

## **Appendix A5: Probability Plots of Heavy Metals and Trace Constituents from Full-Scale Column Tests**

This appendix contains probability plots for the heavy metal, and trace constituent, influent and effluent values from the long-term, full-column tests. These plots were created using SigmaPlot as it was necessary to correctly plot data series having missing observations. Values less than the laboratory detection limit are not substituted on these plots. As an example, if only 30% of the samples had observed values, the probability plots started at the 70<sup>th</sup> percentile. The concentrations were plotted using log<sub>10</sub>-transformed values as most of these constituents are likely log-normally distributed. As in Appendix A4, straight lines indicate good fits with normal distributions (but log-normal for these constituents), parallel plots indicate similar standard deviations, and well-separated plots indicated likely significant differences between influent and effluent concentrations.

These plots are organized by each of the following 29 constituents: the observations for each media column test for each constituent. The order of the constituents is as follows (all have observations for total and filtered forms shown, except for mercury as only total mercury was evaluated):

- Antimony, total and filtered
- Arsenic, total and filtered
- Aluminum, total and filtered
- Boron, total and filtered
- Calcium, total and filtered
- Cadmium, total and filtered
- Copper, total and filtered
- Iron, total and filtered
- Magnesium, total and filtered
- Manganese, total and filtered
- Nickel, total and filtered
- Lead, total and filtered
- Mercury, total
- Thallium, total and filtered
- Zinc, total and filtered

The order of the media column data, for each of the constituents, is as follows:

- Granular activated carbon (GAC)
- Peat moss (PM)
- Rhyolite sand (R)
- Site filter sand (S)
- Site zeolite (Z)
- Surface modified zeolite (SMZ)

Mixed Rhyolite sand – surface modified zeolite (R-SMZ)  
 Mixed Rhyolite sand – surface modified zeolite – granular activated carbon (R-SMZ-GAC)  
 Mixed Rhyolite sand – surface modified zeolite – granular activated carbon – peat moss (R-SMZ-GAC-PM)  
 Layered site filter sand – site zeolite – granular activated carbon (S-Z-GAC layered)

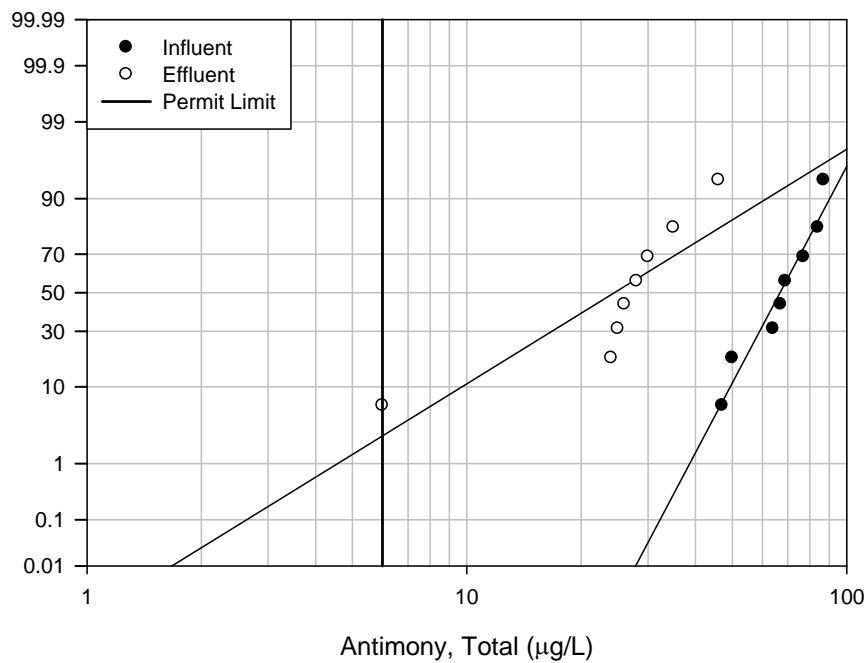
The locations of the major sections, by constituent, of Appendix A5 are:

Antimony, Total.....	4
Antimony, Filtered.....	9
Arsenic, Total.....	14
Arsenic, Filtered.....	19
Aluminum, Total.....	24
Aluminum, Filtered.....	29
Boron, Total .....	34
Boron, Filtered .....	39
Calcium, Total.....	44
Calcium, Filtered.....	49
Cadmium, Total .....	54
Cadmium, Filtered .....	59
Copper, Total .....	64
Copper, Filtered .....	69
Iron, Total .....	74
Iron, Filtered .....	79
Magnesium, Total .....	84
Magnesium, Filtered .....	89
Manganese, Total.....	94
Manganese, Filtered.....	99
Nickel, Total .....	104
Nickel, Filtered .....	109
Lead, Total .....	114
Lead, Filtered .....	119
Mercury.....	124
Thallium, Total .....	126
Thallium, Filtered .....	131

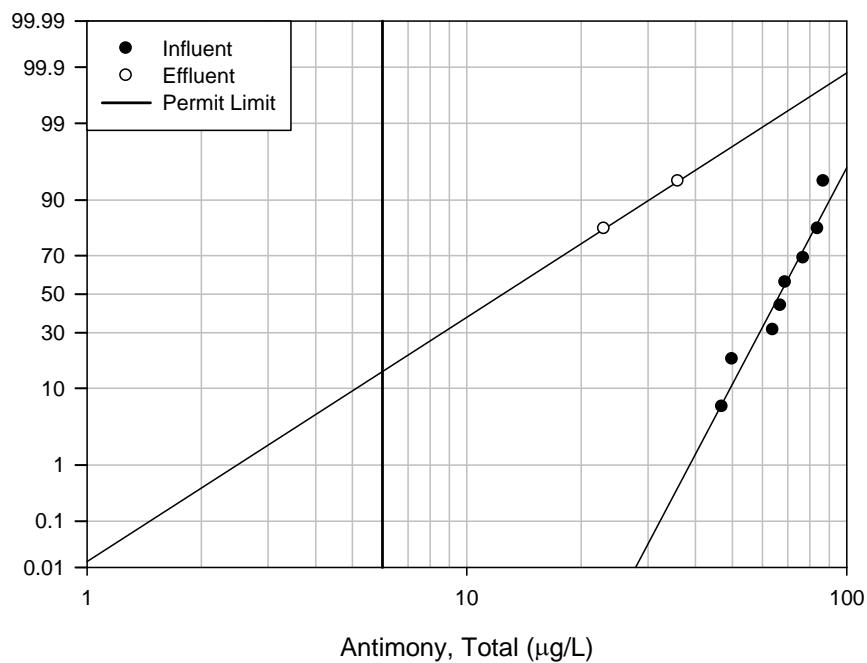
Zinc, Total.....	136
Zinc, Filtered.....	141

## Antimony, Total

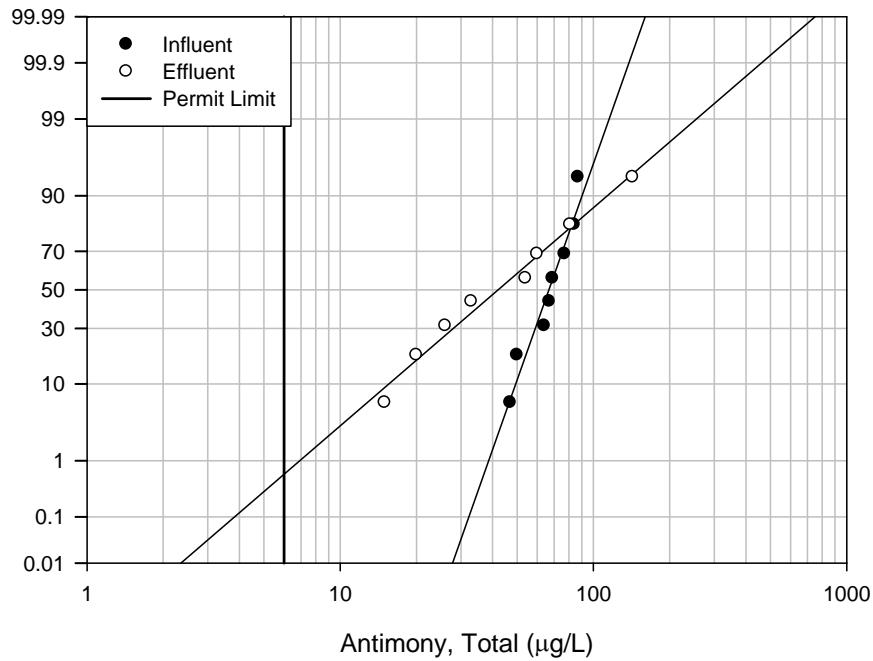
Total Antimony  
Granular Activated Carbon (GAC)



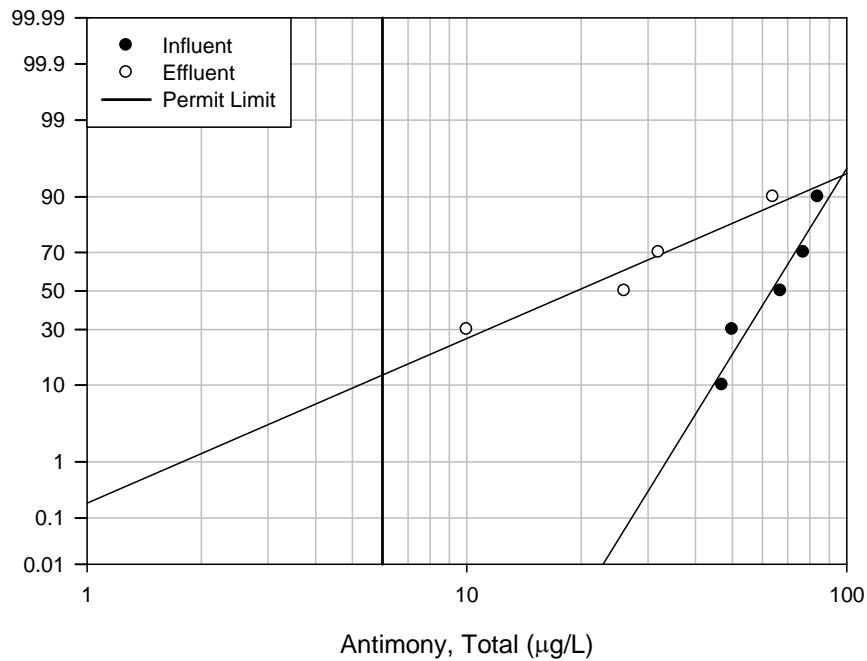
Total Antimony  
Peat Moss (P)



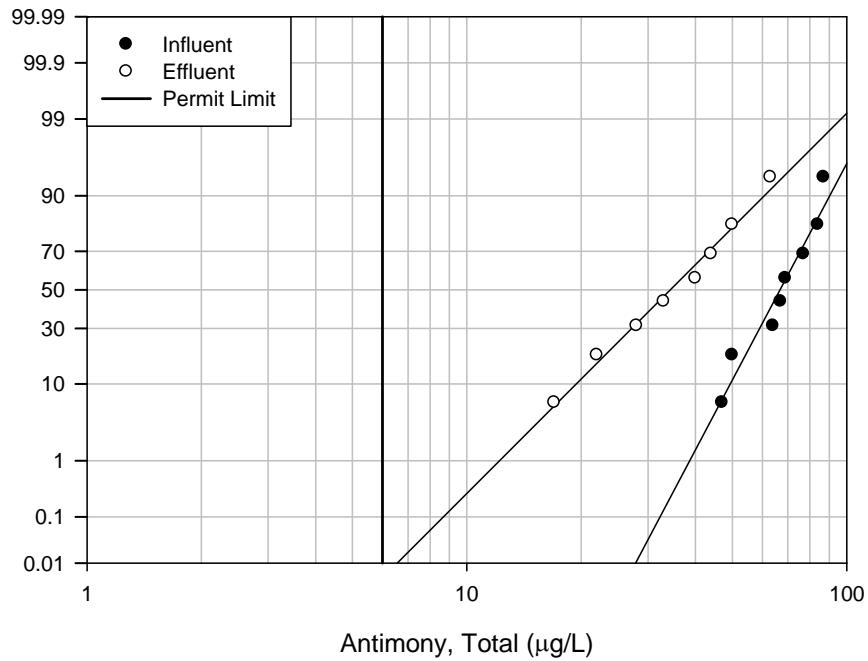
Total Antimony  
Rhyolite Sand (R)



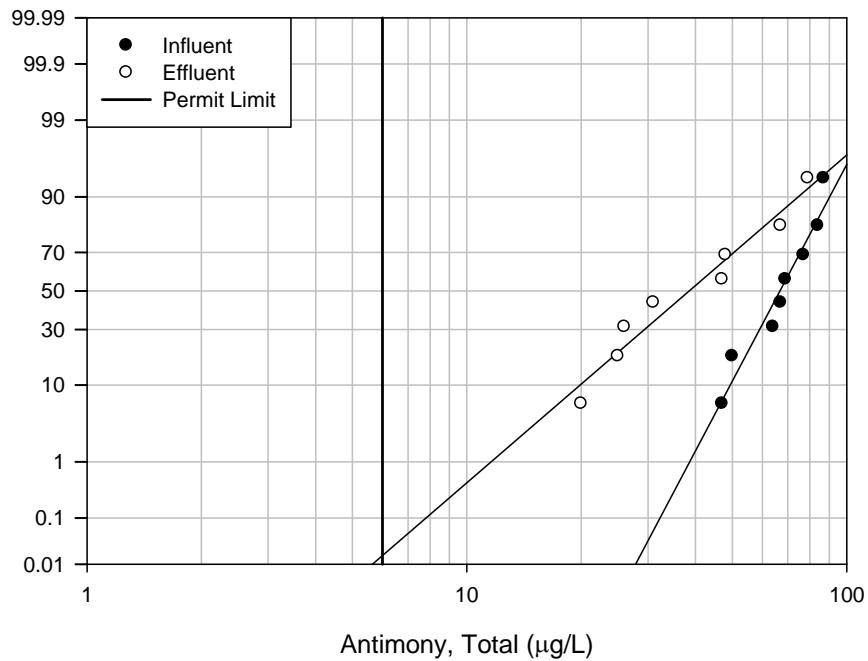
Total Antimony  
Site Sand (S)



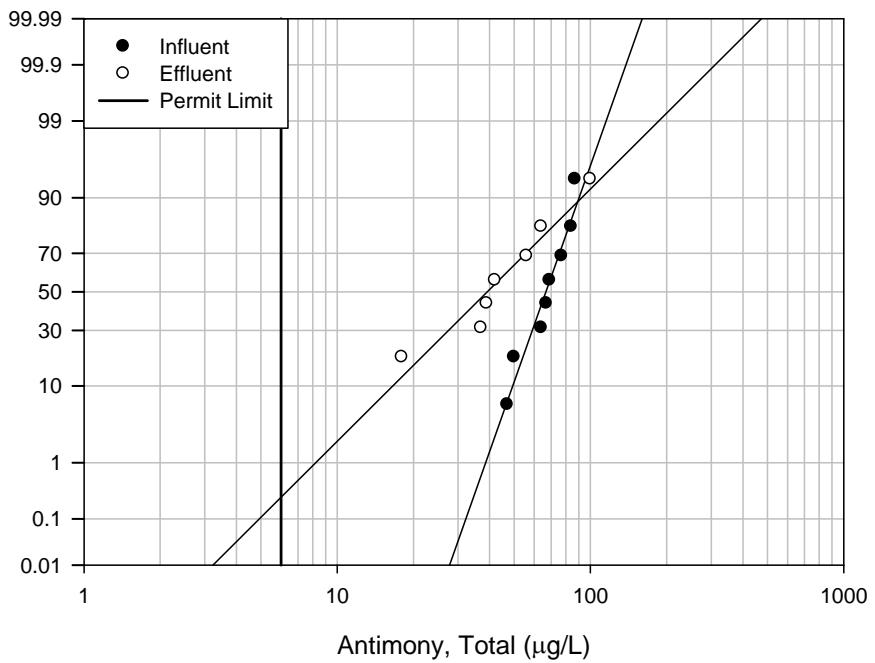
Total Antimony  
Site Zeolite (Z)



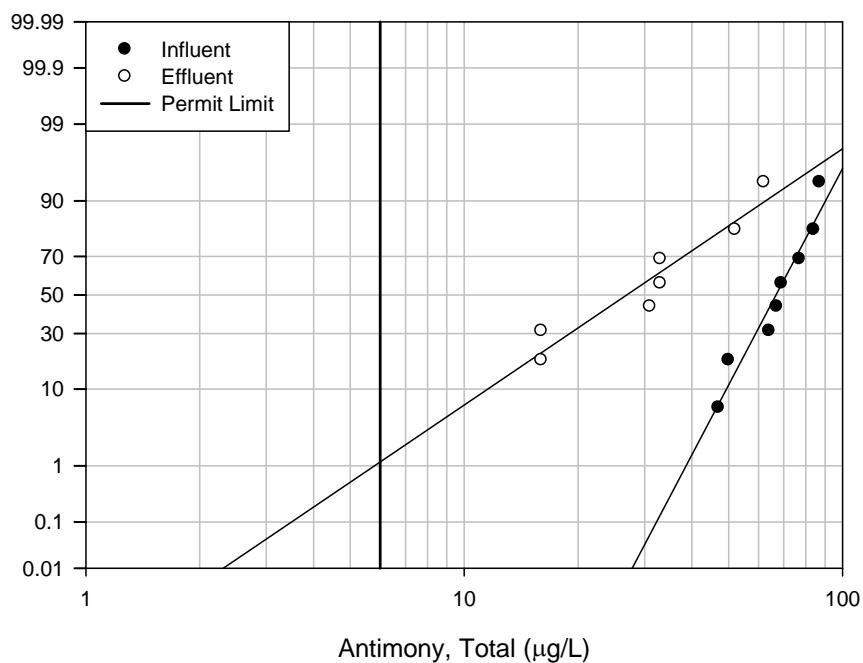
Total Antimony  
Surface Modified Zeolite (SMZ)



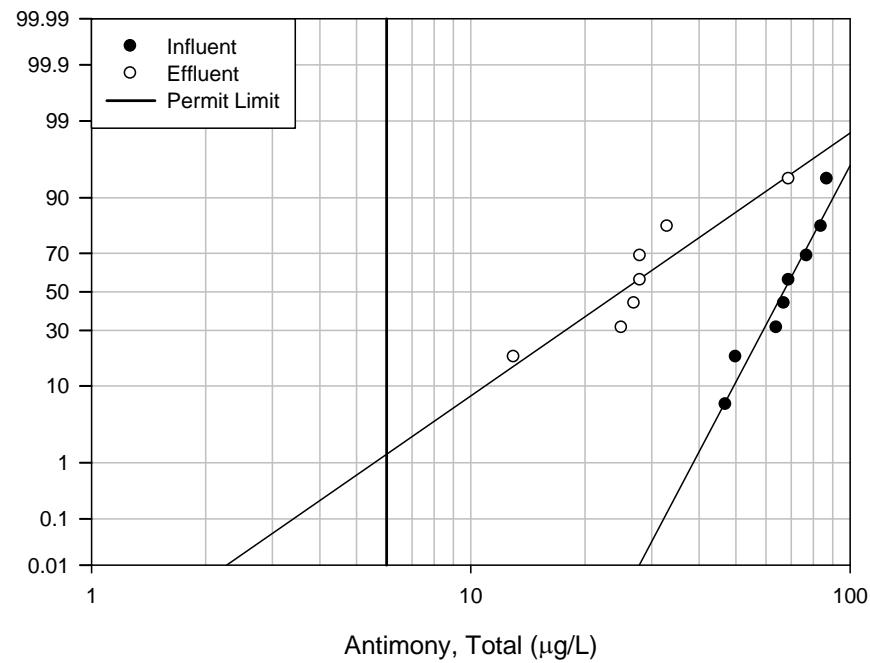
Total Antimony  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



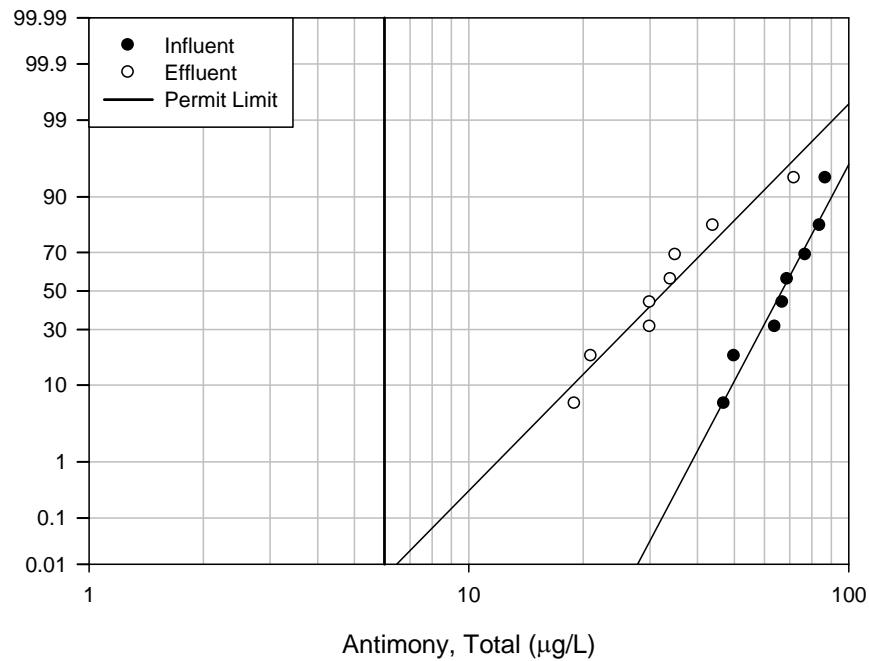
Total Antimony  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



**Total Antimony**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

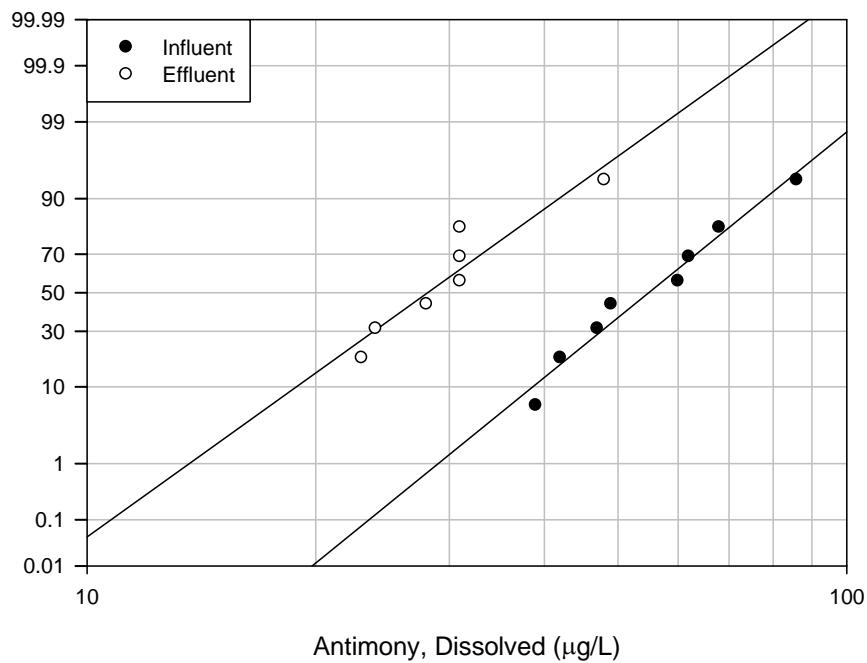


**Total Antimony**  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

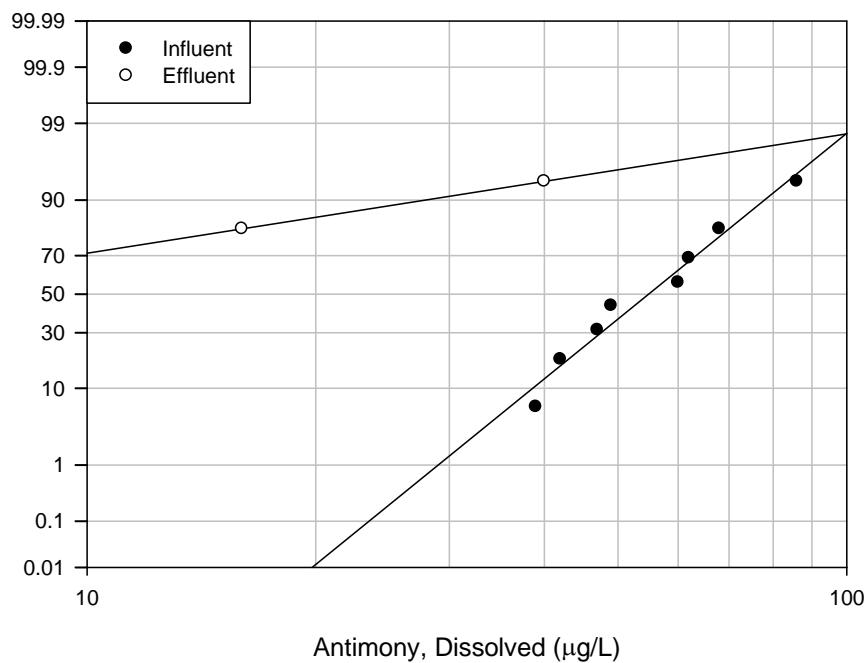


## Antimony, Filtered

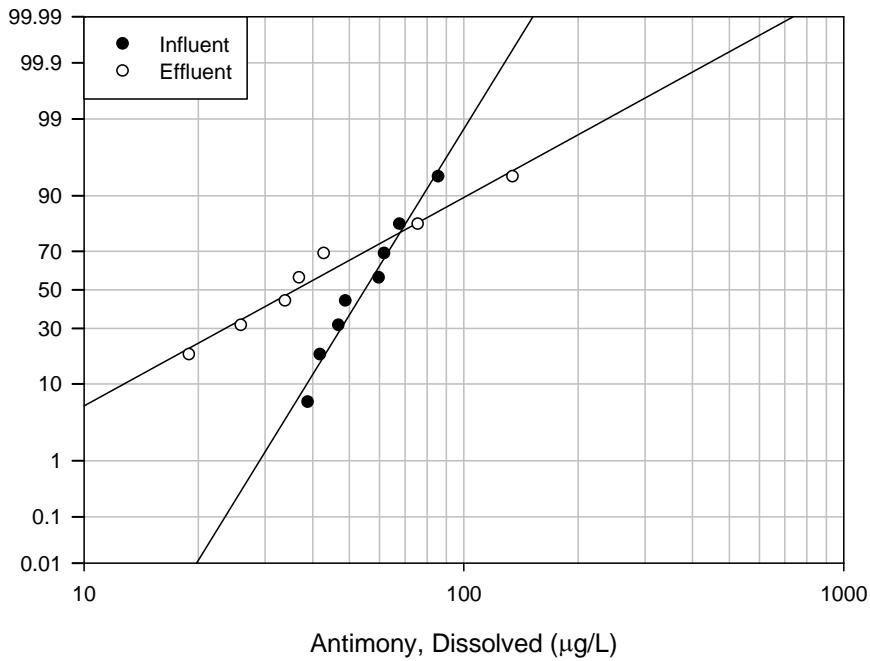
Dissolved Antimony  
Granular Activated Carbon (GAC)



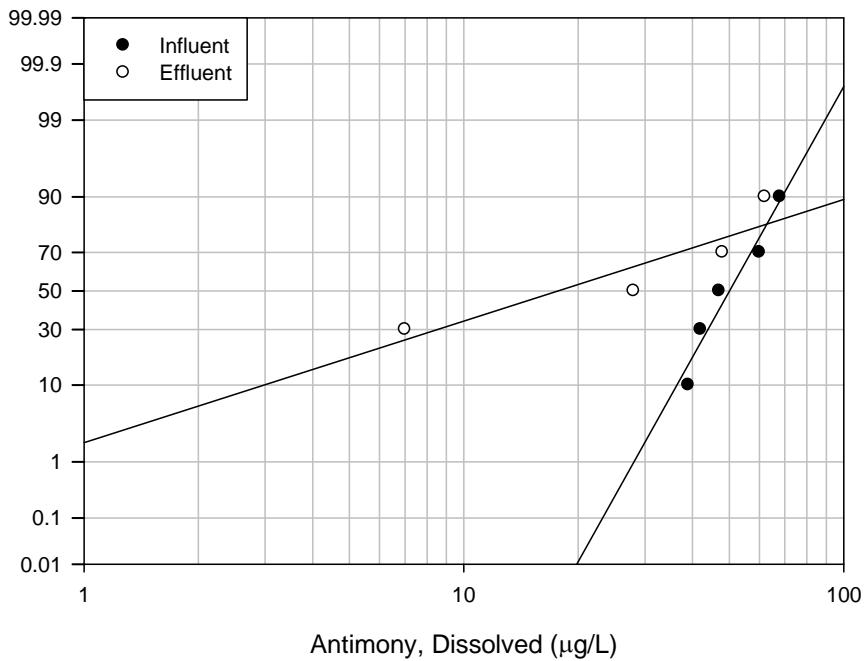
Dissolved Antimony  
Peat Moss (P)



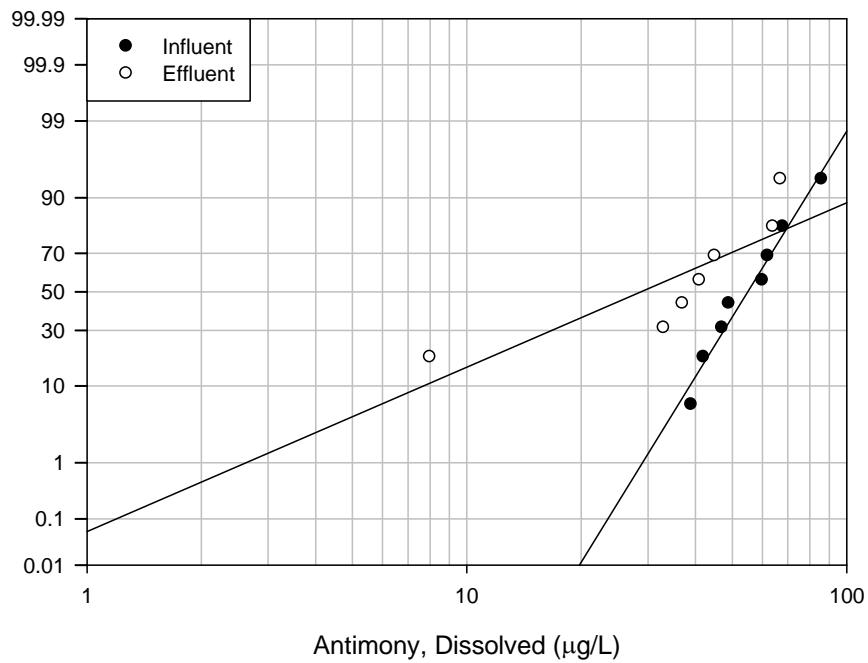
Dissolved Antimony  
Rhyolite Sand (R)



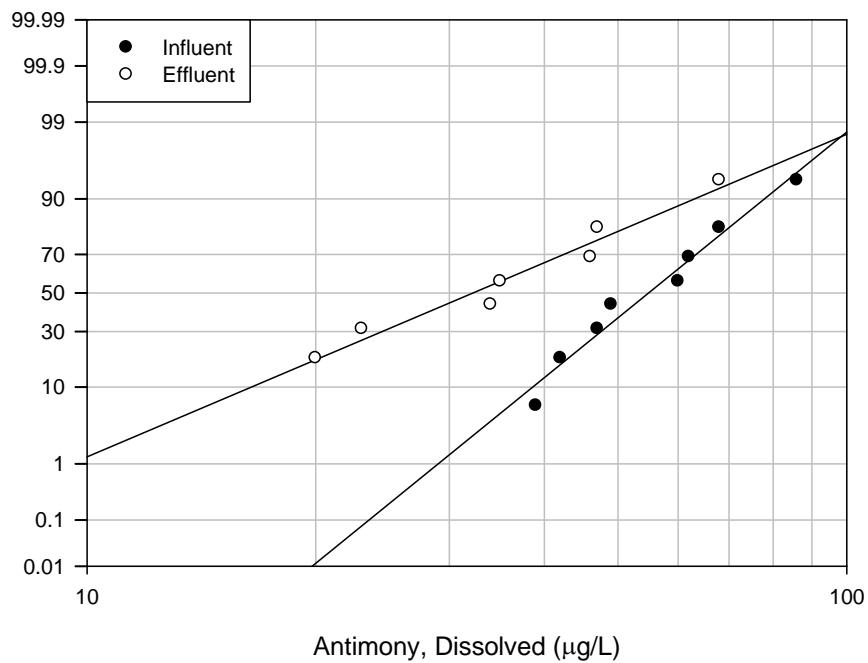
Dissolved Antimony  
Site Sand (S)



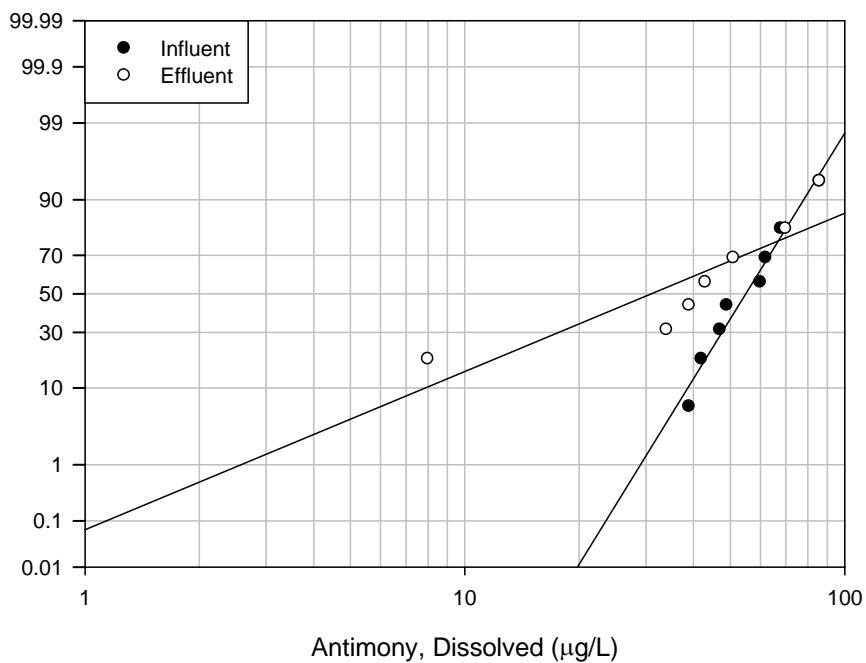
Dissolved Antimony  
Site Zeolite (Z)



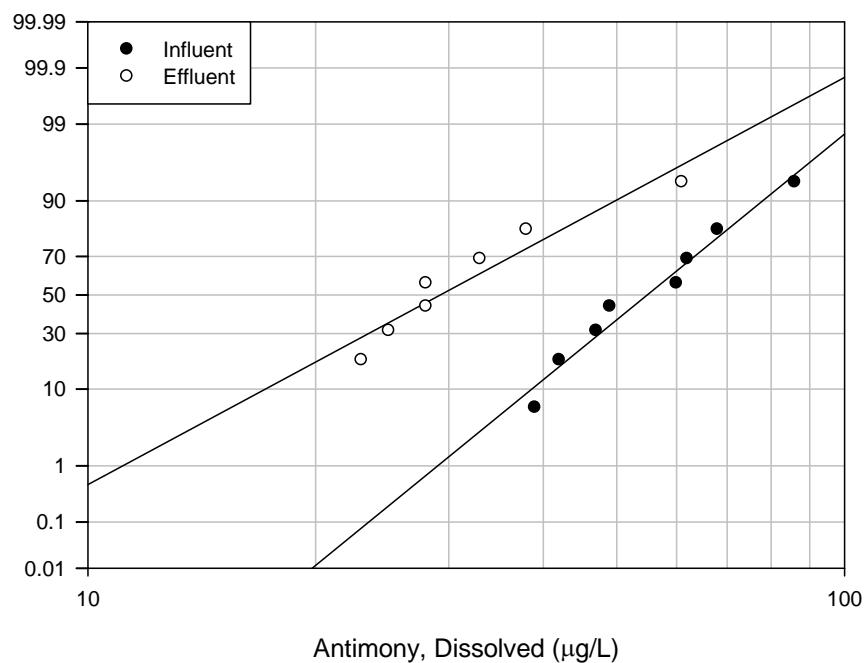
Dissolved Antimony  
Surface Modified Zeolite (SMZ)



**Dissolved Antimony**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

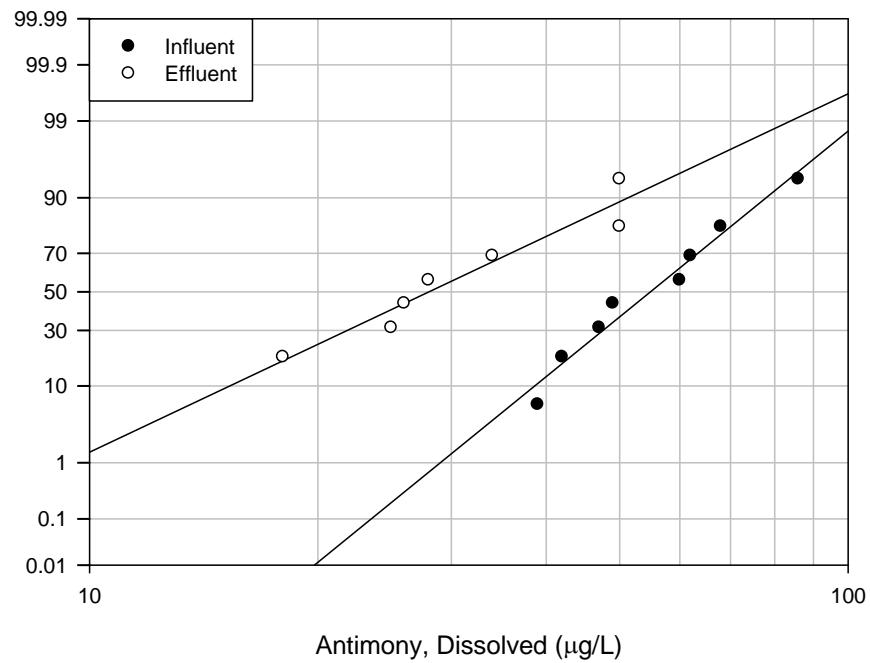


**Dissolved Antimony**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



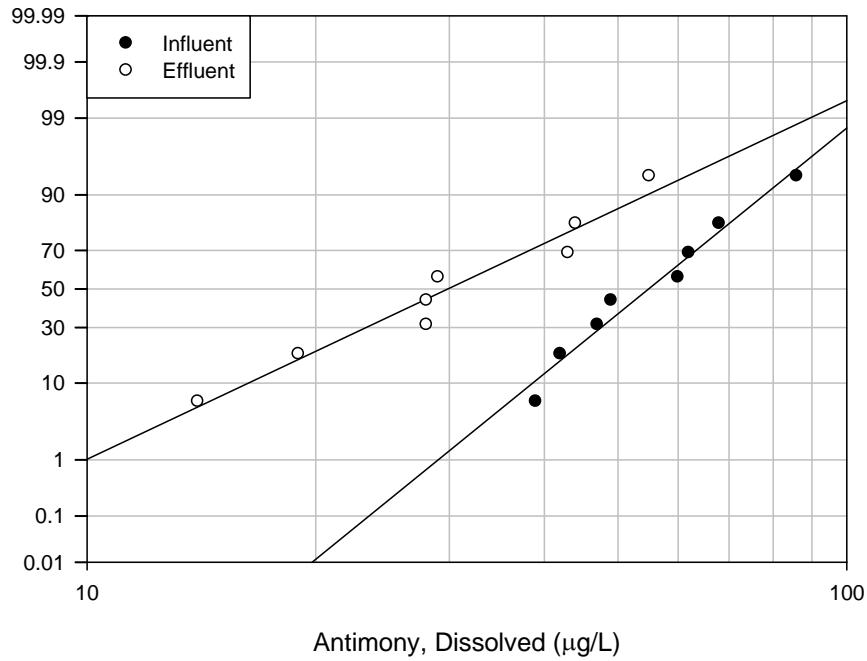
### Dissolved Antimony

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



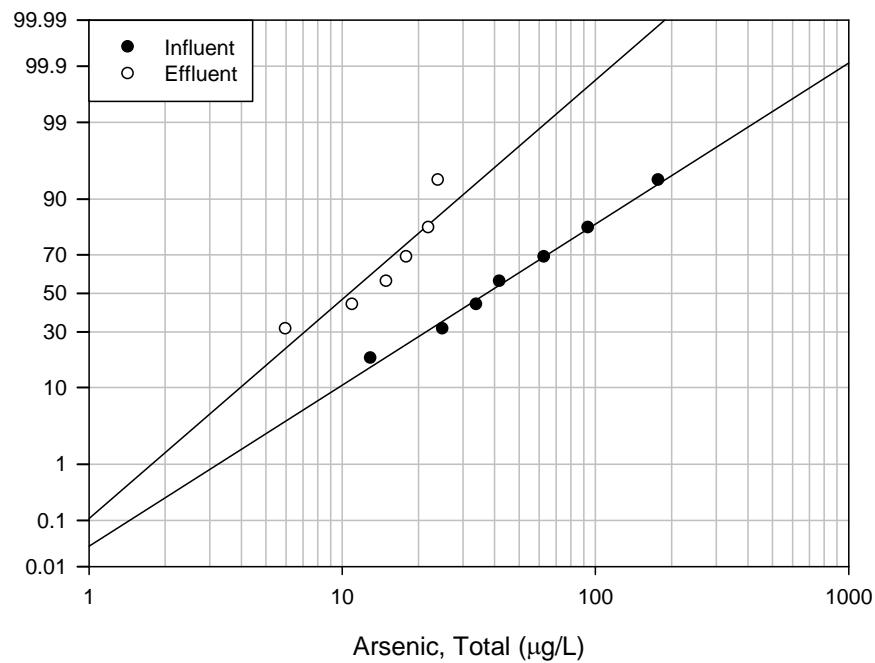
### Dissolved Antimony

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

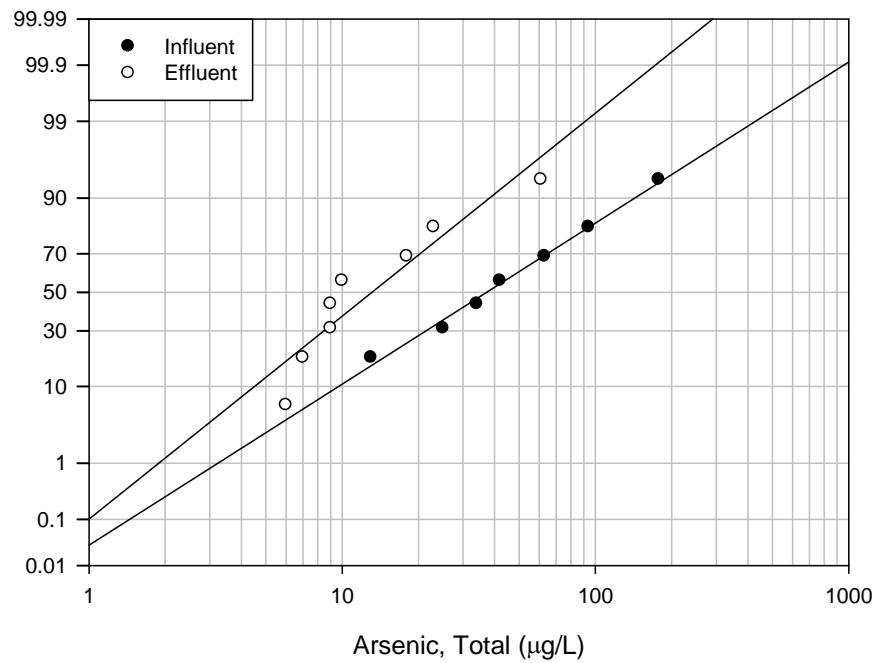


## Arsenic, Total

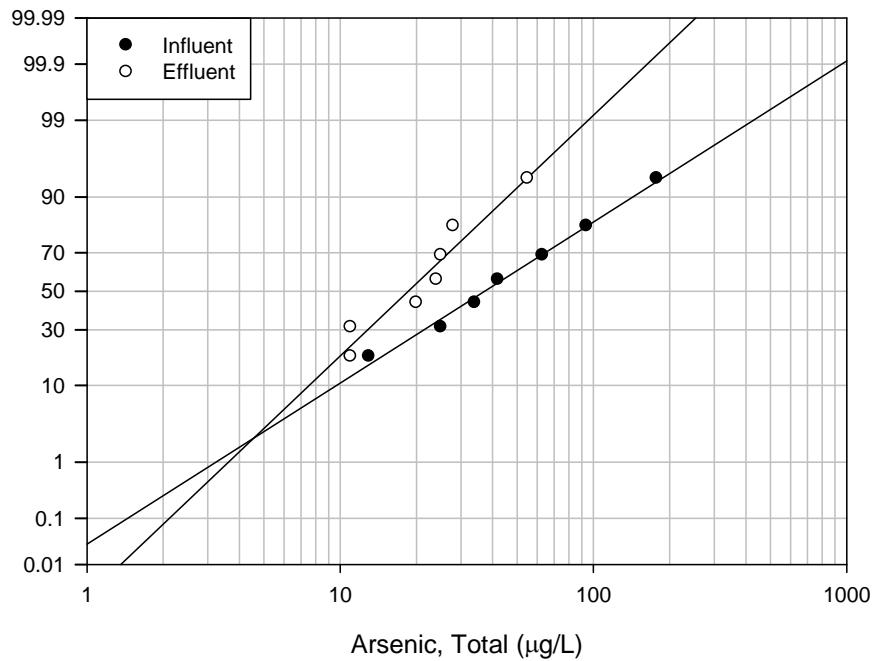
Total Arsenic  
Granular Activated Carbon (GAC)



