | |
| Iron | 0.99997 | 1 | NA | NA | |
| Lead | 0.69098 | 1 | NA | NA | |
| Lithium | 0.0000000014891 | 1 | NA | NA | X |
| Magnesium | 4.2721E-13 | 1 | NA | NA | X |
| Manganese | 1.00000 | 1 | NA | NA | |
| Mercury | 0.34012 | 1 | NA | NA | |
| Molybdenum | 0.87238 | 1 | NA | NA | |
| Nickel | 0.36322 | 1 | NA | NA | |
| Nitrate/Nitrite | 0.5 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/swbk99t

**Results of Inferential Statistical Tests**
**Northern Groundwater-Intercept System Discharge (SW099)**
**vs. Sitewide Background Surface Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.73134 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.81649 | 1 | NA | NA | |
| Radium-226 | 0.5 | 1 | 1 | 0.87035 | |
| Selenium | 0.022275 | 1 | NA | NA | X |
| Silicon | 0.75413 | 1 | 1 | NA | |
| Silver | 0.88551 | 1 | NA | NA | |
| Sodium | 0.00074847 | 0.00011541 | 0.056207 | NA | X |
| Strontium-89,90 | 0.11454 | 1 | 0.25996 | NA | |
| Strontium | 5.1081E-12 | 1 | NA | 0.30033 | X |
| Sulfide | 0.81984 | 1 | NA | NA | |
| Thallium | 0.82366 | 1 | NA | NA | |
| Tin | 0.84559 | 1 | NA | NA | |
| Tritium | 0.095756 | 1 | 0.14998 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.0017064 | 1 | 0.016807 | NA | X |
| Uranium-238 | 0.000048270 | 0.000040840 | 0.000028458 | NA | X |
| Vanadium | 0.96695 | 1 | NA | NA | |
| Zinc | 0.0051162 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/swbk99t

**Results of Inferential Statistical Tests**
**Southern Groundwater-Intercept System Discharge (SW100)**
**vs. Sitewide Background Surface Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.86611 | 1 | NA | NA | |
| Americium-241 | 0.050852 | 0.0625 | 0.39516 | 0.19217 | |
| Antimony | 0.94167 | 1 | NA | NA | |
| Arsenic | 0.010389 | 1 | NA | NA | X |
| Barium | 0.035170 | 1 | NA | NA | X |
| Beryllium | 0.69751 | 1 | NA | NA | |
| Cadmium | 0.93447 | 1 | NA | NA | |
| Calcium | 0.000000051841 | 0.00000000067697 | 0.0000000058147 | 0.000011639 | X |
| Cesium-137 | 0.84279 | 1 | 1 | NA | |
| Cesium | 0.99991 | 1 | NA | NA | |
| Chromium | 0.82476 | 1 | NA | NA | |
| Cobalt | 0.21819 | 1 | NA | NA | |
| Copper | 0.22729 | 1 | NA | NA | |
| Gross Alpha | 0.5 | 1 | 1 | NA | |
| Gross Beta | 0.029709 | 1 | 0.36821 | NA | X |
| Iron | 0.21090 | 1 | NA | NA | |
| Lead | 0.47720 | 1 | NA | NA | |
| Lithium | 0.000039893 | 1 | NA | NA | X |
| Magnesium | 0.000015675 | 1 | NA | NA | X |
| Manganese | 0.0087105 | 1 | NA | NA | X |
| Mercury | 0.86228 | 1 | NA | NA | |
| Molybdenum | 0.086780 | 1 | NA | NA | |
| Nickel | 0.78554 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.00000000020228 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/SW100DIS

**Results of Inferential Statistical Tests**
**Southern Groundwater-Intercept System Discharge (SW100)**
**vs. Sitewide Background Surface Water**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.5 | 1 | 1 | NA | |
| Radium-228 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.0058170 | 1 | NA | NA | X |
| Silicon | 1 | 1 | NA | NA | |
| Silver | 0.24621 | 1 | NA | NA | |
| Sodium | 0.00000038782 | 0.000000022649 | 0.0000080595 | 0.0000063633 | X |
| Strontium-89,90 | 0.50830 | 1 | 1 | NA | |
| Strontium | 0.00000020105 | 1 | NA | NA | X |
| Thallium | 0.98226 | 1 | NA | NA | |
| Tin | 0.98062 | 1 | NA | NA | |
| Tritium | 0.5 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.27007 | 1 | 1 | 0.86059 | |
| Uranium-238 | 0.033219 | 1 | 0.13577 | NA | X |
| Vanadium | 0.42204 | 1 | NA | NA | |
| Zinc | 0.000015898 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/SW100DIS

**Results of Inferential Statistical Tests**
**Southern Groundwater-Intercept System Discharge (SW100)**
**vs. Sitewide Background Surface Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.92754 | 1 | NA | NA | |
| Americium-241 | 0.056630 | 0.028302 | 0.50610 | NA | X |
| Antimony | 0.77693 | 1 | NA | NA | |
| Arsenic | 0.020422 | 1 | NA | NA | |
| Barium | 0.22733 | 1 | NA | NA | |
| Beryllium | 0.73500 | 1 | NA | NA | |
| Cadmium | 0.63073 | 1 | NA | NA | |
| Calcium | 0.0000028388 | 0.000088508 | 0.0000018179 | 0.00012947 | X |
| Cesium-137 | 0.85198 | 1 | 1 | NA | |
| Cesium | 0.83712 | 1 | NA | NA | |
| Chromium | 0.81184 | 1 | NA | NA | |
| Cobalt | 0.74167 | 1 | NA | NA | |
| Copper | 0.098286 | 1 | NA | NA | |
| Cyanide | 0.63989 | 1 | NA | NA | |
| Gross Alpha | 0.066020 | 1 | 0.20238 | NA | |
| Gross Beta | 0.013136 | 1 | 0.041975 | NA | X |
| Iron | 0.36910 | 1 | NA | 0.42151 | |
| Lead | 0.13403 | 1 | NA | NA | |
| Lithium | 0.00069539 | 1 | NA | NA | X |
| Magnesium | 0.000026706 | 1 | NA | NA | X |
| Manganese | 0.45696 | 1 | NA | NA | |
| Mercury | 0.79790 | 1 | NA | NA | |
| Molybdenum | 0.54606 | 1 | NA | NA | |
| Nickel | 0.067105 | 1 | NA | NA | |
| Nitrate/Nitrite | 0.5 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/SW100T

**Results of Inferential Statistical Tests**
**Southern Groundwater-Intercept System Discharge (SW100)**
**vs. Sitewide Background Surface Water**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.000064152 | 1 | NA | NA | X |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.0000019088 | 1 | NA | NA | X |
| Radium-226 | 0.5 | 1 | 1 | NA | |
| Selenium | 0.000053070 | 1 | NA | NA | X |
| Silicon | 0.98619 | 1 | 1 | NA | |
| Silver | 0.73751 | 1 | NA | NA | |
| Sodium | 0.000025157 | 0.000085189 | 0.00090759 | 0.00053828 | X |
| Strontium-89,90 | 0.91580 | 1 | 1 | NA | |
| Strontium | 0.00046710 | 1 | NA | NA | X |
| Sulfide | 0.73026 | 1 | NA | NA | |
| Thallium | 0.65943 | 1 | NA | NA | |
| Tin | 0.78411 | 1 | NA | NA | |
| Tritium | 0.048456 | 1 | 0.055544 | NA | X |
| Uranium-233,234 | 0.5 | 1 | 1 | NA | |
| Uranium-235 | 0.090137 | 1 | 0.37895 | NA | |
| Uranium-238 | 0.017996 | 1 | 0.041478 | NA | |
| Vanadium | 0.53202 | 1 | NA | NA | |
| Zinc | 0.0023459 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/SW100T