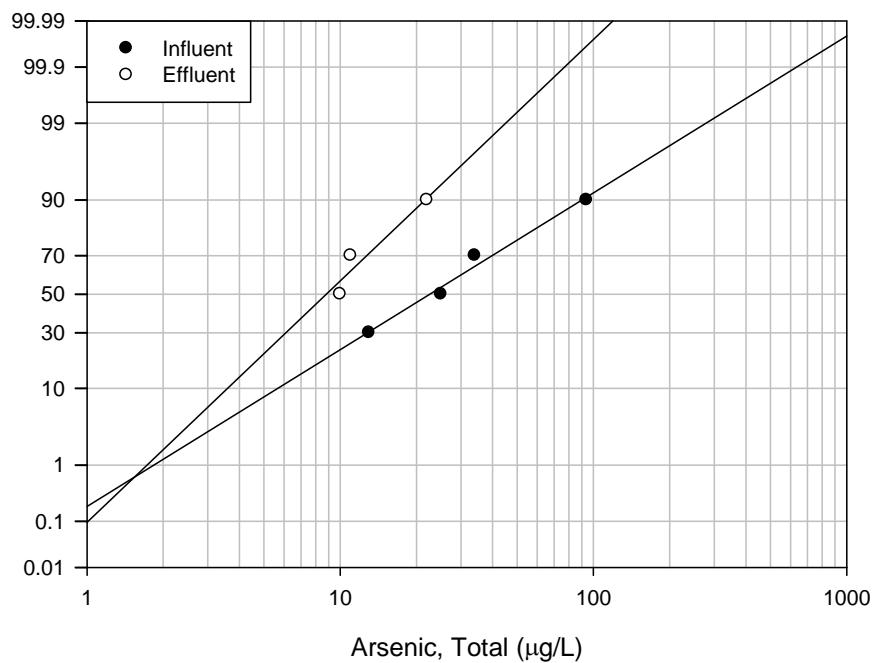
Total Arsenic  
Peat Moss (P)



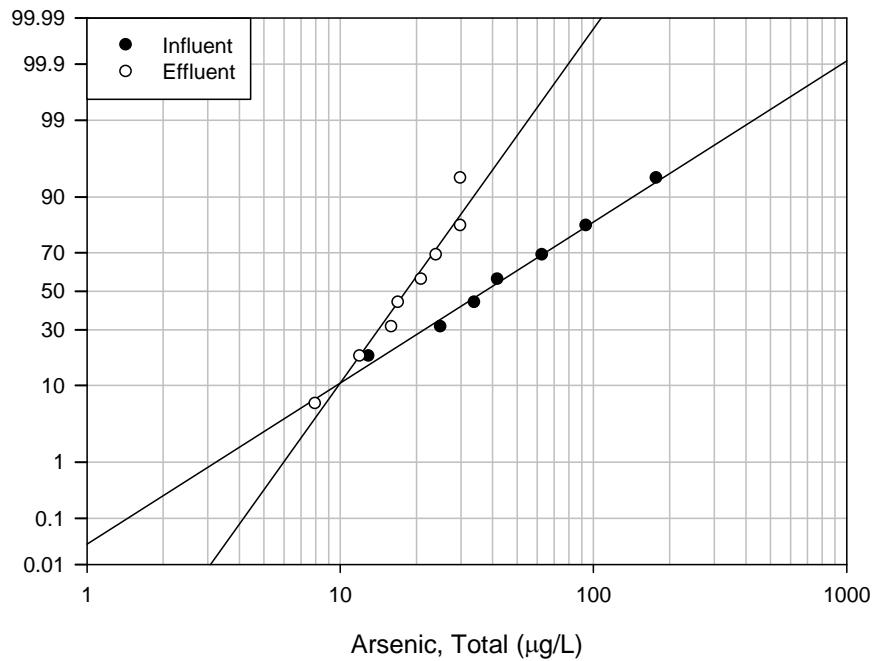
Total Arsenic  
Rhyolite Sand (R)



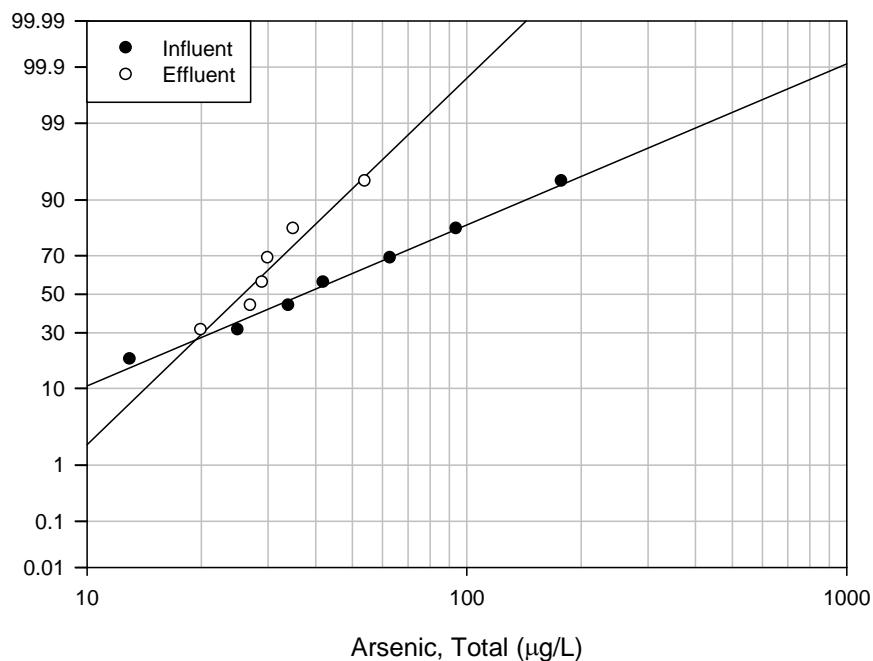
Total Arsenic  
Site Sand (S)



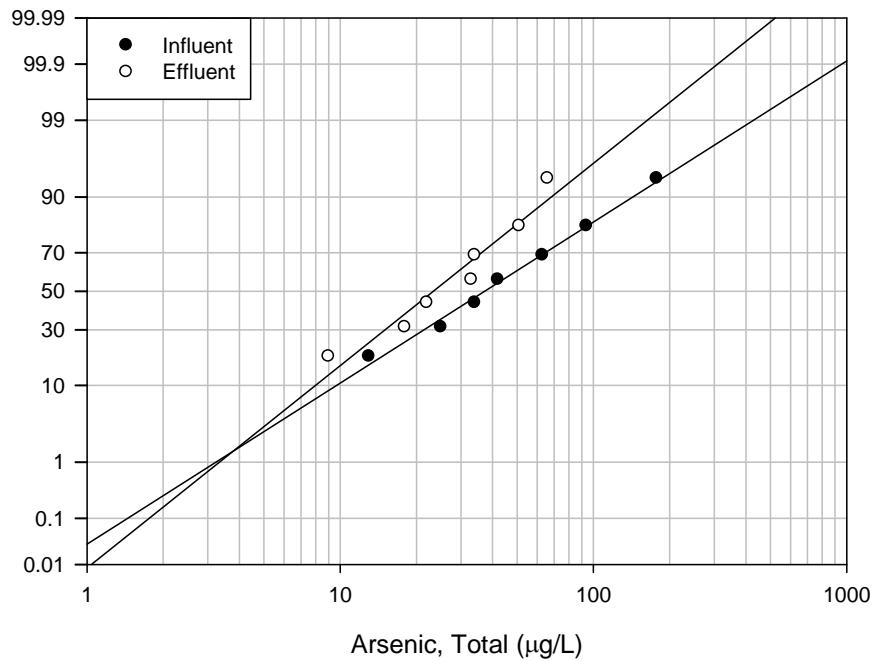
Total Arsenic  
Site Zeolite (Z)



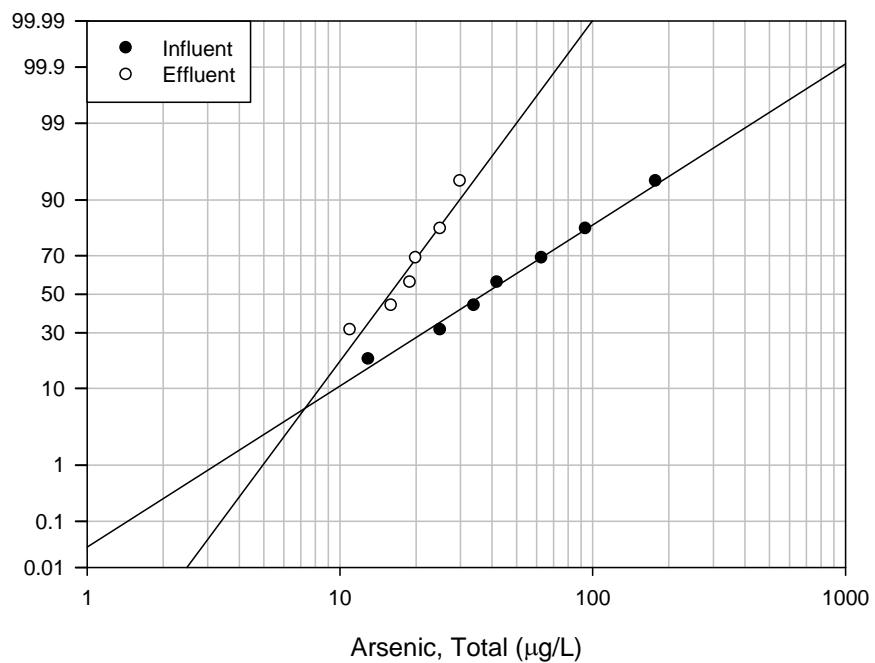
Total Arsenic  
Surface Modified Zeolite (SMZ)



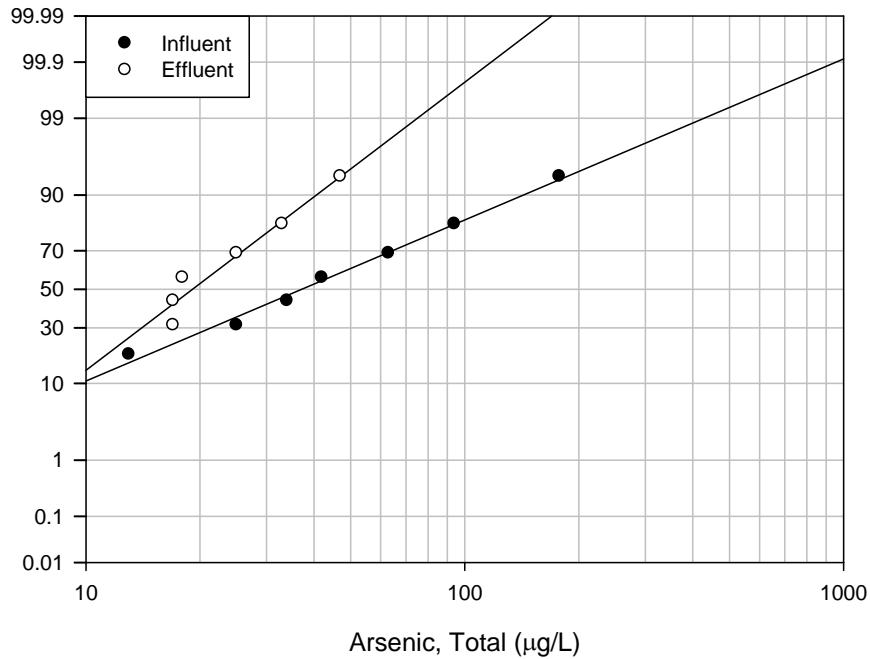
Total Arsenic  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



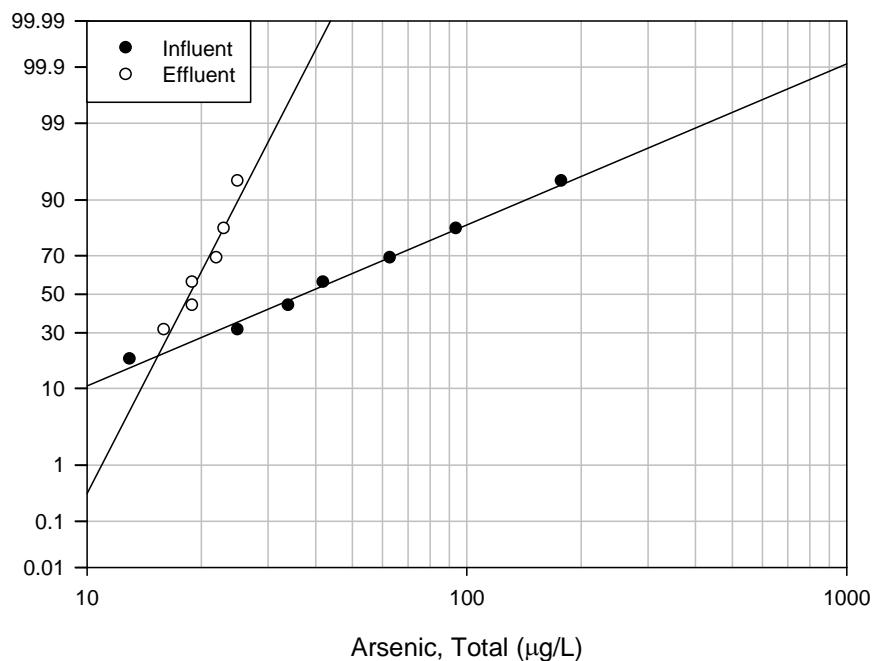
Total Arsenic  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Arsenic  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

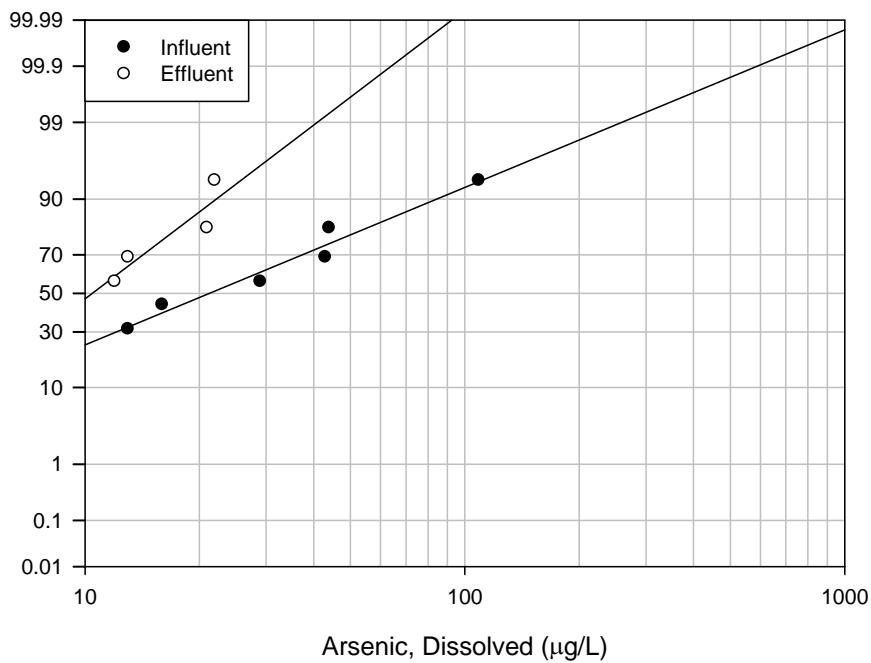


Total Arsenic  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

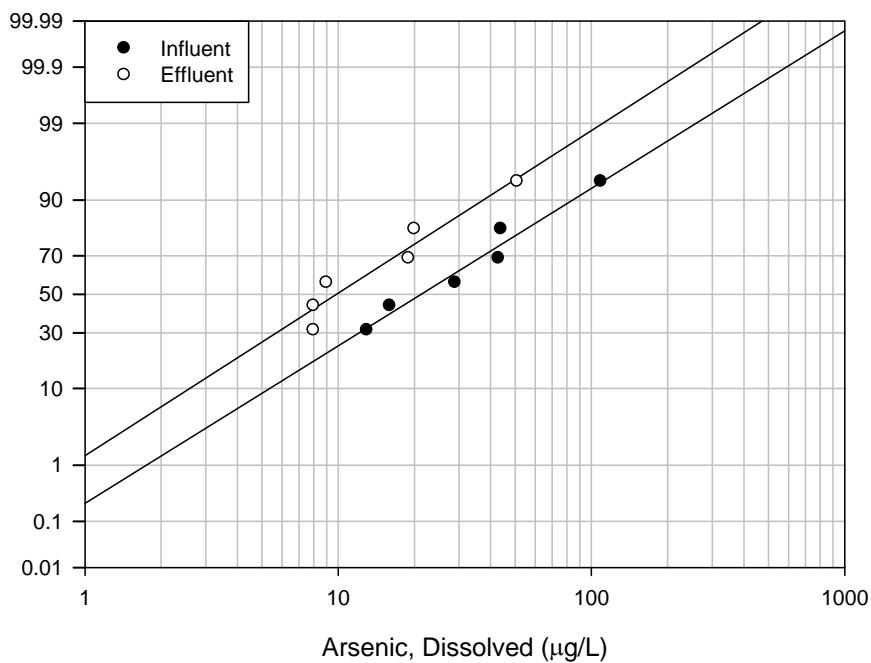


## Arsenic, Filtered

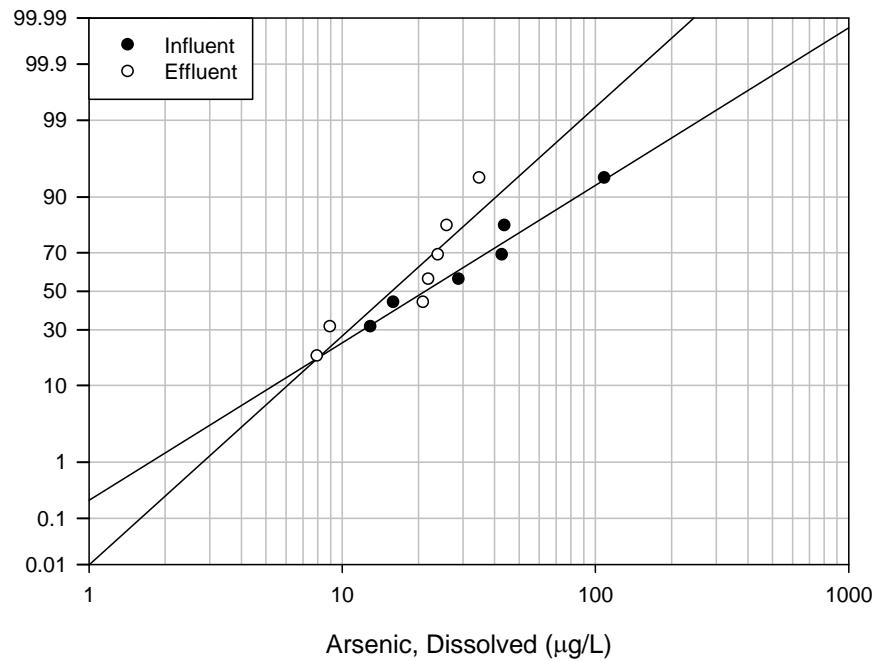
Dissolved Arsenic  
Granular Activated Carbon (GAC)



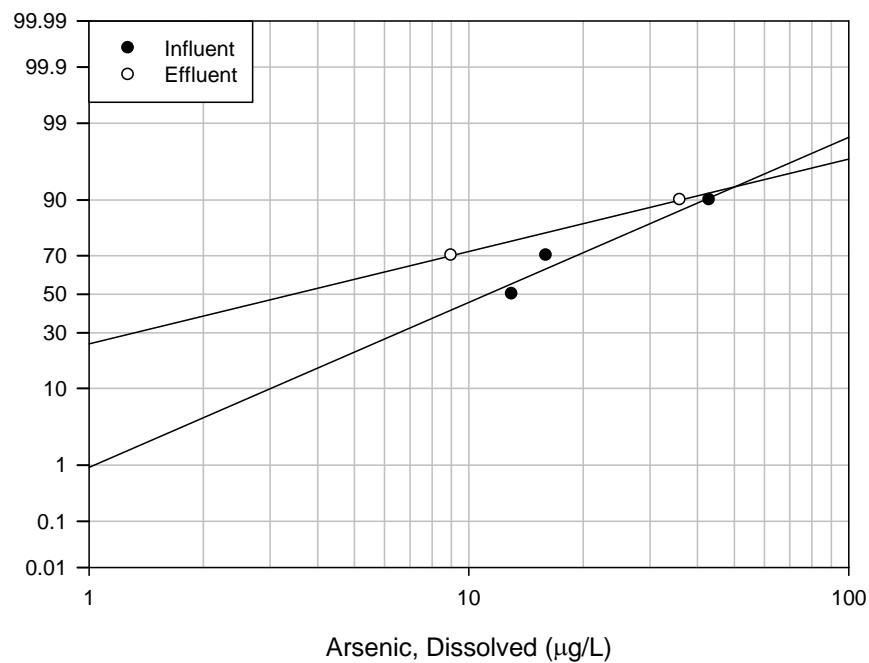
Dissolved Arsenic  
Peat Moss (P)



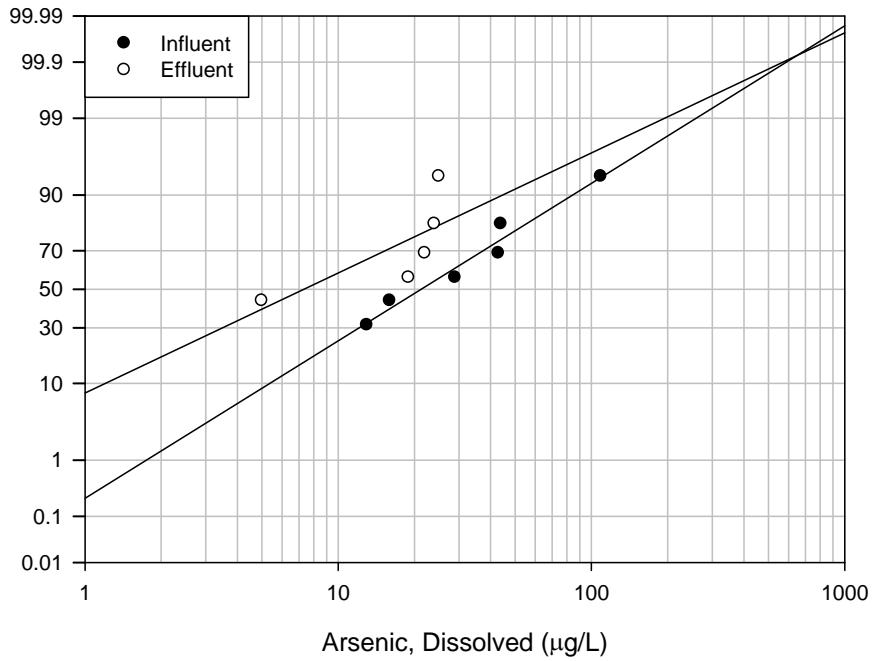
Dissolved Arsenic  
Rhyolite Sand (R)



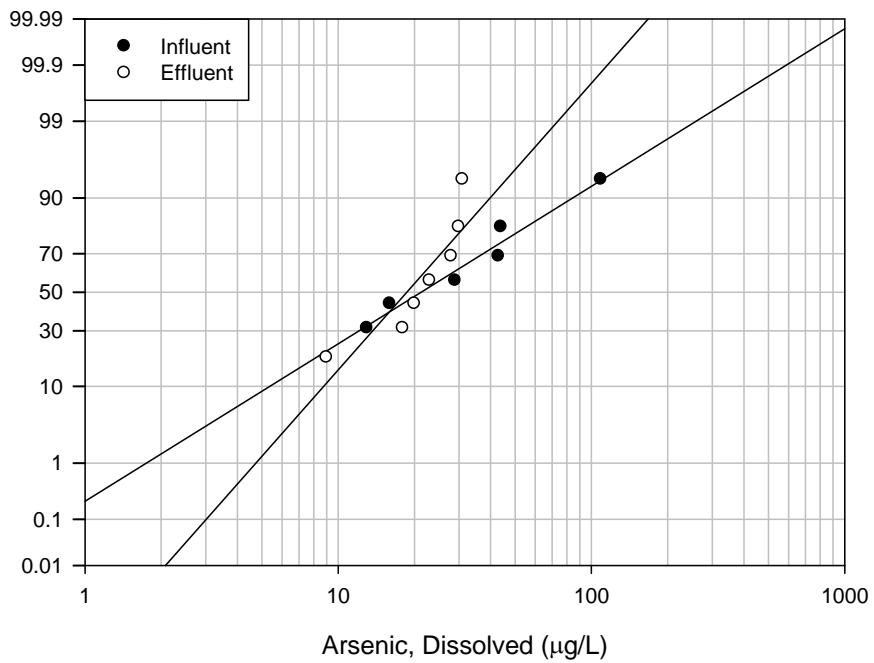
Dissolved Arsenic  
Site Sand (S)



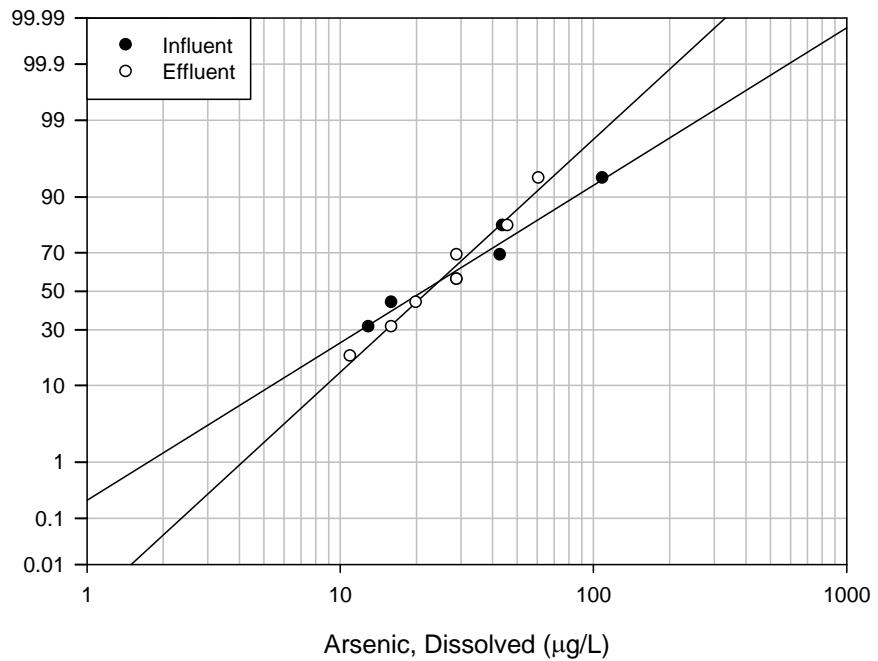
Dissolved Arsenic  
Site Zeolite (Z)



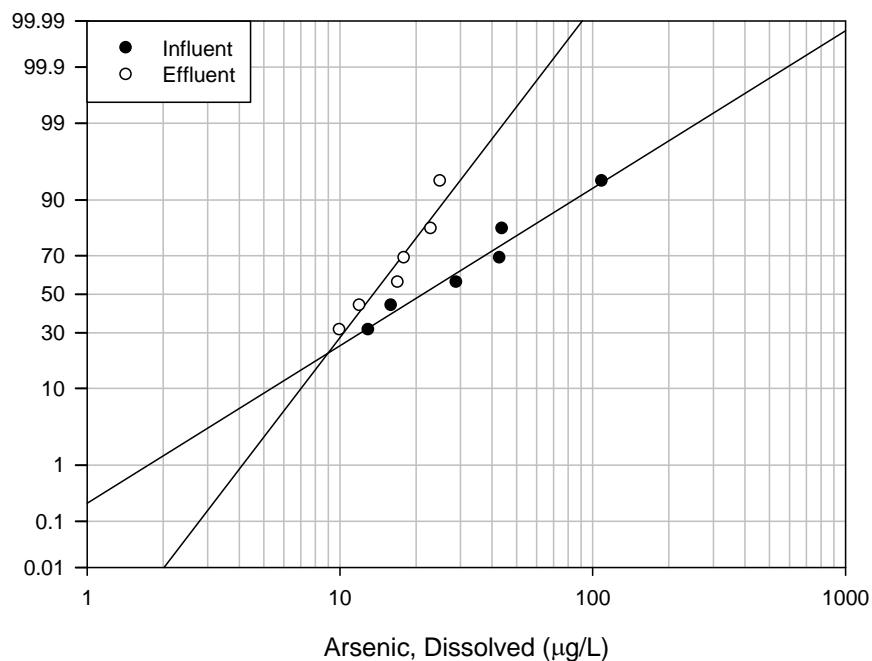
Dissolved Arsenic  
Surface Modified Zeolite (SMZ)



Dissolved Arsenic  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

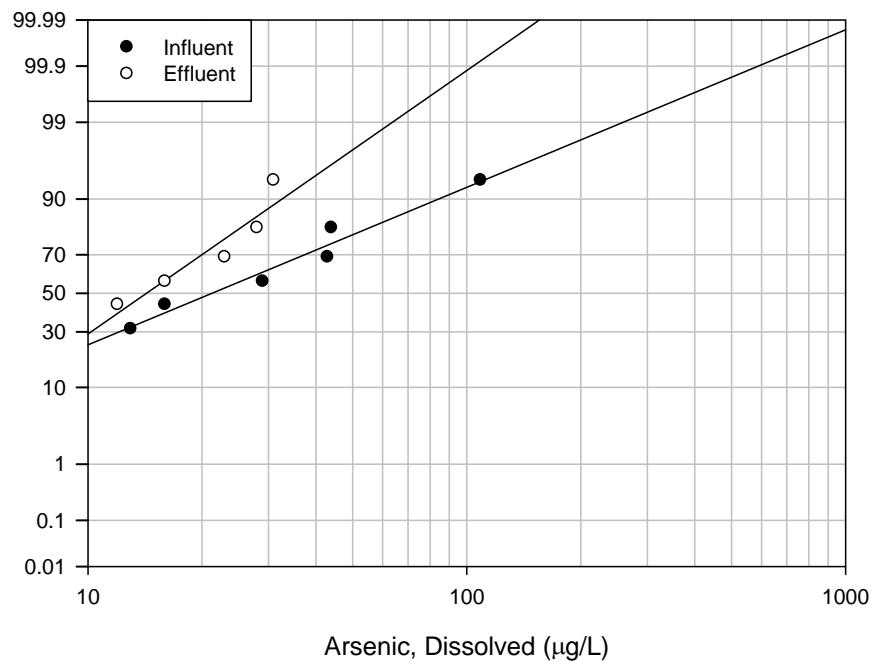


Dissolved Arsenic  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



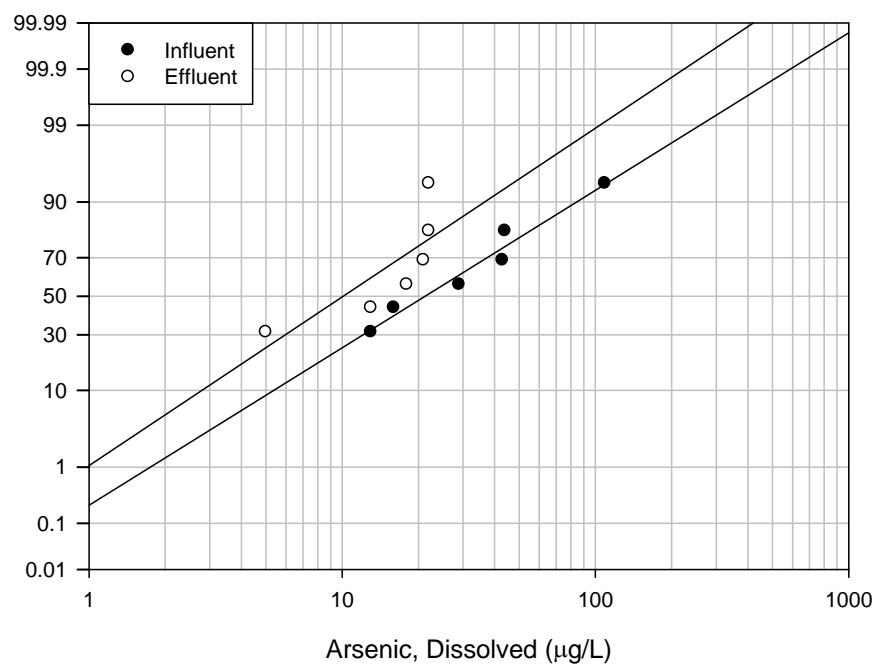
### Dissolved Arsenic

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



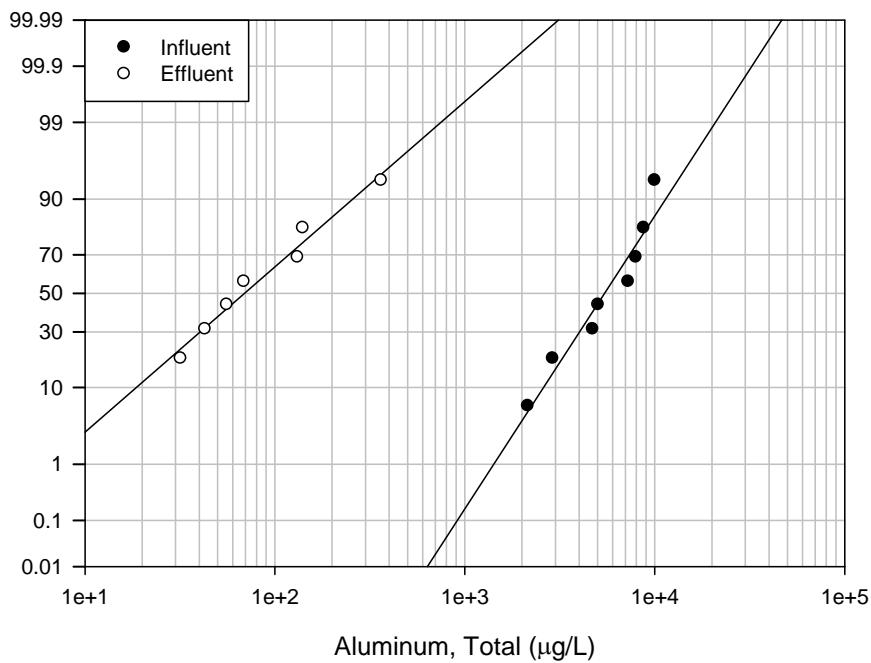
### Dissolved Arsenic

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

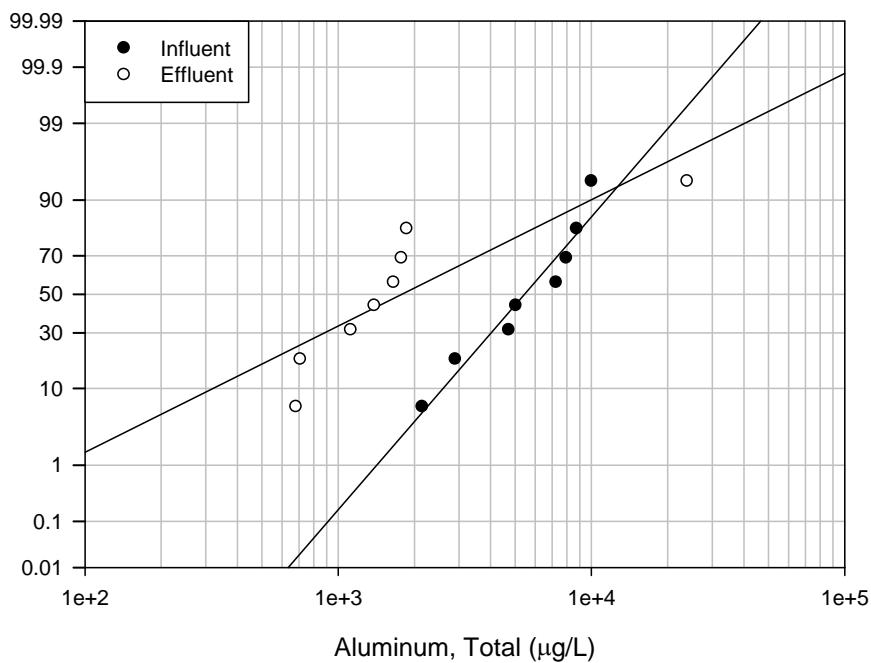


## Aluminum, Total

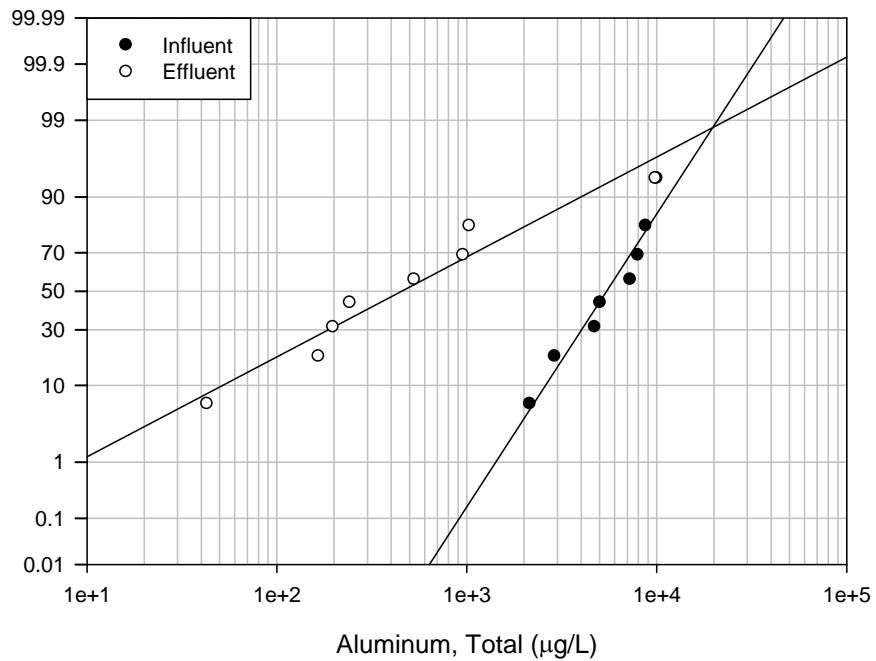
Total Aluminum  
Granular Activated Carbon (GAC)



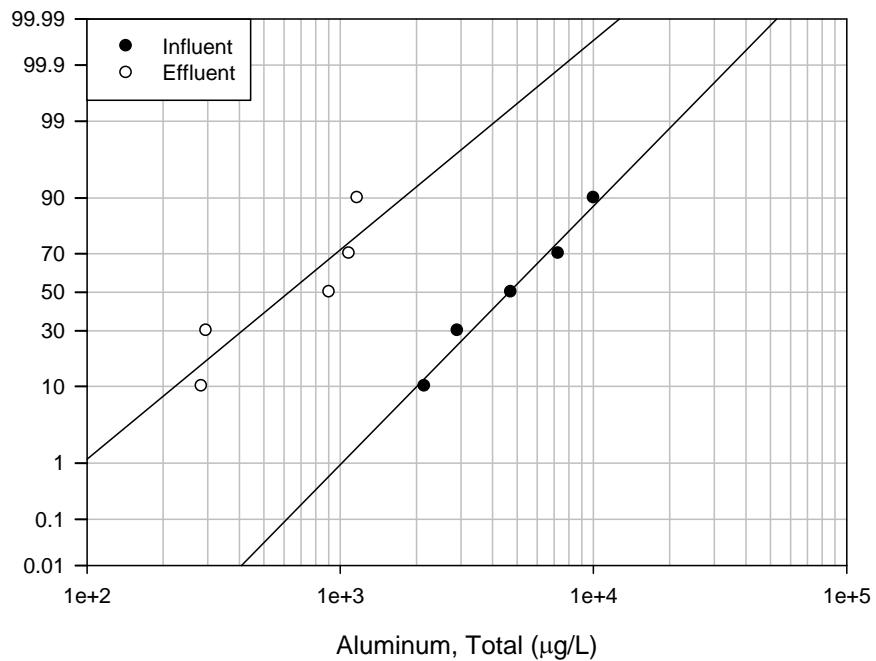
Total Aluminum  
Peat Moss (P)



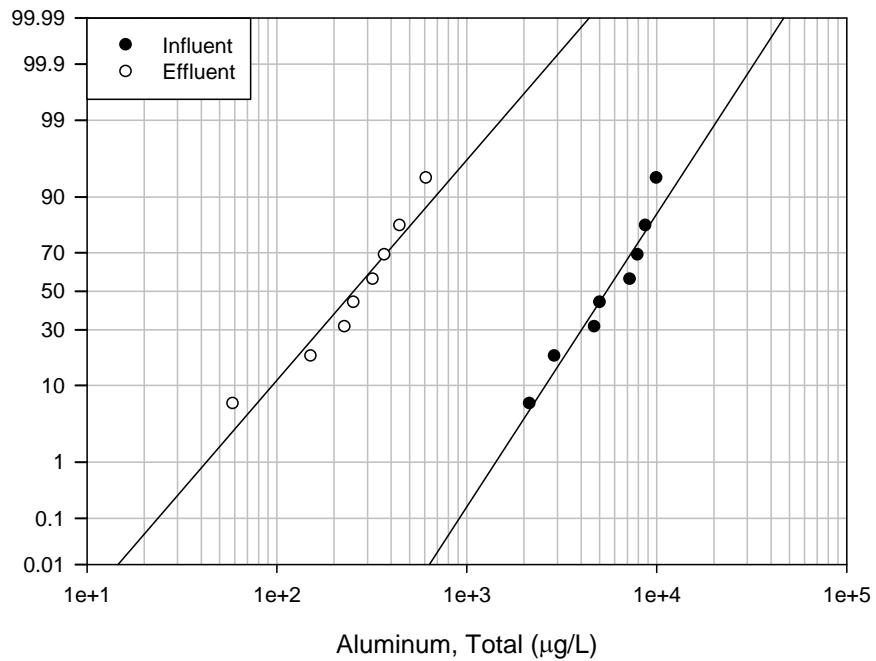
Total Aluminum  
Rhyolite Sand (R)



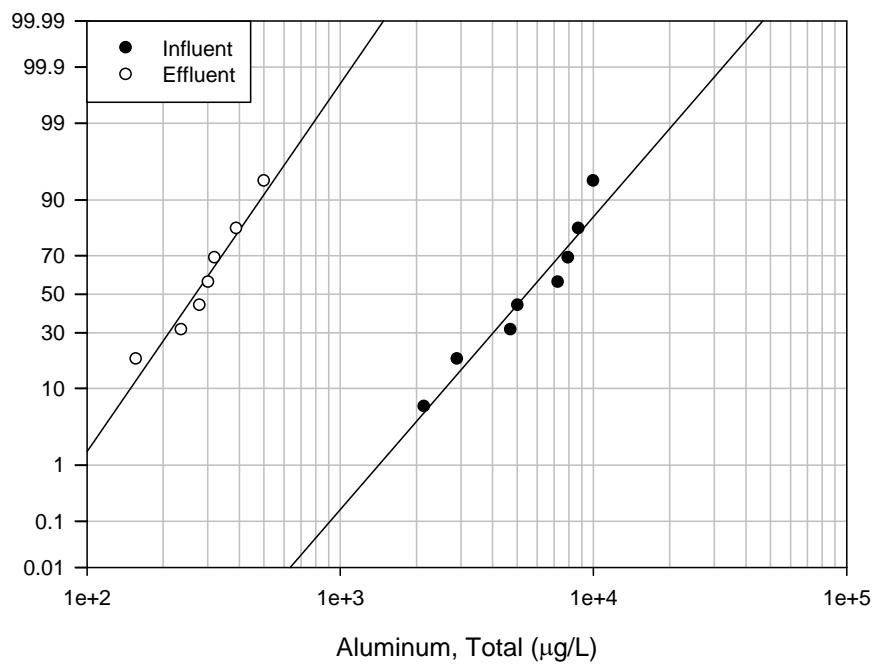
Total Aluminum  
Site Sand (S)



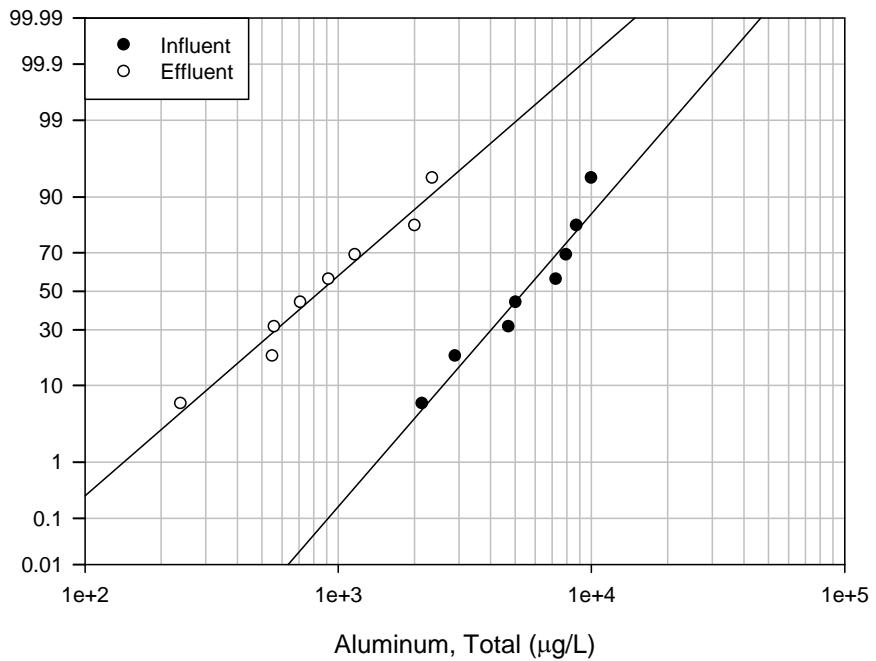
Total Aluminum  
Site Zeolite (Z)



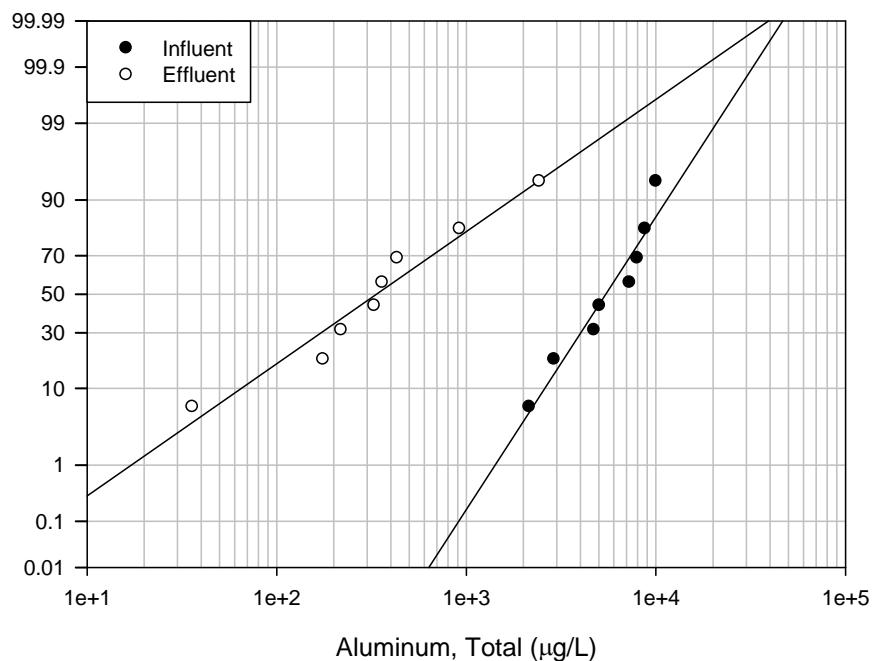
Total Aluminum  
Surface Modified Zeolite (SMZ)



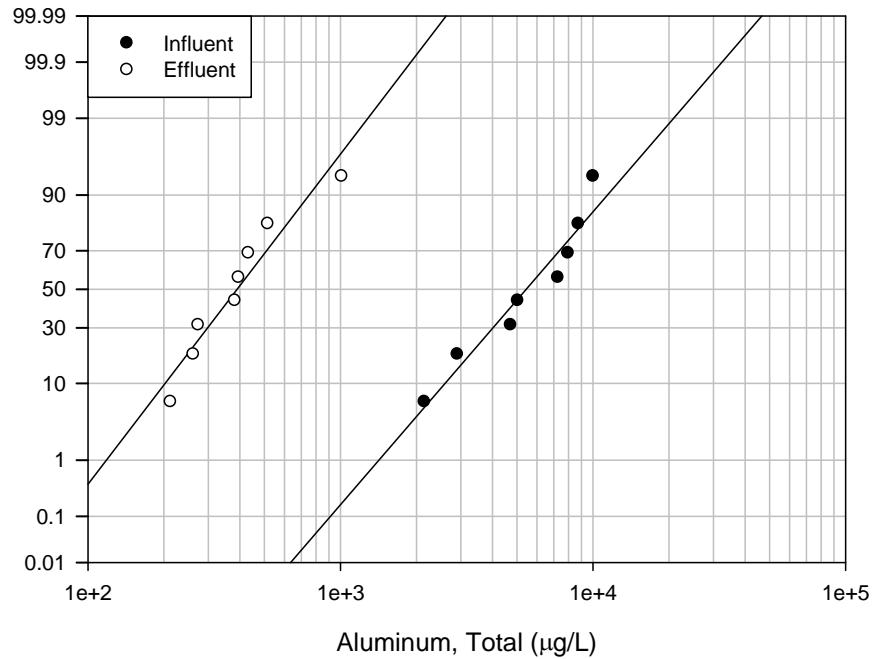
Total Aluminum  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



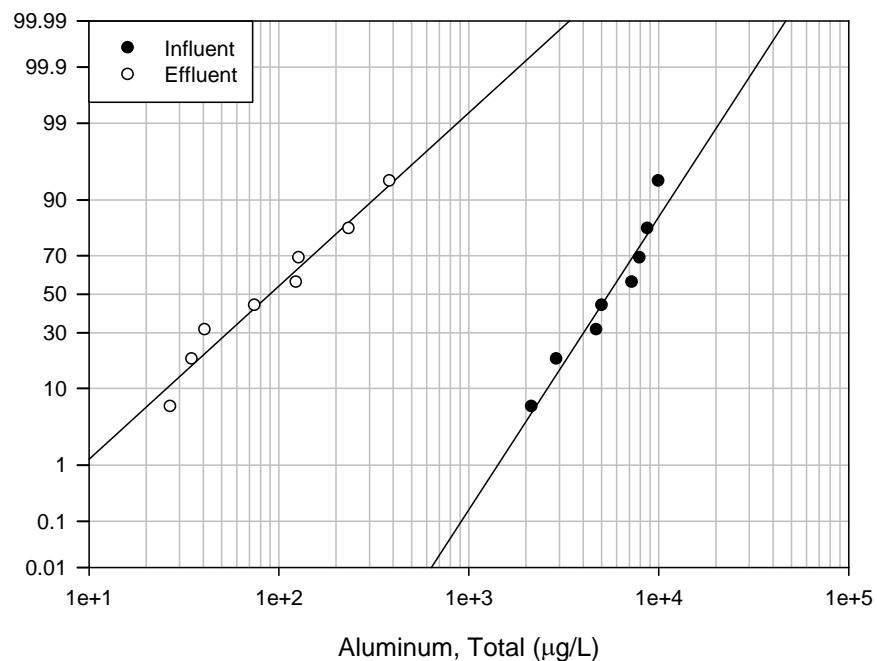
Total Aluminum  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Aluminum  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

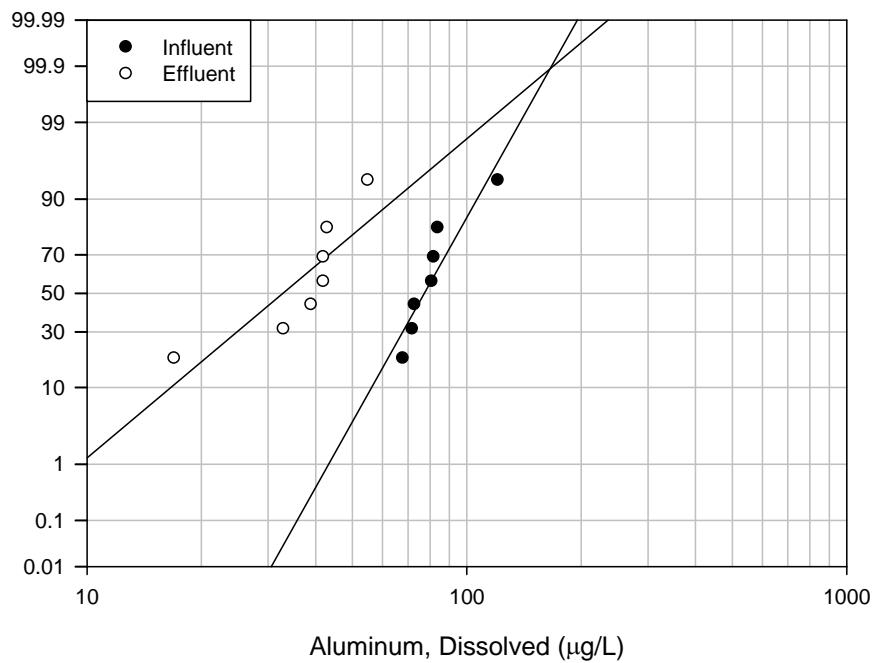


Total Aluminum  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

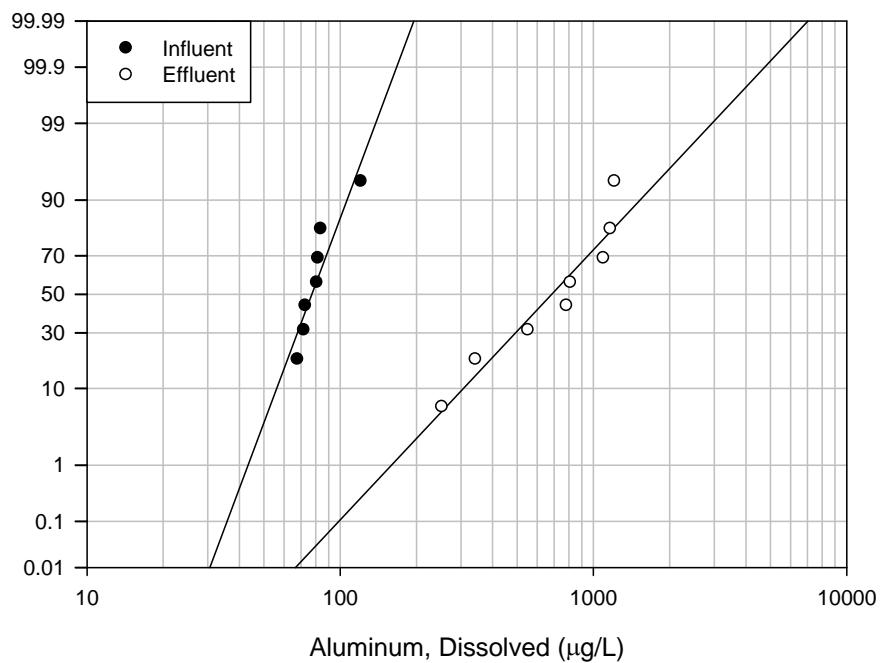


## Aluminum, Filtered

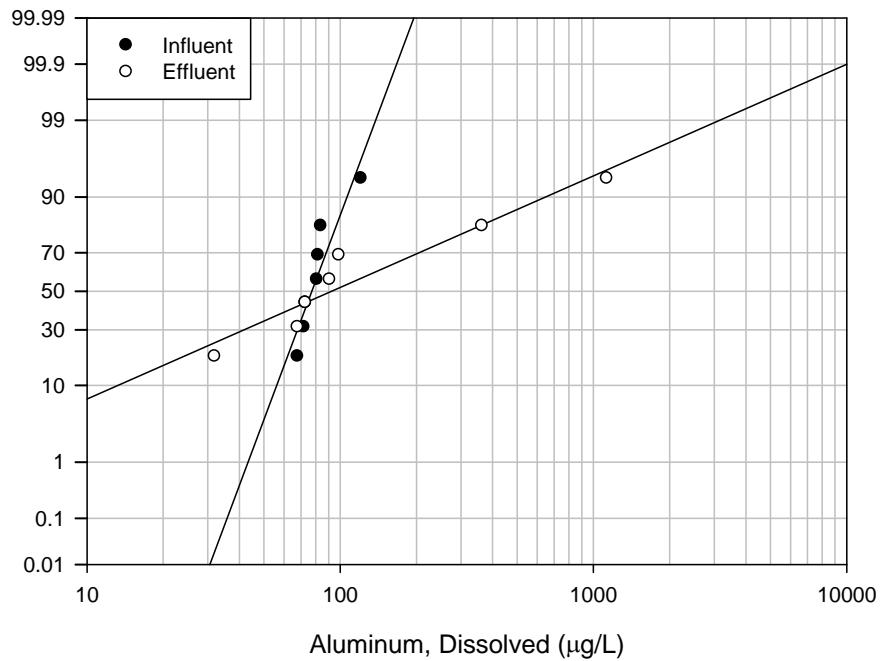
Dissolved Aluminum  
Granular Activated Carbon (GAC)



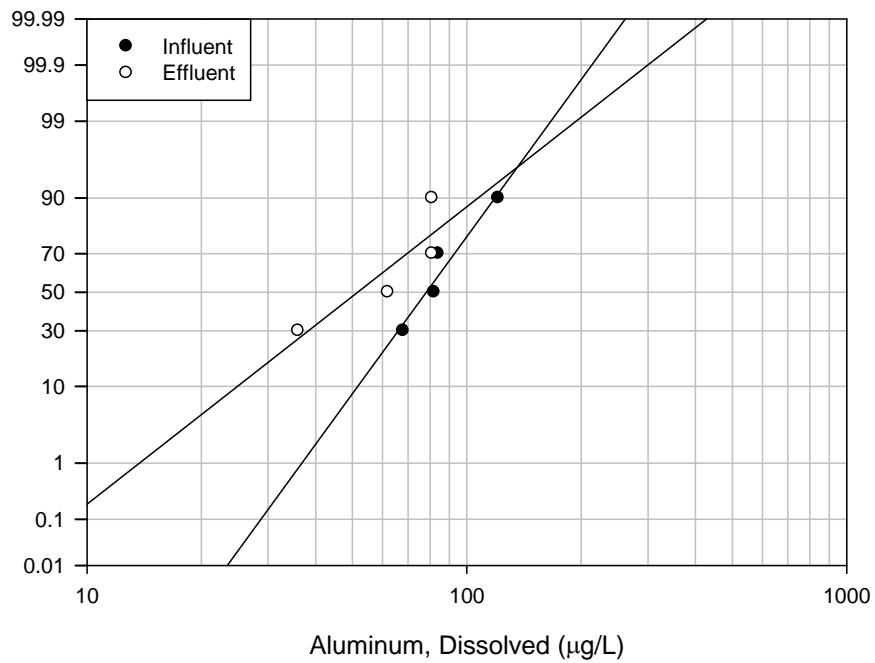
Dissolved Aluminum  
Peat Moss (P)



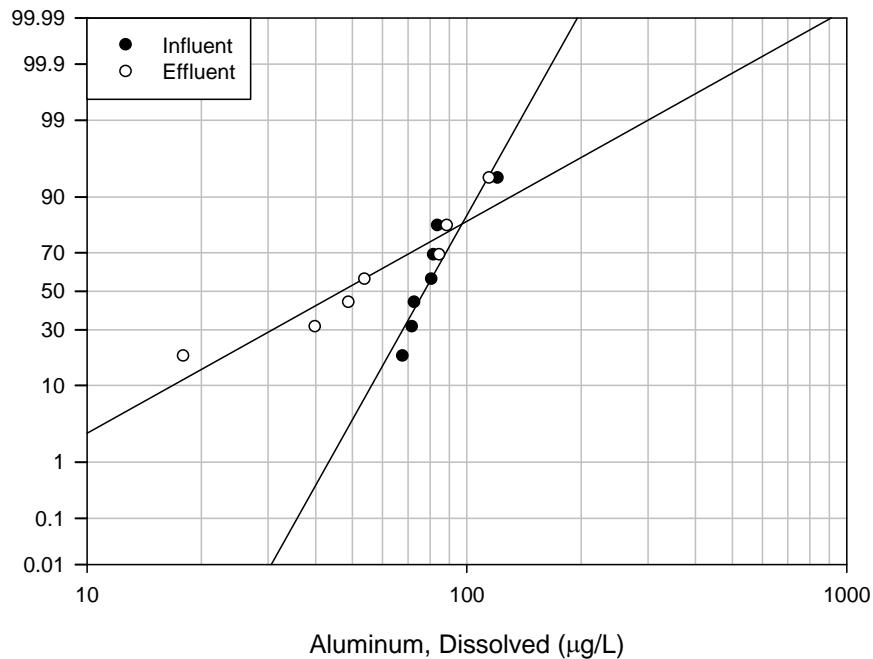
Dissolved Aluminum  
Rhyolite Sand (R)



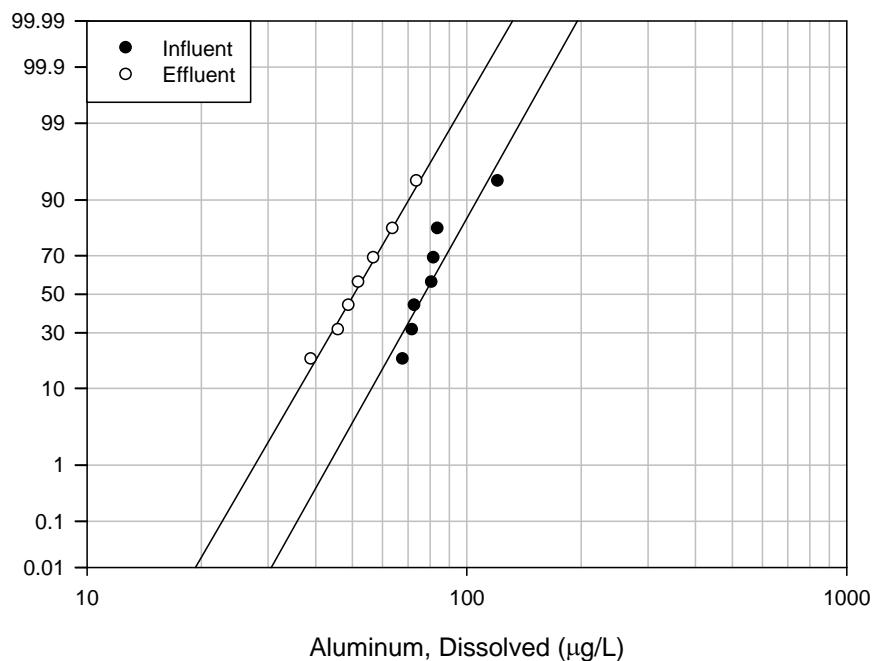
Dissolved Aluminum  
Site Sand (S)



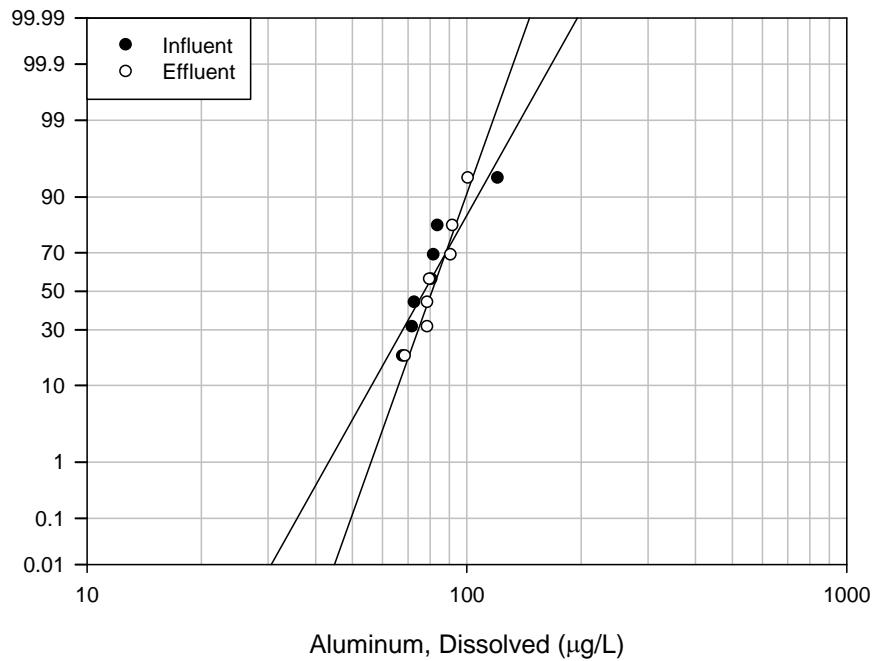
Dissolved Aluminum  
Site Zeolite (Z)



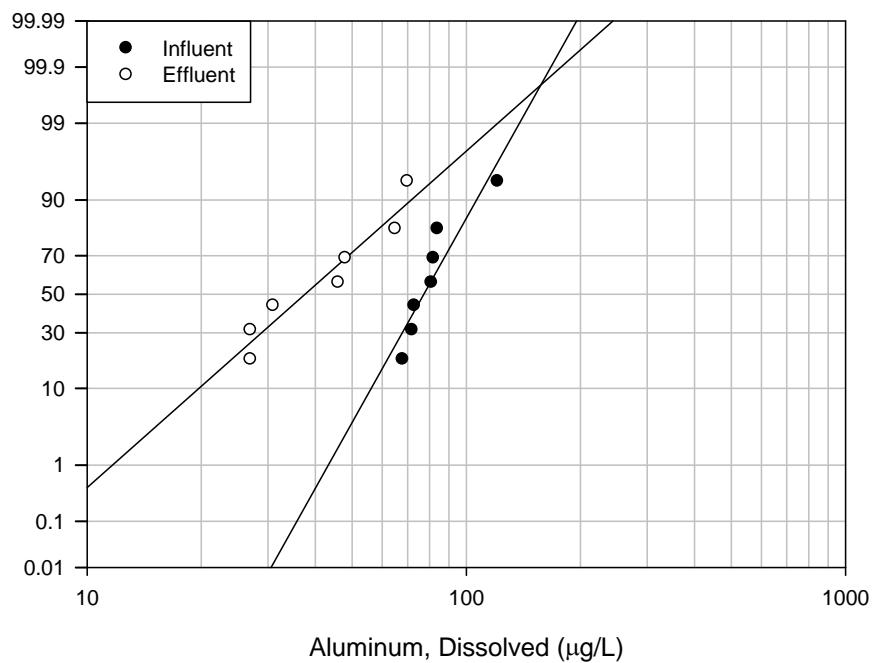
Dissolved Aluminum  
Surface Modified Zeolite (SMZ)



Dissolved Aluminum  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

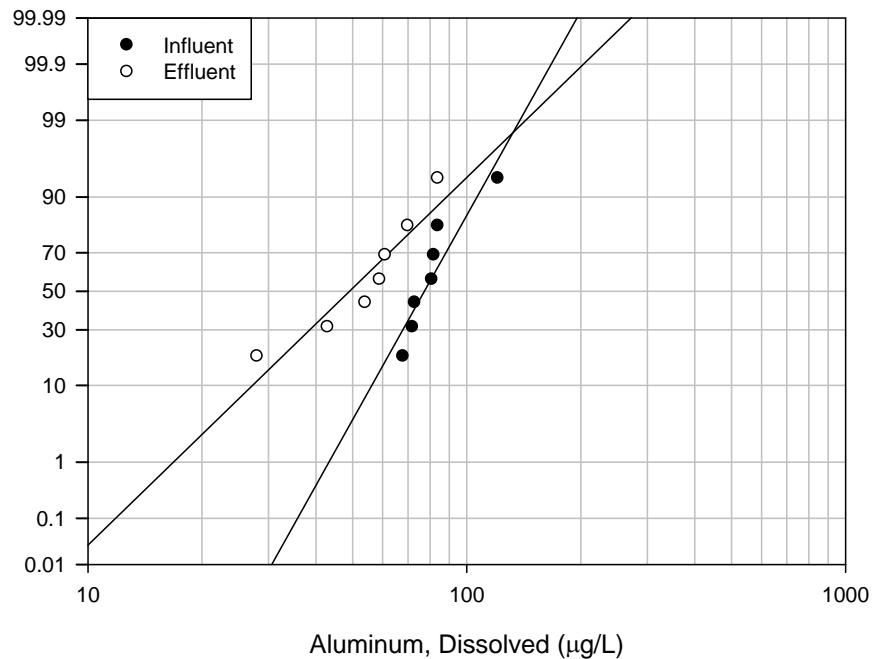


Dissolved Aluminum  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



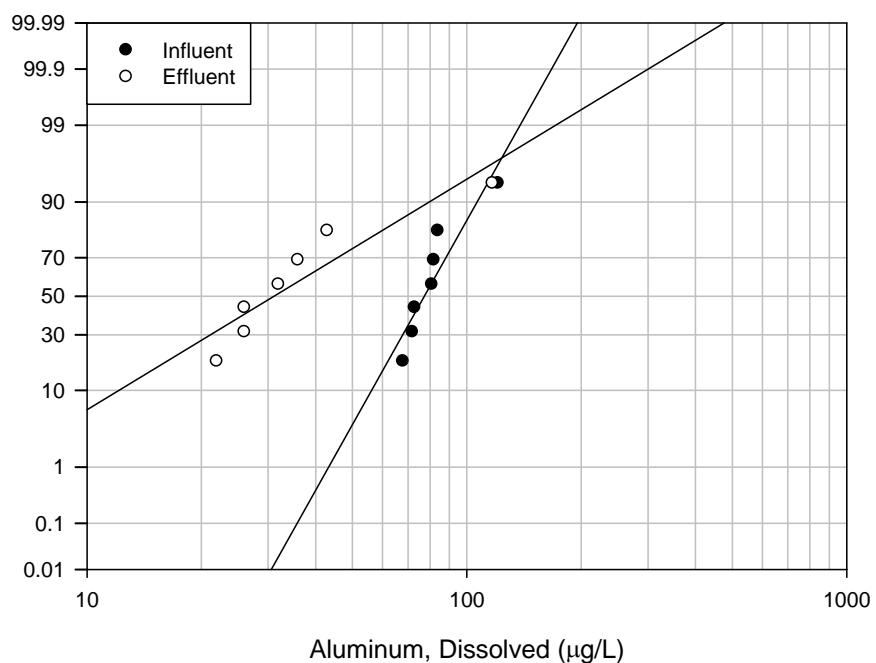
### Dissolved Aluminum

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



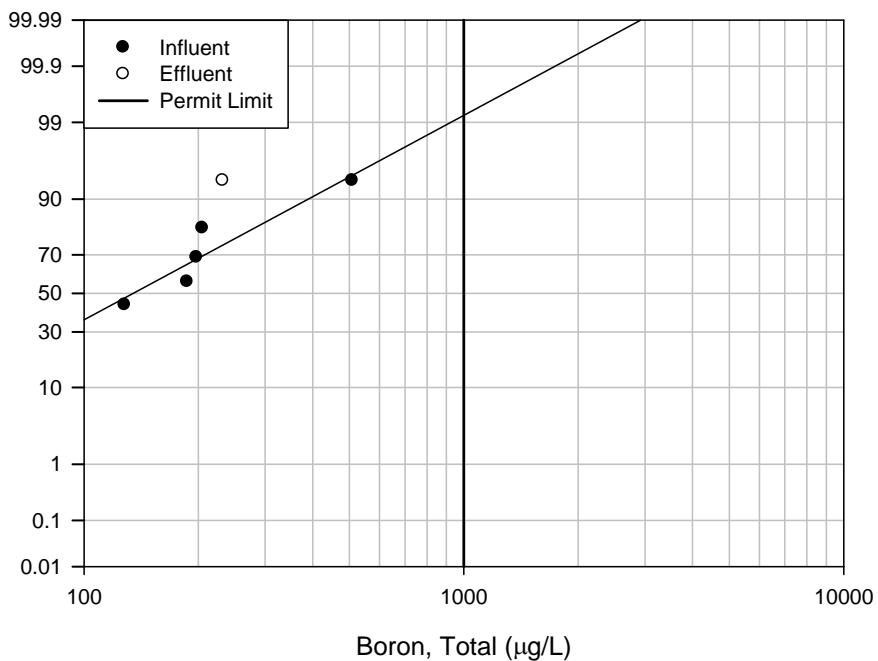
### Dissolved Aluminum

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

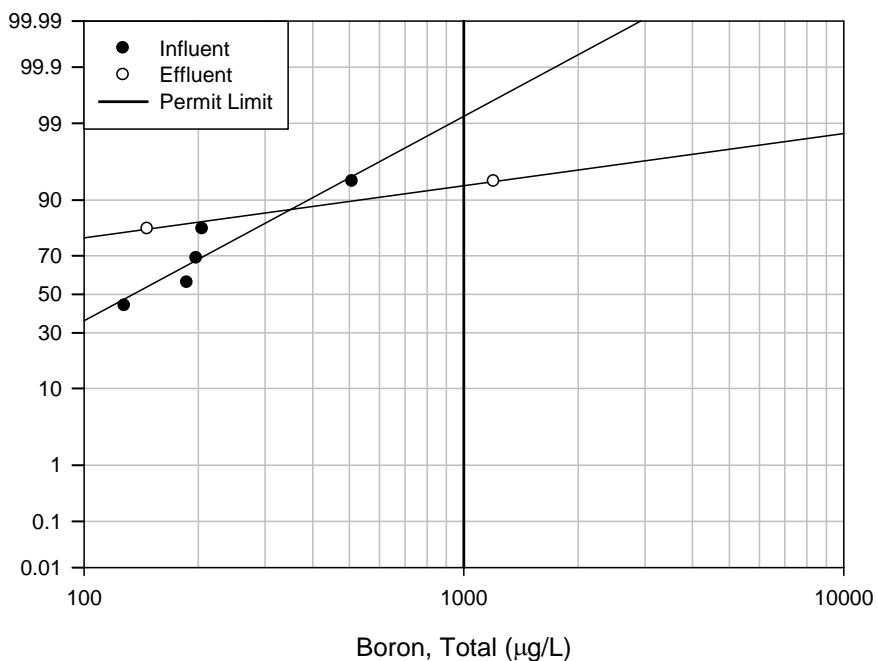


## Boron, Total

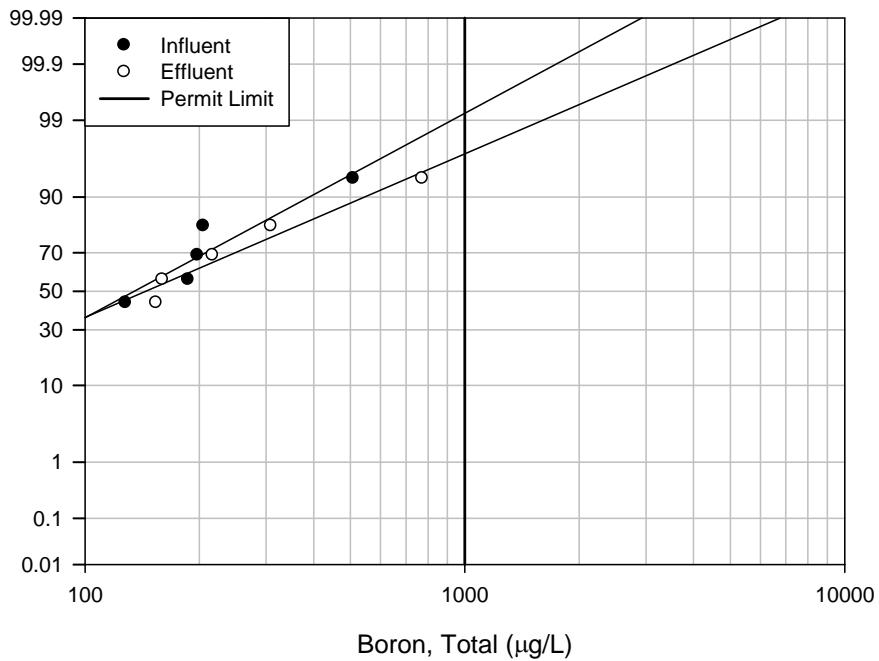
Total Boron  
Granular Activated Carbon (GAC)



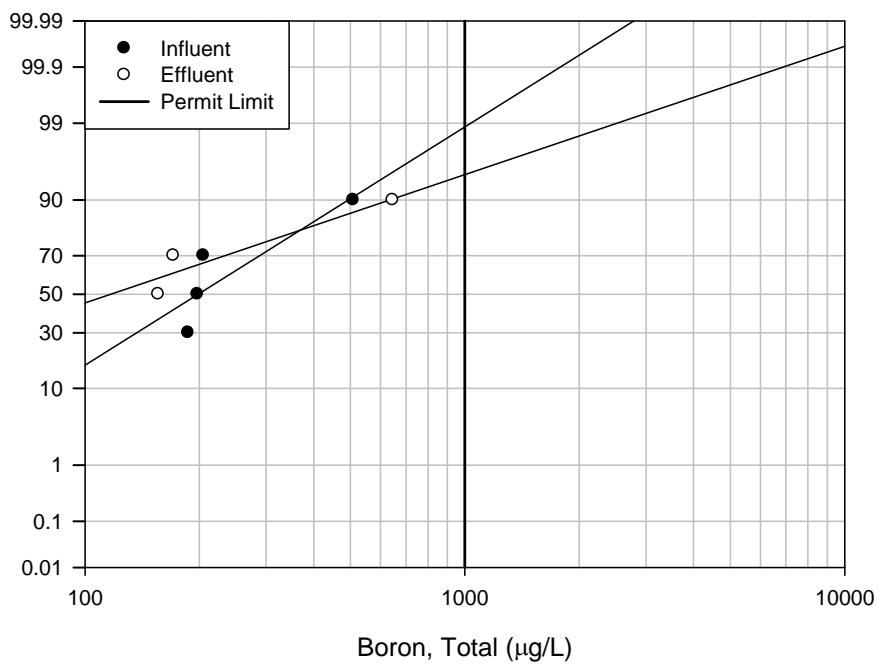
Total Boron  
Peat Moss (P)



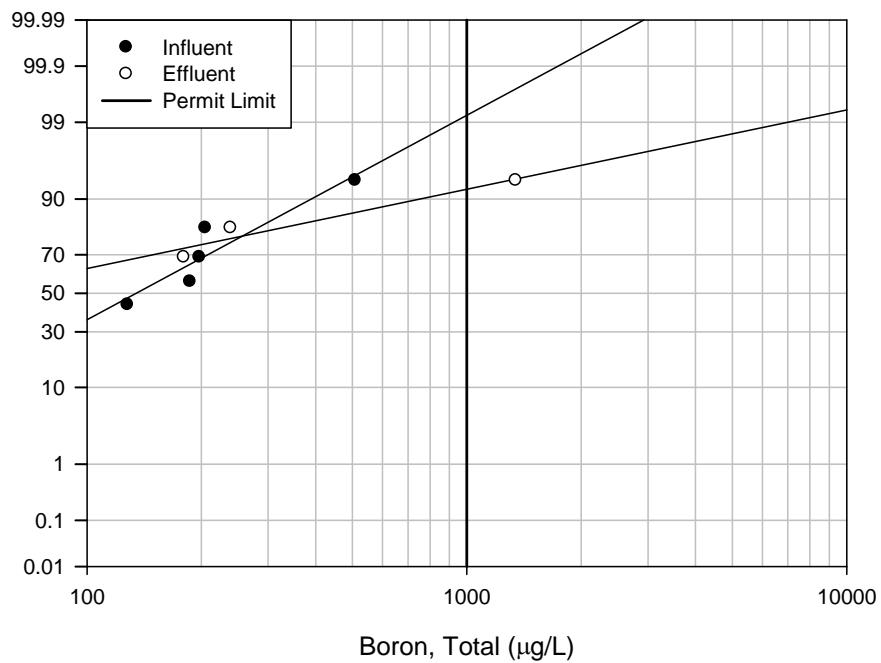
Total Boron  
Rhyolite Sand (R)



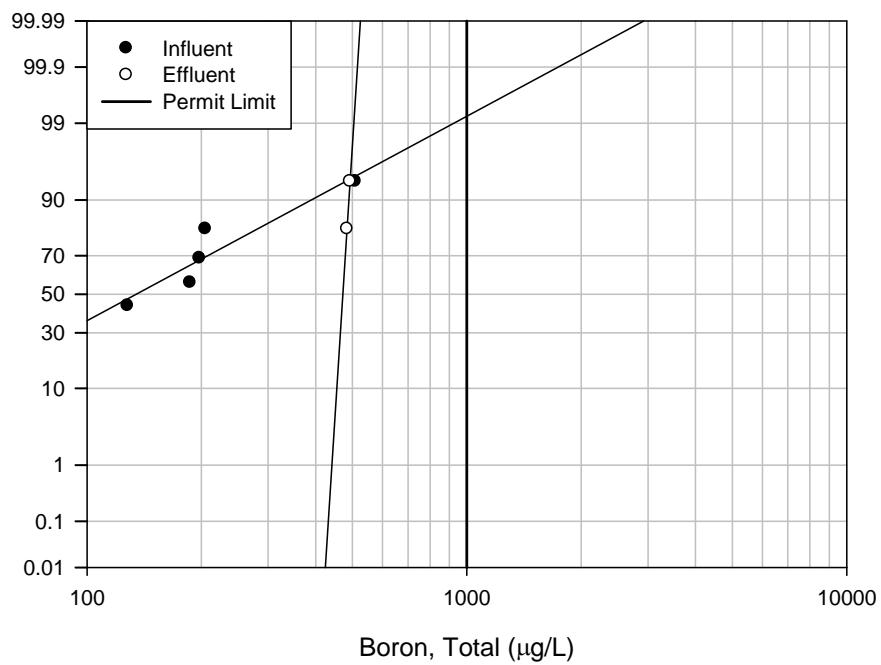
Total Boron  
Site Sand (S)



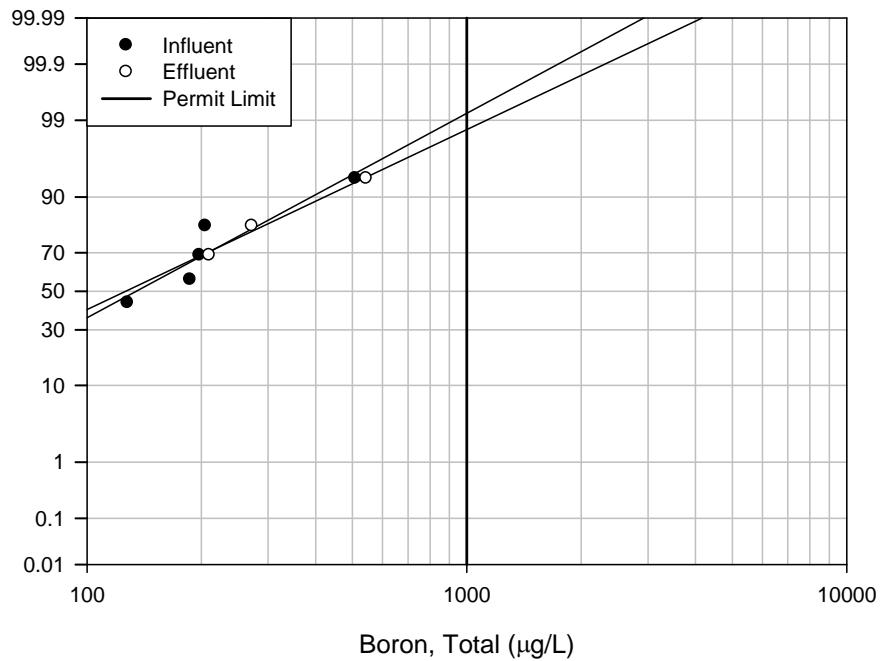
Total Boron  
Site Zeolite (Z)



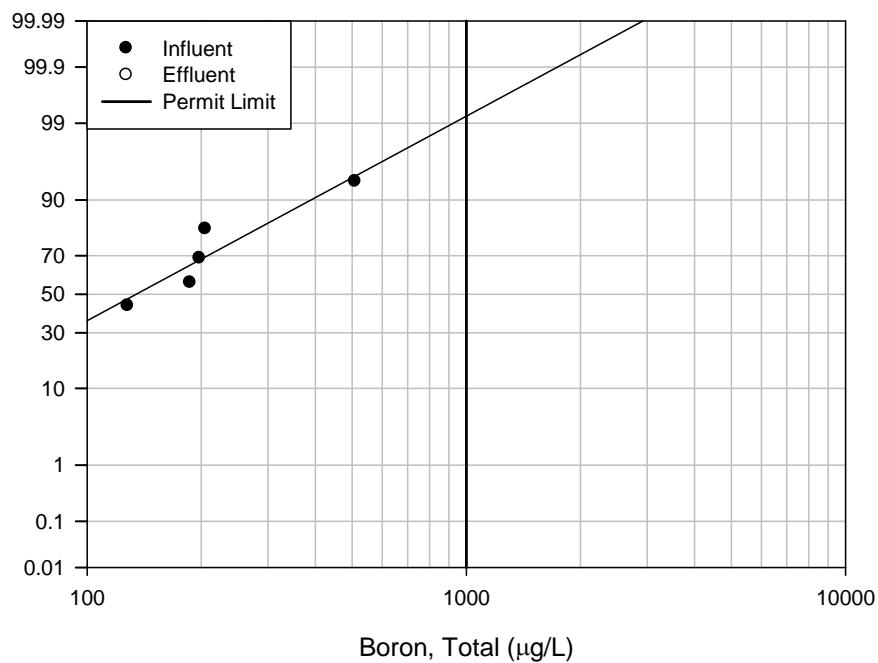
Total Boron  
Surface Modified Zeolite (SMZ)



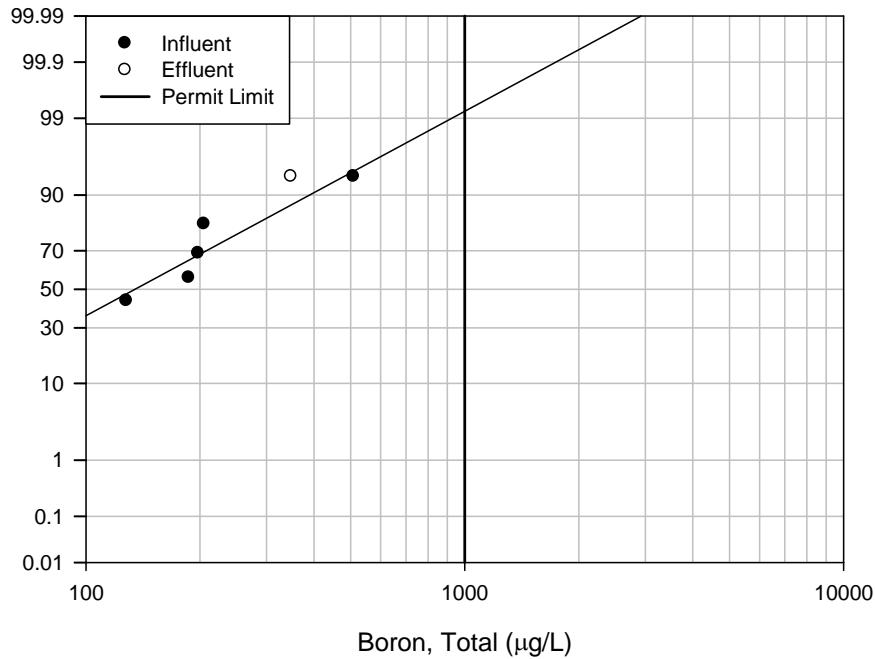
**Total Boron**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



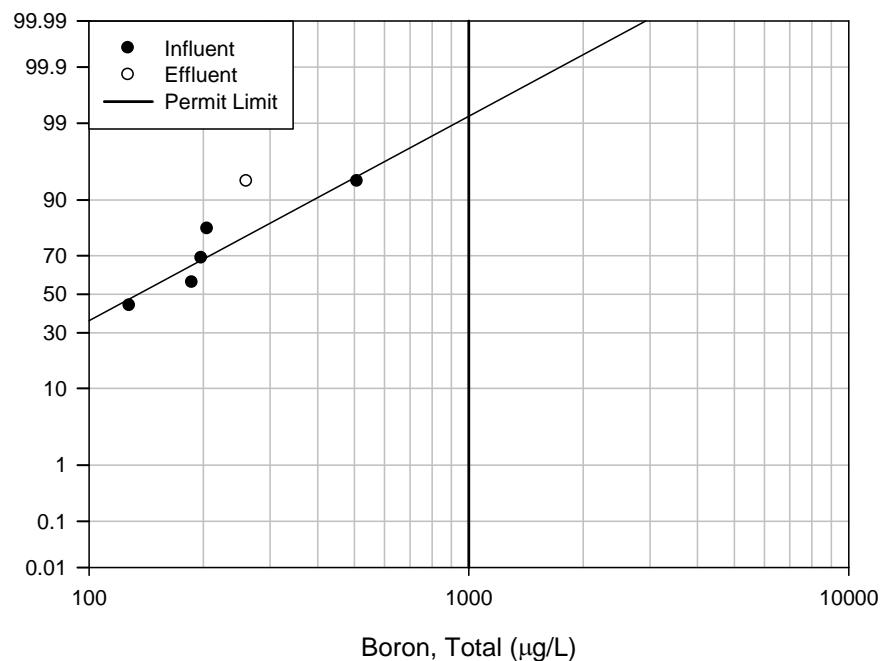
**Total Boron**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Boron  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