**Results of Inferential Statistical Tests**
**All UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Dissolved)**
**Γ-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.12894 | 0.30508 | NA | NA | |
| Americium-241 | 0.94628 | 0.89662 | 0.99023 | 0.85353 | |
| Antimony | 0.20577 | 0.095258 | NA | NA | |
| Arsenic | 0.00035839 | 1 | NA | NA | X |
| Barium | 0.00044385 | -2.0717E-13 | NA | 2.4665E-11 | X |
| Beryliium | 0.91594 | 1 | NA | NA | |
| Cadmium | 0.91149 | 0.31804 | NA | NA | |
| Calcium | 0.080776 | 0.0000024448 | 0.0000019590 | 0.0000057094 | X |
| Cesium-137 | 0.99525 | 1 | 0.88564 | 0.98786 | |
| Cesium | 0.98909 | 1 | NA | NA | |
| Chromium | 0.25221 | 0.30552 | NA | NA | |
| Cobalt | 0.00084581 | 0.57491 | NA | NA | X |
| Copper | 0.0000077654 | 0.0086172 | NA | NA | X |
| Gross Alpha | 0.34901 | 1 | 0.48746 | 0.88735 | |
| Gross Beta | 0.014930 | 1 | 0.0014936 | 0.19617 | X |
| Iron | 0.0000058084 | 0.00000000025098 | NA | NA | X |
| Lead | 0.80165 | 1 | NA | NA | |
| Lithium | 0.062074 | 1 | NA | NA | |
| Magnesium | 0.000090935 | 0.0000050804 | 6.9587E-12 | 0.00000000042486 | X |
| Manganese | 0 | -2.4025E-13 | NA | NA | X |
| Mercury | 0.21944 | 1 | NA | NA | |
| Molybdenum | 0.35350 | 1 | NA | NA | |
| Nickel | 0.00000000040188 | 0.000031017 | NA | NA | X |
| Plutonium-239,240 | 1 | 1 | 1 | NA | |
| Potassium | 1.7042E-12 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/gwbkgd

**Results of Inferential Statistical Tests**
**All UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.000000013877 | 0.000000011414 | 0.000032113 | 0.00000000020645 | X |
| Radium-228 | 0.99577 | 0.61111 | 0.99045 | 0.99950 | |
| Selenium | 0.72489 | 1 | NA | NA | |
| Silicon | 1 | 1 | NA | NA | |
| Silver | 0.80470 | 1 | NA | NA | |
| Sodium | 0.0000052518 | 0.00000074646 | 0.0026152 | 0.0000026897 | X |
| Strontium-89,90 | 0.034294 | 0.53991 | 0.0070253 | 0.043560 | X |
| Strontium | 0.00057998 | 0.55276 | NA | 0.049544 | X |
| Thallium | 0.97488 | 1 | NA | NA | |
| Tin | 0.84536 | 1 | NA | NA | |
| Tritium | 0.47606 | 1 | 0.90323 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.16130 | 1 | 0.22461 | 0.89135 | |
| Uranium-238 | 0.87320 | 1 | 0.70235 | 0.94909 | |
| Vanadium | 0.96151 | 1 | NA | NA | |
| Zinc | 5.0698E-11 | 0.00011293 | 2.3427E-10 | NA | X |

NA = Statistical Test Not Applicable

OU7/gwbkgd

**Results of Inferential Statistical Tests**
**All UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.0000000012111 | 0.0025573 | 0.000079428 | 0.00020549 | X |
| Americium-241 | 0.084992 | 0.011692 | 0.25097 | 0.025950 | X |
| Antimony | 0.049108 | 1 | NA | NA | X |
| Arsenic | 0.0000057476 | 0.00025135 | NA | NA | X |
| Barium | 3.5527E-15 | 0.000083708 | 1.1102E-16 | 0.000000068355 | X |
| Beryllium | 0.0010182 | 0.0049144 | NA | NA | X |
| Cadmium | 0.18476 | 0.27242 | NA | NA | |
| Calcium | 0.091286 | 0.000020861 | 0.000079428 | 0.000054143 | X |
| Cesium-137 | 0.39339 | 1 | 0.57609 | 0.52147 | |
| Cesium | 0.61948 | 1 | NA | NA | |
| Chromium | 0.00000000016482 | 1 | 0.000000010208 | NA | X |
| Cobalt | 0.00036435 | 0.010043 | NA | NA | X |
| Copper | 2.8006E-11 | 0.00000065261 | NA | NA | X |
| Cyanide | 0.15155 | 1 | NA | NA | |
| Gross Alpha | 0.99980 | 1 | 1 | 0.99317 | |
| Gross Beta | 0.99190 | 1 | 0.98380 | 0.94831 | |
| Iron | 1.7764E-15 | 0.00065728 | 4.8801E-11 | 0.0000023228 | X |
| Lead | 0.00000062221 | 0.00046393 | 0.000014515 | NA | X |
| Lithium | 0.00023233 | 1 | NA | NA | X |
| Magnesium | 0.000030860 | 0.000041854 | 0.000000080487 | 0.000000028906 | X |
| Manganese | 1.7764E-15 | 0.000000070650 | 4.5741E-14 | 0.0000000082322 | X |
| Mercury | 0.00022392 | 0.000043835 | NA | NA | X |
| Molybdenum | 0.42275 | 1 | NA | NA | |
| Nickel | 4.7347E-11 | 0.27743 | NA | NA | X |
| Nitrate/Nitrite | 5.1603E-13 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/GWBKGT

**Results of Inferential Statistical Tests**
**All UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.071143 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0 | 0.0000025338 | NA | NA | X |
| Radium-226 | 0.036874 | 0.26923 | 0.34266 | 0.034120 | X |
| Selenium | 0.73362 | 0.035379 | NA | NA | X |
| Silicon | 0.0000069494 | 0.037842 | 0.00059649 | 0.000055474 | X |
| Silver | 0.00085266 | 0.0013805 | NA | NA | X |
| Sodium | 0.0026339 | 0.00063658 | 0.033161 | 0.0017567 | X |
| Strontium-89,90 | 0.31995 | 1 | 0.38291 | 0.023131 | X |
| Strontium | 0.00069448 | 0.0094774 | 0.00015752 | 0.0000033661 | X |
| Thallium | 0.21700 | 1 | NA | NA | |
| Tin | 0.062207 | 0.26471 | NA | NA | |
| Tritium | 0.62417 | 1 | 0.99938 | 0.79417 | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.60405 | 1 | 0.61986 | 0.83908 | |
| Uranium-238 | 0.48244 | 1 | 0.51030 | 0.80826 | |
| Vanadium | 0.00000000040032 | 0.036831 | NA | NA | X |
| Zinc | 6.1685E-11 | 0.00015457 | 0.0000000034297 | NA | X |

NA = Statistical Test Not Applicable

OU7/GWBKGT

**Results of Inferential Statistical Tests**
**Landfill UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.38042 | 1 | NA | NA | |
| Americium-241 | 0.92878 | 0.88889 | 0.99316 | 0.82852 | |
| Antimony | 0.070874 | 0.11394 | NA | NA | |
| Arsenic | 0.0000000031191 | 1 | NA | NA | X |
| Barium | 0 | -3.2618E-13 | NA | 1.1102E-16 | X |
| Beryllium | 0.91599 | 1 | NA | NA | |
| Cadmium | 0.53655 | 0.11986 | NA | NA | |
| Calcium | 0.18612 | 0.0000000034929 | 0.00000010077 | 0.00025187 | X |
| Cesium-137 | 0.99574 | 1 | 0.94707 | 0.43768 | |
| Cesium | 0.77360 | 1 | NA | NA | |
| Chromium | 0.66671 | 1 | NA | NA | |
| Cobalt | 0.00000000023280 | 0.35620 | NA | NA | X |
| Copper | 0.81010 | 0.11223 | NA | NA | |
| Gross Alpha | 0.22187 | 1 | 0.43518 | 0.95136 | |
| Gross Beta | 0.0013989 | 1 | 0.000097381 | 0.054269 | X |
| Iron | 3.89858E-15 | -2.871E-13 | 9.992E-16 | NA | X |
| Lead | 0.77178 | 1 | NA | NA | |
| Lithium | 0.42214 | 1 | NA | NA | |
| Magnesium | 0.024246 | 0.0000013818 | 0.0000017532 | 0.00010493 | X |
| Manganese | 0 | 8.9928E-14 | 0 | NA | X |
| Mercury | 0.11723 | 1 | NA | NA | |
| Molybdenum | 0.071891 | 1 | NA | NA | |
| Nickel | 1.0048E-12 | 0.0016765 | NA | NA | X |
| Plutonium-239,240 | 1 | 1 | 1 | NA | |
| Potassium | 0.00000011598 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/GWBKLUHD

**Results of Inferential Statistical Tests**
**Landfill UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.000000017434 | 3.9867E-12 | 0.0000035507 | 0.0000000071873 | X |
| Radium-228 | 0.98749 | 0.6 | 0.95604 | 0.98952 | |
| Selenium | 1.00000 | 1 | NA | NA | |
| Silicon | 1 | 1 | NA | NA | |
| Silver | 0.74482 | 1 | NA | NA | |
| Sodium | 0.00095744 | 0.0039140 | 0.65081 | 0.015549 | X |
| Strontium-89,90 | 0.020585 | 1 | 0.000079202 | 0.015158 | X |
| Strontium | 0.086082 | 1 | NA | 0.01490 | |
| Thallium | 0.85856 | 1 | NA | NA | |
| Tin | 0.26619 | 1 | NA | NA | |
| Tritium | 0.38146 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | 1 | NA | |
| Uranium-235 | 0.29902 | 1 | 0.25879 | 0.96702 | |
| Uranium-238 | 0.96943 | 1 | 0.97565 | 0.99081 | |
| Vanadium | 0.59247 | 1 | NA | NA | |
| Zinc | 0.0000023804 | 0.11111 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/GWBKLUHD