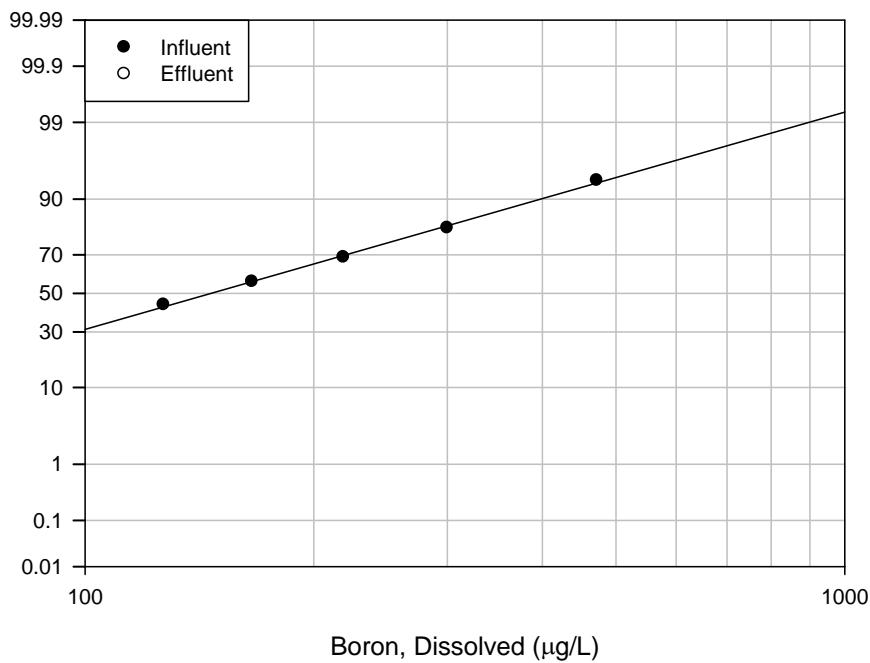


Total Boron  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

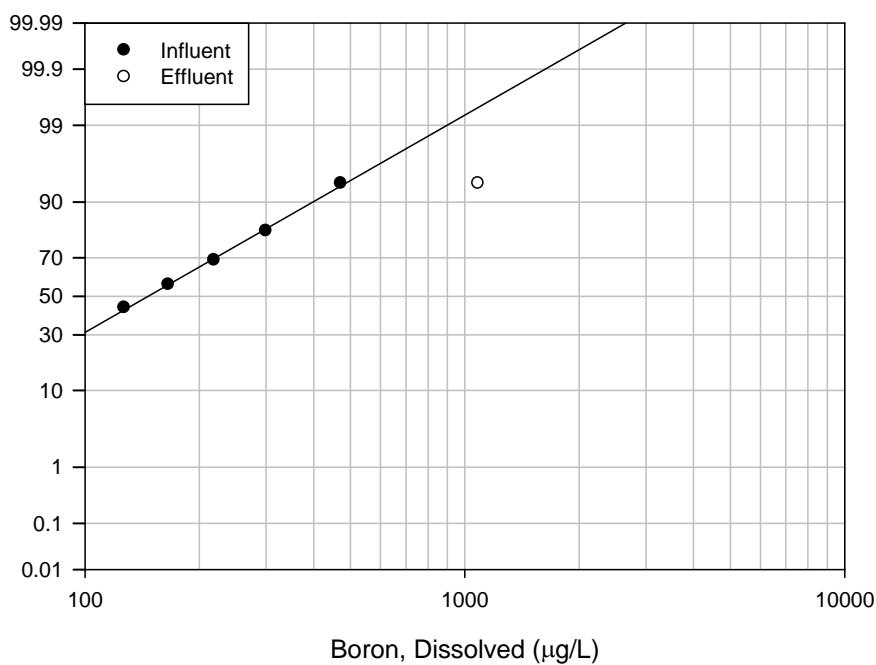


## Boron, Filtered

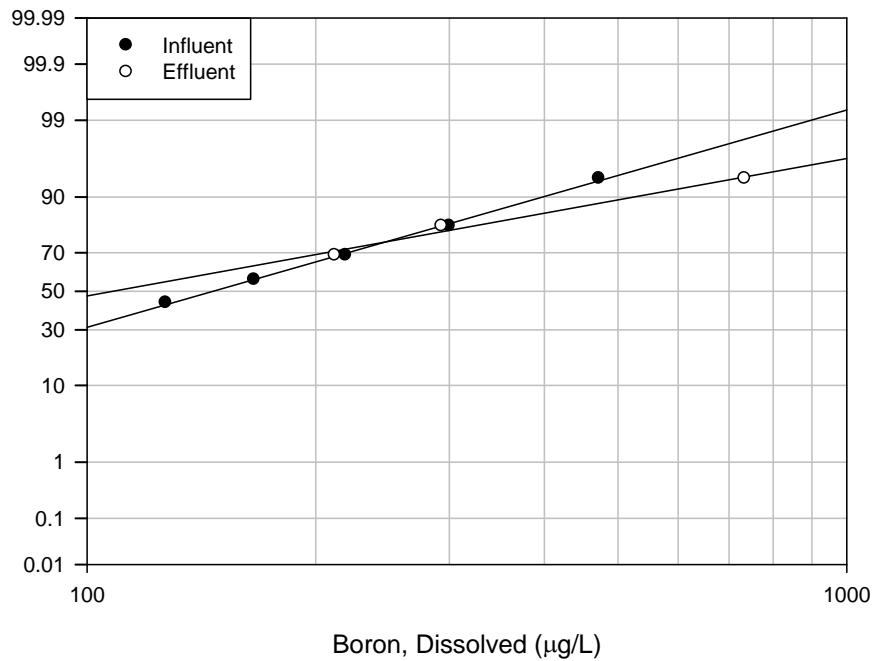
Dissolved Boron  
Granular Activated Carbon (GAC)



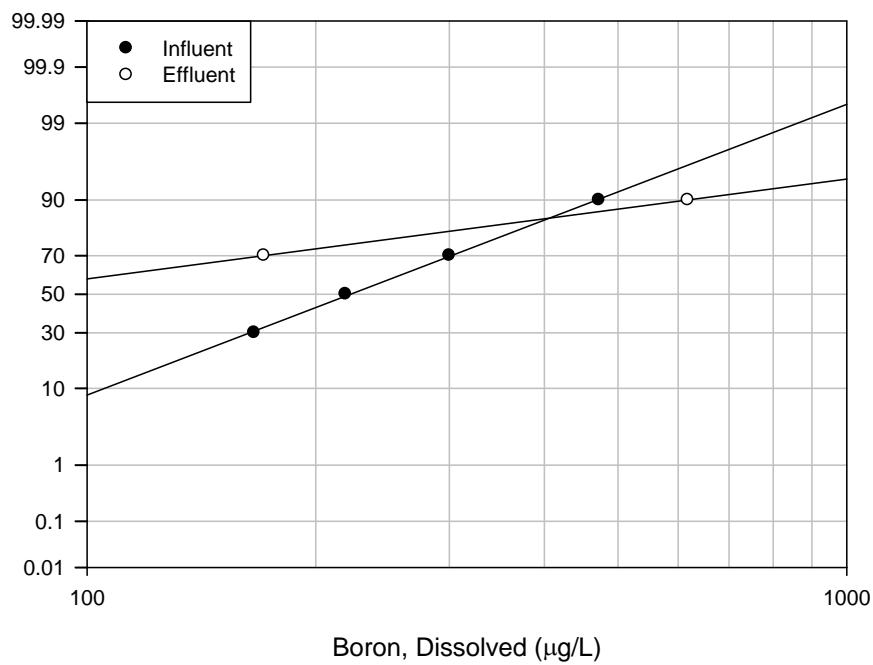
Dissolved Boron  
Peat Moss (P)



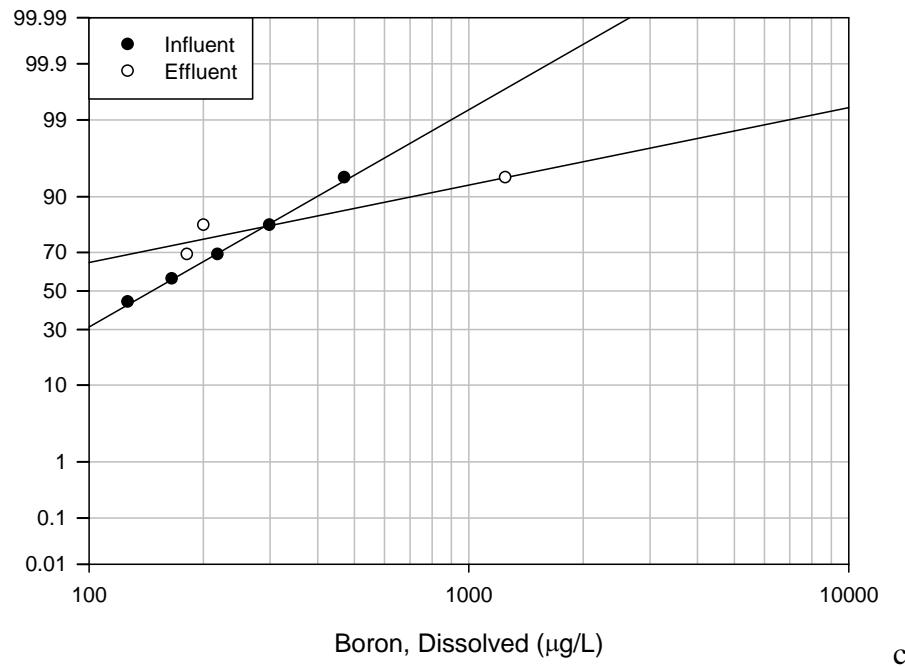
Dissolved Boron  
Rhyolite Sand (R)



Dissolved Boron  
Site Sand (S)

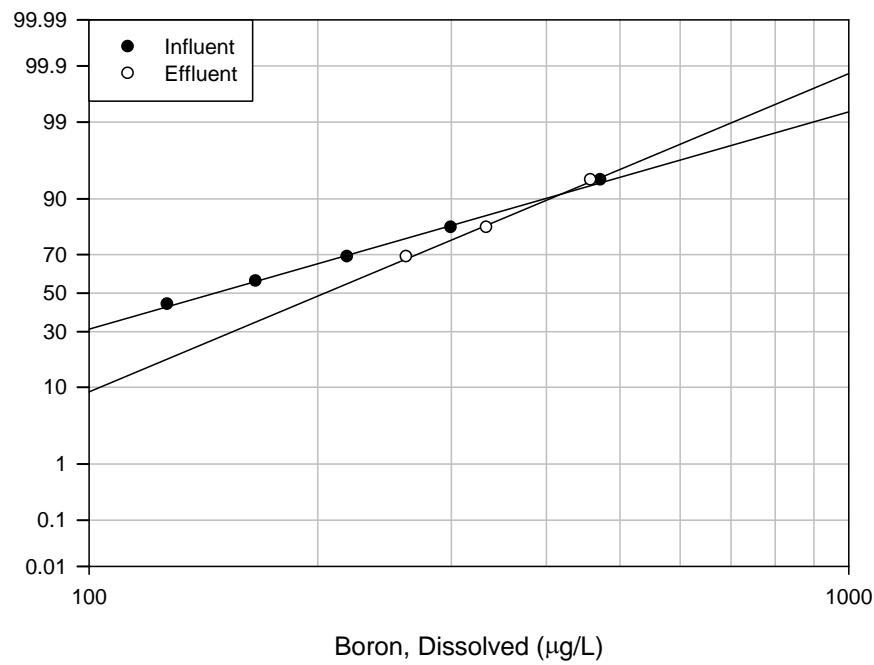


Dissolved Boron  
Site Zeolite (Z)

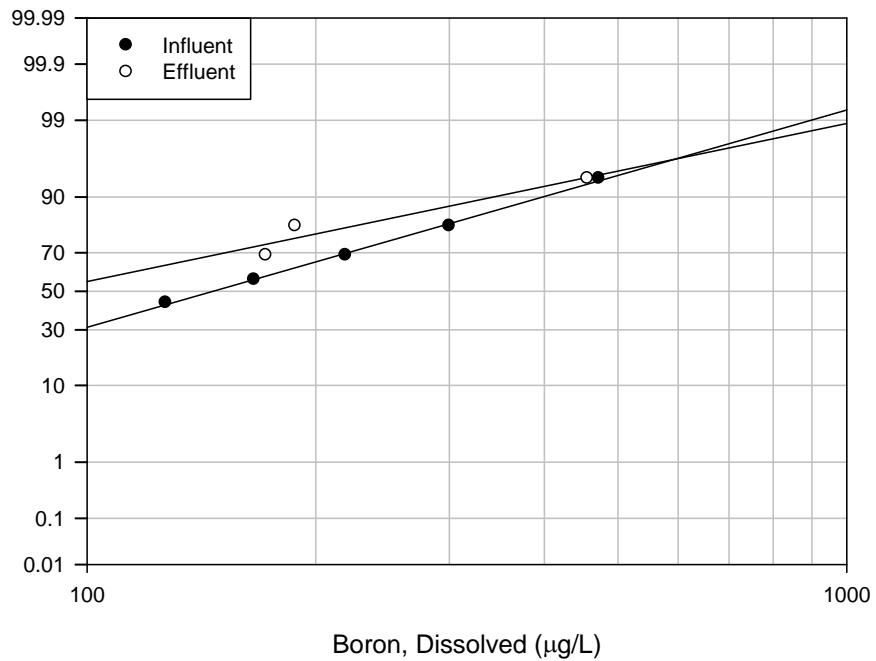


c

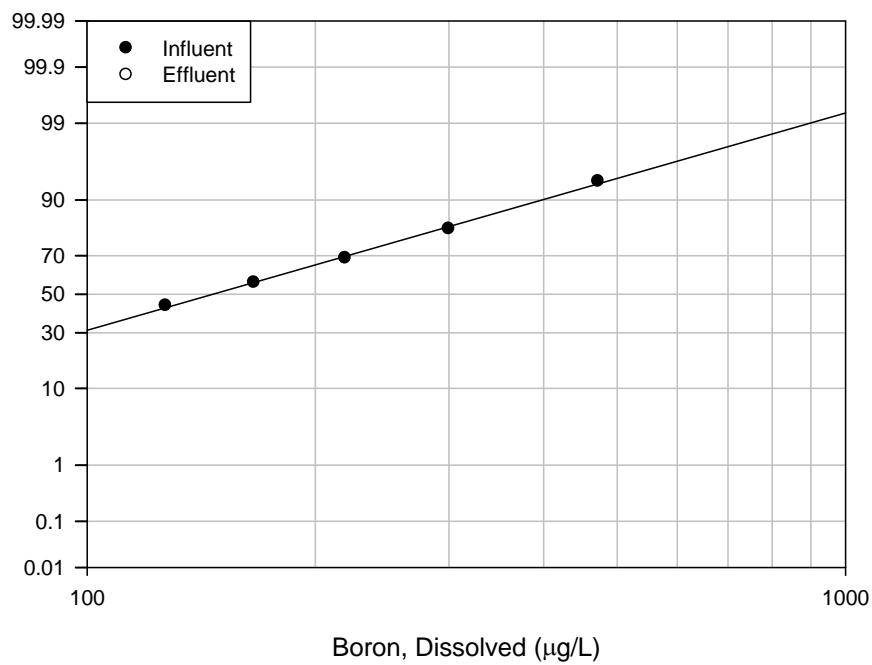
Dissolved Boron  
Surface Modified Zeolite (SMZ)



**Dissolved Boron**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

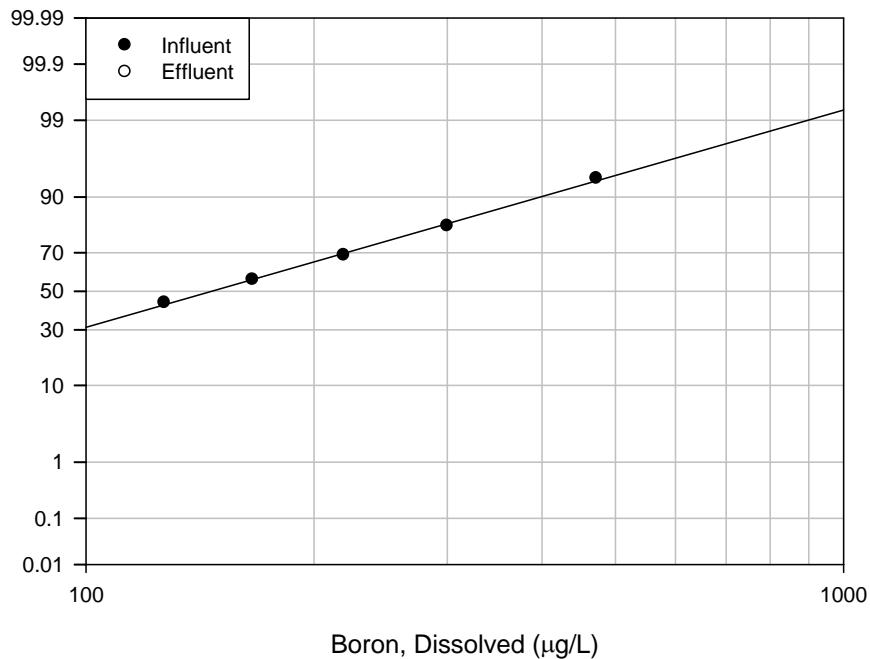


**Dissolved Boron**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



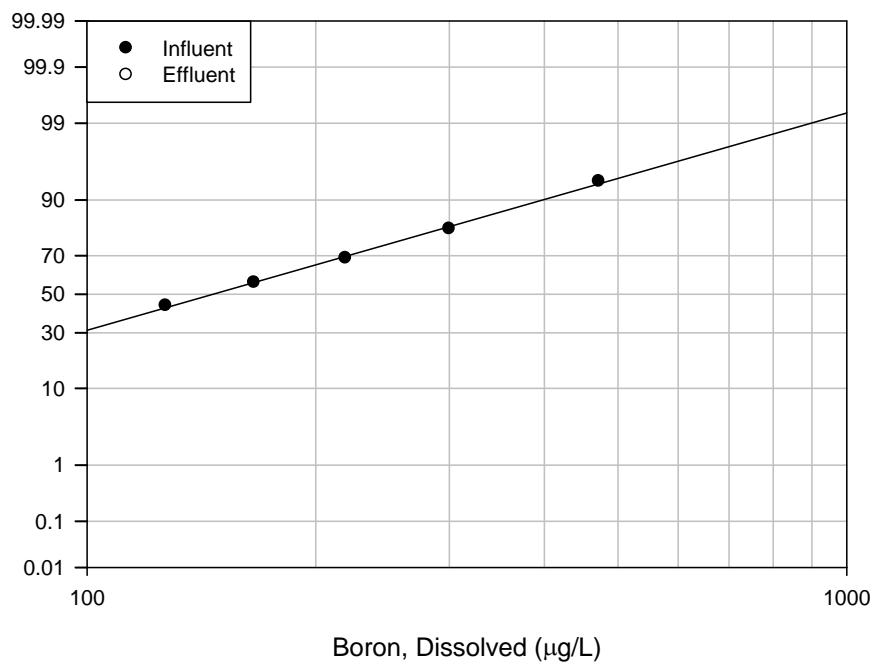
### Dissolved Boron

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



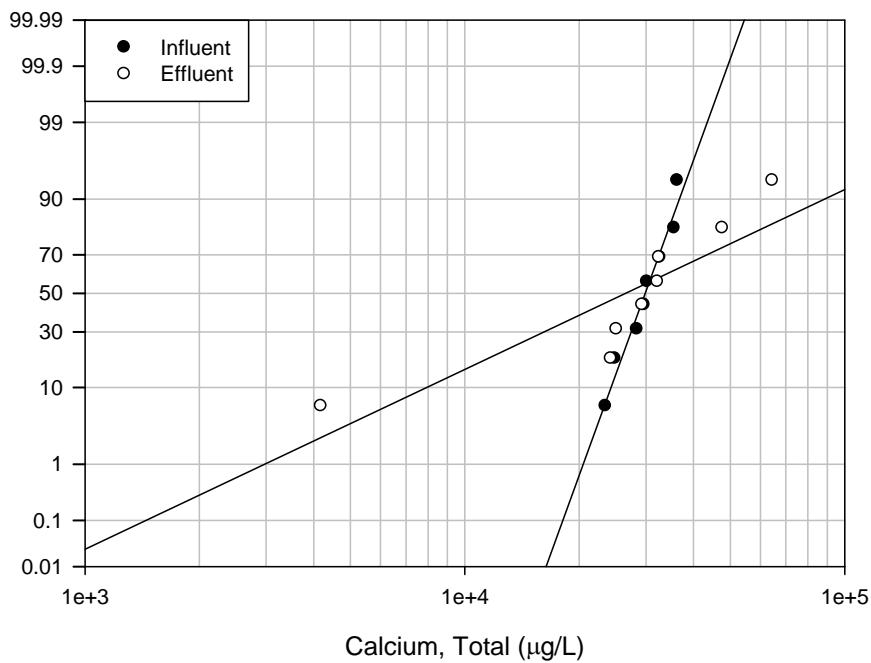
### Dissolved Boron

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

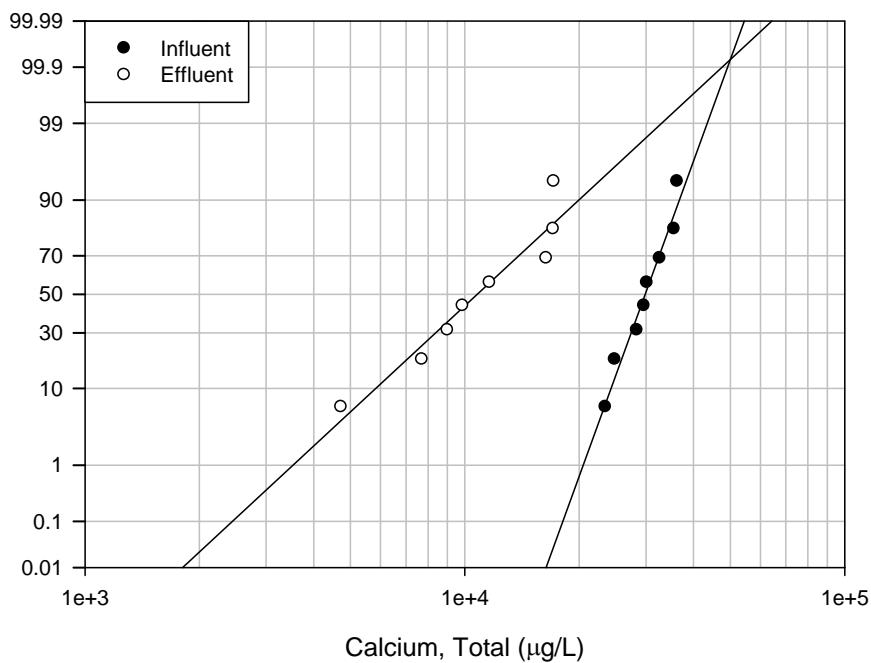


## Calcium, Total

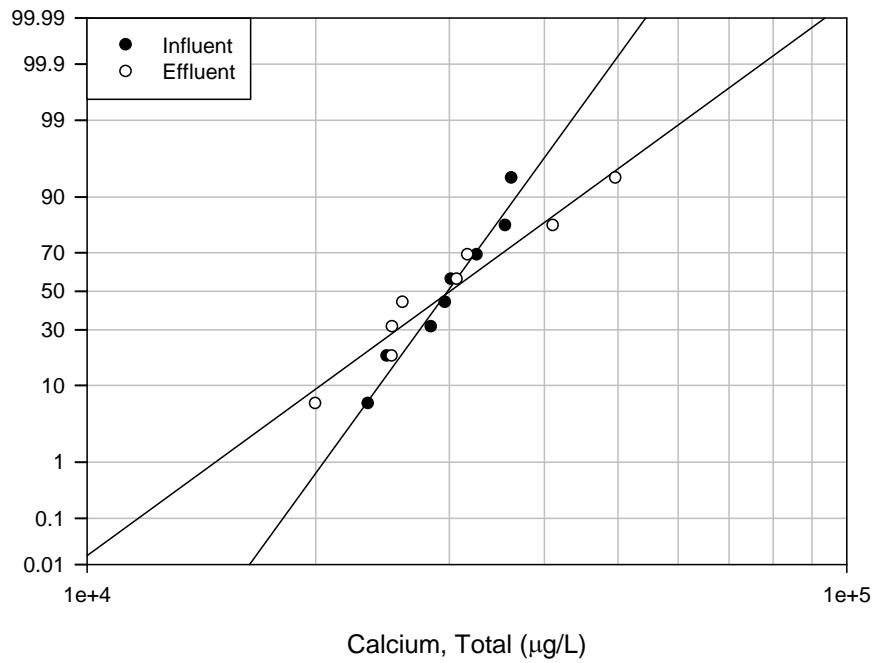
Total Calcium  
Granular Activated Carbon (GAC)



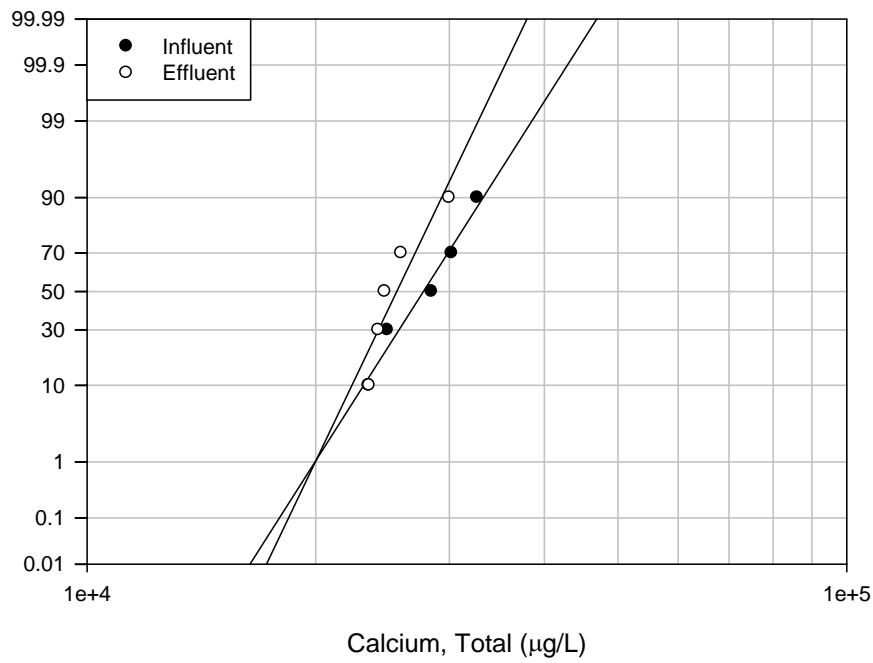
Total Calcium  
Peat Moss (P)



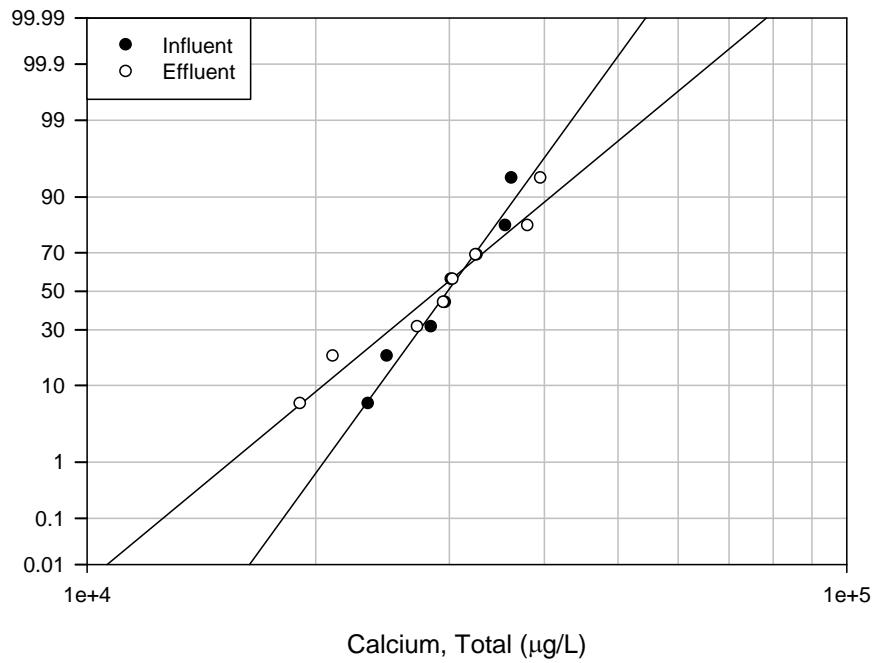
Total Calcium  
Rhyolite Sand (R)



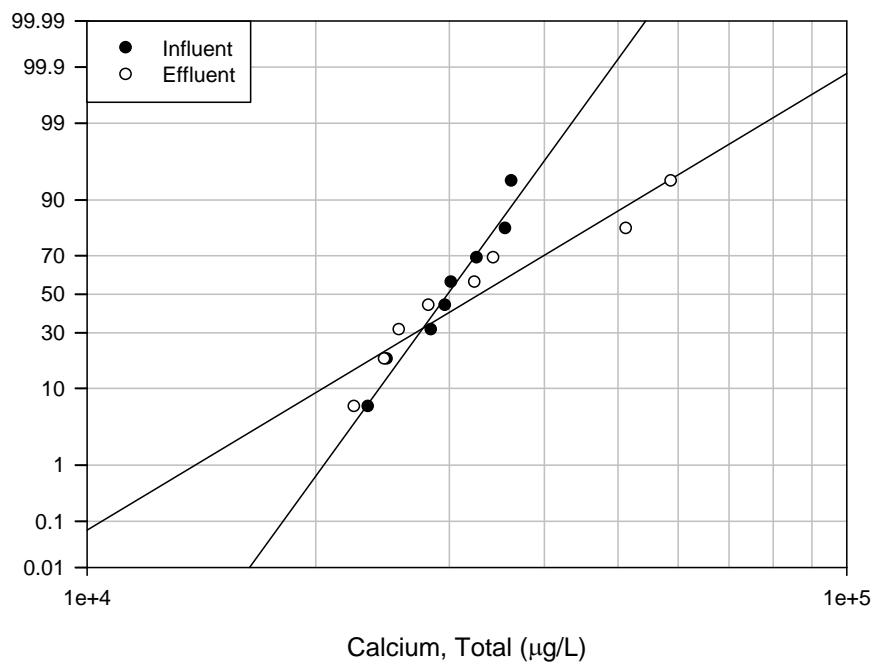
Total Calcium  
Site Sand (S)



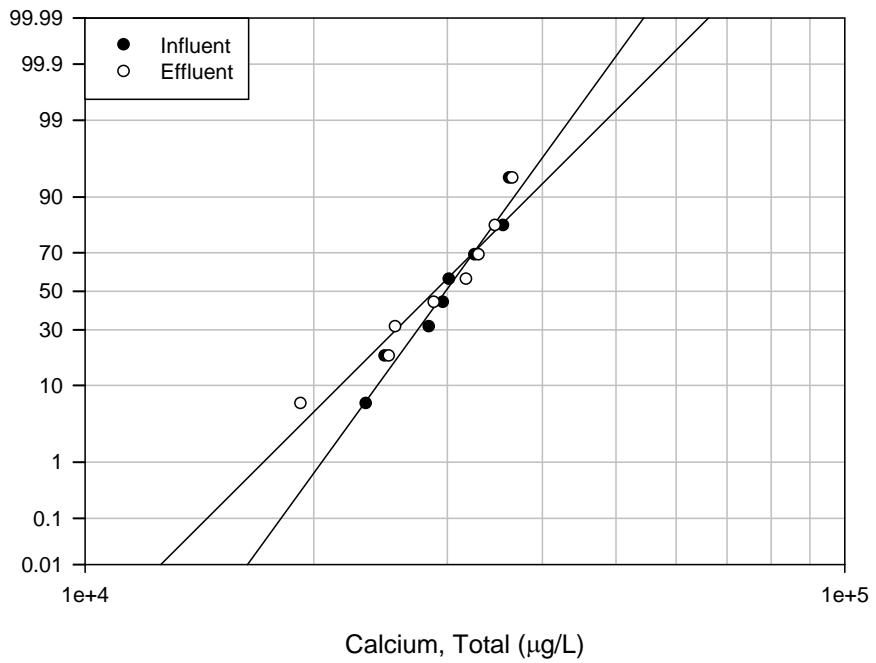
Total Calcium  
Site Zeolite (Z)



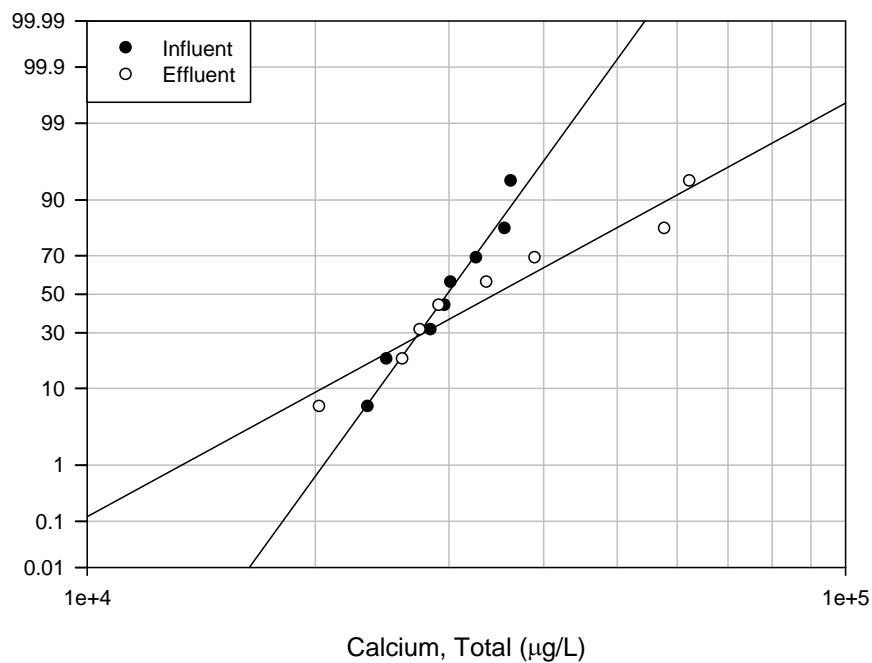
Total Calcium  
Surface Modified Zeolite (SMZ)



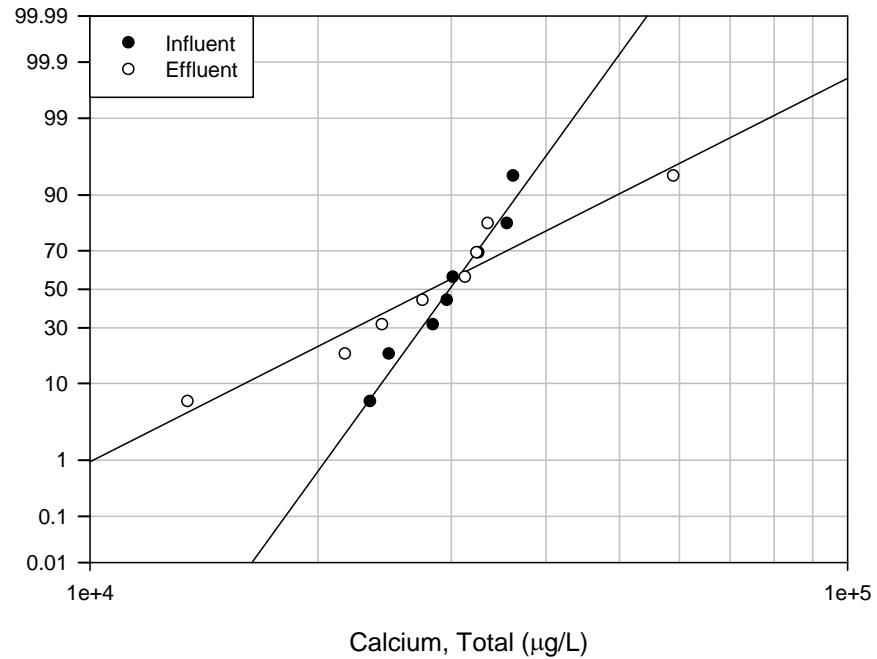
Total Calcium  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



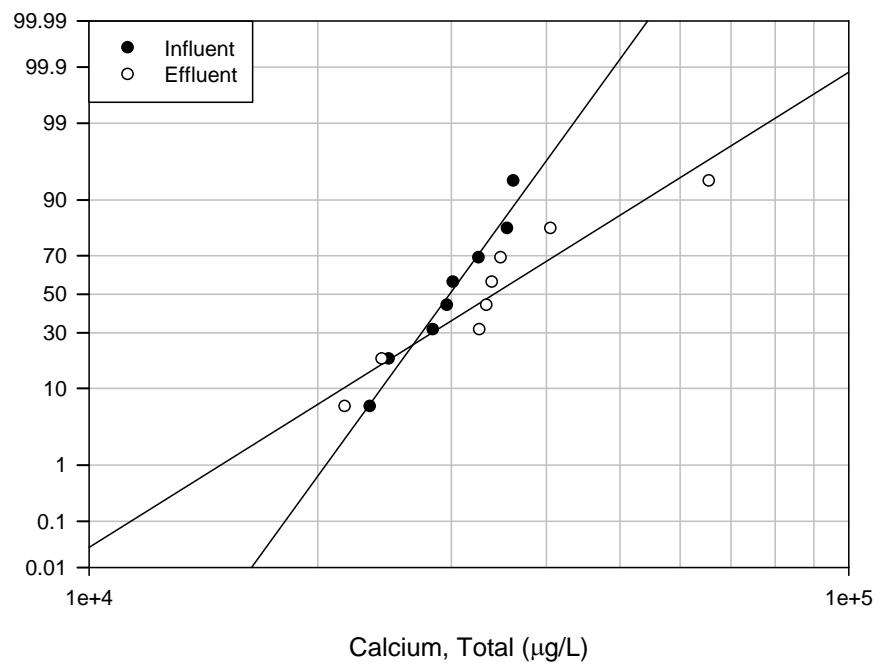
Total Calcium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Calcium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

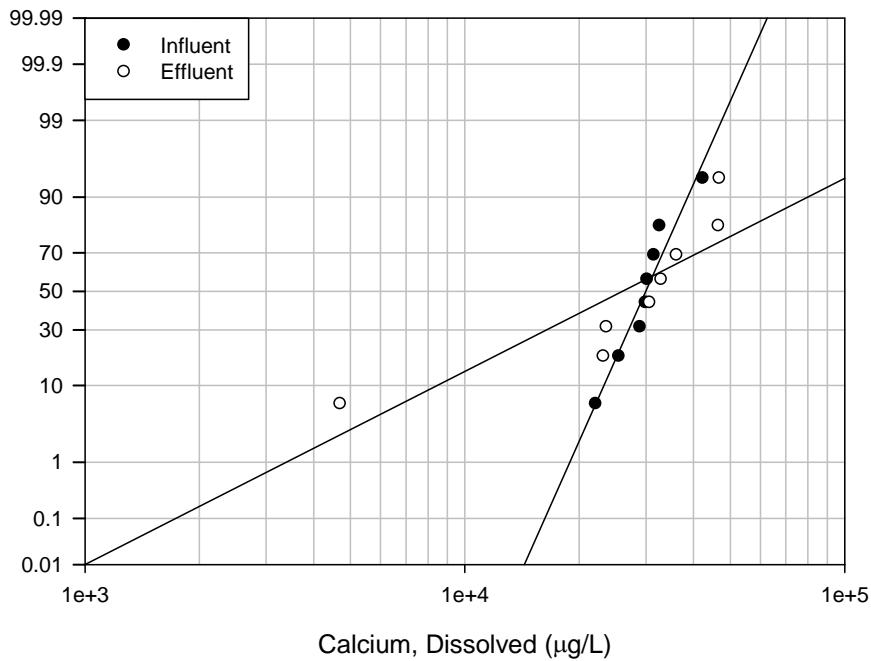


Total Calcium  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

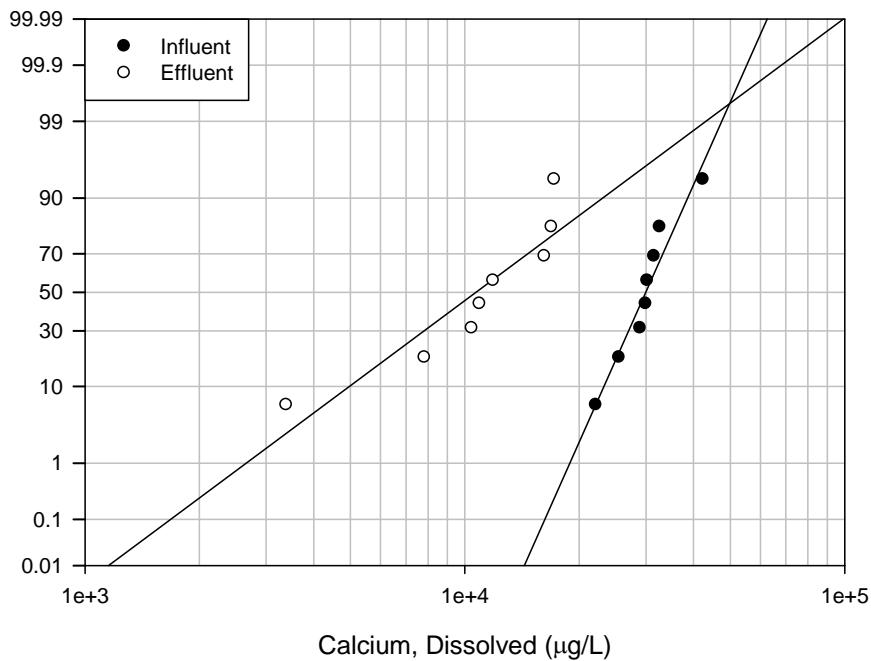


## Calcium, Filtered

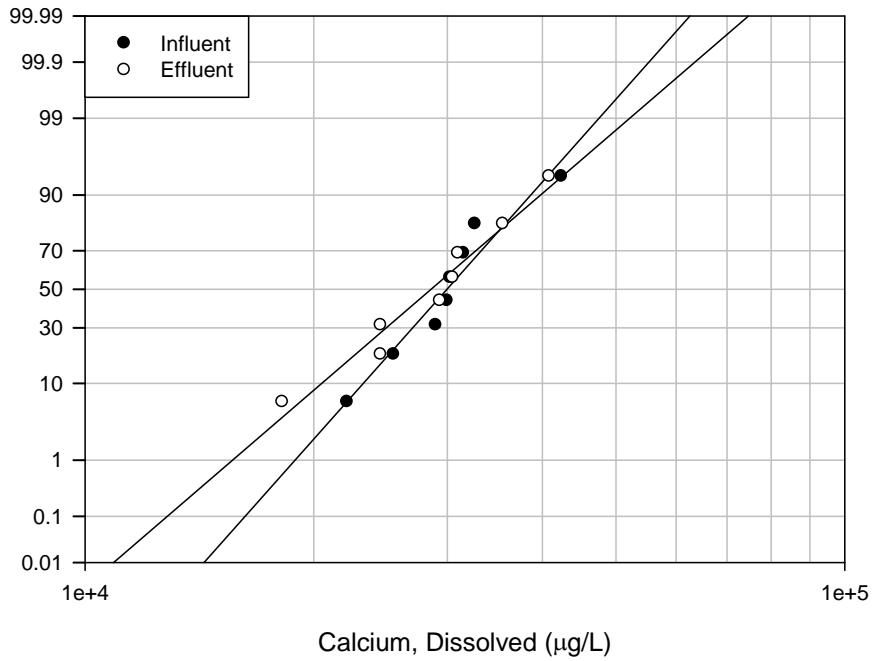
Dissolved Calcium  
Granular Activated Carbon (GAC)



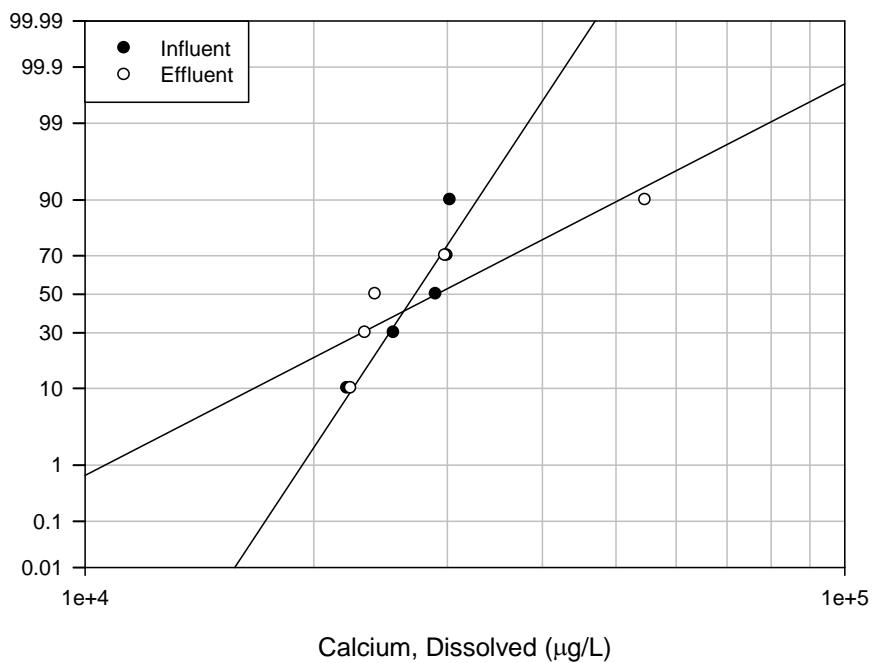
Dissolved Calcium  
Peat Moss (P)



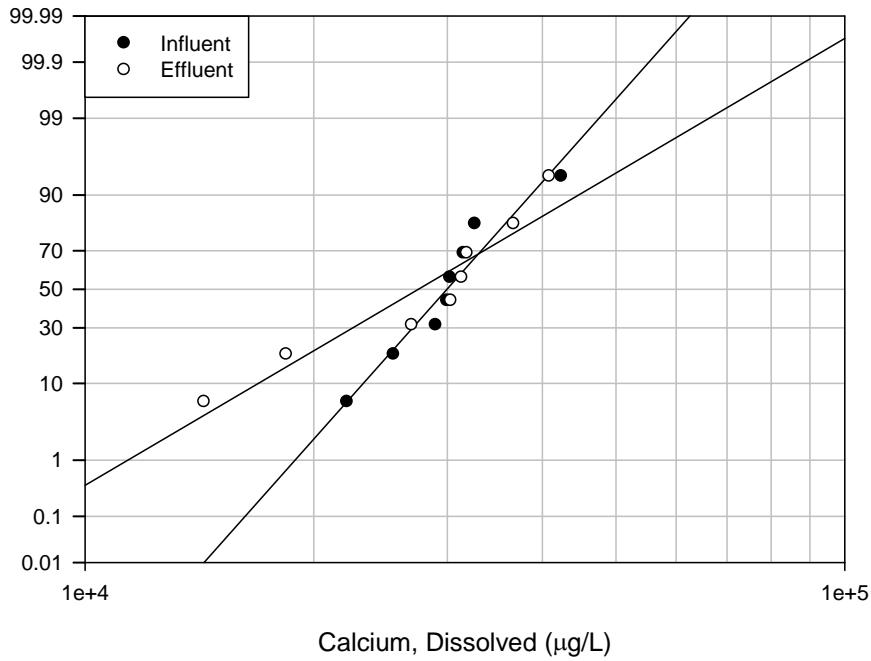
Dissolved Calcium  
Rhyolite Sand (R)



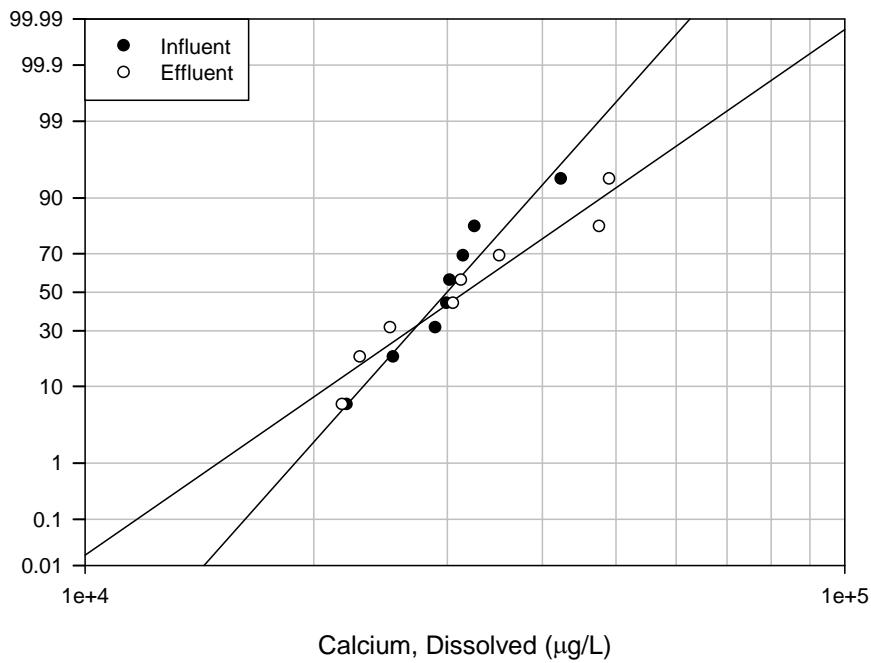
Dissolved Calcium  
Site Sand (S)



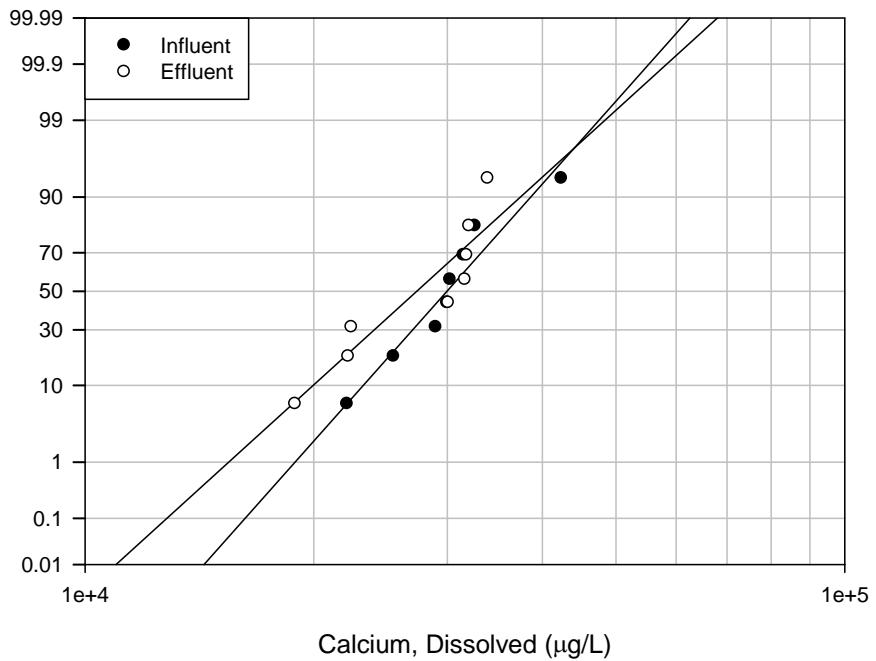
Dissolved Calcium  
Site Zeolite (Z)



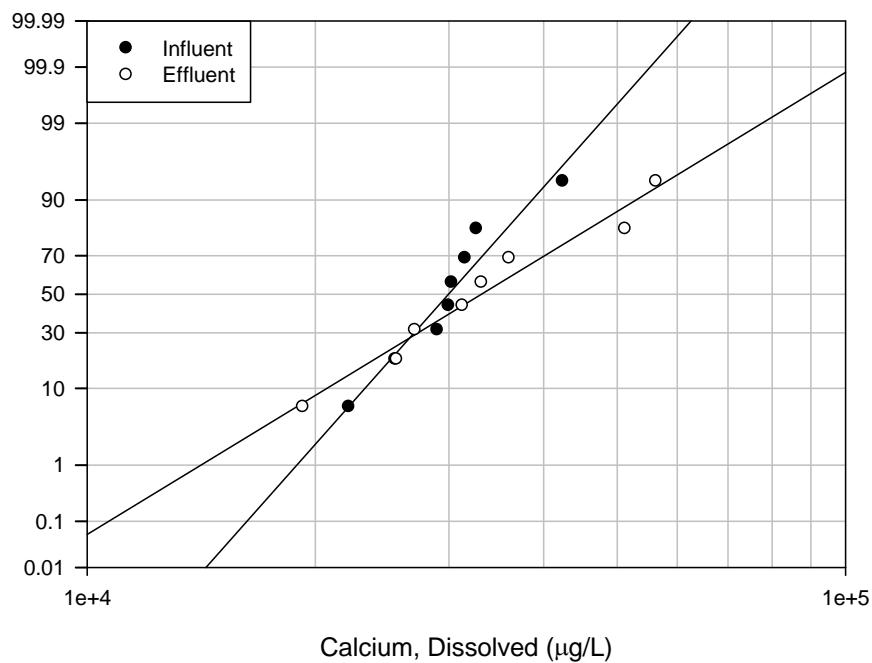
Dissolved Calcium  
Surface Modified Zeolite (SMZ)



Dissolved Calcium  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

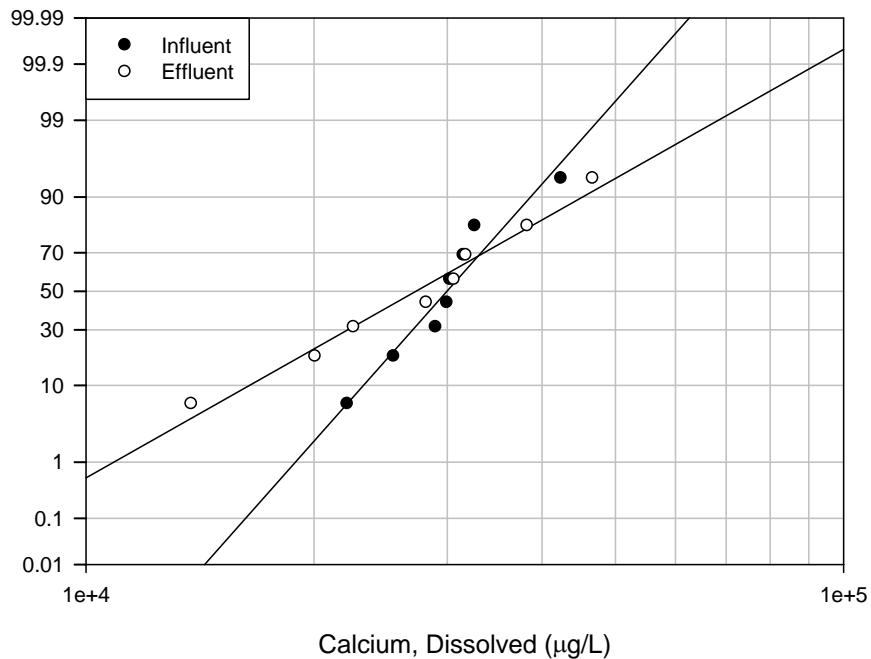


Dissolved Calcium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



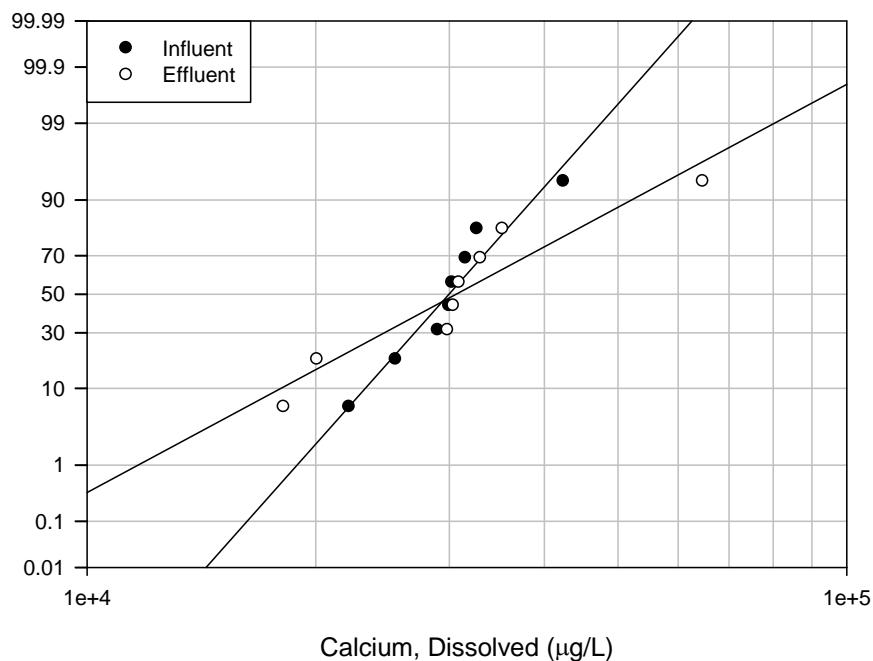
### Dissolved Calcium

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



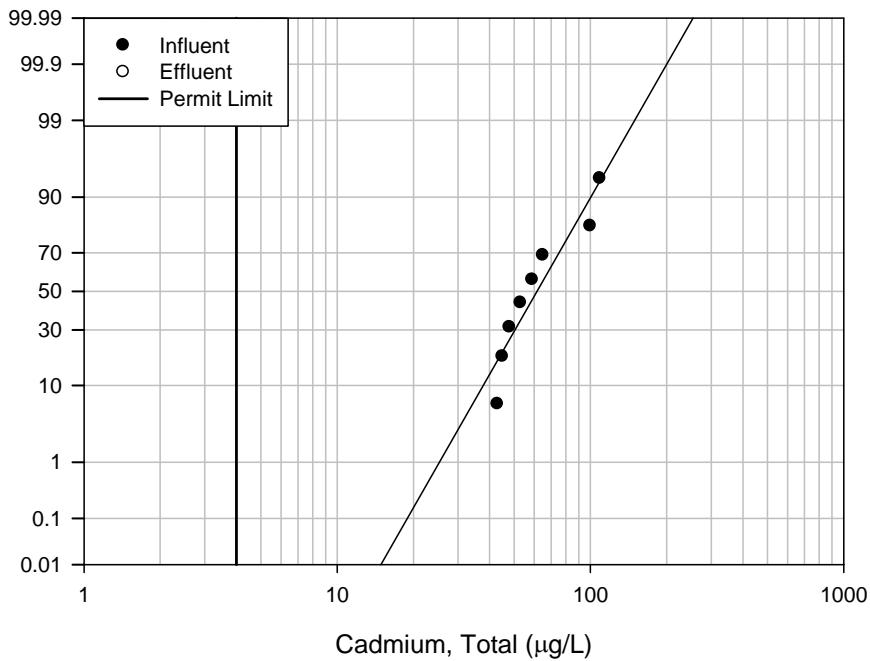
### Dissolved Calcium

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

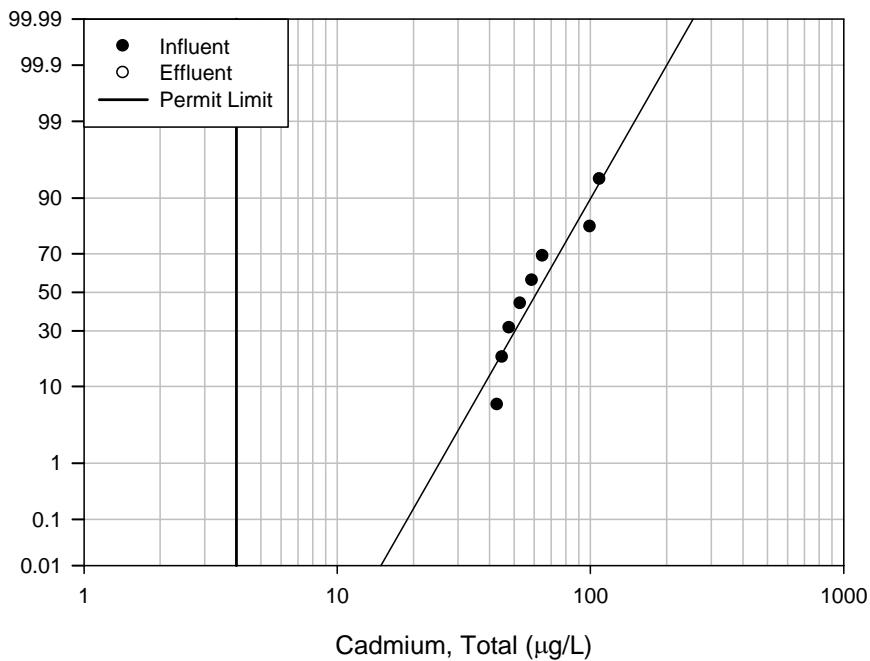


## Cadmium, Total

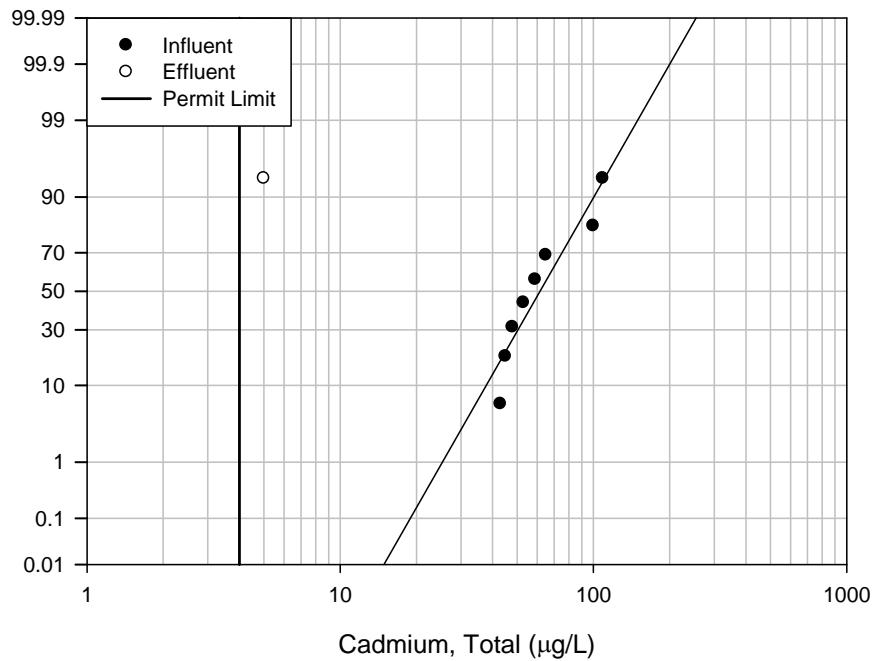
Total Cadmium  
Granular Activated Carbon (GAC)



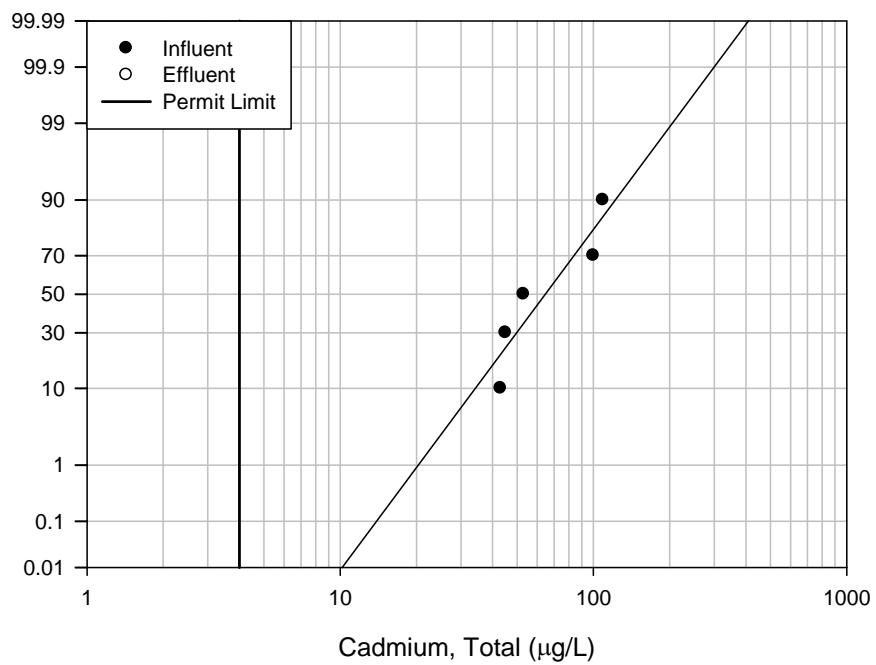
Total Cadmium  
Peat Moss (P)



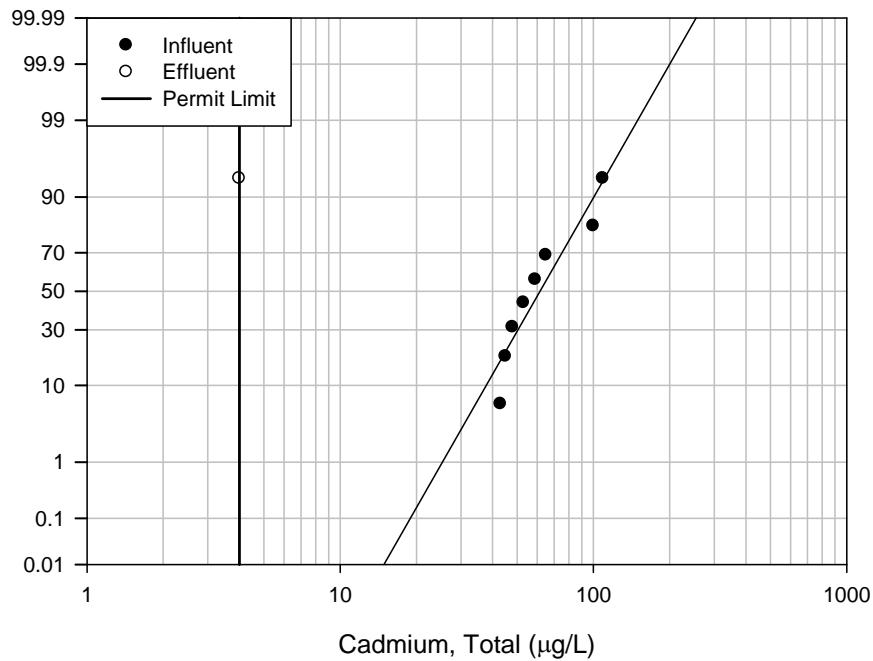
Total Cadmium  
Rhyolite Sand (R)



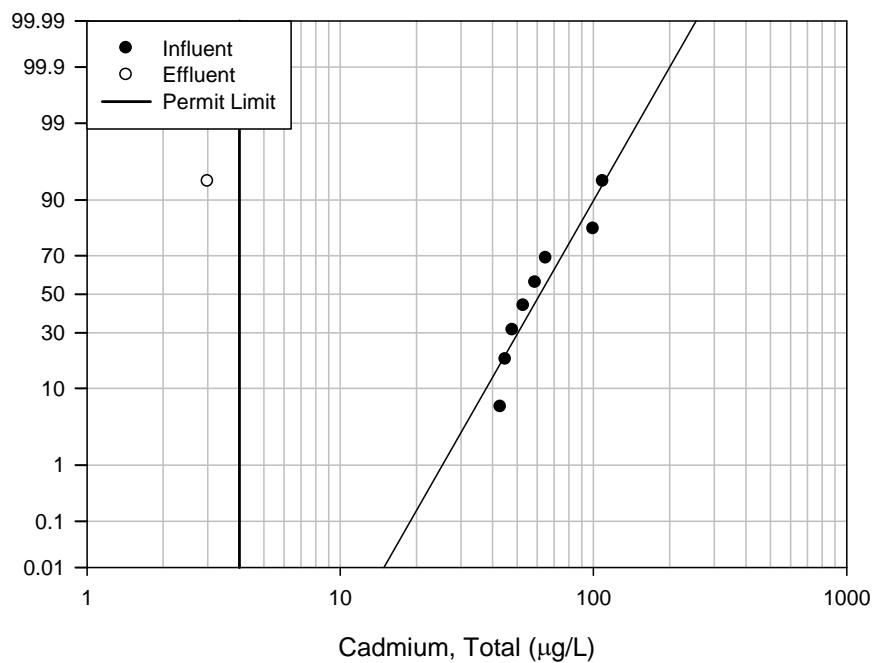
Total Cadmium  
Site Sand (S)



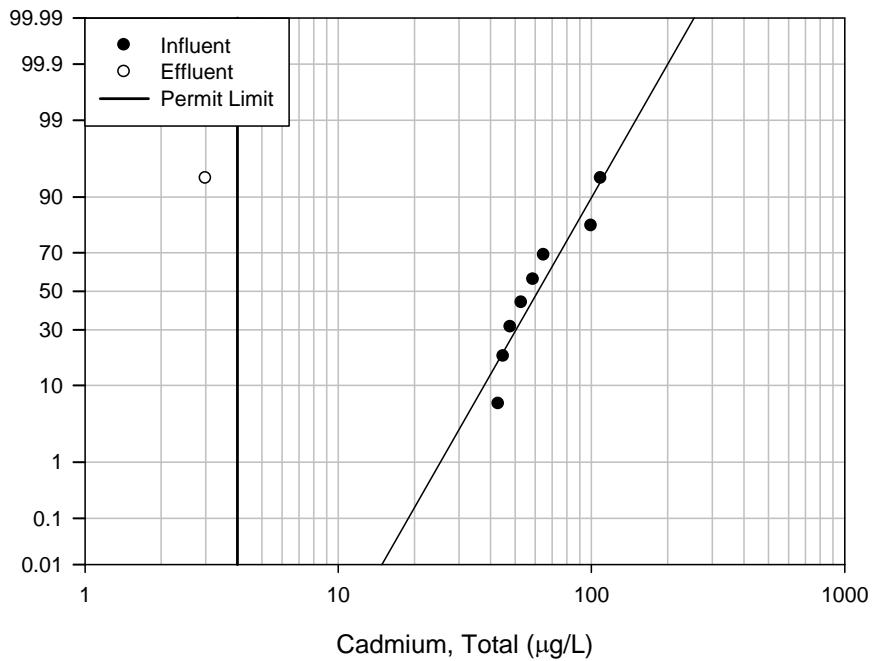
Total Cadmium  
Site Zeolite (Z)



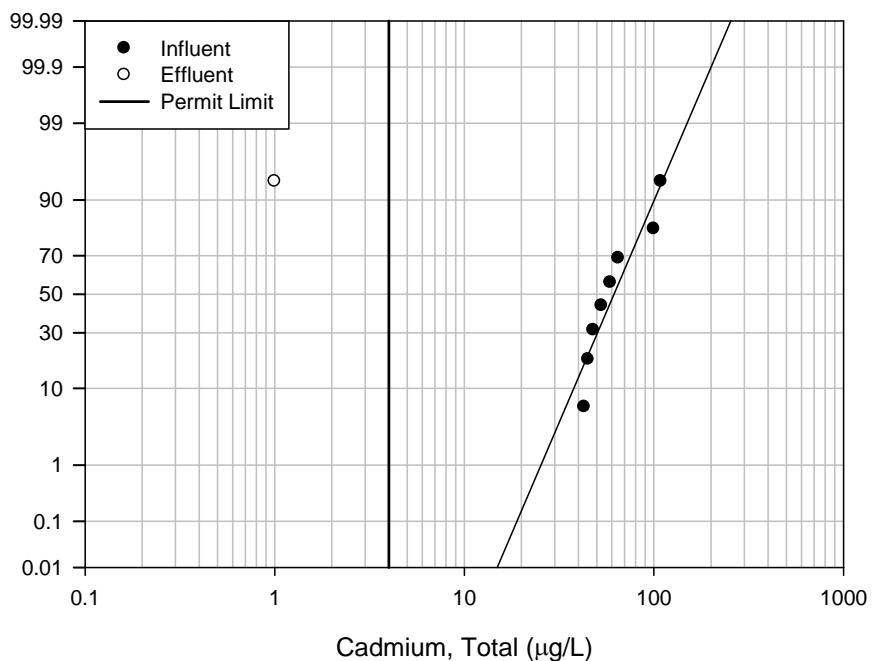
Total Cadmium  
Surface Modified Zeolite (SMZ)



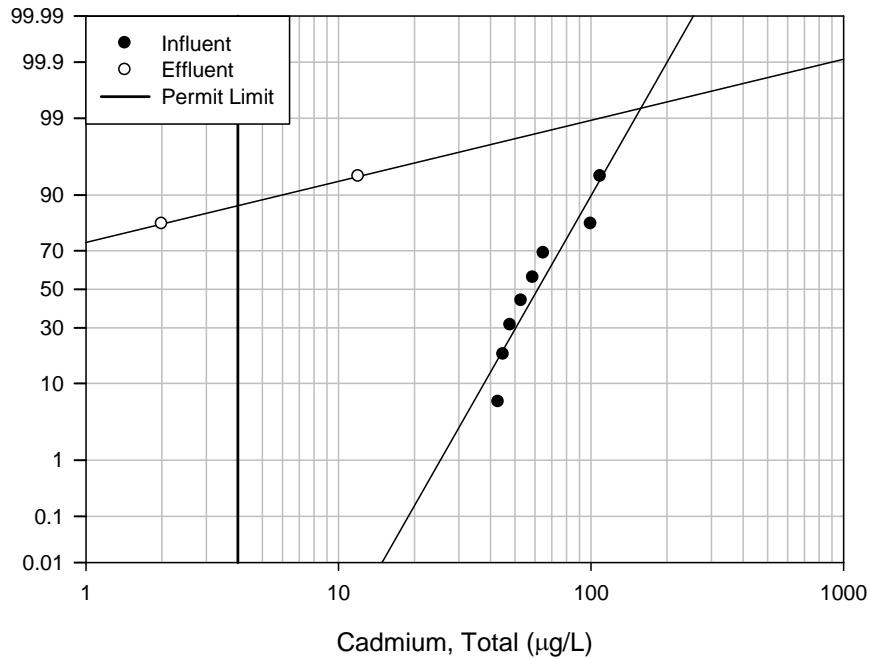
Total Cadmium  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



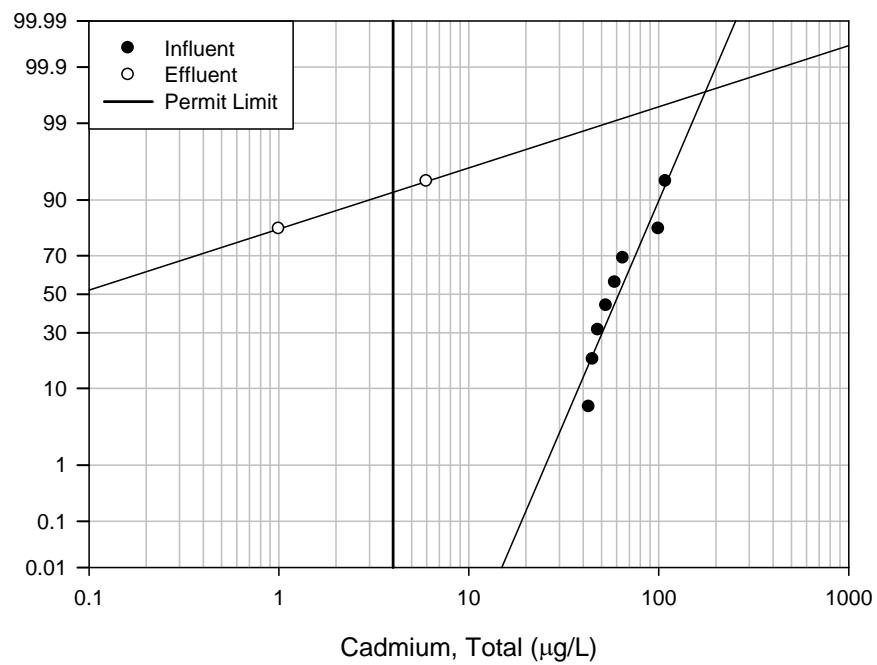
Total Cadmium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Cadmium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

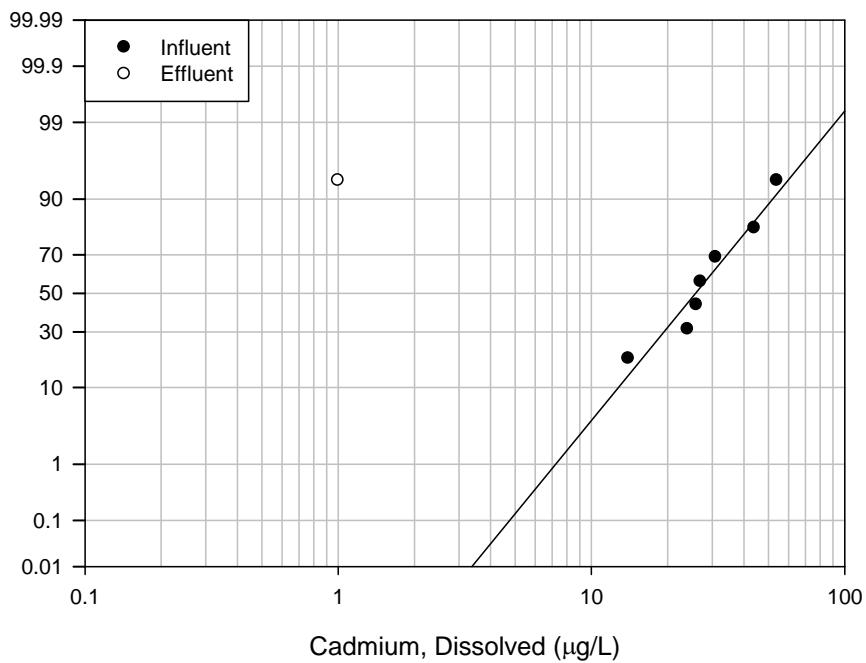


Total Cadmium  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

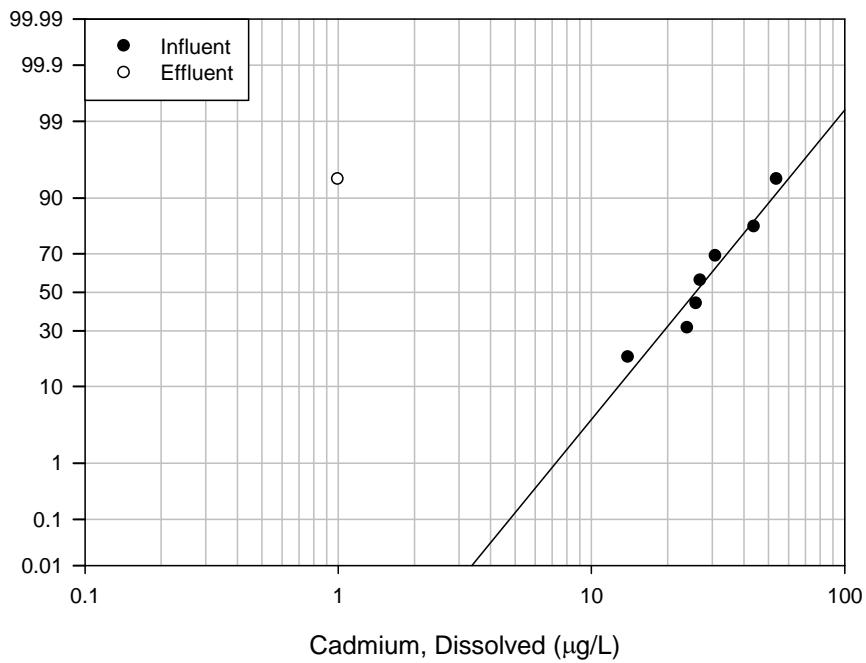


## Cadmium, Filtered

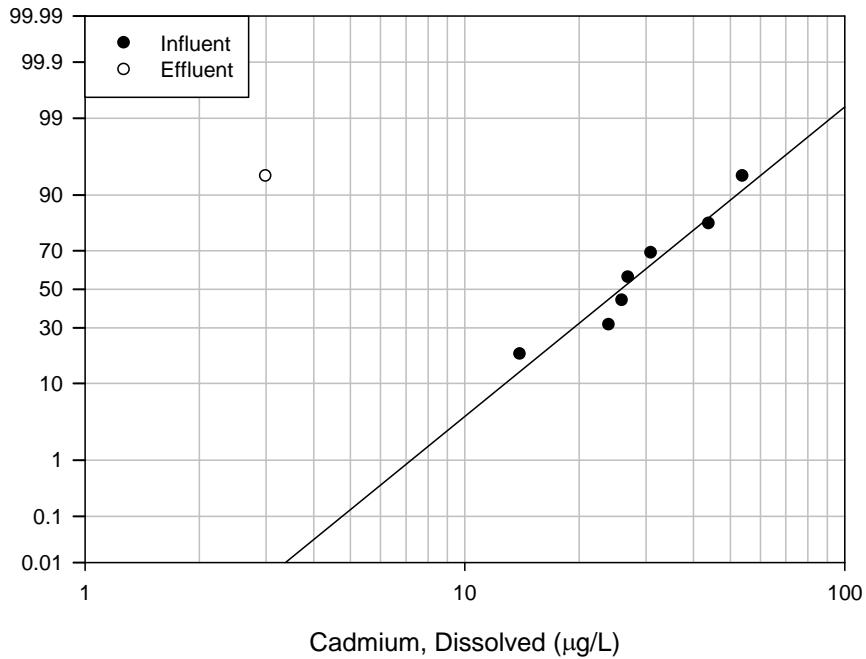
Dissolved Cadmium  
Granular Activated Carbon (GAC)



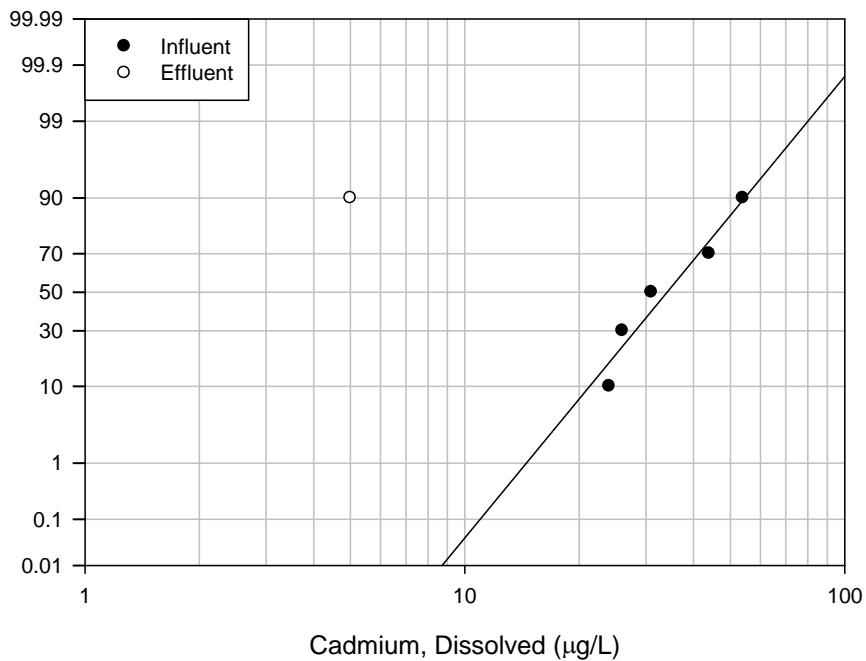
Dissolved Cadmium  
Peat Moss (P)



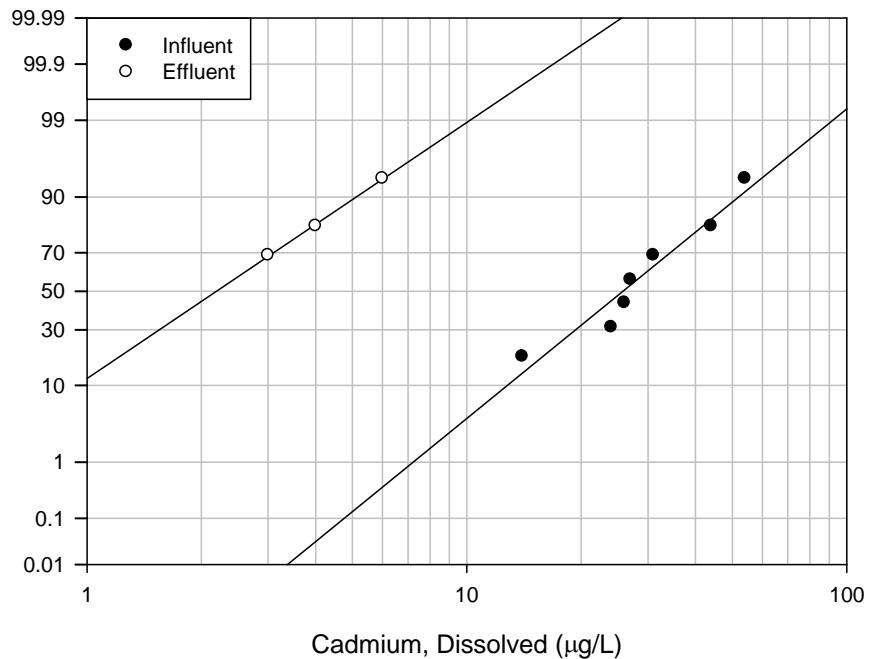
Dissolved Cadmium  
Rhyolite Sand (R)



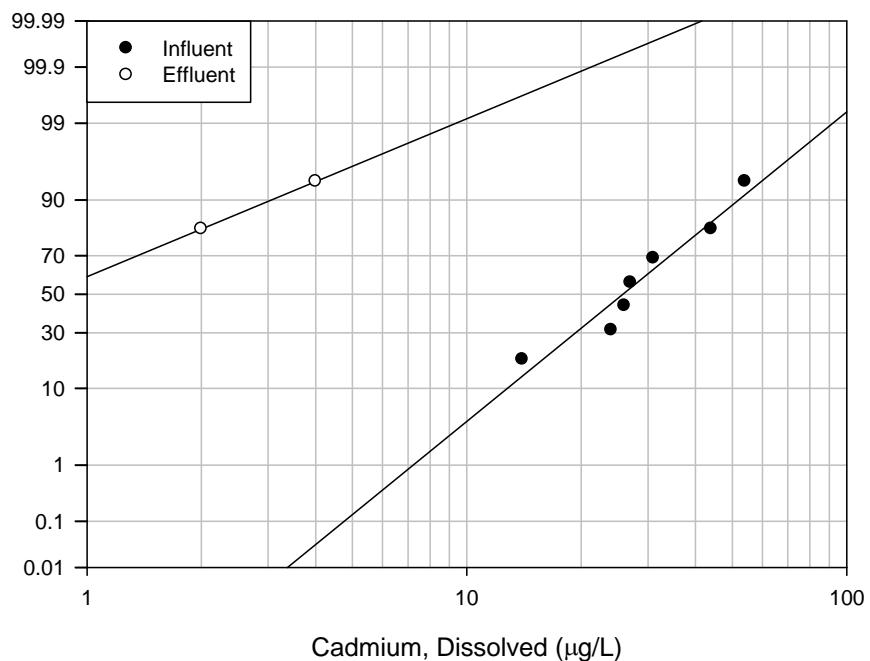
Dissolved Cadmium  
Site Sand (S)



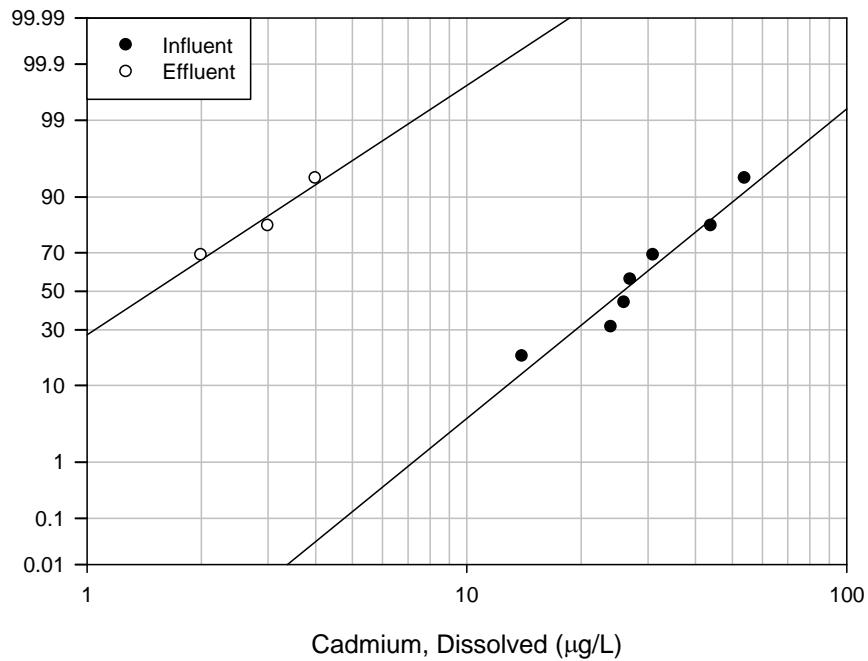
Dissolved Cadmium  
Site Zeolite (Z)



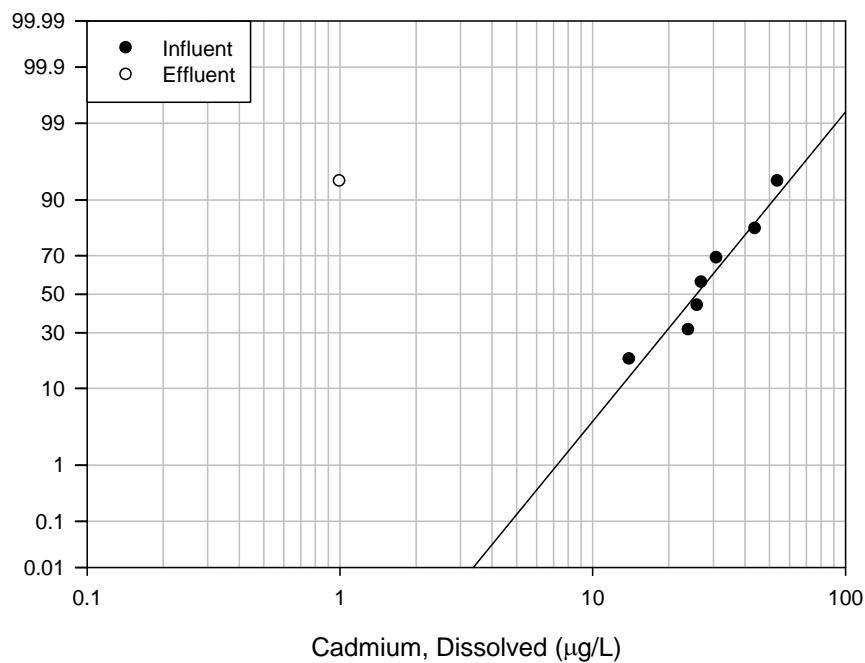
Dissolved Cadmium  
Surface Modified Zeolite (SMZ)