**Results of Inferential Statistical Tests**
**Landfill UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.000000029649 | 0.10179 | 0.00063738 | 0.0025829 | X |
| Americium-241 | 0.0092164 | 0.00028497 | 0.00034139 | 0.0018752 | X |
| Antimony | 0.092817 | 1 | NA | NA | |
| Arsenic | 0.000000012812 | 0.000012138 | NA | NA | X |
| Barium | 0 | 0.000085402 | 0 | 0.00000000067621 | X |
| Beryllium | 0.023463 | 0.32189 | NA | NA | X |
| Cadmium | 0.77911 | 1 | NA | NA | |
| Calcium | 0.075043 | 0.000000049240 | 0.000011757 | 0.00025277 | X |
| Cesium-137 | 0.071238 | 1 | 0.19951 | 0.18609 | |
| Cesium | 0.5 | 1 | NA | NA | |
| Chromium | 0.000015384 | 1 | 0.0000093398 | NA | X |
| Cobalt | 0.000085172 | 0.10267 | NA | NA | X |
| Copper | 0.000055366 | 0.10267 | NA | NA | X |
| Cyanide | 0.098752 | 1 | NA | NA | |
| Gross Alpha | 0.96130 | 1 | 1 | 0.97182 | |
| Gross Beta | 0.89672 | 1 | 1 | 0.94348 | |
| Iron | 0 | 0.0030818 | 0.000000011946 | 0.0000029729 | X |
| Lead | 0.00023639 | 0.011691 | 0.0016133 | NA | X |
| Lithium | 0.017501 | 1 | NA | NA | X |
| Magnesium | 0.0074286 | 0.00000061849 | 0.000011757 | 0.000073873 | X |
| Manganese | 0 | 1.8426E-11 | 0 | 0.00000039193 | X |
| Mercury | 0.0096964 | 0.00096683 | NA | NA | X |
| Molybdenum | 0.24148 | 1 | NA | NA | |
| Nickel | 0.00000021210 | 1 | NA | NA | X |
| Nitrate/Nitrite | 0.48737 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/gwbkluht

**Results of Inferential Statistical Tests**
**Landfill UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.00149461 | 1 | NA | NA | X |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 9.9791E-12 | 0.0000021551 | NA | NA | X |
| Radium-226 | 0.047790 | 0.25 | 0.46429 | 0.16870 | X |
| Selenium | 0.99834 | 1 | NA | NA | |
| Silicon | 0.000014014 | 0.38571 | 0.021586 | 0.0056568 | X |
| Silver | 0.010811 | 0.10356 | NA | NA | X |
| Sodium | 0.0016273 | 0.0030818 | 0.19627 | 0.0030011 | X |
| Strontium-89,90 | 0.31063 | 1 | 0.44608 | 0.17942 | |
| Strontium | 0.012024 | 0.00085569 | 0.00093599 | 0.00056084 | X |
| Thallium | 0.5 | 1 | NA | NA | |
| Tin | 0.46446 | 1 | NA | NA | |
| Tritium | 0.017086 | 1 | 0.38907 | 0.65433 | X |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.96720 | 1 | 0.92601 | 0.99590 | |
| Uranium-238 | 0.82613 | 1 | 0.93514 | 0.69988 | |
| Vanadium | 0.00000032568 | 1 | NA | NA | X |
| Zinc | 0.000011932 | 0.031148 | 0.00082799 | NA | X |

NA = Statistical Test Not Applicable

OU7/gwbkluht

**Results of Inferential Statistical Tests**
**Downgradient UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.026057 | 1 | NA | NA | X |
| Americium-241 | 0.67264 | 1 | 1 | NA | |
| Antimony | 0.26064 | 0.12375 | NA | NA | |
| Arsenic | 0.58075 | 1 | NA | NA | |
| Barium | 1 | 1 | NA | NA | |
| Beryllium | 0.59793 | 1 | NA | NA | |
| Cadmium | 0.82352 | 1 | NA | NA | |
| Calcium | 0 | 0.013996 | 0 | 1.3323E-15 | X |
| Cesium-137 | 0.31826 | 1 | 0.38676 | 0.46290 | |
| Cesium | 0.95706 | 1 | NA | NA | |
| Chromium | 0.31826 | 0.12252 | NA | NA | |
| Cobalt | 0.67916 | 1 | NA | NA | |
| Copper | 0.51169 | 1 | NA | NA | |
| Gross Alpha | 0.00061702 | 1 | 0.16189 | NA | X |
| Gross Beta | 0.000045536 | 1 | 0.000040417 | NA | X |
| Iron | 0.69547 | 1 | NA | NA | |
| Lead | 0.91740 | 1 | NA | NA | |
| Lithium | 2.2204E-16 | 1 | NA | NA | X |
| Magnesium | 0 | 0.0000021419 | 0 | 1.80973-14 | X |
| Manganese | 0.0013495 | 1 | NA | NA | X |
| Mercury | 0.14273 | 1 | NA | NA | |
| Molybdenum | 0.24795 | 1 | NA | NA | |
| Nickel | 0.0022320 | 0.016228 | NA | NA | X |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 1.5765E-14 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/GWBKDUHD

**Results of Inferential Statistical Tests**
**Downgradient UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-226 | 0.00086672 | 0.0012869 | 0.0000070433 | 0.00031065 | X |
| Radium-228 | 0.93319 | 1 | 1 | NA | |
| Selenium | 0.000038210 | 1 | NA | NA | X |
| Silicon | 1 | 1 | NA | NA | |
| Silver | 0.34924 | 1 | NA | NA | |
| Sodium | 0 | 1.0469E-13 | 0 | 0.00000000024963 | X |
| Strontium-89,90 | 0.25954 | 0.057692 | 0.069181 | NA | |
| Strontium | 0 | 1 | 0 | 2.1094E-15 | X |
| Thallium | 0.74361 | 1 | NA | NA | |
| Tin | 0.24366 | 1 | NA | NA | |
| Tritium | 0.5 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.000048735 | 1 | 0.0010559 | 0.27295 | X |
| Uranium-238 | 0.0000020125 | 1 | 0.029395 | 0.38882 | X |
| Vanadium | 0.023790 | 1 | NA | NA | X |
| Zinc | 0.019858 | 1 | NA | NA | X |

NA = Statistical Test Not Applicable

OU7/GWBKDUHD

**Results of Inferential Statistical Tests**
**Downgradient UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.89438 | 1 | 1 | NA | |
| Americium-241 | 0.79683 | 1 | 0.65236 | 0.85957 | |
| Antimony | 0.026864 | 1 | NA | NA | X |
| Arsenic | 0.067613 | 1 | NA | NA | |
| Barium | 0.99998 | 1 | NA | NA | |
| Beryllium | 0.81507 | 1 | NA | NA | |
| Cadmium | 0.72433 | 1 | NA | NA | |
| Calcium | 0.000000012955 | 1 | 0.0000000099542 | NA | X |
| Cesium-137 | 0.80660 | 1 | 0.63803 | NA | |
| Cesium | 0.5 | 1 | NA | NA | |
| Chromium | 0.34079 | 1 | NA | NA | |
| Cobalt | 0.75956 | 1 | NA | NA | |
| Copper | 0.77311 | 1 | NA | NA | |
| Cyanide | 0.68426 | 1 | NA | NA | |
| Gross Alpha | 0.95168 | 1 | 1 | NA | |
| Gross Beta | 0.78661 | 1 | 1 | NA | |
| Lead | 0.99150 | 1 | NA | NA | |
| Lithium | 0.00000000028271 | 1 | NA | NA | X |
| Magnesium | 0.000000046701 | 1 | 0.00000034408 | NA | X |
| Manganese | 0.85085 | 1 | 1 | NA | |
| Mercury | 0.71863 | 1 | NA | NA | |
| Molybdenum | 0.47676 | 1 | NA | NA | |
| Nickel | 0.69649 | 1 | NA | NA | |
| Nitrate/Nitrite | 0.0000016376 | 1 | NA | NA | X |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |

NA = Statistical Test Not Applicable

OU7/GWBKDUHT

**Results of Inferential Statistical Tests**
**Downgradient UHSU Groundwater vs. Sitewide Background UHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Potassium | 0.000000037714 | 1 | NA | NA | X |
| Radium-226 | 0.20092 | 1 | 0.46429 | 0.21028 | |
| Selenium | 0.00082587 | 0.0000012255 | NA | NA | X |
| Silicon | 0.99987 | 1 | 1 | NA | |
| Silver | 0.37510 | 1 | NA | NA | |
| Sodium | 0.00000053036 | 0.00000068952 | 0.0000019822 | NA | X |
| Strontium-89,90 | 0.33999 | 1 | 0.49947 | 0.0069390 | X |
| Strontium | 0.000000033767 | 0.071429 | 0.0000017105 | NA | X |
| Thallium | 0.67415 | 1 | NA | NA | |
| Tin | 0.69929 | 1 | NA | NA | |
| Tritium | 0.82834 | 1 | 0.99955 | 0.86311 | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.018439 | 1 | 0.18025 | 0.053317 | X |
| Uranium-238 | 0.019648 | 1 | 0.056001 | 0.024563 | X |
| Vanadium | 0.10315 | 1 | NA | NA | |
| Zinc | 0.80765 | 1 | 0.94232 | NA | |

NA = Statistical Test Not Applicable

OU7/GWBKDUHT

**Results of Inferential Statistical Tests**
**Upgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.17466 | 1 | NA | NA | |
| Americium-241 | 1 | 1 | NA | NA | |
| Antimony | 0.88865 | 1 | NA | NA | |
| Arsenic | 0.77336 | 0.13169 | NA | NA | |
| Barium | 0.071065 | 1 | NA | 0.034572 | X |
| Beryllium | NA | 1 | NA | NA | |
| Cadmium | 0.33245 | 1 | NA | NA | |
| Calcium | 0.010024 | 1 | 0.84097 | 0.76954 | X |
| Cesium | 0.44169 | 1 | NA | NA | |
| Cesium-137 | 0.32171 | 0.66667 | 0.93333 | 0.48041 | |
| Chromium | 0.92402 | 1 | NA | NA | |
| Cobalt | 0.20972 | 1 | NA | NA | |
| Copper | 0.10656 | 0.35211 | NA | NA | |
| Gross Alpha | 0.00038809 | 1 | 0.016863 | NA | X |
| Gross Beta | 0.050510 | 1 | 0.49281 | NA | |
| Iron | 0.27546 | 1 | NA | NA | |
| Lead | 0.68325 | 1 | NA | NA | |
| Lithium | 0.99959 | 1 | NA | 1.00000 | |
| Magnesium | 0.0016571 | 1 | 0.84097 | 0.42279 | X |
| Manganese | 0.00000032996 | 0.0000052610 | 0.000066031 | 0.000032323 | X |
| Mercury | 0.92195 | 1 | NA | NA | |
| Molybdenum | 0.031475 | 0.35211 | NA | NA | X |
| Nickel | 0.043301 | 1 | NA | NA | X |
| Potassium | 0.93227 | 1 | NA | 0.94471 | |
| Radium-226 | 0.96986 | 1 | 1 | NA | |
| Selenium | 0.60192 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/gwbkuhld

**Results of Inferential Statistical Tests**
**Upgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Silicon | 0.99993 | 1 | NA | NA | |
| Silver | 0.37342 | 1 | NA | NA | |
| Sodium | 1 | 1 | 1 | 1.00000 | |
| Strontium-89,90 | 0.42256 | 1 | 0.96298 | 0.16945 | |
| Strontium | 0.96091 | 1 | 0.99925 | 0.99776 | |
| Thallium | NA | 1 | NA | NA | |
| Tin | 0.85101 | 1 | NA | NA | |
| Tritium | 0.37480 | 1 | 1 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.015138 | 0.038630 | 0.051217 | 0.017247 | X |
| Uranium-238 | 0.00017409 | 1 | 0.061492 | 0.062593 | X |
| Vanadium | 0.67622 | 1 | NA | NA | |
| Zinc | 0.62748 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/gwbkuhld

**Results of Inferential Statistical Tests**
**Upgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.000031232 | 0.0030450 | 0.018956 | NA | X |
| Americium-241 | 0.50716 | 1 | 0.80674 | 0.87195 | |
| Antimony | 0.43165 | 1 | NA | NA | |
| Arsenic | 0.40669 | 0.18659 | NA | NA | |
| Barium | 0.0093523 | 1 | 0.045679 | NA | X |
| Beryllium | 0.17231 | 1 | NA | NA | |
| Cadmium | 0.48745 | 1 | NA | NA | |
| Calcium | 0.0066709 | 1 | 0.68823 | NA | X |
| Cesium-137 | 0.25673 | 1 | 0.79213 | 0.038994 | X |
| Cesium | NA | 1 | NA | NA | |
| Chromium | 0.0018920 | 1 | 0.094671 | NA | X |
| Cobalt | 0.35940 | 1 | NA | NA | |
| Copper | 0.041296 | 1 | 0.28687 | NA | X |
| Gross Alpha | 0.93319 | 1 | 1 | NA | |
| Gross Beta | 0.93319 | 1 | 1 | NA | |
| Iron | 0.000098935 | 0.0089009 | 0.094671 | NA | X |
| Lead | 0.00066237 | 0.024795 | 0.094671 | NA | X |
| Lithium | 0.99668 | 1 | NA | NA | |
| Magnesium | 0.0029811 | 0.41860 | 0.83143 | NA | X |
| Manganese | 0.00052743 | 1 | 0.094671 | 0.00036552 | X |
| Mercury | 0.018308 | 0.066121 | NA | NA | X |
| Molybdenum | 0.011649 | 1 | NA | NA | X |
| Nickel | 0.10903 | 1 | NA | NA | |
| Nitrate/Nitrite | 0.86126 | 1 | NA | NA | |
| Nitrite | 0.81844 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/gwbkulht

**Results of Inferential Statistical Tests**
**Upgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.014892 | 0.024795 | 0.57517 | NA | X |
| Radium-226 | 0.67264 | 1 | 1 | NA | |
| Radium-228 | 0.97725 | 1 | NA | NA | |
| Selenium | 0.24057 | 1 | NA | NA | |
| Silicon | 0.0018979 | 0.036782 | 0.13640 | NA | X |
| Silver | 0.67723 | 1 | NA | NA | |
| Sodium | 1.0000 | 1 | 1 | NA | |
| Strontium-89,90 | 0.32171 | 0.33333 | 0.6 | 0.34398 | |
| Strontium | 0.75081 | 1 | 0.83143 | NA | |
| Thallium | 0.28219 | 1 | NA | NA | |
| Tin | 0.46633 | 1 | NA | NA | |
| Tritium | 0.32499 | 1 | 0.41249 | 0.99986 | |
| Uranium-233,234 | 0.5 | 1 | 1 | NA | |
| Uranium-235 | 0.5 | 1 | 1 | NA | |
| Uranium-238 | 0.5 | 1 | 1 | NA | |
| Vanadium | 0.0016418 | 1 | NA | NA | X |
| Zinc | 0.17103 | 1 | 0.57517 | 0.071638 | |

NA = Statistical Test Not Applicable

OU7/gwbkulht

**Results of Inferential Statistical Tests**
**Downgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.019072 | 0.22951 | NA | NA | X |
| Americium-241 | 1 | 1 | NA | NA | |
| Antimony | 0.074350 | 0.23729 | NA | NA | |
| Arsenic | 0.73876 | 1 | NA | NA | |
| Barium | 0.0000000040204 | 5.2232E-11 | NA | 0.0000024043 | X |
| Beryllium | 0.030601 | 1 | NA | NA | X |
| Cadmium | 0.042087 | 0.24138 | NA | NA | X |
| Calcium | 0.00000014696 | 1.6761E-12 | 1.6851E-12 | NA | X |
| Cesium-137 | 0.5 | 1 | 1 | NA | |
| Cesium | 0.34996 | 1 | NA | NA | |
| Chromium | 0.0000034447 | 0.010637 | NA | NA | X |
| Cobalt | 0.012944 | 1 | NA | NA | X |
| Copper | 0.00048172 | 1 | NA | NA | X |
| Gross Alpha | 0.0020847 | 1 | 0.015344 | 0.00059775 | X |
| Gross Beta | 0.00048323 | 0.00033038 | 0.0054623 | 0.0016860 | X |
| Iron | 0.18712 | 0.22581 | NA | NA | |
| Lead | 0.30742 | 1 | NA | NA | |
| Lithium | 0.000049582 | 0.049727 | NA | NA | X |
| Magnesium | 0.0047090 | 0.0000069785 | 0.00066793 | NA | X |
| Manganese | 0.017315 | 0.000048850 | 0.0057371 | NA | X |
| Mercury | 0.86144 | 1 | NA | NA | |
| Molybdenum | 0.00028198 | 1 | NA | NA | X |
| Nickel | 0.00038957 | 0.049727 | NA | NA | X |
| Potassium | 0.00000016114 | 4.2118E-11 | 0.00000000052743 | NA | X |
| Radium-226 | 0.74751 | 0.75 | 0.96429 | 0.77981 | |