Dissolved Cadmium  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

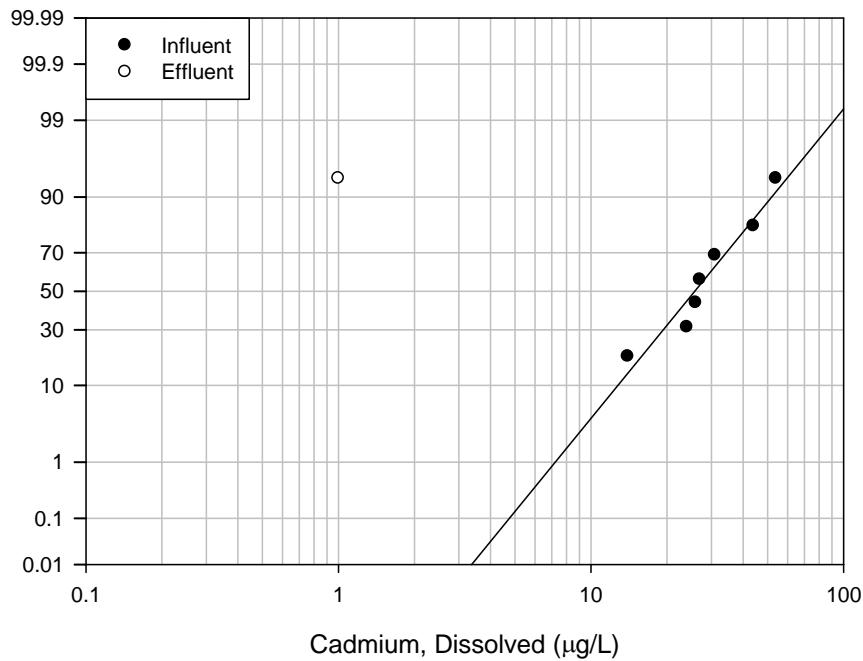


Dissolved Cadmium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



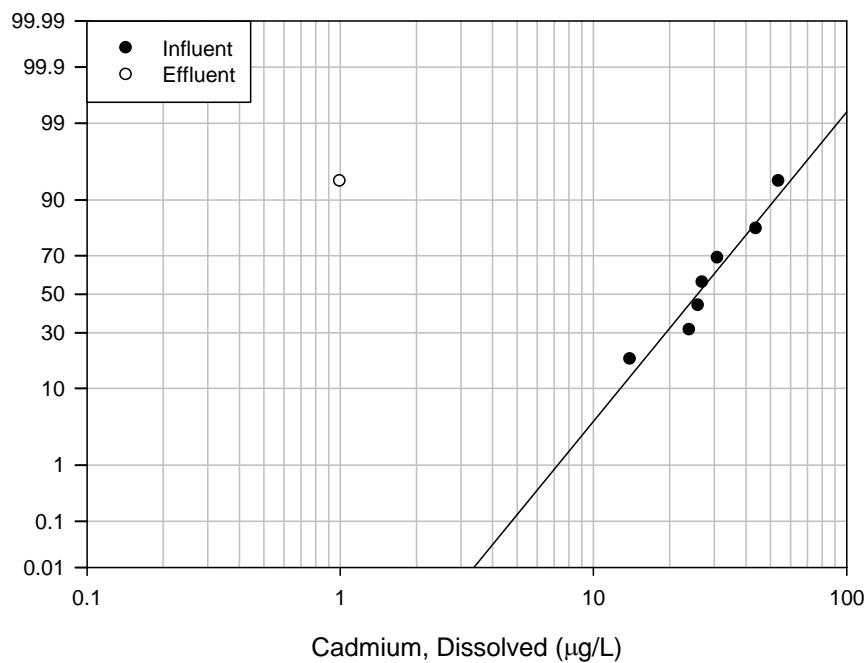
### Dissolved Cadmium

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



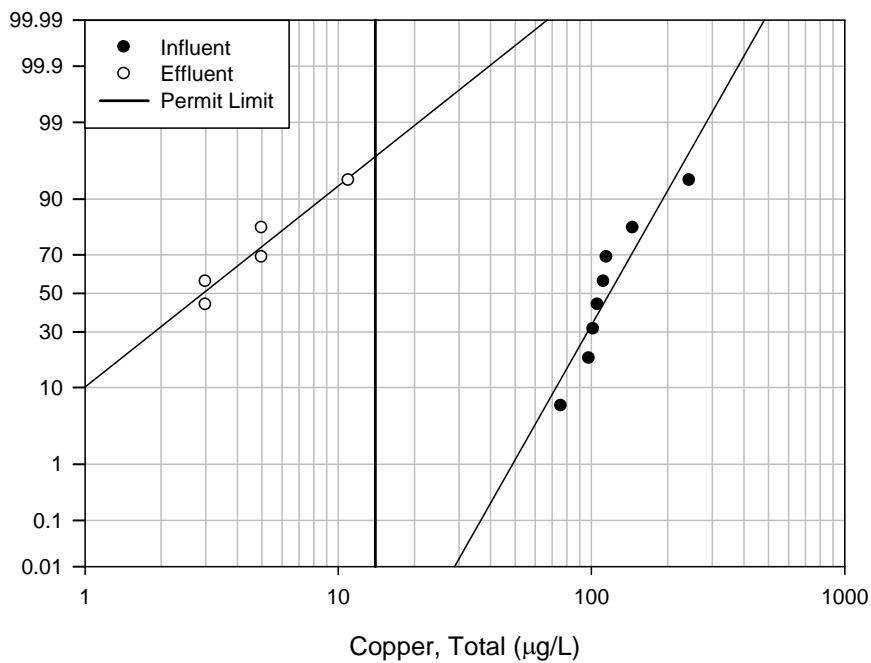
### Dissolved Cadmium

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

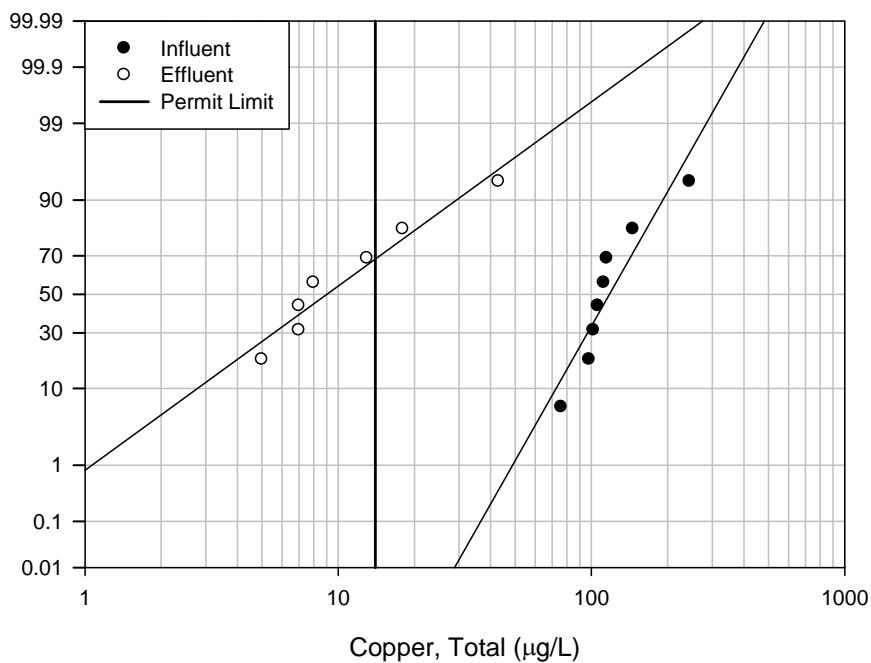


## Copper, Total

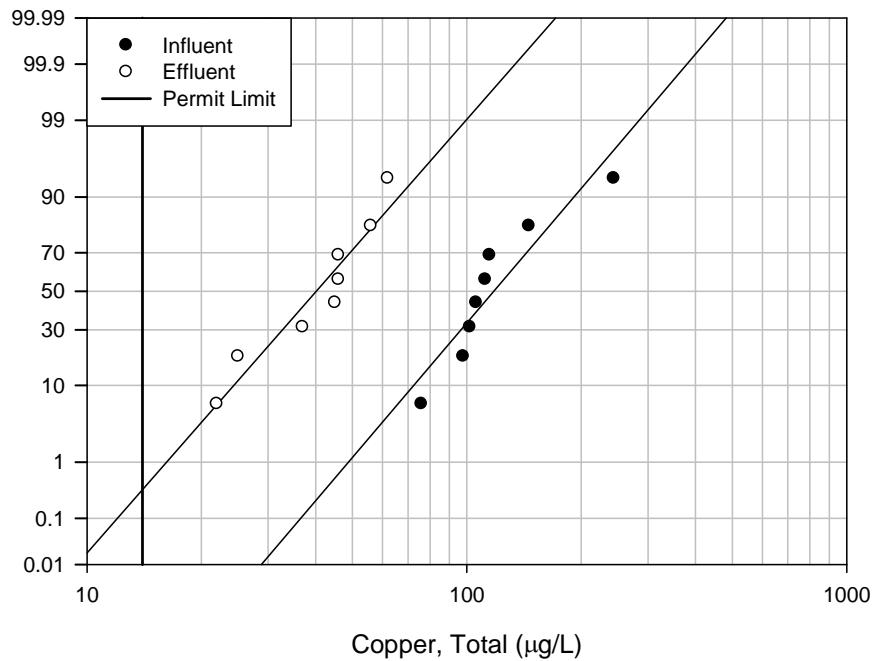
Total Copper  
Granular Activated Carbon (GAC)



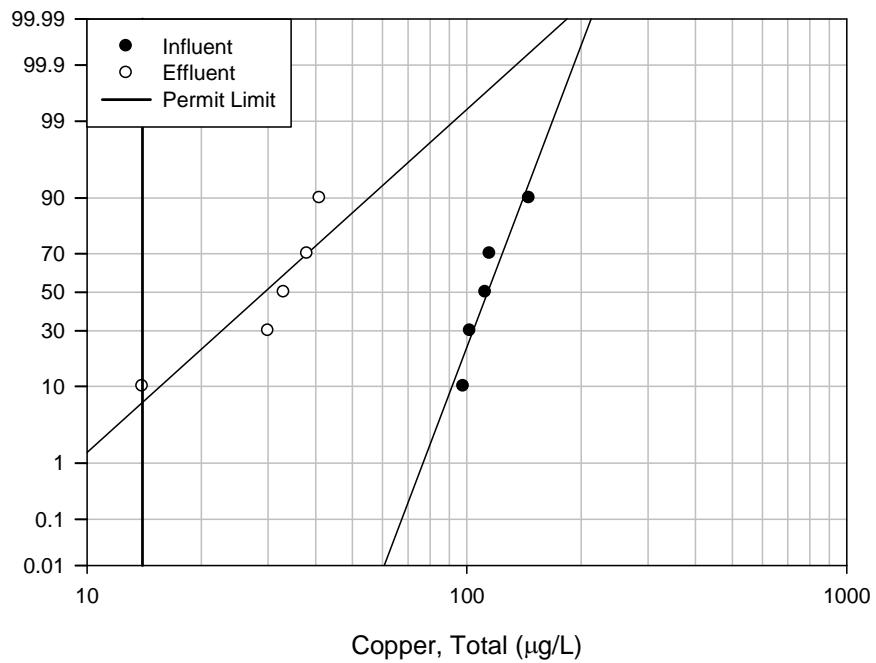
Total Copper  
Peat Moss (P)



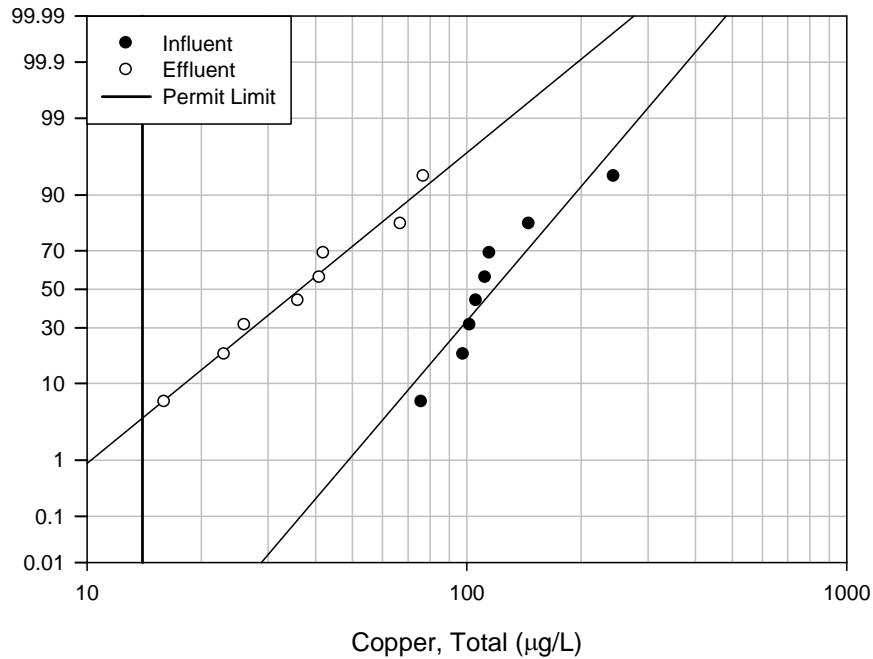
Total Copper  
Rhyolite Sand (R)



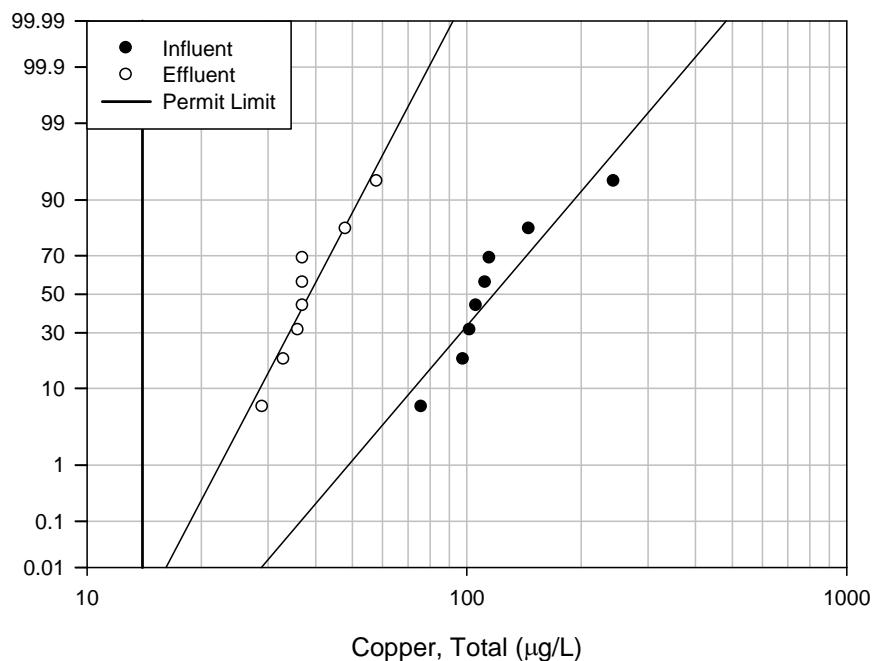
Total Copper  
Site Sand (S)



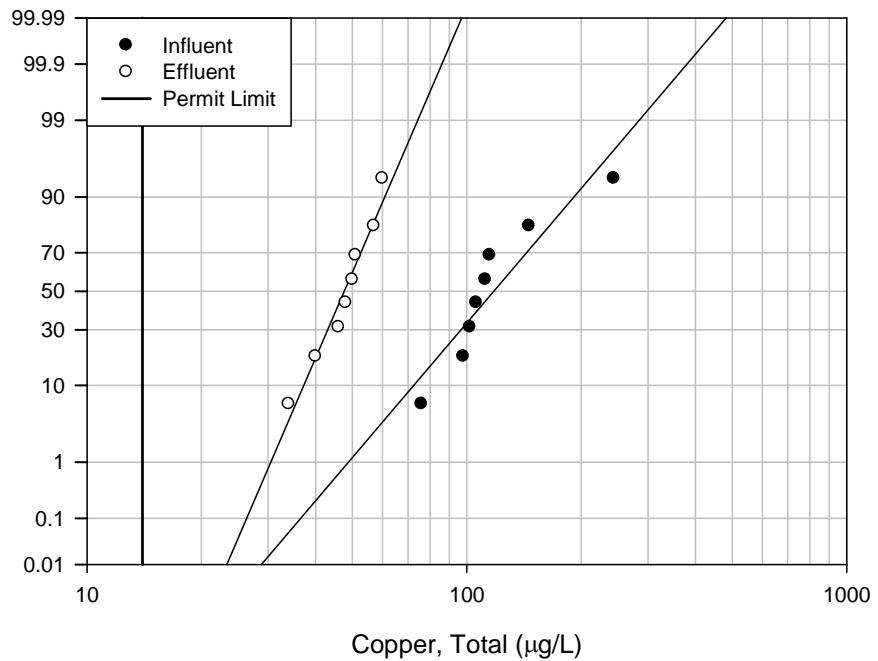
Total Copper  
Site Zeolite (Z)



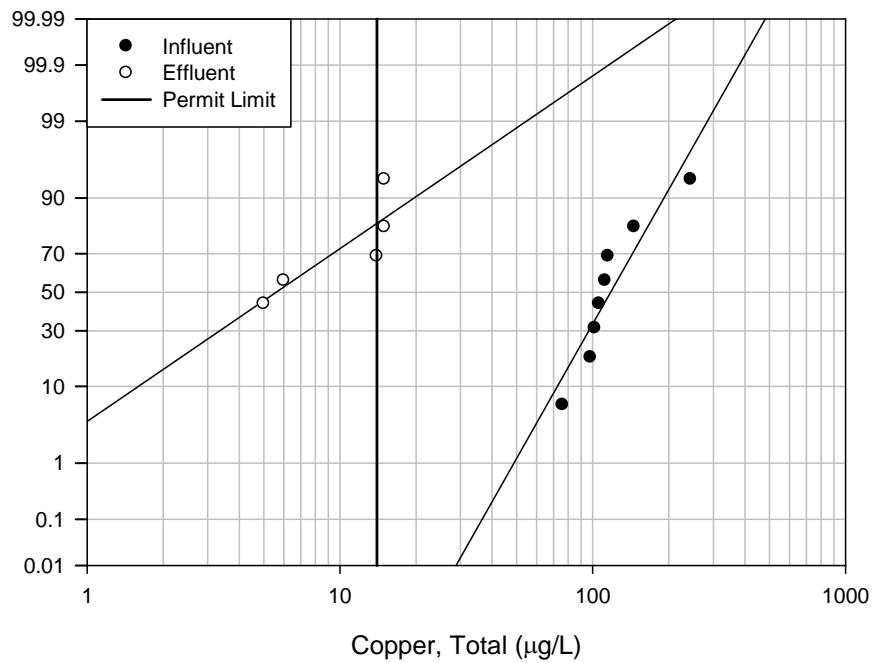
Total Copper  
Surface Modified Zeolite (SMZ)



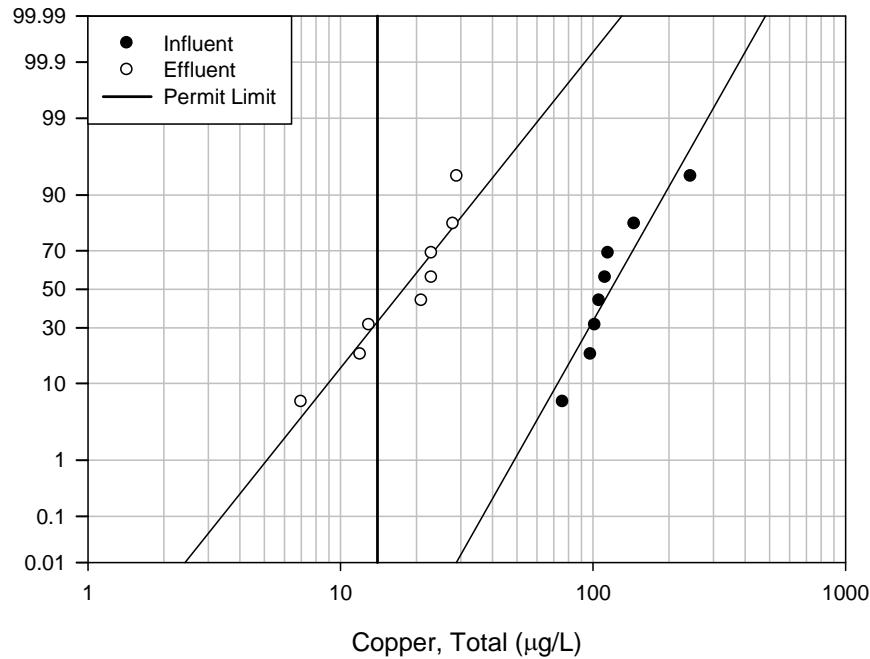
**Total Copper**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



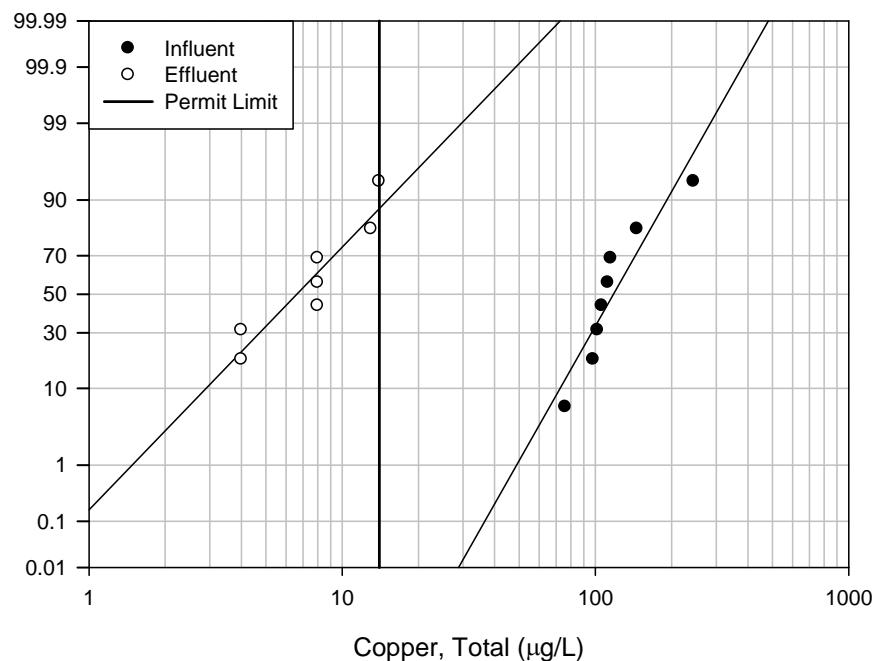
**Total Copper**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Copper  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

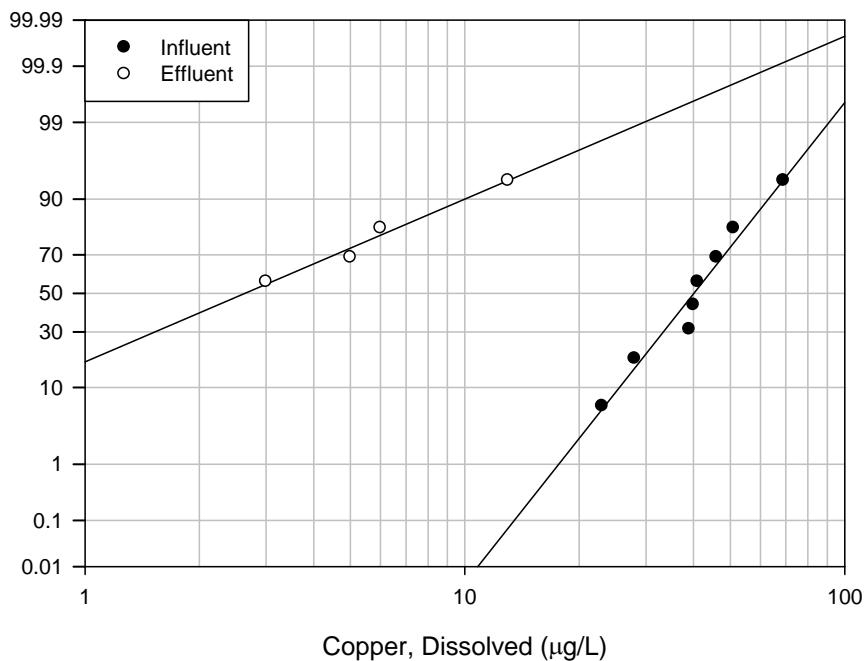


Total Copper  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

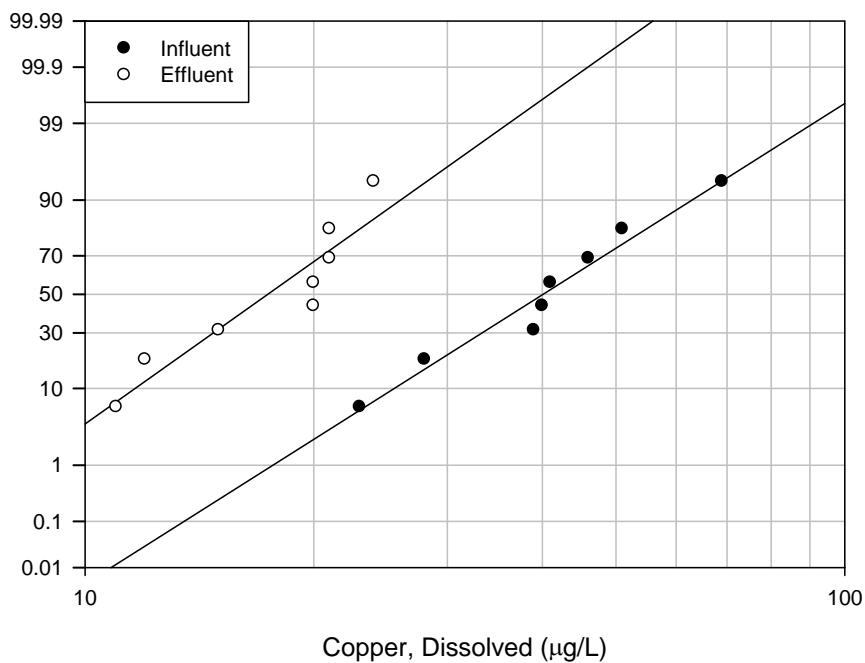


## Copper, Filtered

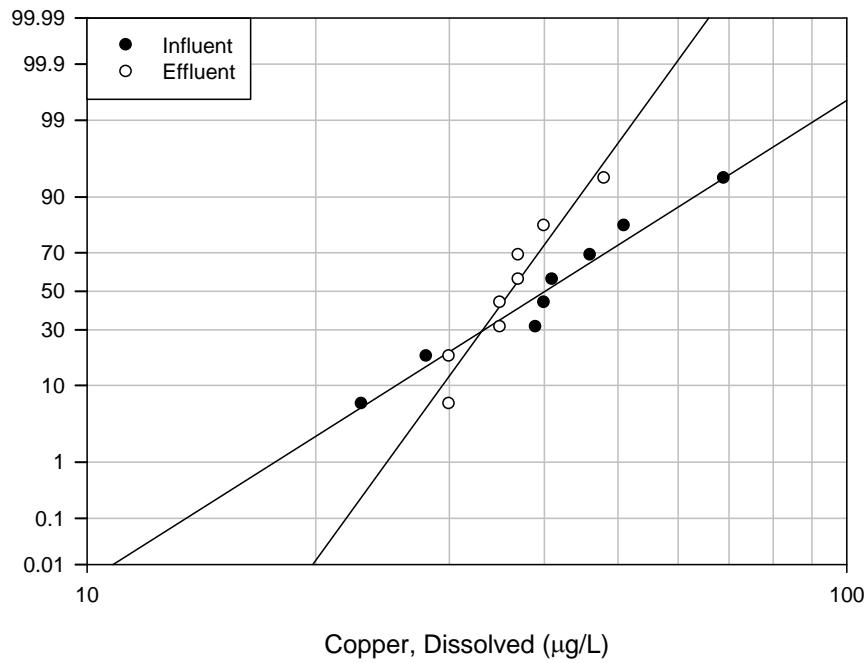
Dissolved Copper  
Granular Activated Carbon (GAC)



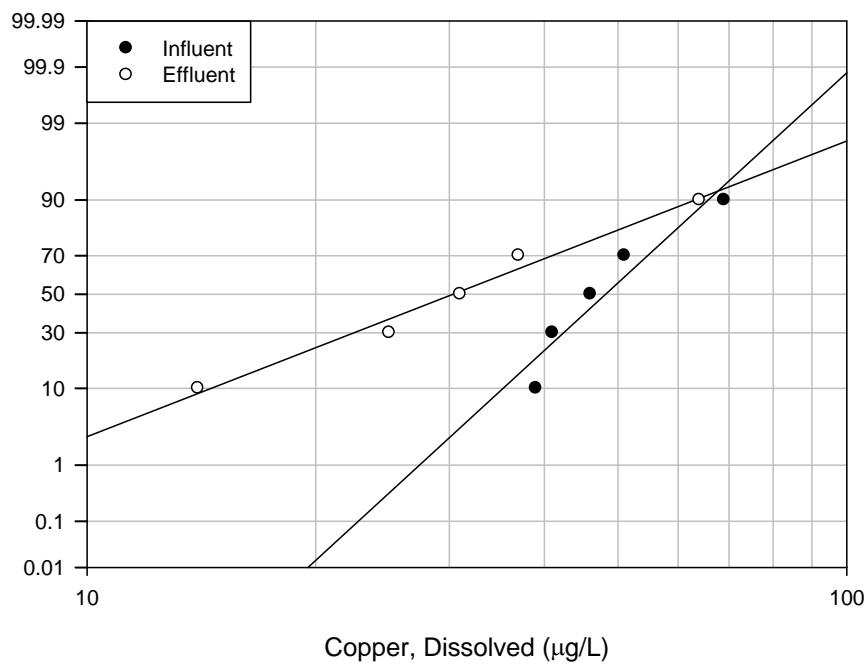
Dissolved Copper  
Peat Moss (P)



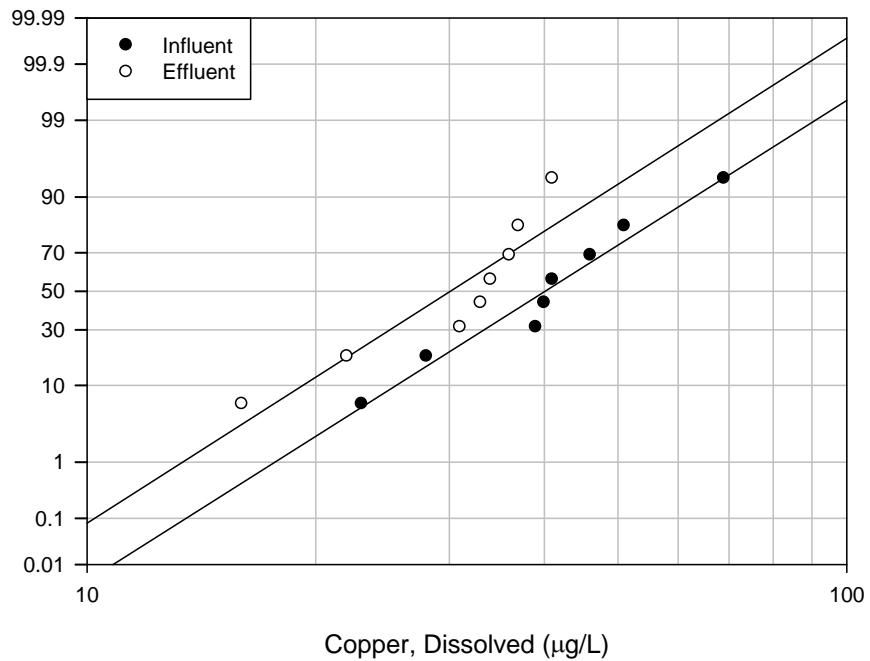
Dissolved Copper  
Rhyolite Sand (R)



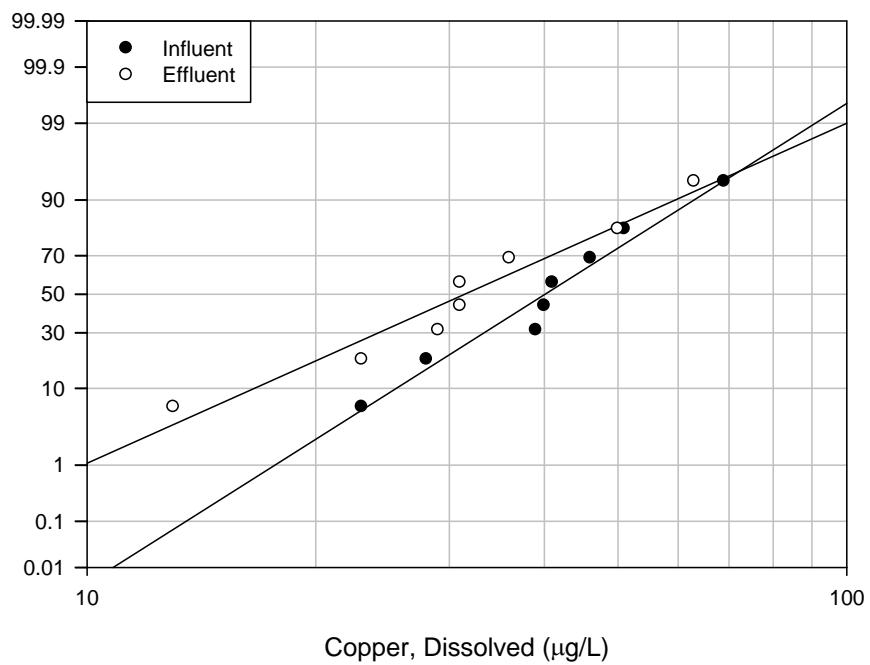
Dissolved Copper  
Site Sand (S)



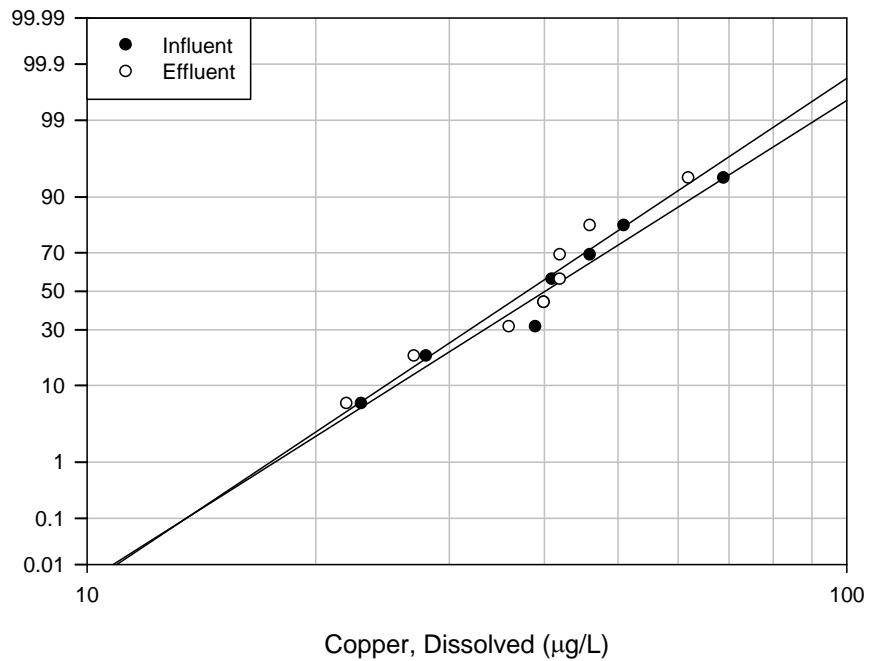
Dissolved Copper  
Site Zeolite (Z)



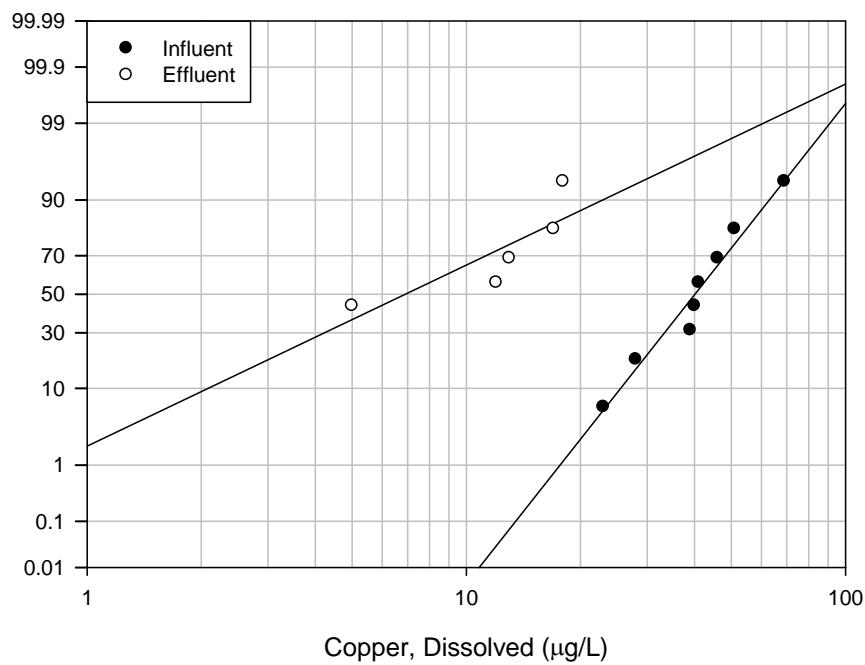
Dissolved Copper  
Surface Modified Zeolite (SMZ)



**Dissolved Copper**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

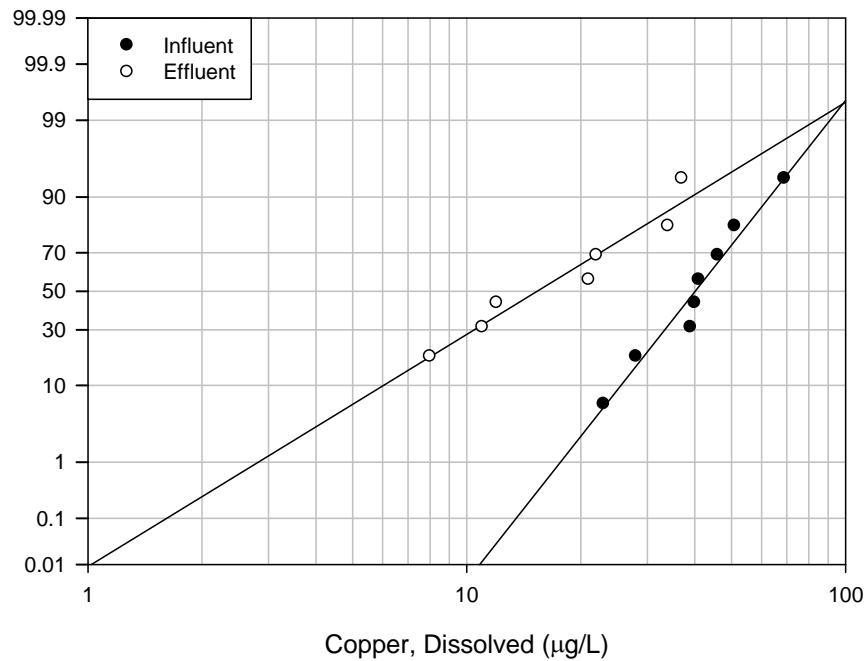


**Dissolved Copper**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



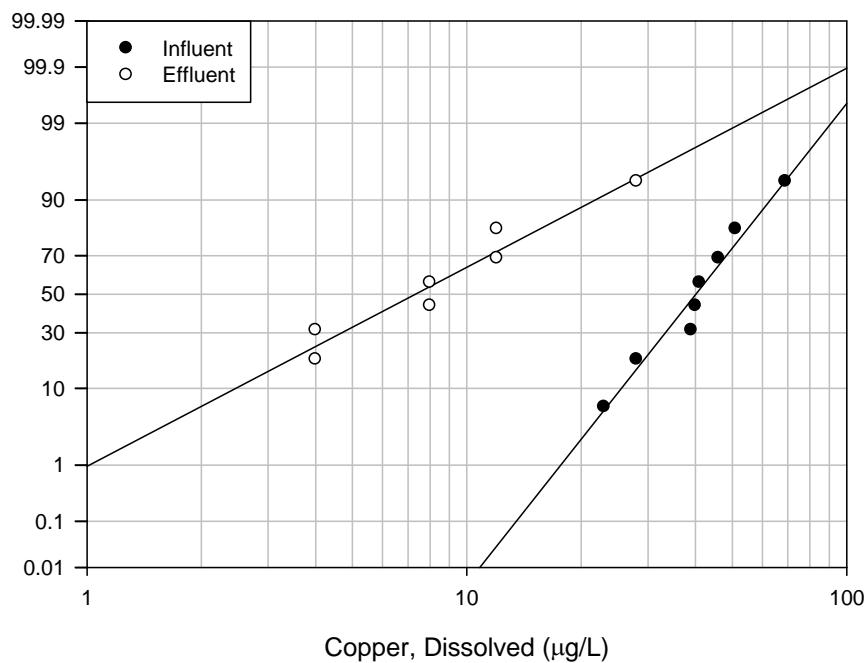
### Dissolved Copper

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



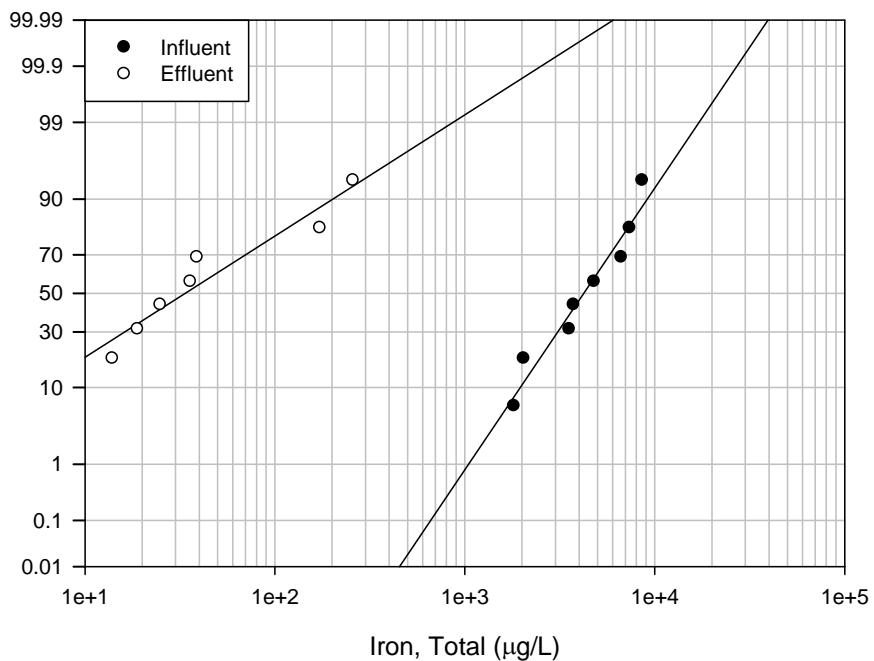
### Dissolved Copper

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

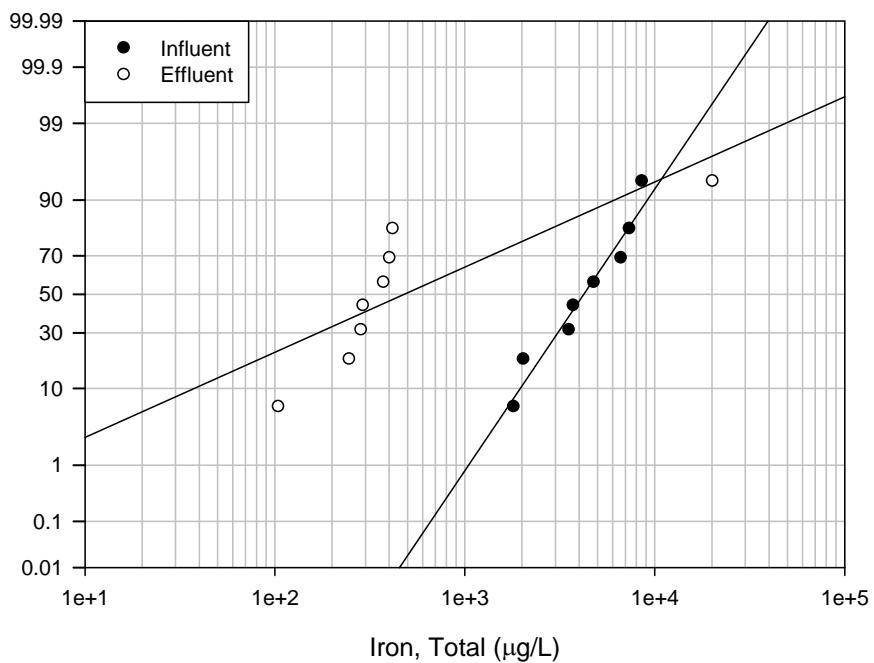


## Iron, Total

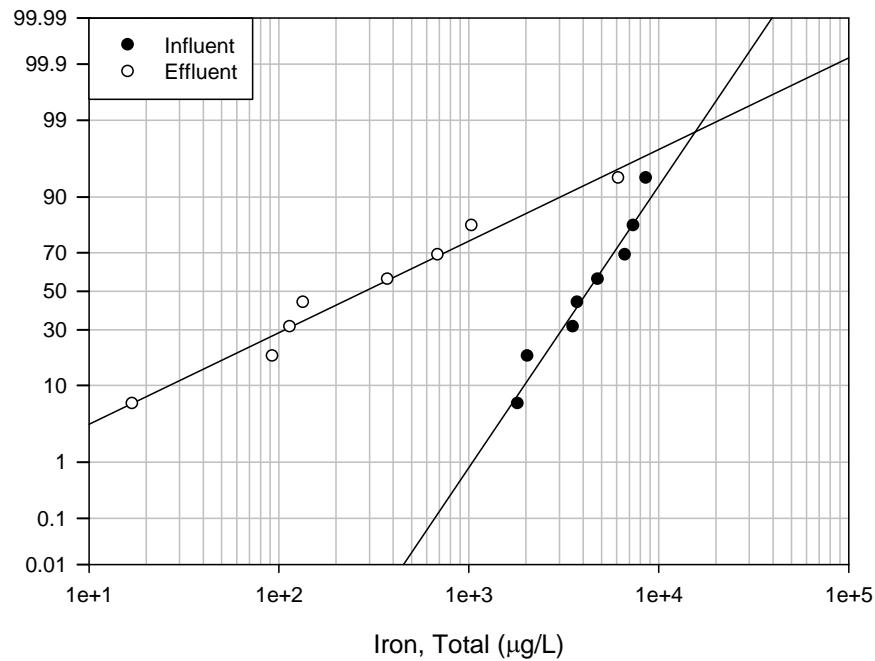
Total Iron  
Granular Activated Carbon (GAC)