NA = Statistical Test Not Applicable

OU7/GWBKDLHD

**Results of Inferential Statistical Tests**
**Downgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Dissolved)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Radium-228 | 0.95837 | 1 | NA | NA | |
| Selenium | 0.039728 | 0.071373 | NA | NA | X |
| Silicon | 1.00000 | 1 | NA | NA | |
| Silver | 0.0030963 | 1 | NA | NA | X |
| Sodium | 0.0000020616 | 0.0017944 | 0.0000021338 | NA | X |
| Strontium-89,90 | 0.44306 | 1 | 0.51533 | 0.081293 | |
| Strontium | 0.00000018418 | 1.6761E-12 | 1.6851E-12 | NA | X |
| Thallium | 0.030601 | 1 | NA | NA | X |
| Tin | 0.021797 | 1 | NA | NA | X |
| Tritium | 0.67209 | 1 | 1 | 0.61081 | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.65151 | 1 | 0.49189 | 0.76442 | |
| Uranium-238 | 0.020517 | 1 | 0.22308 | 0.38093 | X |
| Vanadium | 0.050533 | 1 | NA | NA | |
| Zinc | 0.10832 | 0.22581 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/GWBKDLHD

## Results of Inferential Statistical Tests
## Downgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater
## (Totals)
## P-Values

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Aluminum | 0.27076 | 1 | 1 | NA | |
| Americium-241 | 0.58676 | 1 | 1 | 0.25199 | |
| Antimony | 0.16190 | 1 | NA | NA | |
| Arsenic | 0.5 | 1 | NA | NA | |
| Barium | 0.043706 | 1 | NA | NA | X |
| Beryllium | 0.57926 | 1 | NA | NA | |
| Cadmium | 0.57674 | 1 | NA | NA | |
| Calcium | 0.047734 | 0.038462 | 0.23077 | NA | X |
| Cesium-137 | 0.077272 | 1 | 0.21429 | NA | |
| Cesium | NA | 1 | NA | NA | |
| Chromium | 0.014711 | 1 | NA | NA | X |
| Cobalt | 0.57366 | 1 | NA | NA | |
| Copper | 0.32580 | 1 | NA | NA | |
| Cyanide | 0.5 | 1 | NA | NA | |
| Gross Alpha | 0.5 | 1 | 1 | NA | |
| Gross Beta | 0.5 | 1 | 1 | NA | |
| Iron | 0.36877 | 1 | 1 | NA | |
| Lead | 0.30030 | 1 | 1 | NA | |
| Lithium | 0.17622 | 1 | NA | NA | |
| Magnesium | 0.038578 | 0.038462 | 0.23077 | NA | X |
| Manganese | 0.19266 | 1 | 1 | NA | |
| Mercury | NA | 1 | NA | NA | |
| Molybdenum | 0.057571 | 1 | NA | NA | |
| Nickel | 0.00092843 | 1 | NA | NA | X |
| Nitrate/Nitrite | 0.16033 | 1 | NA | NA | |

NA = Statistical Test Not Applicable

OU7/gwbkdlht

**Results of Inferential Statistical Tests**
**Downgradient LHSU Groundwater vs. Sitewide Background LHSU Groundwater**
**(Totals)**
**P-Values**

| Analyte | Gehan | Slippage | Quantile | T-test | PCOC (<0.05) |
|---|---|---|---|---|---|
| Nitrite | 0.69824 | 1 | NA | NA | |
| Plutonium-239,240 | 0.5 | 1 | 1 | NA | |
| Potassium | 0.050706 | 1 | 0.23077 | NA | |
| Radium-226 | 0.089856 | 0.25 | 0.25 | NA | |
| Selenium | 0.00031661 | 1 | NA | NA | X |
| Silicon | 0.5 | 1 | 1 | NA | |
| Silver | 0.58087 | 1 | NA | NA | |
| Sodium | 0.047790 | 0.038462 | 0.23077 | NA | X |
| Strontium-89,90 | 0.5 | 1 | 1 | NA | |
| Strontium | 0.047790 | 0.038462 | 0.23077 | NA | X |
| Thallium | 0.5 | 1 | NA | NA | |
| Tin | 0.5 | 1 | NA | NA | |
| Tritium | 0.32499 | 1 | 0.72384 | NA | |
| Uranium-233,234 | 0.5 | 1 | NA | NA | |
| Uranium-235 | 0.078650 | 0.2 | 0.2 | NA | |
| Uranium-238 | 0.11034 | 0.33333 | 0.33333 | NA | |
| Vanadium | 0.27063 | 1 | NA | NA | |
| Zinc | 0.52679 | 1 | 1 | NA | |

NA = Statistical Test Not Applicable

OU7/gwbkdlht

# Hot Measurement Test

## HOT MEASUREMENT TEST

The hot measurement test compares site concentrations against background upper tolerance interval of the 99th percentile at the 99-percent confidence level ($UTL_{99/99}$) concentrations for total and dissolved analytes. Test results for groundwater samples are included on the Appendix M disk. The files are self-extracting, compressed, text files. To "decompress" the data, copy the files to a hard drive and type the file name followed by a Return. The names and contents of the files are:

| | |
|---|---|
| GWHOTLH.EXE | Lower hydrostratigraphic unit |
| GWHOTLHD.TXT | Dissolved analytes |
| GWHOTLHT.TXT | Total Analytes |
| GWHOTUH.EXE | Upper hydrostratigraphic unit |
| GWHOTUHD.TXT | Dissolved analytes |
| GWHOTUHT.TXT | Total analytes |

# Statistics Used to Generate Isoconcentration Maps

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Lower Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| **Average Dissolved Americium-241** | | |
| 986 | 0.039 | 2/16 |
| 70293 | 0.01 | 2/16 |
| 70593 | 0.005 | 2/16 |
| B207189 | 0.004 | 1/16 |
| | | |
| **Average Dissolved Uranium-238** | | |
| 886 | 1.553 | 5/16 |
| 986 | 0.637 | 12/16 |
| 4187 | 1.14 | 11/16 |
| 70293 | 3.165 | 3/16 |
| 70593 | 2.086 | 2/16 |
| B207189 | 0.432 | 6/16 |
| | | |
| **Average Detected Total VOCs** | | |
| 886 | 15.2 | 5/16 |
| 986 | 14.667 | 3/16 |
| 4187 | 4.333 | 6/16 |
| 70893 | 36 | 1/16 |
| B207189 | 8.667 | 3/16 |
| | | |
| **Average Total Radium-226** | | |
| 986 | 0.34 | 1/16 |
| 4187 | 1.5 | 1/16 |
| | | |
| **Average Total Americium-241** | | |
| 986 | 0.005 | 9/16 |
| 70293 | 0.003 | 3/16 |
| 70593 | 0.007 | 2/16 |
| B207189 | 0.005 | 2/16 |
| | | |
| **Average NO3/NO2** | | |
| 886 | 1800 | 10/16 |
| 986 | 216.7 | 6/16 |
| 4187 | 1270 | 10/16 |
| 70293 | 1820 | 1/16 |
| 70593 | 0 | 0/16 |
| 70893 | 260 | 1/16 |
| B207189 | 235 | 4/16 |
| | | |
| **Average TDS** | | |
| 886 | 288000 | 11/16 |
| 986 | 286615.385 | 13/16 |
| 4187 | 1884545.455 | 11/16 |
| 70293 | 197777.778 | 3/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Lower Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 70593 | 240000 | 2/16 |
| 70893 | 435000 | 2/16 |
| B207189 | 1687500 | 8/16 |
| | | |
| **Average Detected BTEX Compounds** | | |
| 886 | 3 | 2/16 |
| 986 | 5 | 1/16 |
| 4187 | 1 | 3/16 |
| 70293 | 0 | 0/16 |
| 70593 | 0 | 0/16 |
| 70893 | 0 | 0/16 |
| B207189 | 0 | 0/16 |
| | | |
| **Average Dissolved Uranium-235** | | |
| 886 | 0.05 | 5/16 |
| 986 | 0.053 | 11/16 |
| 4187 | 0.037 | 10/16 |
| 70293 | 0.5 | 2/16 |
| 70593 | 0.272 | 2/16 |
| B207189 | 0.017 | 7/16 |
| | | |
| **Average Detected Chlorinated Hydrocarbons** | | |
| 886 | 17.7 | 3/16 |
| 986 | 7.5 | 2/16 |
| 4187 | 4.6 | 5/16 |
| 70293 | 0 | 0/16 |
| 70593 | 0 | 0/16 |
| 70893 | 0 | 0/16 |
| B207189 | 8.7 | 3/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| **Average Detected SVOCs** | | |
| 70093 | 4 | 1/16 |
| 70693 | 21 | 1/16 |
| 71193 | 7.5 | 2/16 |
| 71493 | 2.25 | 2/16 |
| 71693 | 25 | 1/16 |
| 71893 | 2.75 | 2/16 |
| 72093 | 33.667 | 1/16 |
| 72293 | 710.444 | 3/16 |
| 72393 | 716.778 | 3/16 |
| | | |
| **Average Total Uranium-235** | | |
| 1086 | 0.06 | 1/16 |
| 4087 | 0.593 | 1/16 |
| 4287 | 0.796 | 1/16 |
| 6087 | 0.09 | 2/16 |
| 6187 | -0.1 | 1/16 |
| 6287 | 0 | 0/16 |
| 6687 | 0 | 0/16 |
| 6787 | 0 | 0/16 |
| 6887 | 0.1 | 1/16 |
| 70493 | 0.236 | 1/16 |
| 70693 | 0.04 | 1/16 |
| 71193 | 0 | 0/16 |
| 71493 | 0.041 | 1/16 |
| 7187 | 0.08 | 1/16 |
| 7287 | 0.1 | 1/16 |
| B106089 | 0.068 | 2/16 |
| B206189 | 0.44 | 1/16 |
| B206289 | 0.477 | 3/16 |
| B206489 | 0.181 | 2/16 |
| B206589 | 1.092 | 3/16 |
| B206889 | 2.62 | 1/16 |
| B207089 | 0.351 | 1/16 |
| | | |
| **Average Dissolved Uranium-238** | | |
| 786 | 18.42 | 2/16 |
| 1086 | 0.096 | 12/16 |
| 4087 | 14.347 | 3/16 |
| 4287 | 2.831 | 4/16 |
| 5887 | 0.083 | 13/16 |
| 6087 | 0.077 | 12/16 |
| 6187 | 0.167 | 8/16 |
| 6287 | 0.141 | 10/16 |
| 6387 | 0.888 | 9/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 6487 | 0.495 | 11/16 |
| 6587 | 0.358 | 9/16 |
| 6687 | 0.386 | 12/16 |
| 6787 | 0.156 | 7/16 |
| 6887 | 0.129 | 11/16 |
| 70093 | 0.41 | 3/16 |
| 70193 | 0.426 | 3/16 |
| 70393 | 0.31 | 3/16 |
| 70493 | 2.028 | 3/16 |
| 70693 | 0.386 | 3/16 |
| 7087 | 6.643 | 6/16 |
| 71193 | 0.977 | 3/16 |
| 71493 | 1.773 | 3/16 |
| 71693 | 0.84 | 1/16 |
| 7187 | 0.48 | 13/16 |
| 71893 | 0.536 | 3/16 |
| 72093 | 1.631 | 2/16 |
| 72293 | 0.712 | 3/16 |
| 72393 | 0.593 | 3/16 |
| 7287 | 0.729 | 11/16 |
| B106089 | 0.789 | 5/16 |
| B206189 | 9.62 | 10/16 |
| B206289 | 0.859 | 10/16 |
| B206389 | 5.669 | 7/16 |
| B206489 | 2.06 | 6/16 |
| B206589 | 19.989 | 12/16 |
| B206689 | 14.115 | 6/16 |
| B206789 | 2.774 | 9/16 |
| B206889 | 29.81 | 1/16 |
| B207089 | 1.112 | 10/16 |
| | | |
| Average Total Americium-241 | | |
| 1086 | 0.004 | 14/16 |
| 4087 | 0.002 | 1/16 |
| 4287 | 0.005 | 4/16 |
| 5887 | 0.004 | 12/16 |
| 6087 | 0.006 | 12/16 |
| 6187 | 0.004 | 10/16 |
| 6287 | 0.007 | 8/16 |
| 6387 | 0.069 | 9/16 |
| 6487 | 0.005 | 10/16 |
| 6587 | 0.039 | 10/16 |
| 6687 | 0.011 | 5/16 |
| 6787 | 0.008 | 8/16 |
| 6887 | 0.005 | 10/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 70093 | 0.007 | 3/16 |
| 70193 | 0.007 | 3/16 |
| 70393 | 0.004 | 3/16 |
| 70493 | 0.003 | 3/16 |
| 70693 | 0.013 | 2/16 |
| 7087 | 0.004 | 2/16 |
| 71193 | 0.005 | 1/16 |
| 71493 | 0.005 | 1/16 |
| 71693 | 0.006 | 1/16 |
| 7187 | 0.01 | 12/16 |
| 71893 | 0.006 | 3/16 |
| 72093 | 0.172 | 3/16 |
| 72293 | 0.011 | 2/16 |
| 72393 | 0.087 | 3/16 |
| 7287 | 0.005 | 9/16 |
| B106089 | 0.002 | 3/16 |
| B206189 | 0.008 | 10/16 |
| B206289 | 0.014 | 2/16 |
| B206389 | 0.002 | 4/16 |
| B206489 | 0.005 | 2/16 |
| B206589 | 0.009 | 12/16 |
| B206789 | -0.433 | 1/16 |
| B207089 | 0.004 | 10/16 |
| | | |
| Average NO3/NO2 | | |
| 786 | 86.667 | 3/16 |
| 1086 | 3154.545 | 11/16 |
| 4087 | 290 | 3/16 |
| 4287 | 97.5 | 4/16 |
| 5887 | 3571.429 | 14/16 |
| 6087 | 6214.286 | 14/16 |
| 6187 | 5375 | 12/16 |
| 6287 | 5700 | 11/16 |
| 6387 | 145 | 4/16 |
| 6487 | 91.667 | 6/16 |
| 6587 | 5190.909 | 11/16 |
| 6687 | 5450 | 12/16 |
| 6787 | 3785.714 | 7/16 |
| 6887 | 3632.143 | 14/16 |
| 70093 | 3066.667 | 1/16 |
| 70193 | 1573.333 | 1/16 |
| 70393 | 3100 | 1/16 |
| 70493 | 1966.667 | 1/16 |
| 70693 | 6550 | 1/16 |
| 7087 | 4260 | 10/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 71193 | 0 | 0/16 |
| 71493 | 270 | 1/16 |
| 7187 | 2120 | 10/16 |
| 71893 | 850 | 1/16 |
| 72093 | 0 | 0/16 |
| 72293 | 0 | 0/16 |
| 72393 | 0 | 0/16 |
| 7287 | 1140 | 11/16 |
| B106089 | 1218.889 | 9/16 |
| B206189 | 238.75 | 8/16 |
| B206289 | 207.273 | 11/16 |
| B206389 | 250 | 2/16 |
| B206489 | 1217.778 | 9/16 |
| B206589 | 448.182 | 11/16 |
| B206689 | 818 | 10/16 |
| B206789 | 6661.538 | 13/16 |
| B206889 | 160250 | 8/16 |
| B206989 | 50750 | 4/16 |
| B207089 | 1101.818 | 11/16 |
| | | |
| **Average Dissolved Americium-241** | | |
| 1086 | 0.013 | 1/16 |
| 5887 | 0.002 | 1/16 |
| 6087 | 0.007 | 1/16 |
| 6187 | 0.002 | 1/16 |
| 6287 | 0.006 | 1/16 |
| 6387 | 0.009 | 1/16 |
| 6487 | 0.01 | 1/16 |
| 6787 | 0.047 | 1/16 |