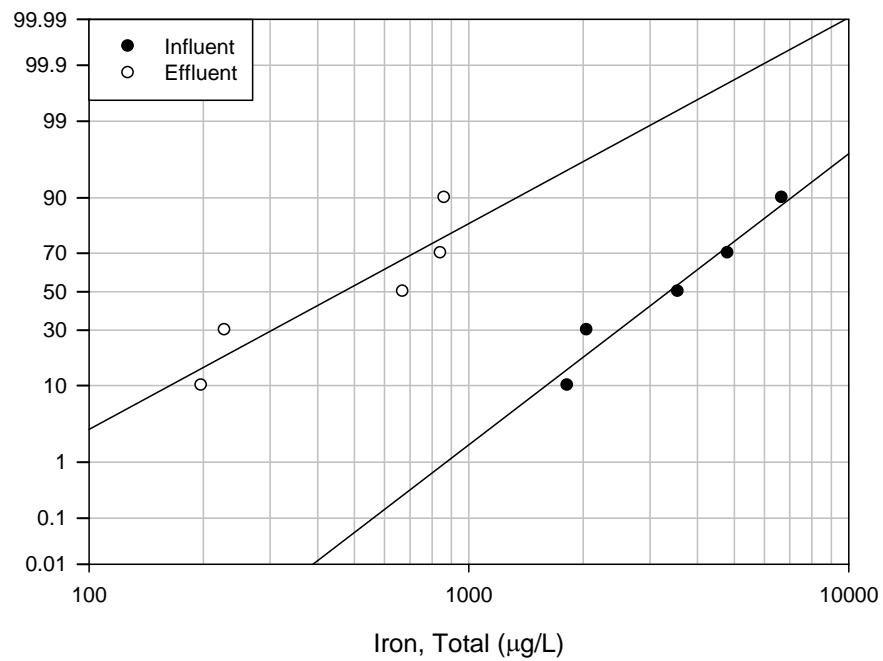
Total Iron  
Peat Moss (P)



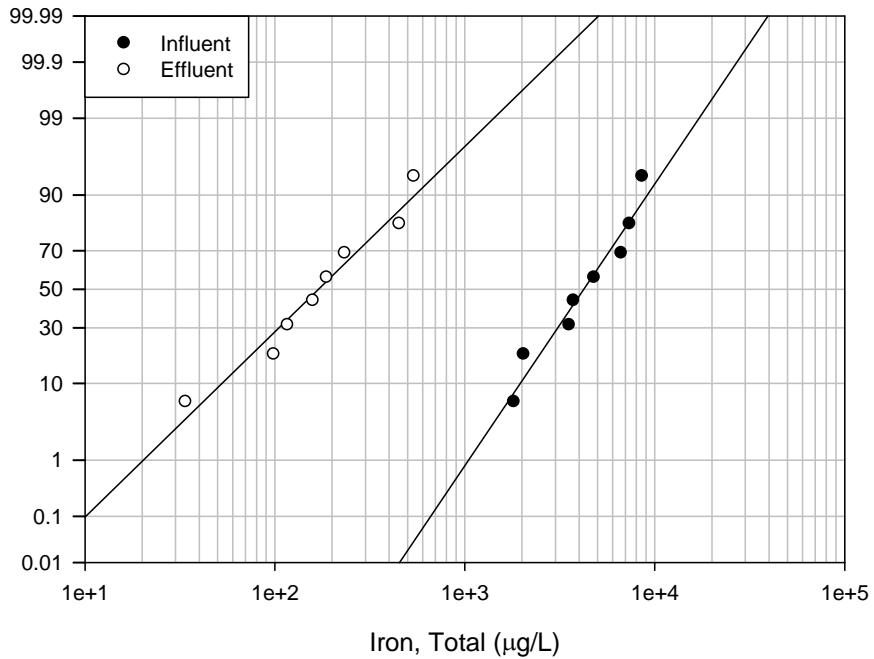
Total Iron  
Rhyolite Sand (R)



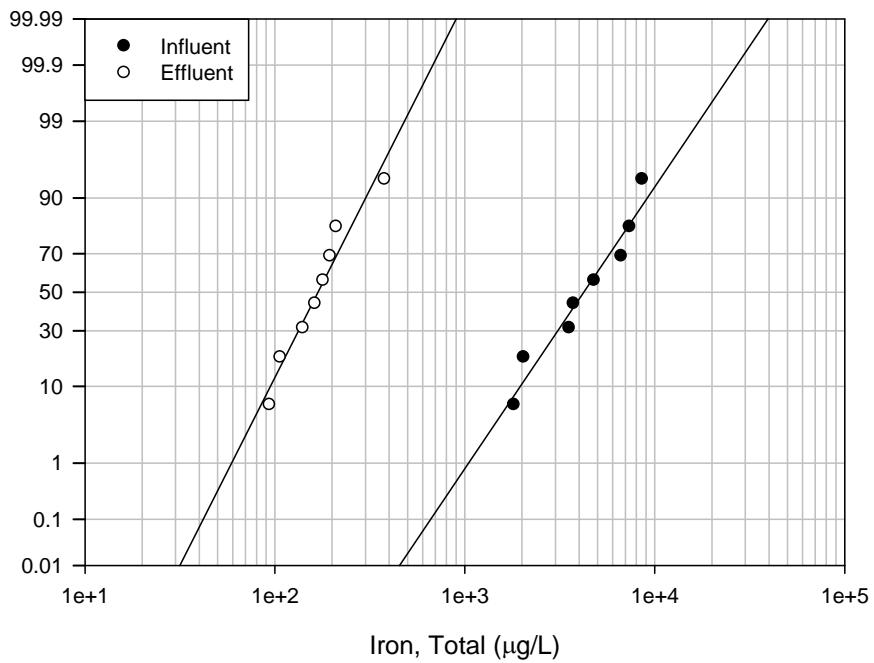
Total Iron  
Site Sand (S)



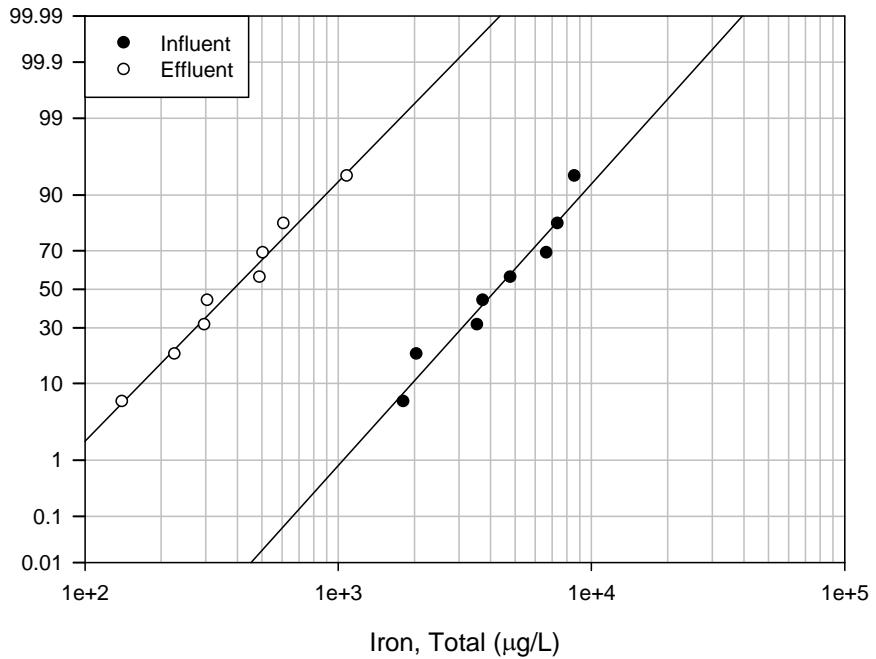
Total Iron  
Site Zeolite (Z)



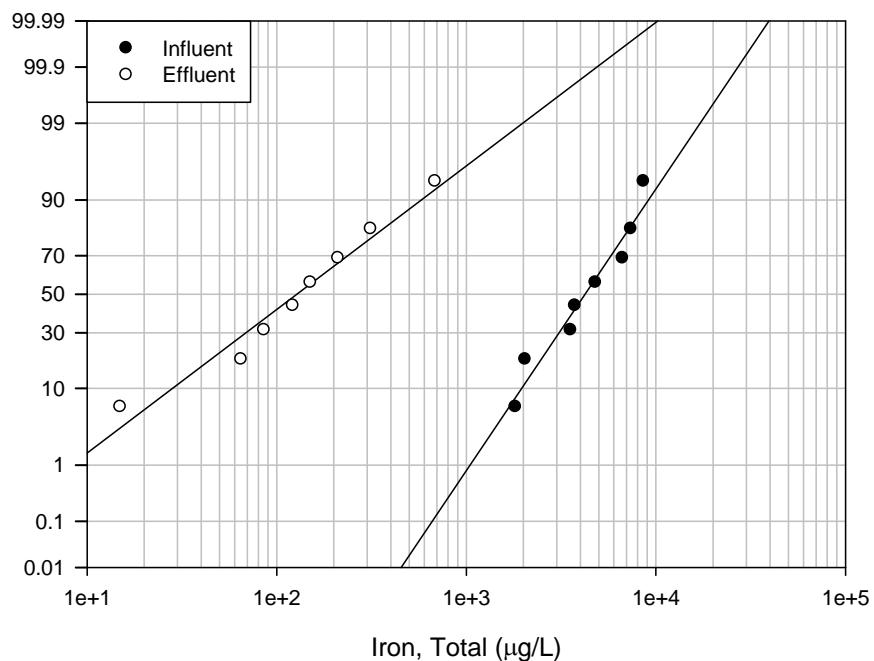
Total Iron  
Surface Modified Zeolite (SMZ)



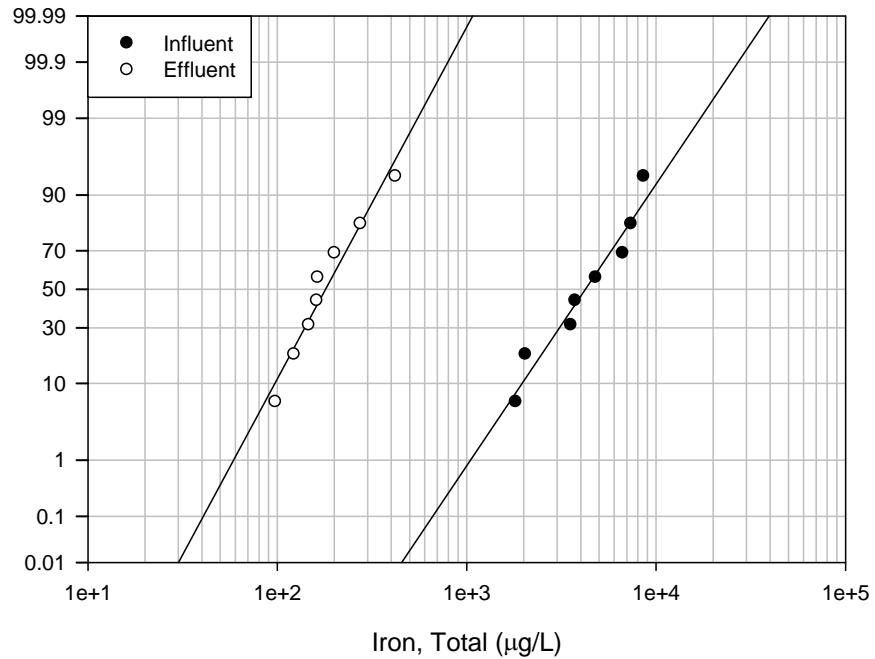
Total Iron  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



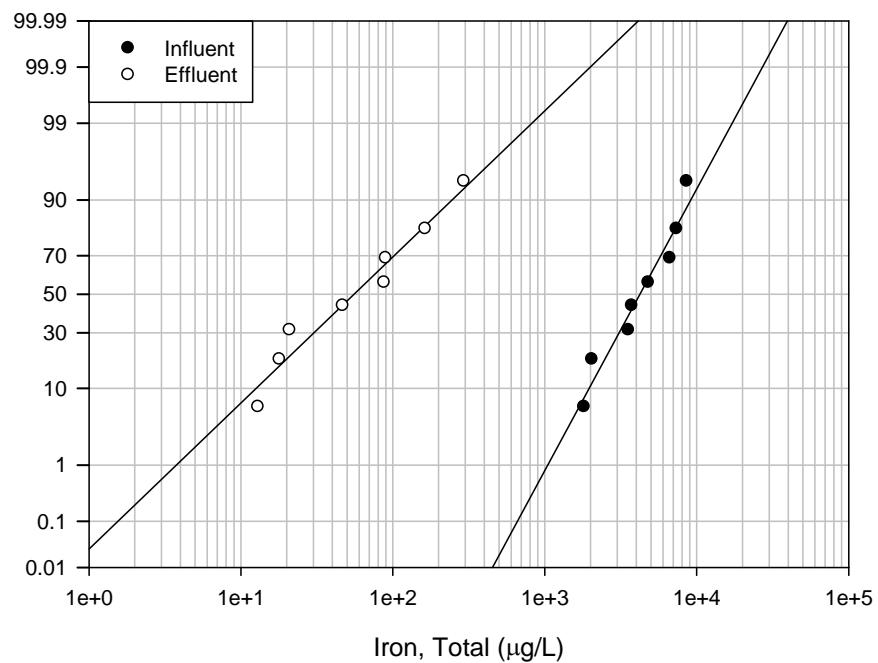
Total Iron  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Iron  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

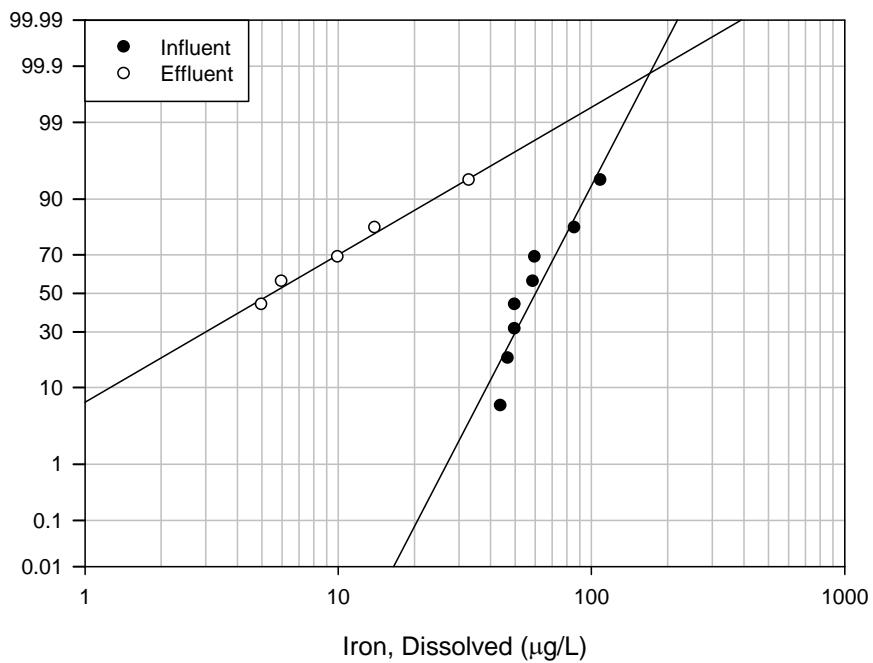


Total Iron  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

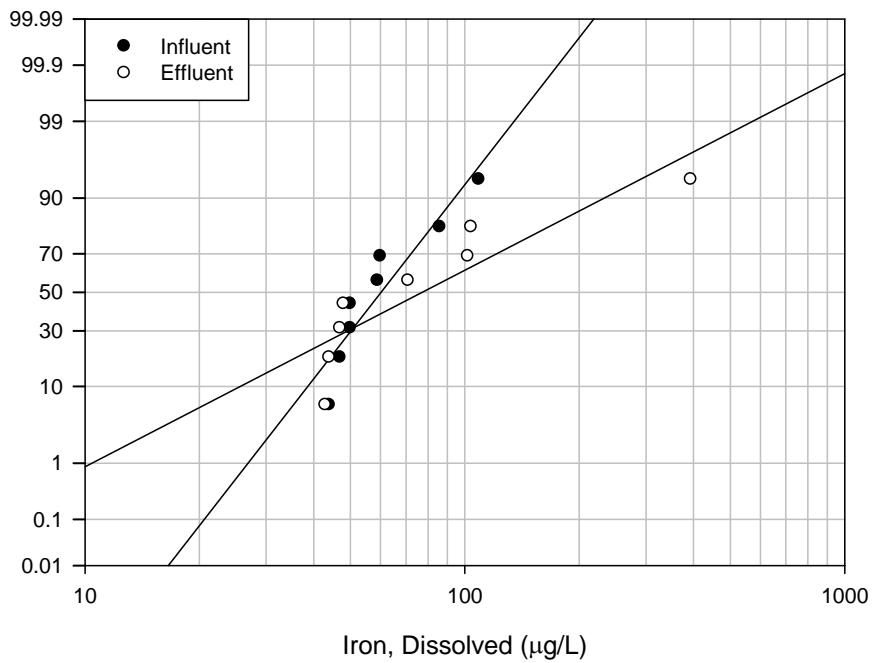


## Iron, Filtered

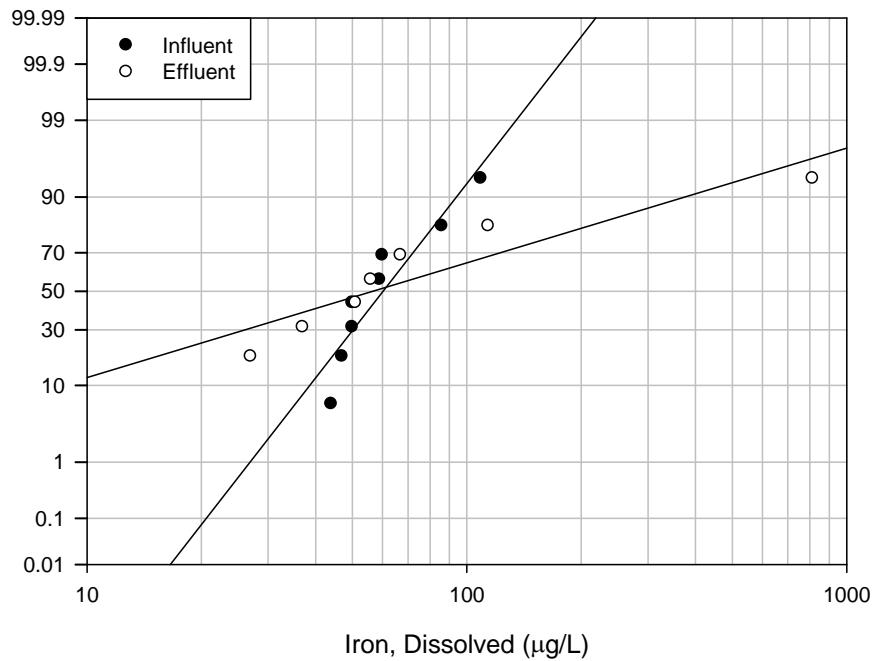
Dissolved Iron  
Granular Activated Carbon (GAC)



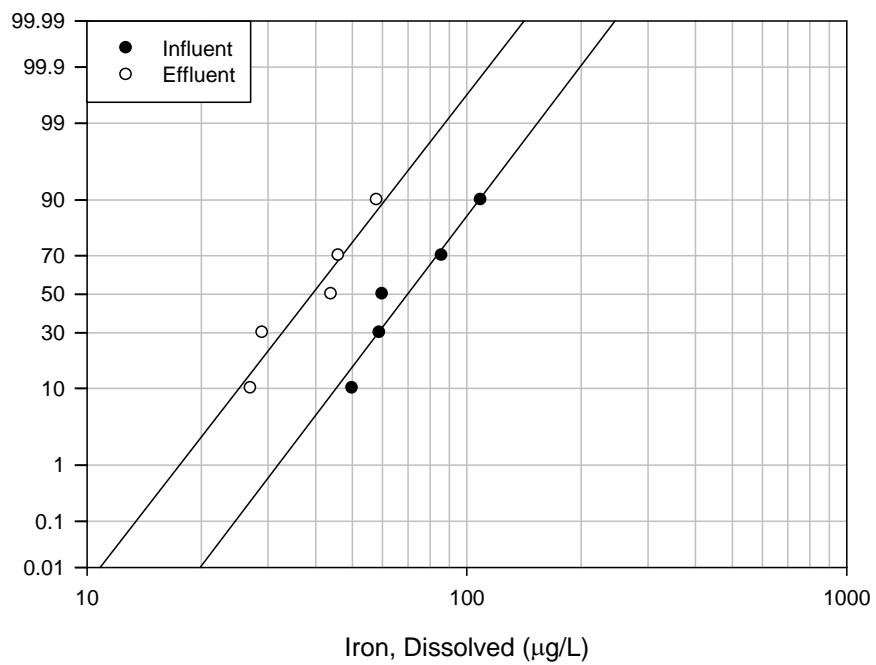
Dissolved Iron  
Peat Moss (P)



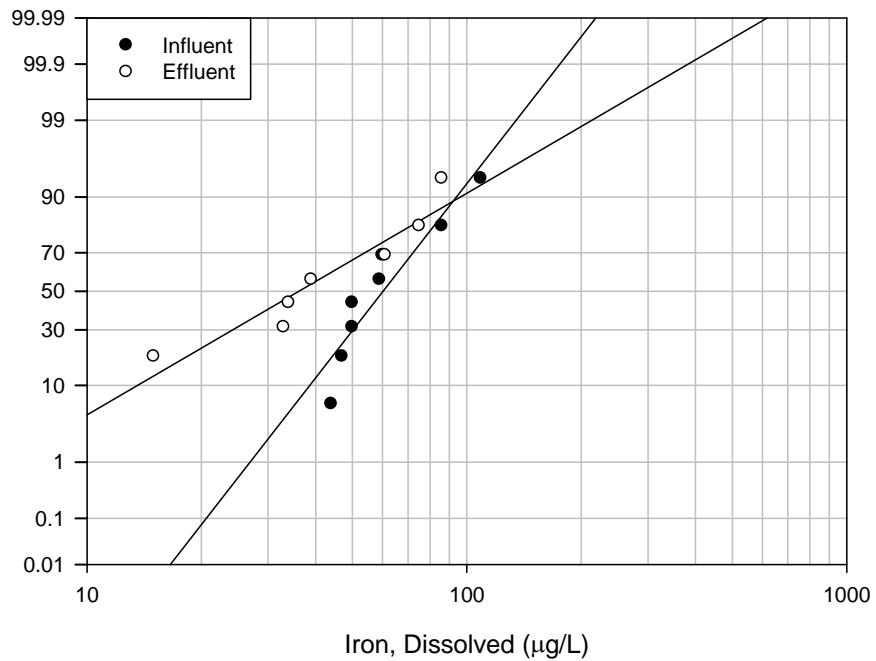
Dissolved Iron  
Rhyolite Sand (R)



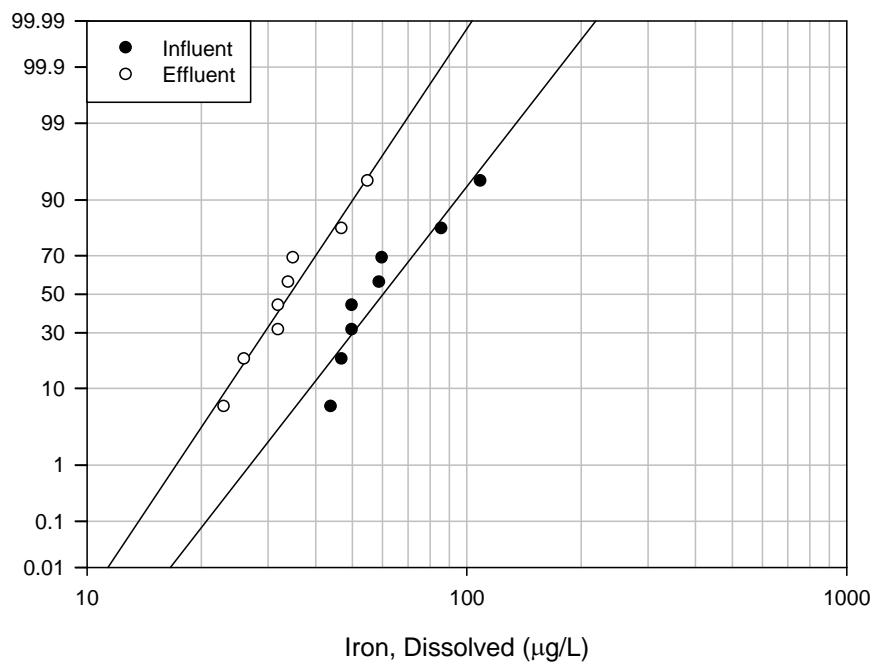
Dissolved Iron  
Site Sand (S)



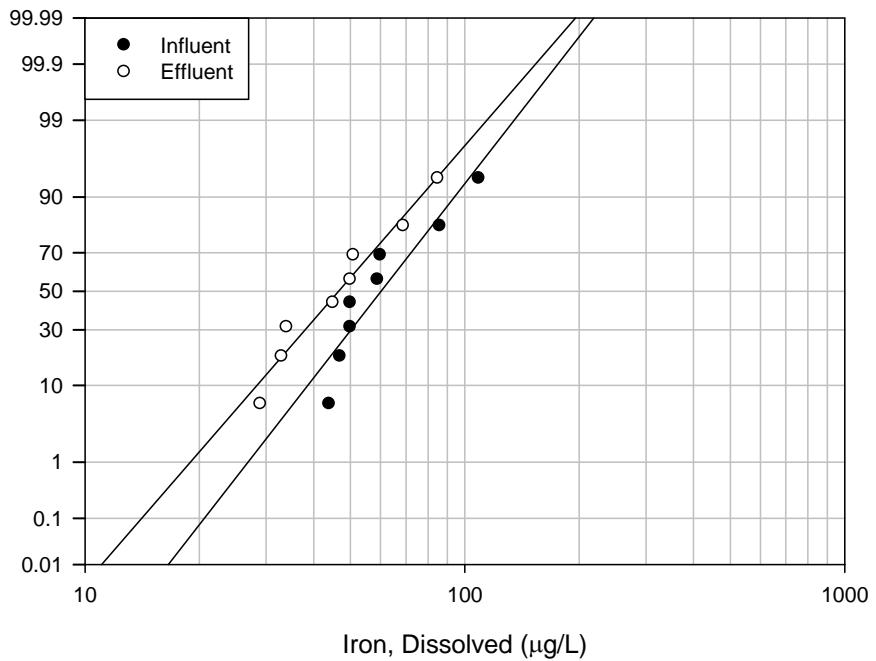
Dissolved Iron  
Site Zeolite (Z)



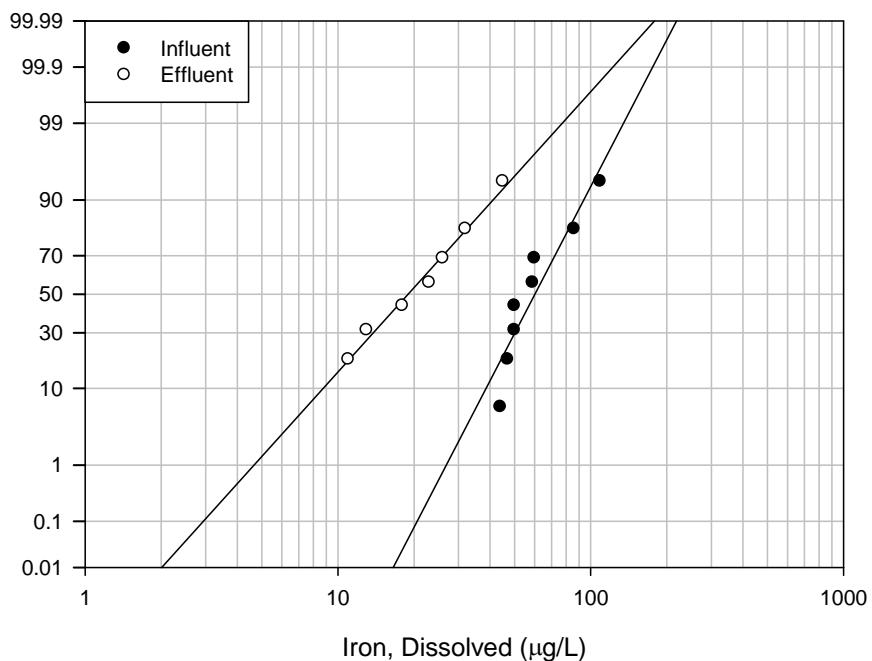
Dissolved Iron  
Surface Modified Zeolite (SMZ)



Dissolved Iron  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

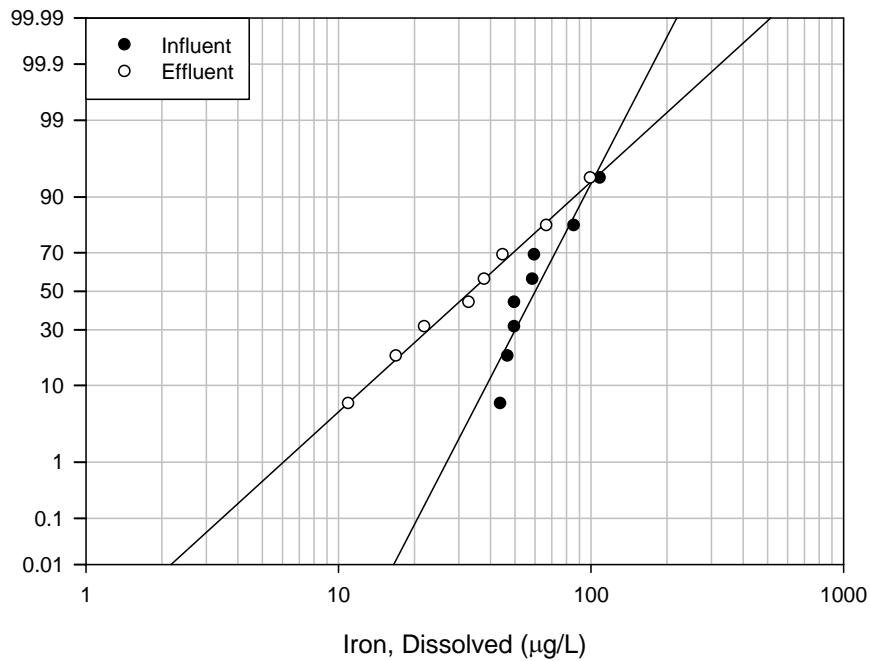


Dissolved Iron  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



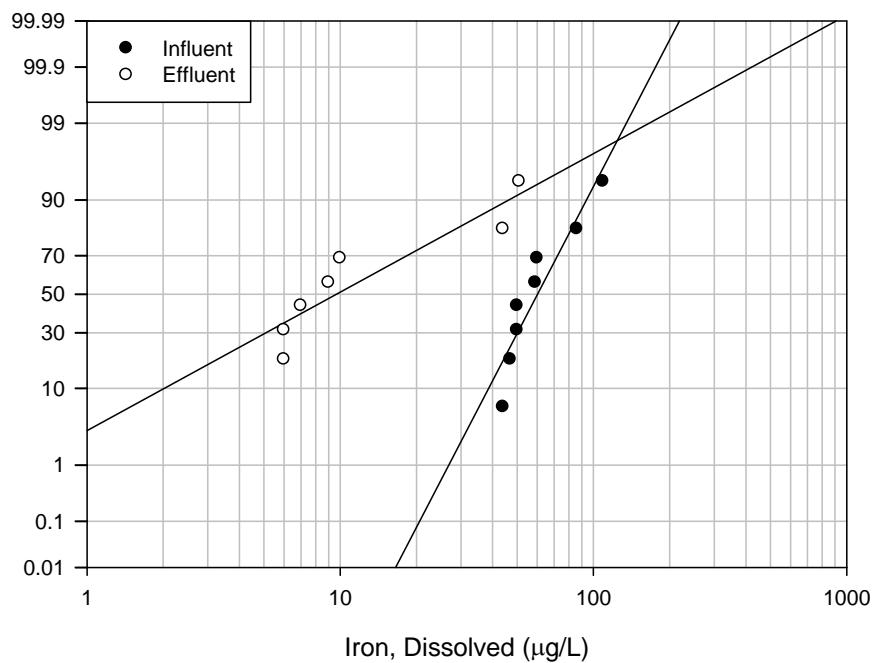
### Dissolved Iron

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



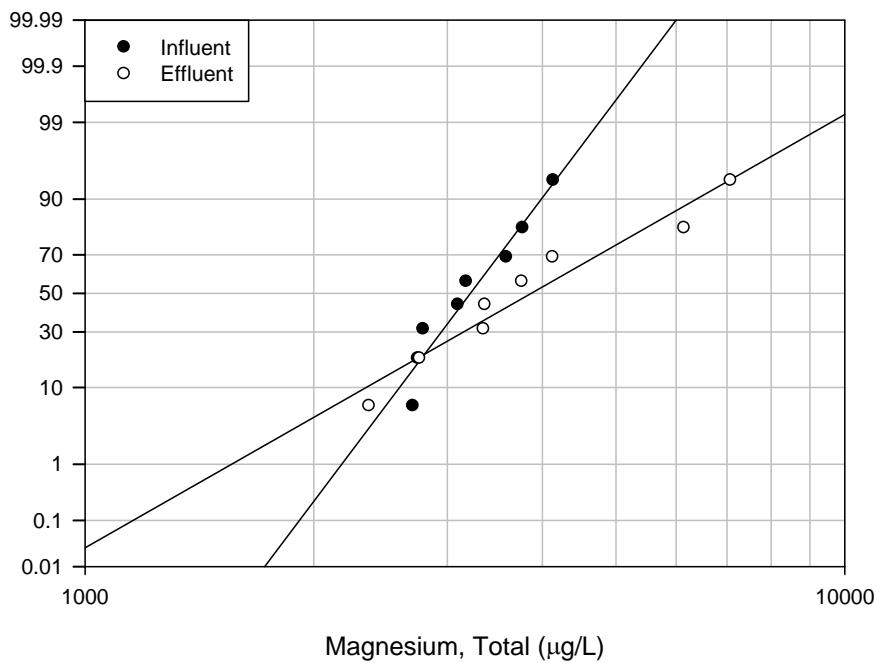
### Dissolved Iron

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

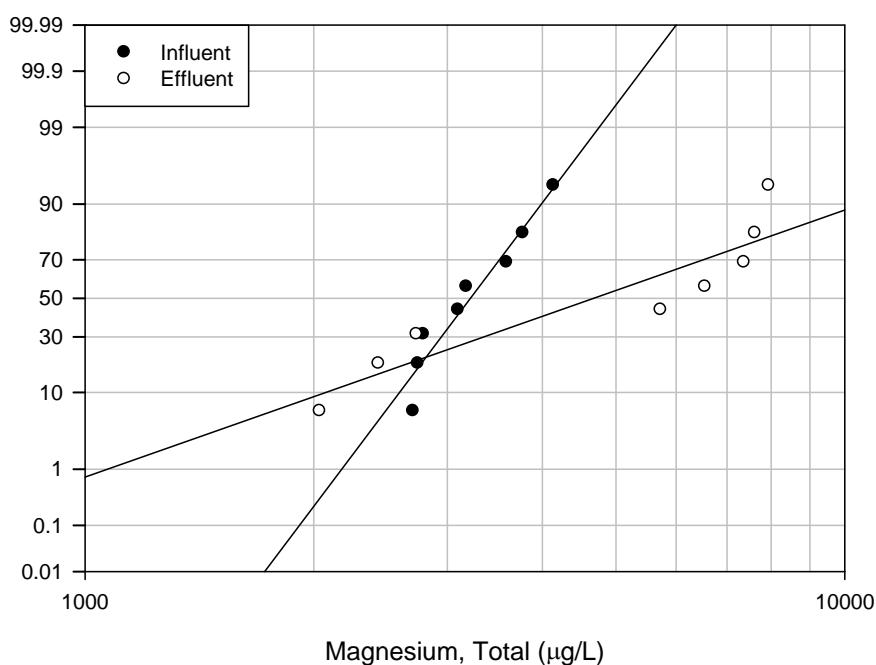


## Magnesium, Total

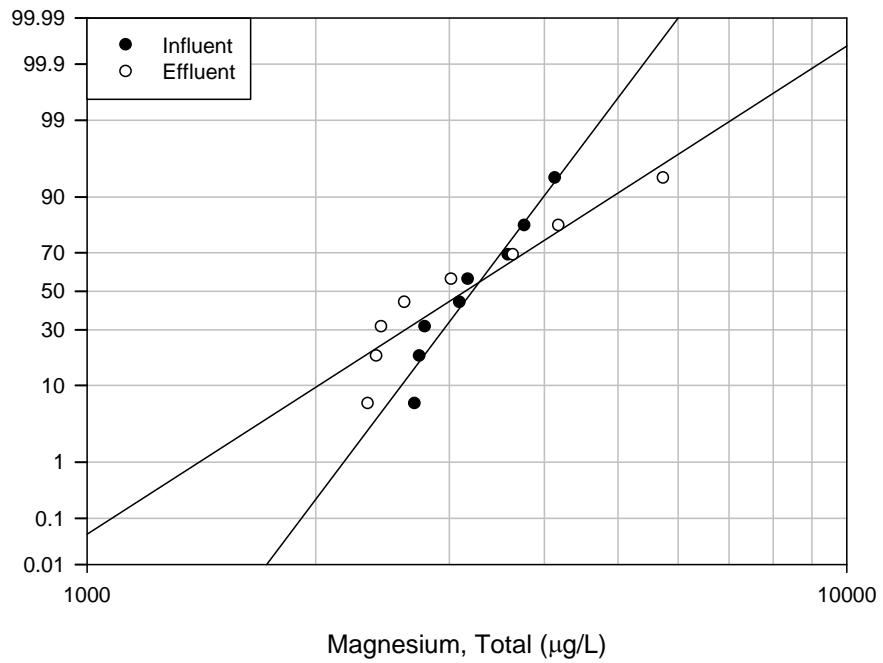
Total Magnesium  
Granular Activated Carbon (GAC)



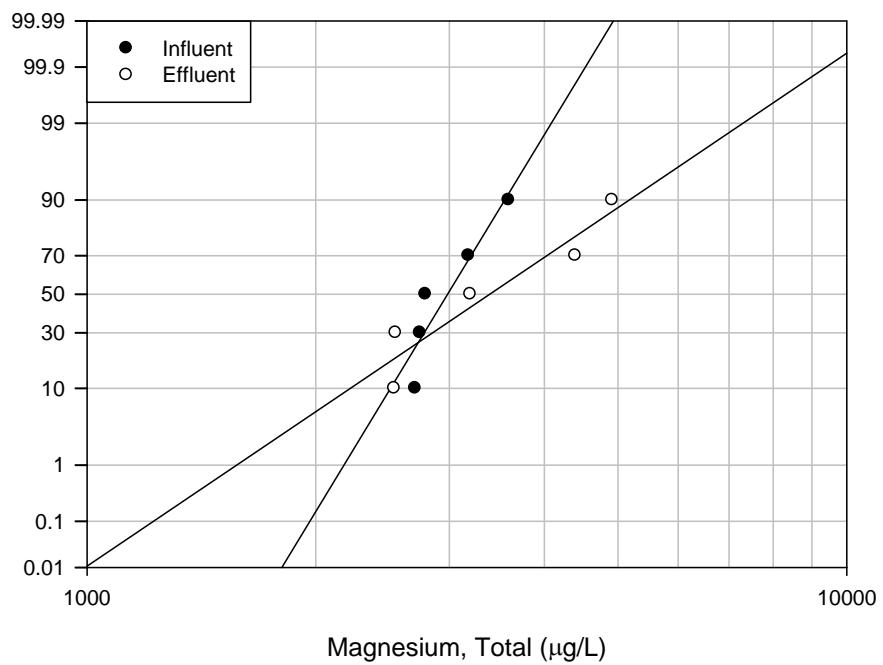
Total Magnesium  
Peat Moss (P)



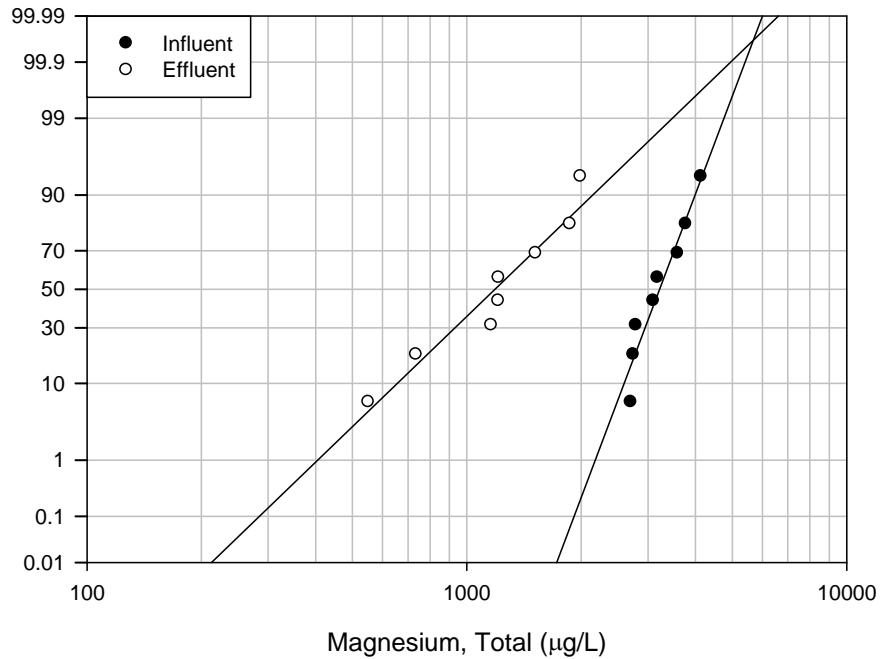
Total Magnesium  
Rhyolite Sand (R)



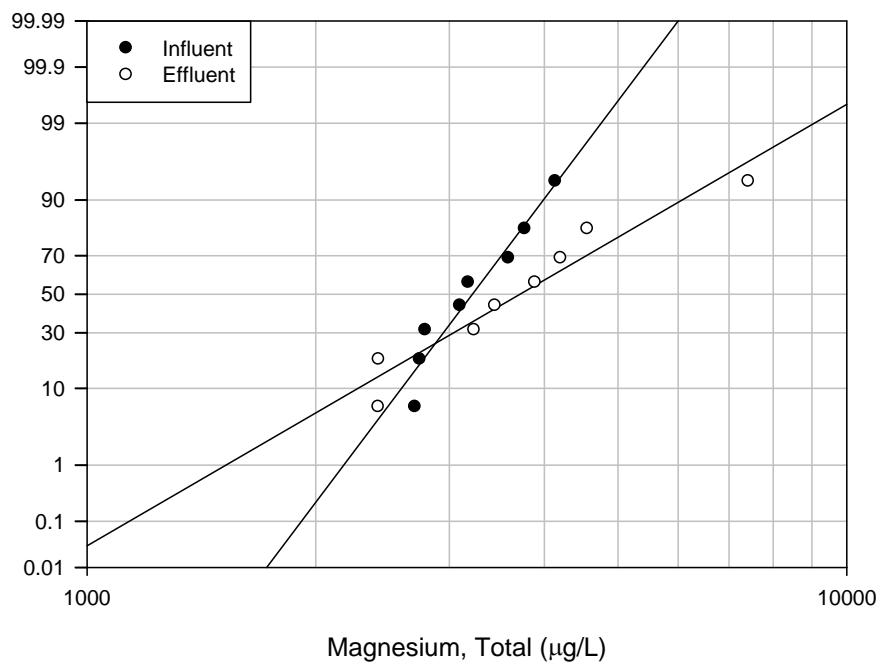
Total Magnesium  
Site Sand (S)



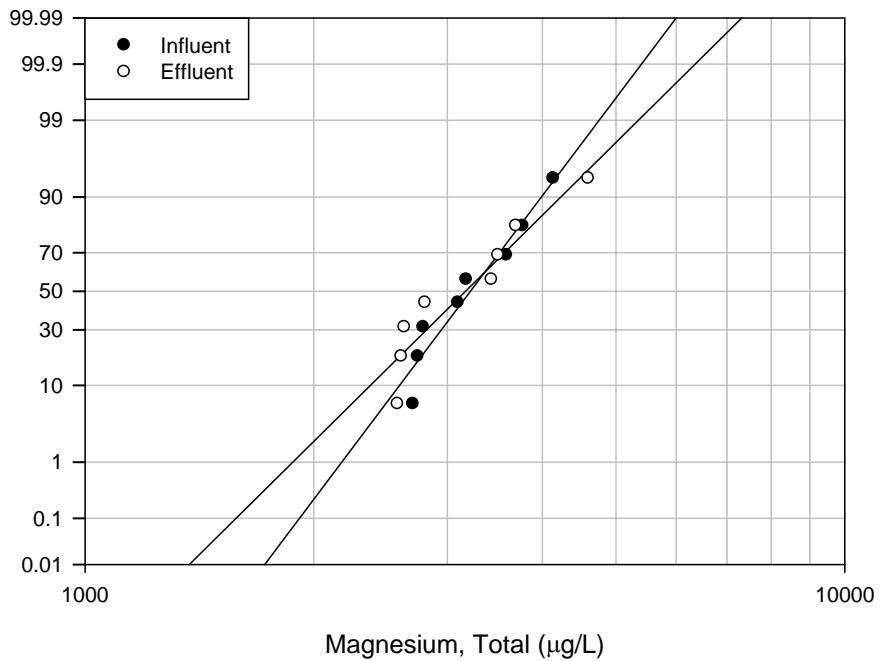
Total Magnesium  
Site Zeolite (Z)