| 6887 | 0.001 | 1/16 |
| 70093 | 0.001 | 2/16 |
| 70193 | 0.006 | 2/16 |
| 70393 | 0.01 | 2/16 |
| 70493 | 0.007 | 2/16 |
| 70693 | 0.005 | 2/16 |
| 71193 | 0.002 | 1/16 |
| 71693 | 0.004 | 1/16 |
| 7187 | 0.02 | 1/16 |
| 71893 | 0.003 | 2/16 |
| 72093 | 0.013 | 2/16 |
| 72293 | 0.051 | 1/16 |
| 72393 | 0.025 | 2/16 |
| 7287 | -0.005 | 1/16 |
| B207089 | 0.008 | 1/16 |
| | | |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| **Average Total Uranium-238** | | |
| 1086 | 0.06 | 1/16 |
| 4087 | 13.23 | 1/16 |
| 4287 | 3.683 | 1/16 |
| 5887 | 0.1 | 1/16 |
| 6087 | 0.175 | 2/16 |
| 6187 | 0 | 0/16 |
| 6287 | 0 | 0/16 |
| 6687 | 0.82 | 1/16 |
| 6787 | 0.14 | 1/16 |
| 6887 | 0.54 | 1/16 |
| 70493 | 1.693 | 1/16 |
| 70693 | 1 | 1/16 |
| 71193 | 1.2 | 1/16 |
| 71493 | 2.1 | 1/16 |
| 7187 | 0.5 | 1/16 |
| 7287 | 0.7 | 1/16 |
| B106089 | 0.568 | 2/16 |
| B206189 | 10.41 | 1/16 |
| B206289 | 7.519 | 3/16 |
| B206489 | 2.535 | 2/16 |
| B206589 | 13.423 | 3/16 |
| B206889 | 32.63 | 2/16 |
| B207089 | 1.58 | 1/16 |
| | | |
| **Average TDS** | | |
| 786 | 1583333.333 | 3/16 |
| 1086 | 138090.909 | 11/16 |
| 4087 | 1120000 | 5/16 |
| 4287 | 327333.333 | 6/16 |
| 5887 | 161285.714 | 14/16 |
| 6087 | 243428.571 | 14/16 |
| 6187 | 155666.667 | 12/16 |
| 6287 | 167272.727 | 11/16 |
| 6387 | 528000 | 10/16 |
| 6487 | 324785.714 | 14/16 |
| 6587 | 226666.667 | 12/16 |
| 6687 | 446307.692 | 13/16 |
| 6787 | 178571.429 | 7/16 |
| 6887 | 203000 | 14/16 |
| 70093 | 170000 | 3/16 |
| 70193 | 244444.444 | 3/16 |
| 70393 | 208888.889 | 3/16 |
| 70493 | 226666.667 | 3/16 |
| 70693 | 405000 | 2/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 7087 | 507222.222 | 9/16 |
| 71193 | 191111.111 | 3/16 |
| 71493 | 176666.667 | 3/16 |
| 71693 | 450000 | 1/16 |
| 7187 | 274600 | 10/16 |
| 71893 | 250000 | 3/16 |
| 72093 | 1355555.556 | 3/16 |
| 72293 | 2211111.111 | 3/16 |
| 72393 | 1283333.334 | 2/16 |
| 7287 | 338181.818 | 11/16 |
| B106089 | 334444.444 | 9/16 |
| B206189 | 752909.091 | 11/16 |
| B206289 | 371846.154 | 13/16 |
| B206389 | 672500 | 8/16 |
| B206489 | 359800 | 10/16 |
| B206589 | 634846.154 | 13/16 |
| B206689 | 555333.333 | 12/16 |
| B206789 | 1206923.077 | 13/16 |
| B206889 | 3630000 | 2/16 |
| B206989 | 5100000 | 1/16 |
| B207089 | 1993333.333 | 12/16 |
| | | |
| **Average Dissolved Uranium-235** | | |
| 786 | 0.713 | 2/16 |
| 1086 | 0.038 | 10/16 |
| 4087 | 0.516 | 3/16 |
| 4287 | 0.137 | 4/16 |
| 5887 | 0.044 | 11/16 |
| 6087 | 0.021 | 9/16 |
| 6187 | 0.01 | 9/16 |
| 6287 | 0.051 | 9/16 |
| 6387 | 0.059 | 8/16 |
| 6487 | 0.076 | 9/16 |
| 6587 | 0.044 | 7/16 |
| 6687 | 0.038 | 9/16 |
| 6787 | 0.038 | 5/16 |
| 6887 | 0.017 | 10/16 |
| 70093 | 0.033 | 3/16 |
| 70193 | 0.053 | 3/16 |
| 70393 | 0.043 | 3/16 |
| 70493 | 0.079 | 3/16 |
| 70693 | 0.043 | 3/16 |
| 7087 | 0.284 | 6/16 |
| 71193 | 0.032 | 3/16 |
| 71493 | 0.166 | 3/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 71693 | 0.115 | 1/16 |
| 7187 | 0.045 | 11/16 |
| 71893 | 0.08 | 3/16 |
| 72093 | 0.157 | 2/16 |
| 72293 | 0.196 | 2/16 |
| 72393 | 0.058 | 3/16 |
| 7287 | 0.041 | 11/16 |
| B106089 | 0.098 | 5/16 |
| B206189 | 0.5 | 10/16 |
| B206289 | 0.105 | 7/16 |
| B206389 | 0.315 | 7/16 |
| B206489 | 0.146 | 6/16 |
| B206589 | 0.917 | 12/16 |
| B206689 | 0.566 | 6/16 |
| B206789 | 0.186 | 9/16 |
| B206889 | 0.92 | 1/16 |
| B207089 | 0.065 | 9/16 |
| | | |
| **Average Total Radium-226** | | |
| 6887 | 1.32 | 1/16 |
| B206189 | 0.46 | 1/16 |
| B206489 | 0.36 | 1/16 |
| B206589 | 0.593 | 2/16 |
| B206789 | 0.87 | 1/16 |
| | | |
| **Average Detected BTEX Compounds** | | |
| 5887 | 99 | 1/16 |
| 6387 | 1.4 | 10/16 |
| 6487 | 16.614 | 7/16 |
| 6687 | 102 | 1/16 |
| 6787 | 0.1 | 1/16 |
| 7087 | 0.767 | 3/16 |
| 71193 | 6 | 1/16 |
| 71693 | 30 | 1/16 |
| 72093 | 14.5 | 2/16 |
| 72293 | 423.111 | 3/16 |
| 72393 | 345.222 | 3/16 |
| 7287 | 56 | 2/16 |
| B106089 | 29.7 | 4/16 |
| B206289 | 1 | 2/16 |
| B206389 | 4.75 | 4/16 |
| B206489 | 7.85 | 2/16 |
| B206589 | 1.95 | 2/16 |
| B206789 | 0.1 | 1/16 |
| B206889 | 6.8 | 1/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| B206989 | 1 | 1/16 |
| | | |
| **Average Dissolved Radium-226** | | |
| 1086 | 0.14 | 1/16 |
| 4287 | 0.418 | 1/16 |
| 5887 | 0.17 | 1/16 |
| 6087 | 0.295 | 2/16 |
| 6187 | 0.175 | 2/16 |
| 6287 | 0.23 | 2/16 |
| 6387 | 0.575 | 3/16 |
| 6487 | 1.158 | 5/16 |
| 6587 | 0.325 | 2/16 |
| 6687 | 0.19 | 1/16 |
| 6787 | 0.2 | 1/16 |
| 6887 | 0.22 | 2/16 |
| 7087 | 0.419 | 2/16 |
| 7187 | 0.32 | 1/16 |
| 72093 | 1.575 | 2/16 |
| 72293 | 1.35 | 1/16 |
| 72393 | 1.21 | 2/16 |
| 7287 | 0.295 | 2/16 |
| B206189 | 0.879 | 3/16 |
| B206389 | 1.668 | 6/16 |
| B206489 | 0.17 | 1/16 |
| B206589 | 0.515 | 12/16 |
| B206689 | 0.76 | 1/16 |
| B206789 | 0.133 | 1/16 |
| B207089 | 0.568 | 6/16 |
| | | |
| **Average Detected Chlorinated Hydrocarbons** | | |
| 786 | 1 | 1/16 |
| 1086 | 4 | 2/16 |
| 4087 | 1.5 | 2/16 |
| 4287 | 1 | 1/16 |
| 5887 | 2.76 | 10/16 |
| 6087 | 21 | 2/16 |
| 6287 | 3.5 | 2/16 |
| 6387 | 19.818 | 11/16 |
| 6487 | 29.8 | 14/16 |
| 6587 | 50.545 | 11/16 |
| 6687 | 46.357 | 14/16 |
| 6787 | 5.5 | 2/16 |
| 6887 | 13.48 | 5/16 |
| 70393 | 71.556 | 3/16 |
| 70493 | 3 | 1/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 70693 | 416.333 | 3/16 |
| 7087 | 2.54 | 5/16 |
| 71693 | 20 | 1/16 |
| 7187 | 17 | 2/16 |
| 71893 | 17.833 | 3/16 |
| 72293 | 12.25 | 2/16 |
| 72393 | 11.25 | 2/16 |
| 7287 | 67.615 | 13/16 |
| B106089 | 31.154 | 13/16 |
| B206189 | 4.25 | 8/16 |
| B206289 | 6.25 | 4/16 |
| B206389 | 277.857 | 7/16 |
| B206489 | 31.75 | 14/16 |
| B206589 | 1.5 | 2/16 |
| B206789 | 3 | 1/16 |
| B206889 | 6 | 2/16 |
| B206989 | 5.333 | 3/16 |
| B207089 | 7 | 3/16 |
| | | |
| Average Detected Total VOCs | | |
| 786 | 1 | 1/16 |
| 1086 | 4 | 2/16 |
| 4087 | 1.5 | 2/16 |
| 4287 | 1 | 1/16 |
| 5887 | 12.66 | 10/16 |
| 6087 | 19.333 | 3/16 |
| 6187 | 18 | 1/16 |
| 6287 | 3.5 | 2/16 |
| 6387 | 21.091 | 11/16 |
| 6487 | 41.536 | 14/16 |
| 6587 | 51 | 11/16 |
| 6687 | 53.643 | 14/16 |
| 6787 | 15.033 | 3/16 |
| 6887 | 14.067 | 6/16 |
| 70393 | 71.556 | 3/16 |
| 70493 | 3 | 1/16 |
| 70693 | 416.333 | 3/16 |
| 7087 | 4.571 | 7/16 |
| 71193 | 6 | 1/16 |
| 71693 | 50 | 1/16 |
| 7187 | 14 | 3/16 |
| 71893 | 17.833 | 3/16 |
| 72093 | 20.25 | 2/16 |
| 72293 | 730.556 | 3/16 |
| 72393 | 380.889 | 3/16 |

## Appendix M
## Statistics Used to Generate Isoconcentration Maps

| Upper Hydrostratographic Unit | | |
|---|---|---|
| Analyte | Concentration | Number of Detections |
| 7287 | 76.538 | 13/16 |
| B106089 | 43.215 | 13/16 |
| B206189 | 5.25 | 8/16 |
| B206289 | 9.833 | 6/16 |
| B206389 | 289.286 | 7/16 |
| B206489 | 36.229 | 14/16 |
| B206589 | 5.633 | 3/16 |
| B206689 | 9.5 | 2/16 |
| B206789 | 4.7 | 3/16 |
| B206889 | 10.7 | 4/16 |
| B206989 | 5.667 | 3/16 |
| B207089 | 5.75 | 4/16 |

# Summary Statistics

# Summary Statistics

## SUMMARY STATISTICS

Summary statistics were calculated for groundwater, pond-sediment, subsurface geologic materials, surface-soil, and surface-water data. All media were grouped by dissolved analyte and total analyte. Additional grouping, or aggregation, of data varied by medium.

**Data Aggregation**

| Medium | Data Aggregation for Summary Statistics |
|---|---|
| Groundwater | Individual wells |
| | Hydrostratigraphic unit |
| Pond Sediments | All locations combined |
| Subsurface Geologic Materials | Each individual hazardous substance site (IHSS) or area and geologic unit combination |
| Surface Soils | Each IHSS or area and sample interval combination |
| Surface Water | Individual locations |

Summary statistics are comprised of frequency of detects; maximum, minimum and mean concentration; standard deviation; and the upper tolerance interval of the 99th percentile at the 99-percent confidence level ($UTL_{99/99}$). All results identified as nondetects were assigned a new result value equal to one half the reported detection limit that was used in all calculations. General information about each analyte is also included in the output files.

### File Format

The results of the summary statistics calculations are reported in electronic format. The following self-extracting text files are on the diskette labeled Appendix M.

| | |
|---|---|
| Groundwater | GW_SUMST.EXE (contains GW_WELL.TEXT and GW_HSU.TEXT) |
| Pond Sediments | SD_SUMST.EXE |
| Subsurface Geologic Materials | BH_SUMST.EXE |
| Surface Soils | SS_SUMST.EXE |
| Surface Water | SW_SUMST.EXE |

The number and names of the first few columns vary depending on the aggregation criteria. The majority of the columns are identical for all files. "NC" is used to identify calculations that were not performed for a given analyte.

## Summary Statistics File-Column Descriptions

| Column Name | Media | Description |
|---|---|---|
| Location | Groundwater and surface-water data only | Denotes individual locations for which summary statistics were performed. |
| Hydrostratrigraphic Unit | Groundwater data only | Denotes the upper or lower hydrostratigraphic unit for which summary statistics were performed. |
| Area | Surface-soil and subsurface geologic material data only | Indicates the IHSS or area for which the data were aggregated. Areas for surface soil data are IHSS 114, IHSS 203, and East Landfill Pond. Areas for subsurface geologic material data are IHSS 114, upgradient, and downgradient. |
| Interval | Surface-soil data only | Indicates the sample depth interval (0 to 2 inches or 0 to 10 inches) used to aggregate data. |
| Geologic Unit | Subsurface geologic material data only | Specifies the geologic unit from which the samples were taken. |
| Analytical Category | All | A one letter code identifying the analytical category: M for metals; P for pesticides, herbicides and polychlorinated biphenyls (PCBs), R for radionuclides, S for semivolatile organic compounds, V for volatile organic compounds, and W for water-quality parameters. |
| Filtered/Unfiltered | All | Specifies filtered (dissolved) or unfiltered (total) samples. |
| Analyte Name | All | Specifies the name of the analyte as used in Rocky Flats Environmental Database System (RFEDS). |
| Range of Detection Limits | All | Indicates minimum and maximum values reported by the laboratory as the detection limit. This value may be the instrument, method, or contractor-required detection limit. |
| Frequency of Detects | All | Indicates the number of detects over the total number of results. If the number of detects is equal to 0, "NC" is placed in the following columns: mean result, standard deviation, K value, and $UTL_{99/99}$. |
| Percent Detects | All | Specifies the frequency of detects reported as a percentage of the total number of results. |
| Detects Qualified | All | Indicates the number of detects over the number of results with a laboratory qualifier or validation code indicating an estimated value. |
| Half Detection Limit Number | All | Indicates the number of nondetect results that were replaced with 1/2 the reported detection limit for purposes of calculating the mean. |
| Minimum Result | All | Specifies the minimum result for the analyte listed. |
| Maximum Result | All | Specifies the maximum result for the analyte listed. |
| Mean Result | All | Arithmetic mean calculated for the analyte listed. |
| Units | All | Unit of measure. |
| Standard Deviation | All | A measure of the variability of results around the mean. |
| K Value | All | The constant value used to calculate the $UTL_{99/99}$, (Hahn 1970). This constant was derived for populations of 4 or more. If the number of results is less than 4, "NC" is placed in this column. |
| $UTL_{99/99}$ | All | The upper tolerance interval of the 99th percentile at the 99-percent confidence level. If the K value cannot be determined for the population, "NC" is placed in this column. |
| Maximum Location | All | Denotes the location of the maximum result. |

Reference:

Hahn, G.J. 1970. "Statistical Intervals for a Normal Population. Part 1. Tables, Examples and Applications." *Journal of Quality Technology*, v. 2, n. 3, p. 115-125.

# Appendix N

# OU 7 Analytical Data

# OU 7 Revised Work Plan

## Appendix N
## OU 7 Analytical Data

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## OU 7 ANALYTICAL DATA

Analytical data for the Operable Unit (OU) No. 7 Phase I Resource Recovery and Conservation Act (RCRA) facility investigation/remedial investigation (RFI/RI) are included on one 3½-inch disk. The files are self-extracting, compressed, text files. To "decompress" the data, copy the files to a hard drive and type the file name followed by a Return.

The analytical data used in statistical tests are from all samples collected within the OU 7 boundaries between January 1990 and December 1993. Quality control (QC) sample and RCRA Appendix IX sample analytical data are from the Phase I RFI/RI only. The results, detection limits, and units reflect the internally consistent values contained in the working database. The names and contents of the files are:

| | |
|---|---|
| BH_DATA.EXE | Subsurface geologic materials data |
| GW_DATA.EXE | Groundwater data |
| SD_DATA.EXE | East Landfill Pond sediment data |
| SS_DATA.EXE | Surface-soil data |
| SW_DATA.EXE | Surface-water data |
| QC_DATA.EXE | QC sample data |
| APX9DATA.EXE | RCRA Appendix IX data |