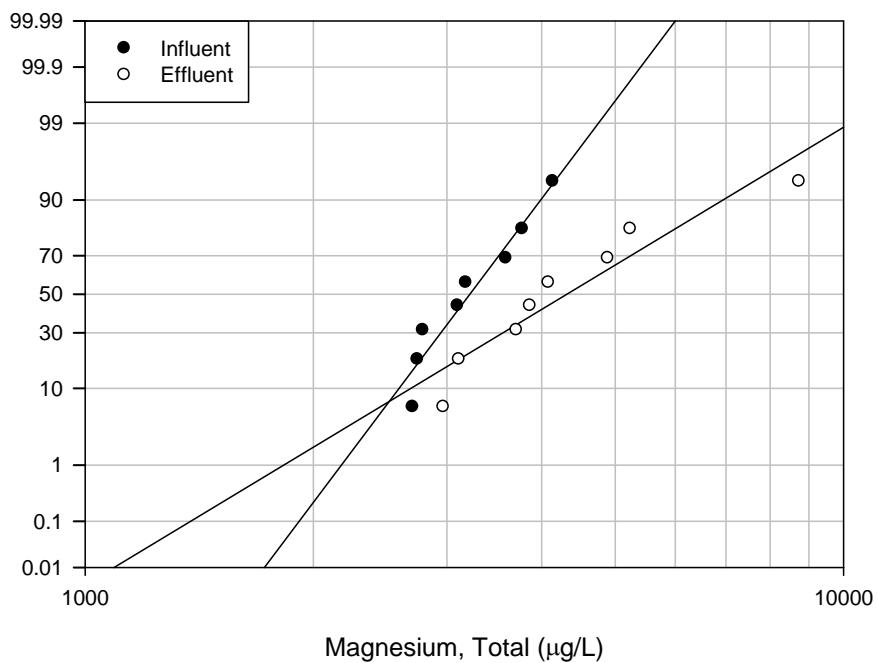
Total Magnesium  
Surface Modified Zeolite (SMZ)



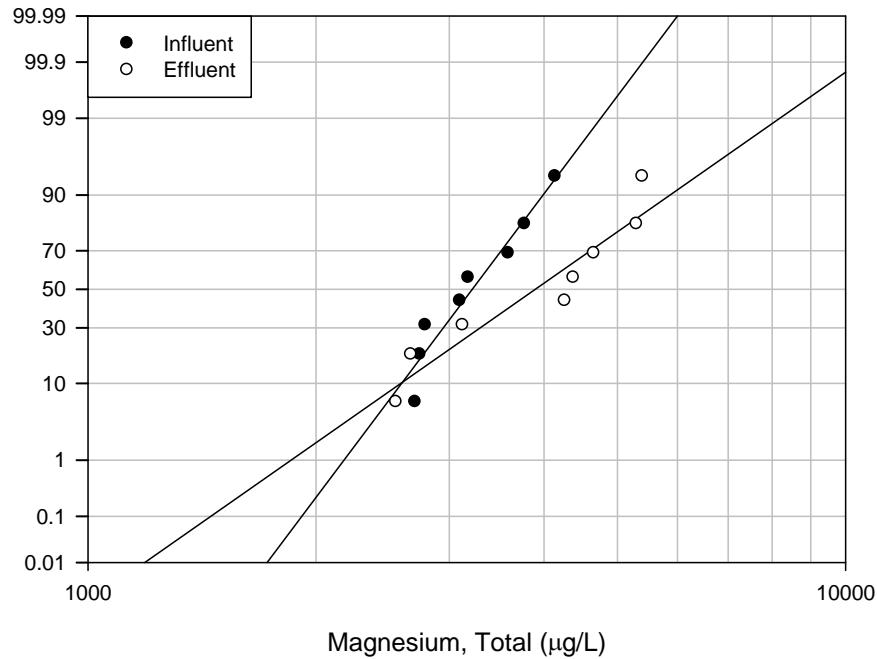
**Total Magnesium**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



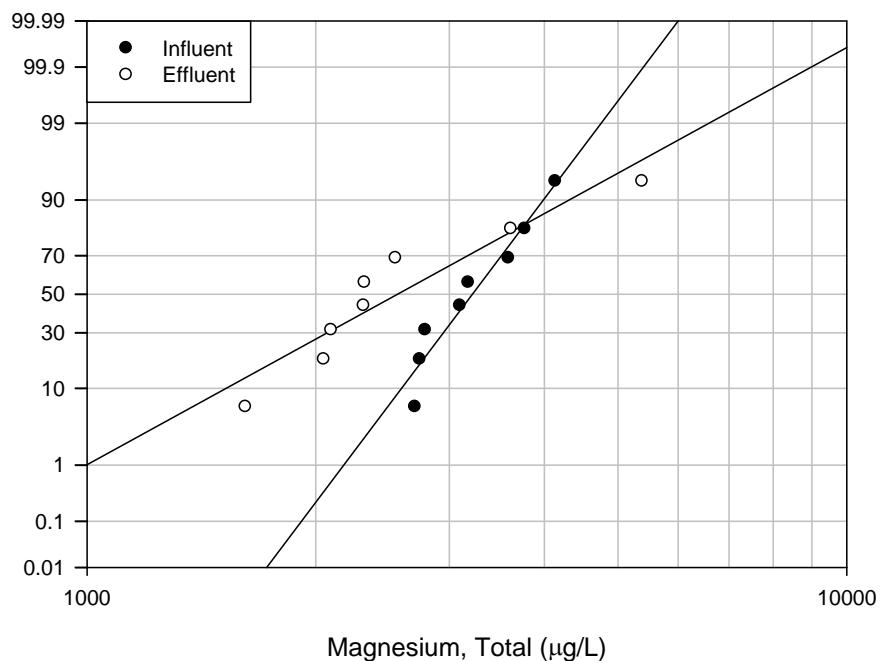
**Total Magnesium**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Magnesium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

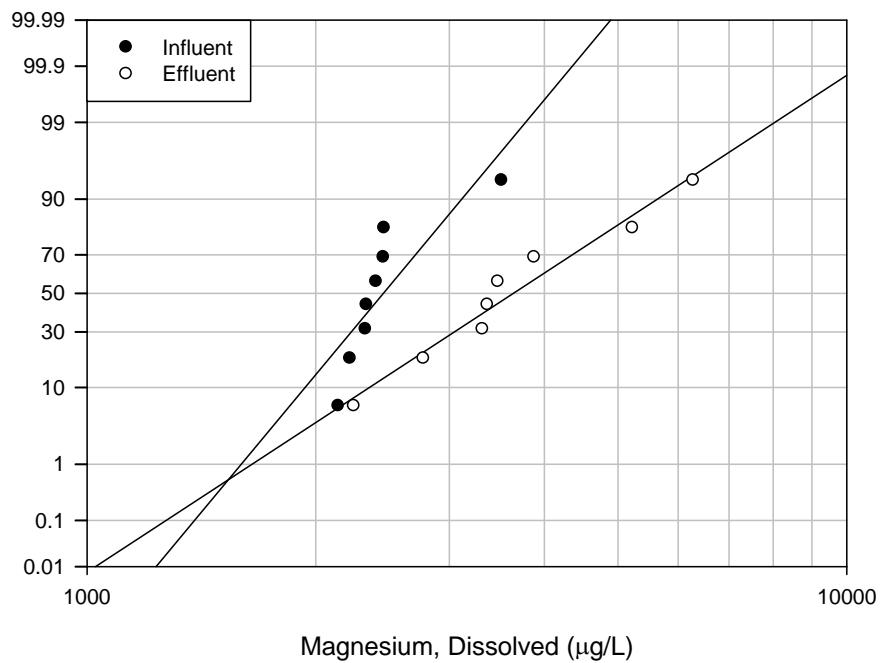


Total Magnesium  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

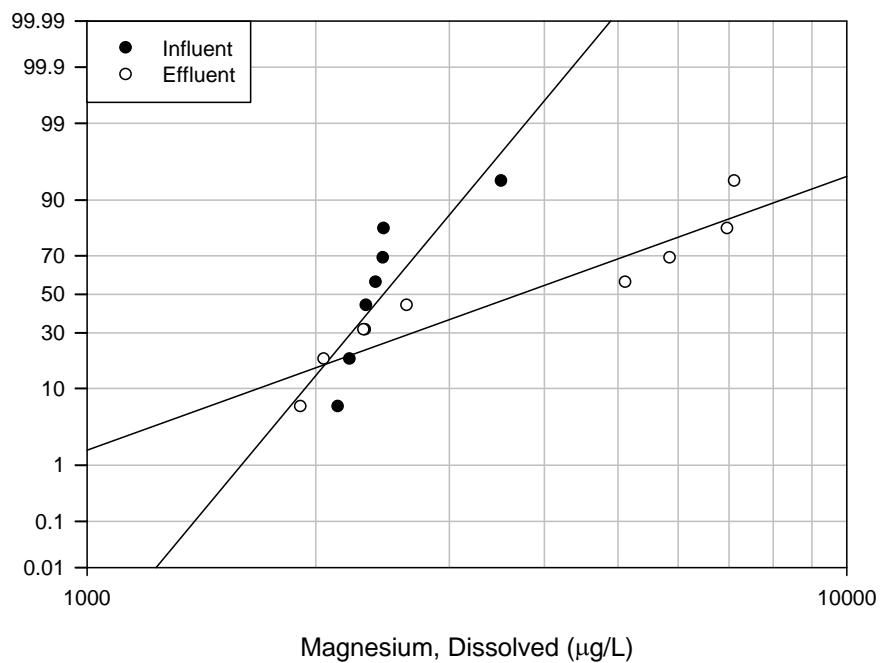


## Magnesium, Filtered

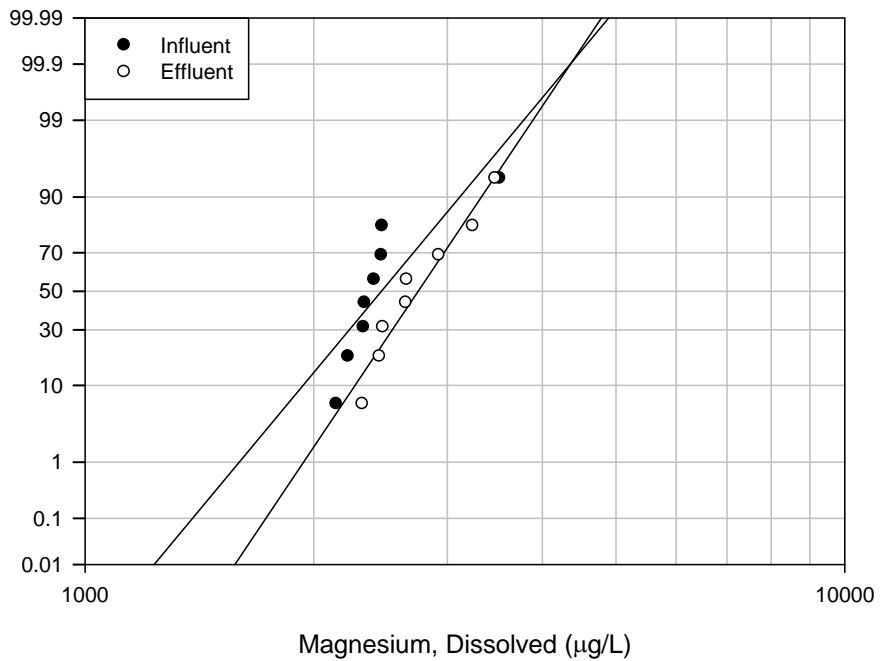
Dissolved Magnesium  
Granular Activated Carbon (GAC)



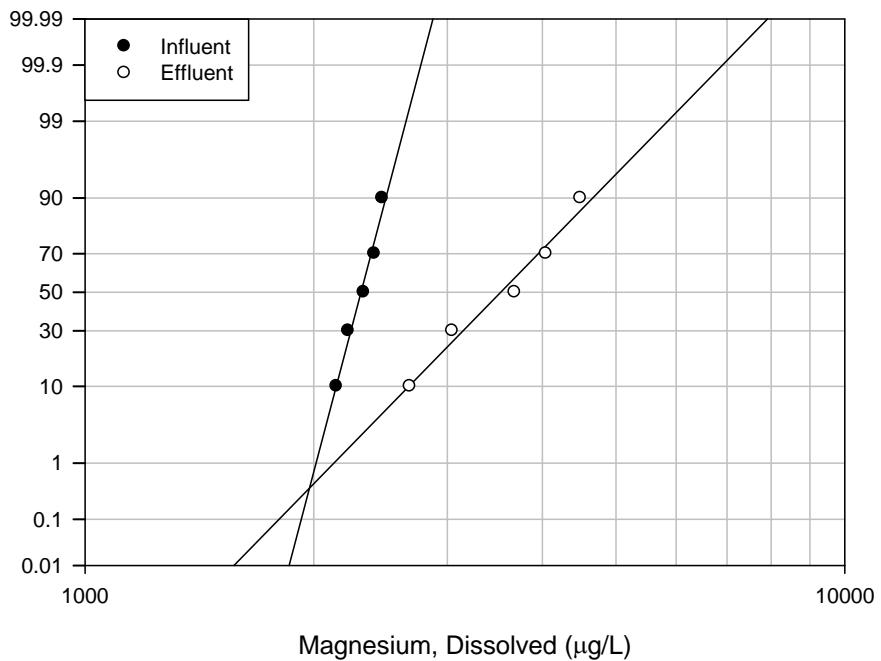
Dissolved Magnesium  
Peat Moss (P)



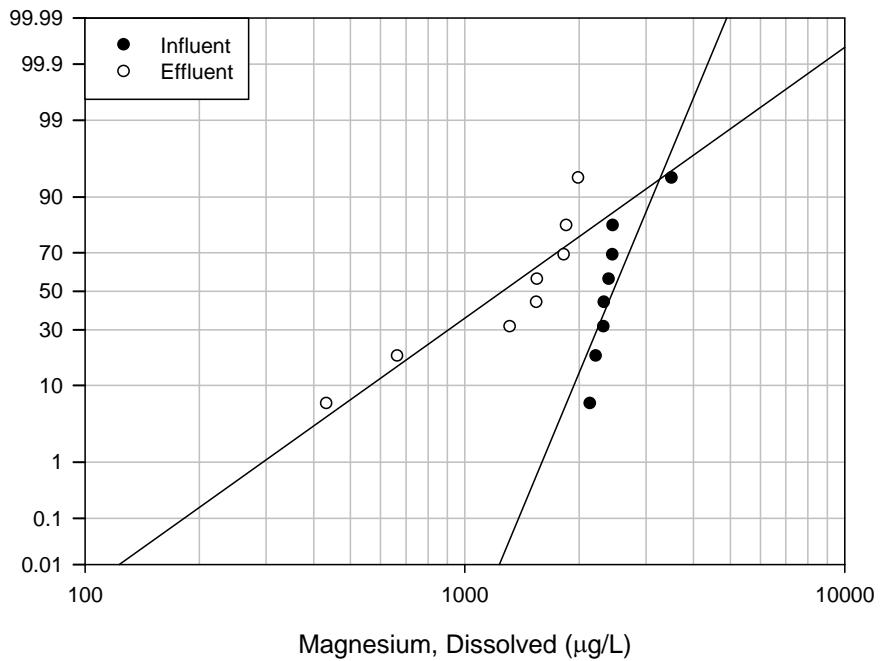
Dissolved Magnesium  
Rhyolite Sand (R)



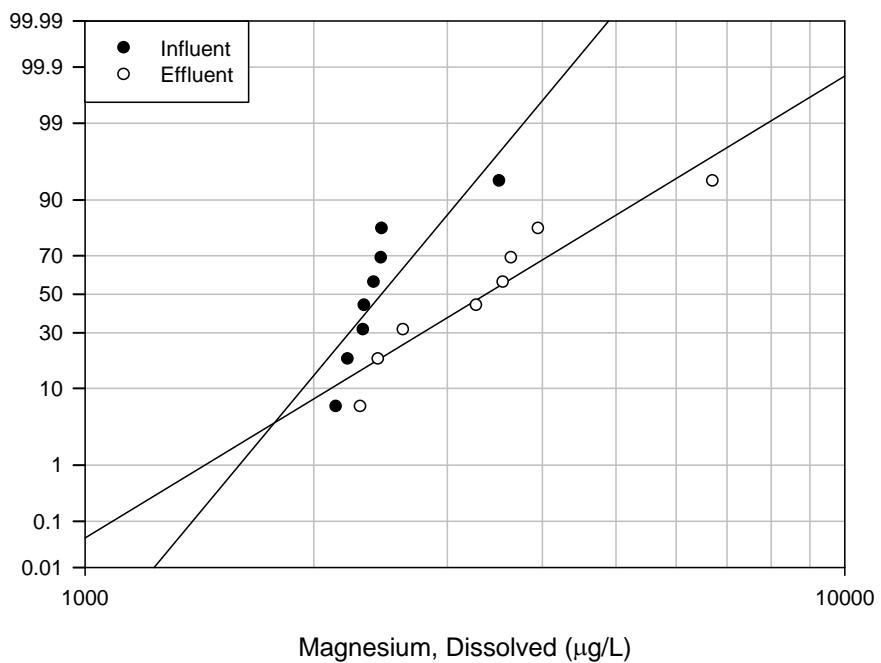
Dissolved Magnesium  
Site Sand (S)



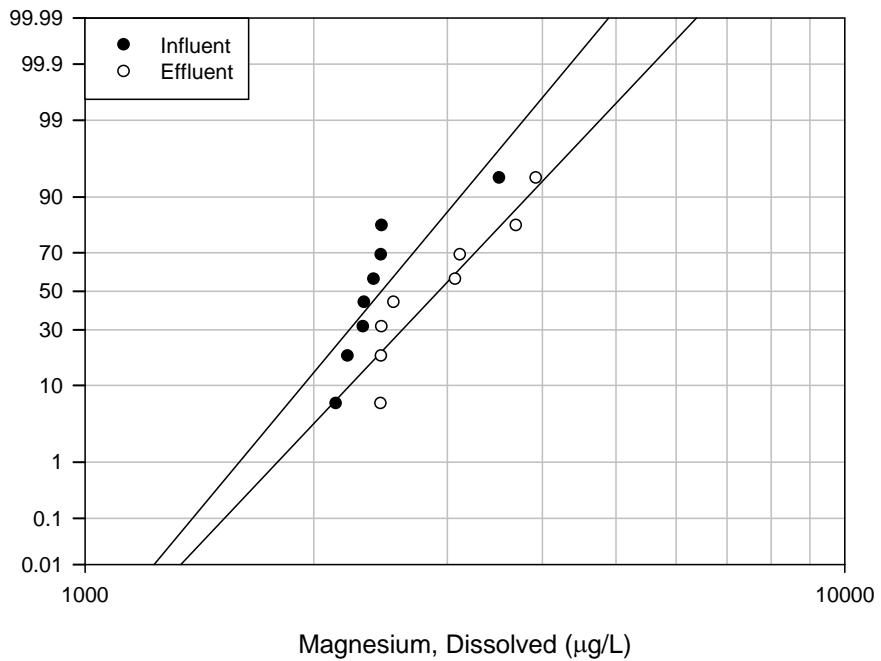
Dissolved Magnesium  
Site Zeolite (Z)



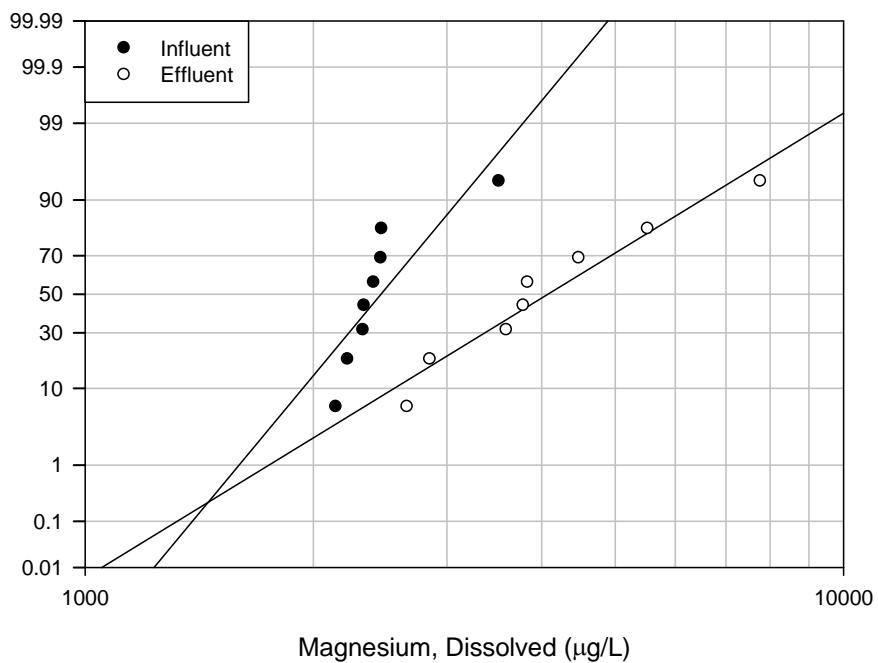
Dissolved Magnesium  
Surface Modified Zeolite (SMZ)



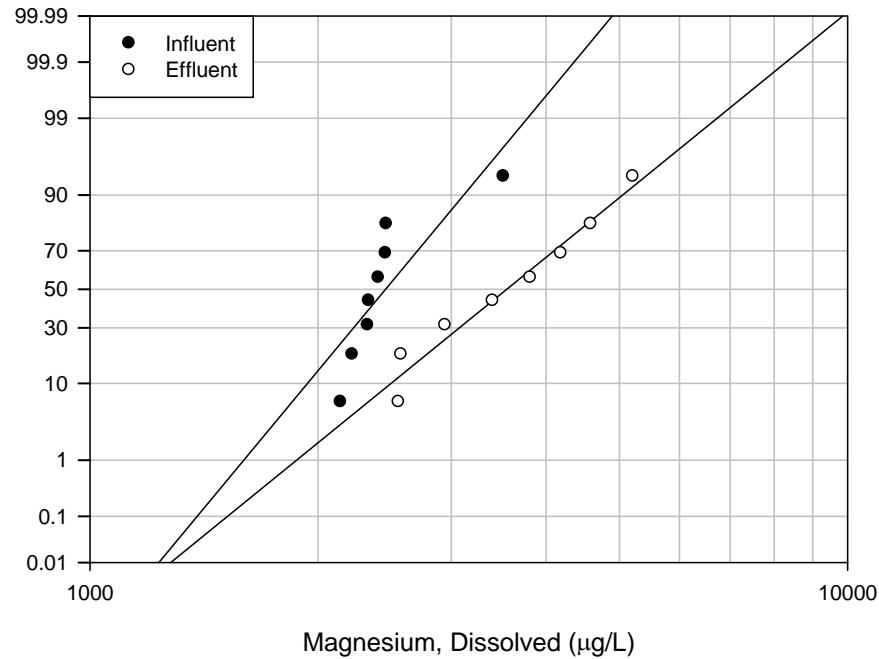
**Dissolved Magnesium**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



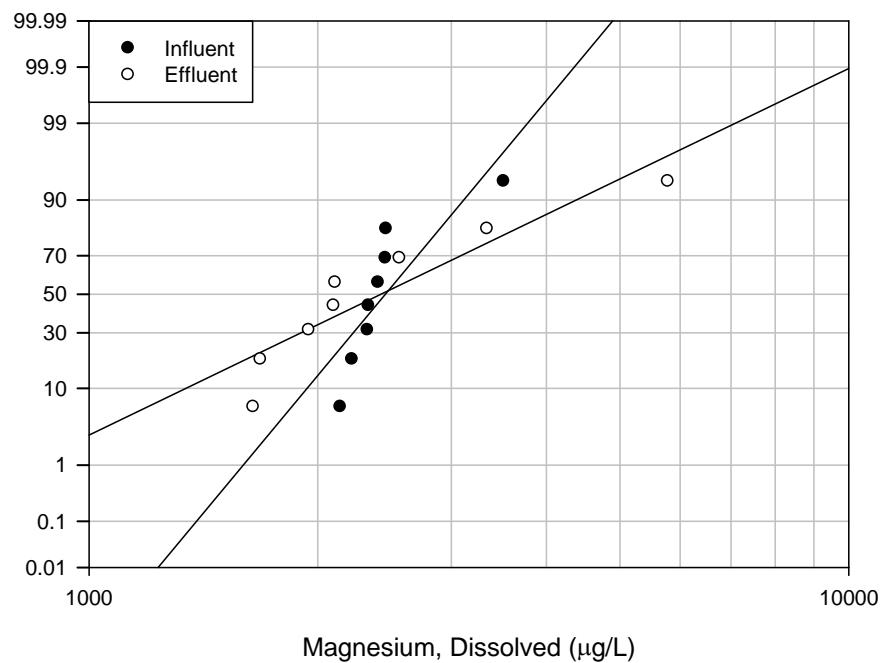
**Dissolved Magnesium**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



**Dissolved Magnesium**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

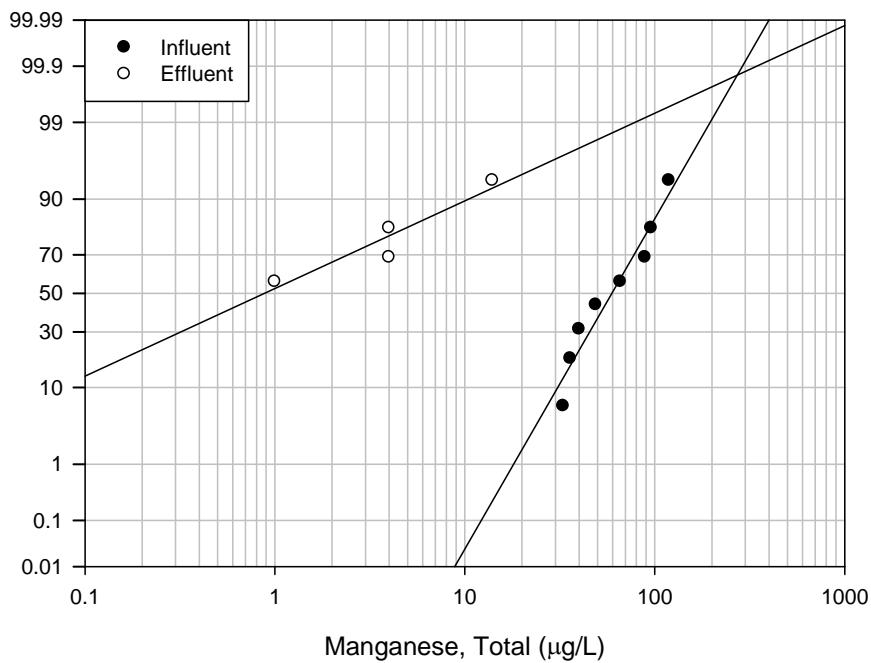


**Dissolved Magnesium**  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

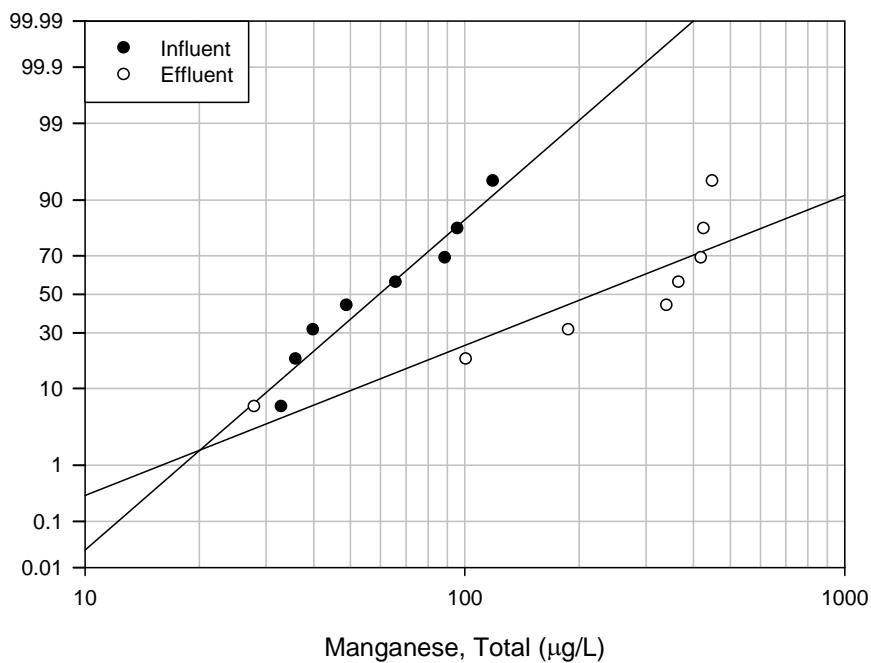


## Manganese, Total

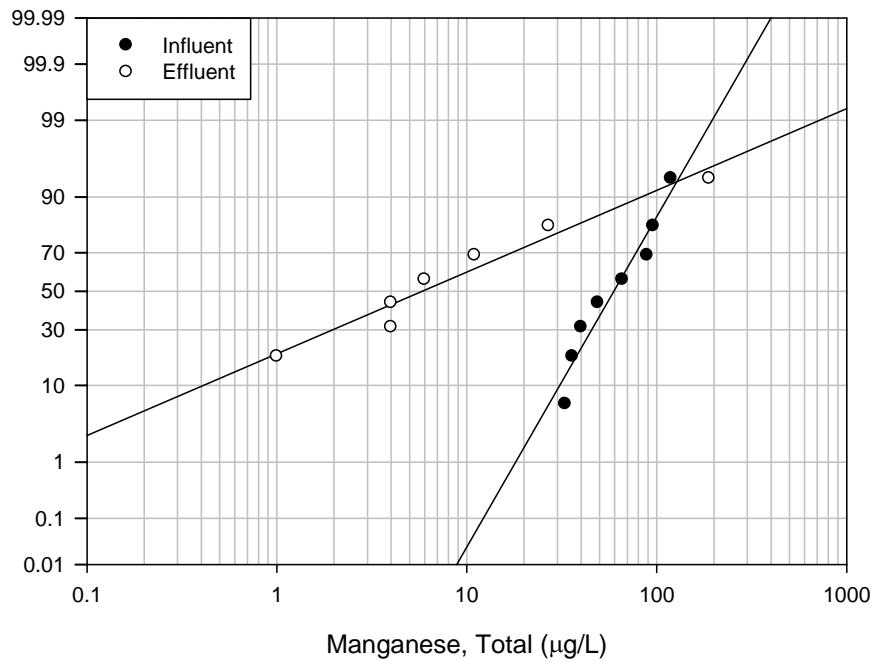
Total Manganese  
Granular Activated Carbon (GAC)



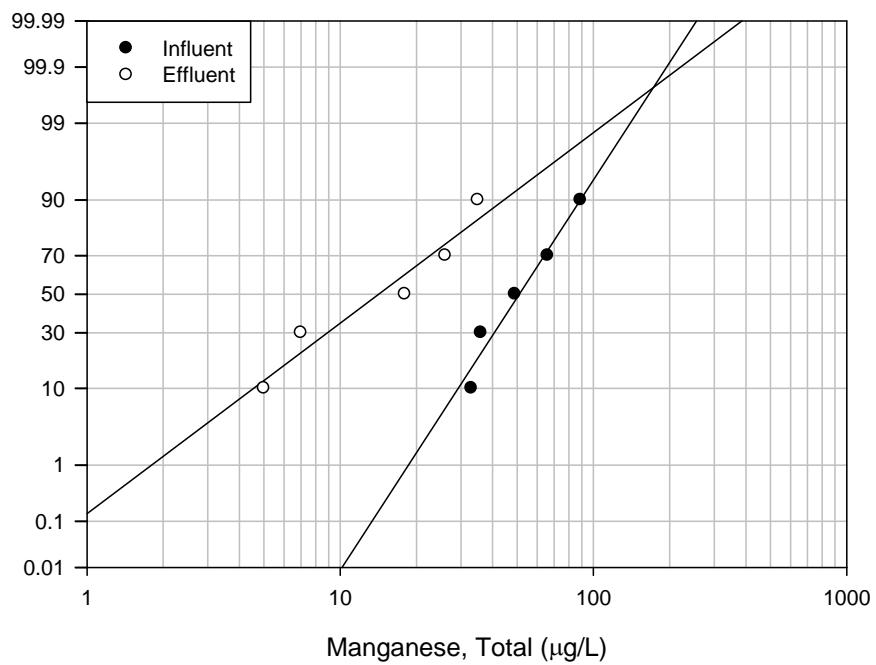
Total Manganese  
Peat Moss (P)



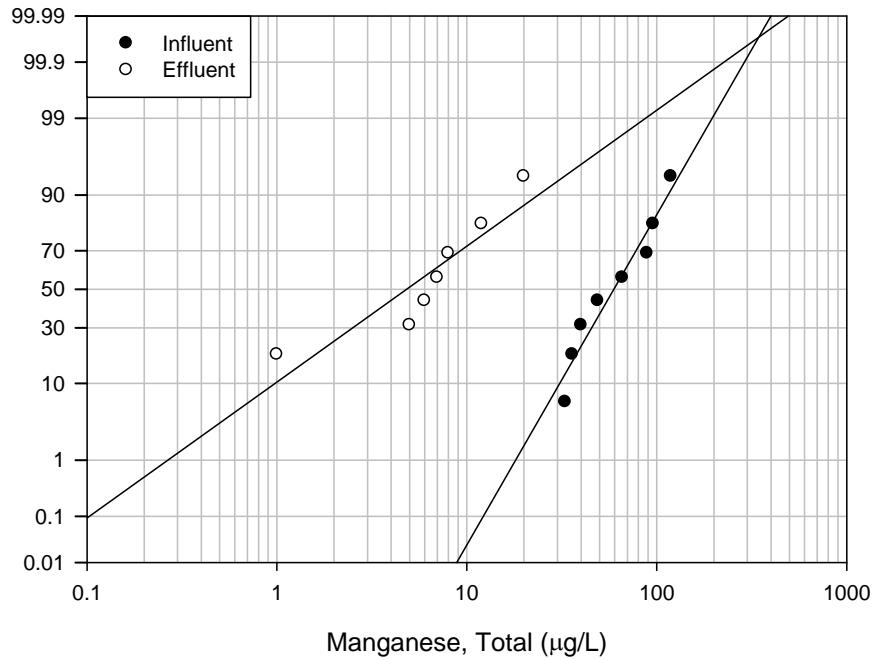
Total Manganese  
Rhyolite Sand (R)



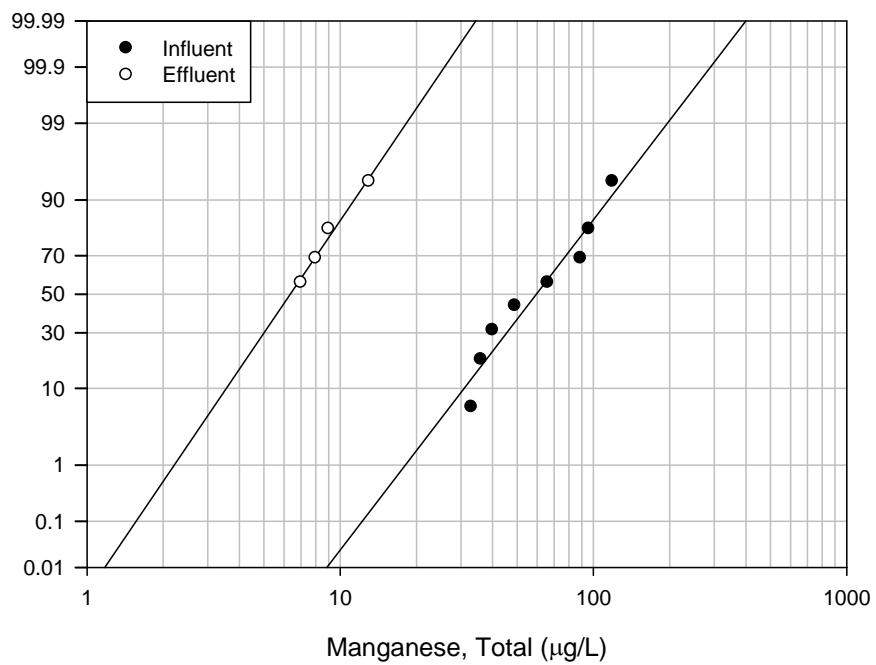
Total Manganese  
Site Sand (S)



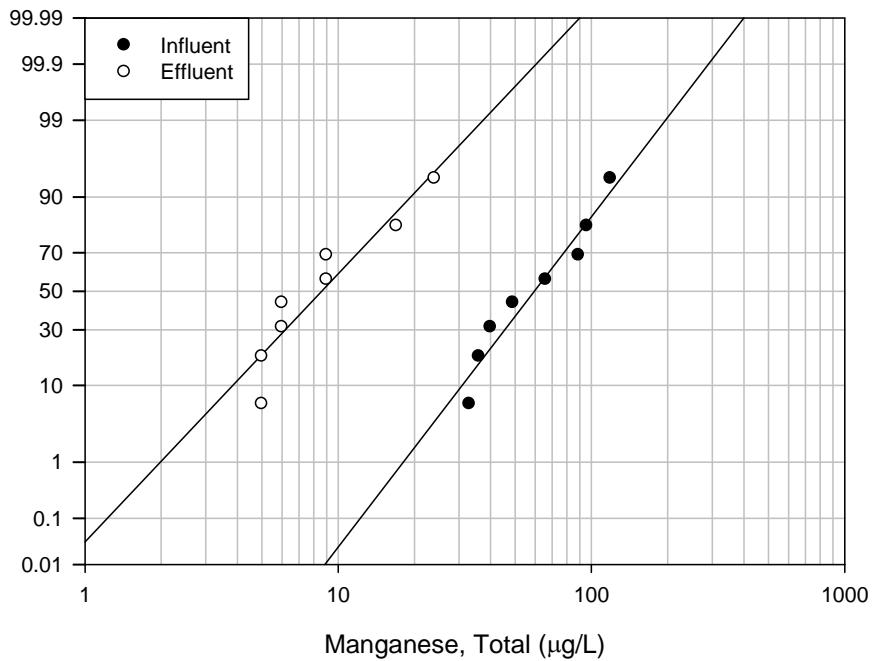
Total Manganese  
Site Zeolite (Z)



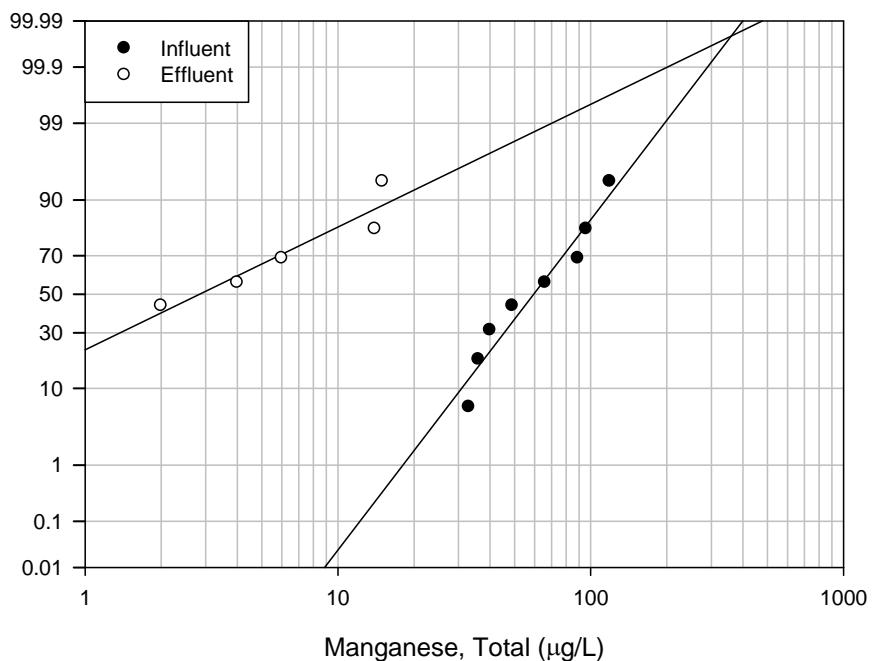
Total Manganese  
Surface Modified Zeolite (SMZ)



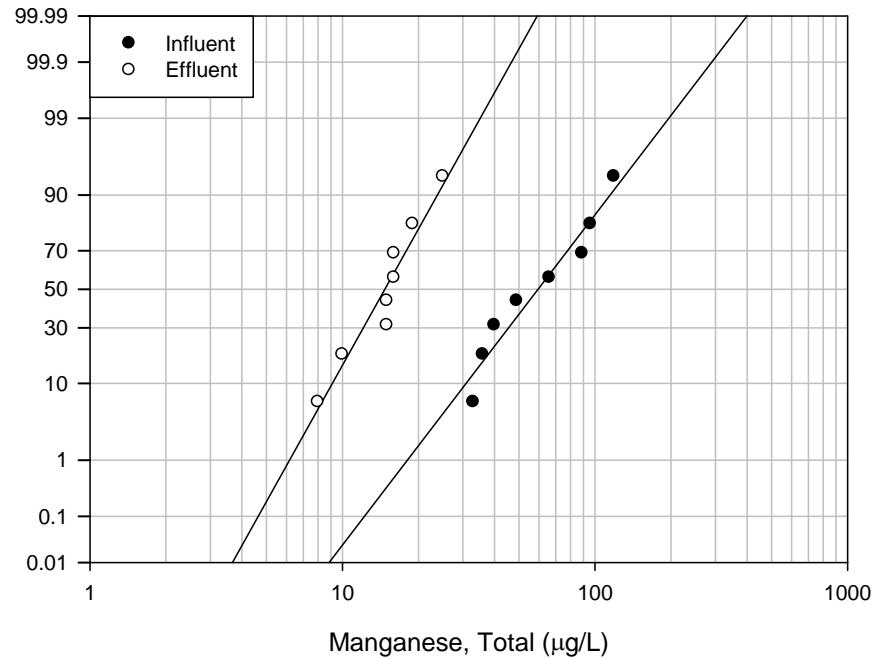
Total Manganese  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



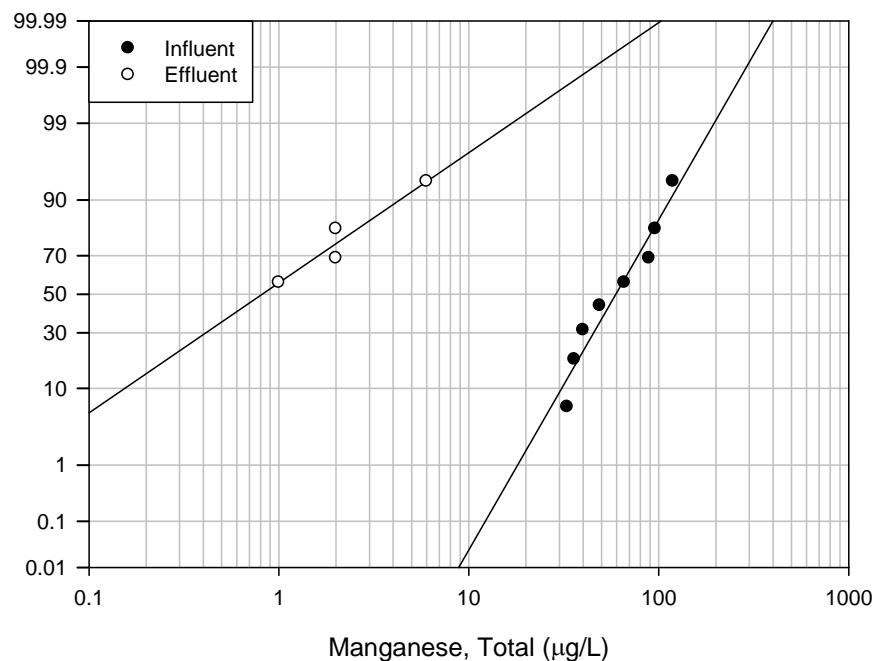
Total Manganese  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Manganese  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

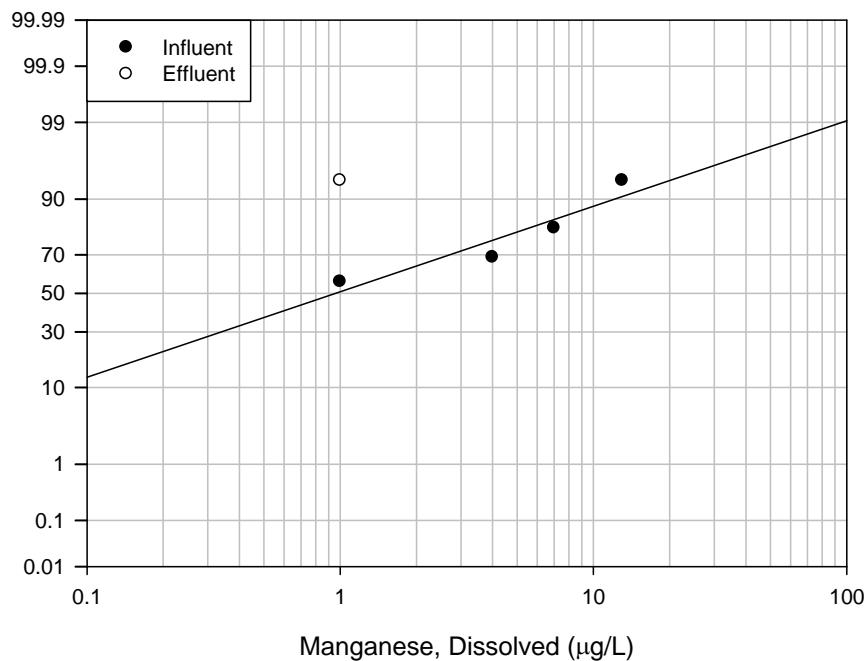


Total Manganese  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

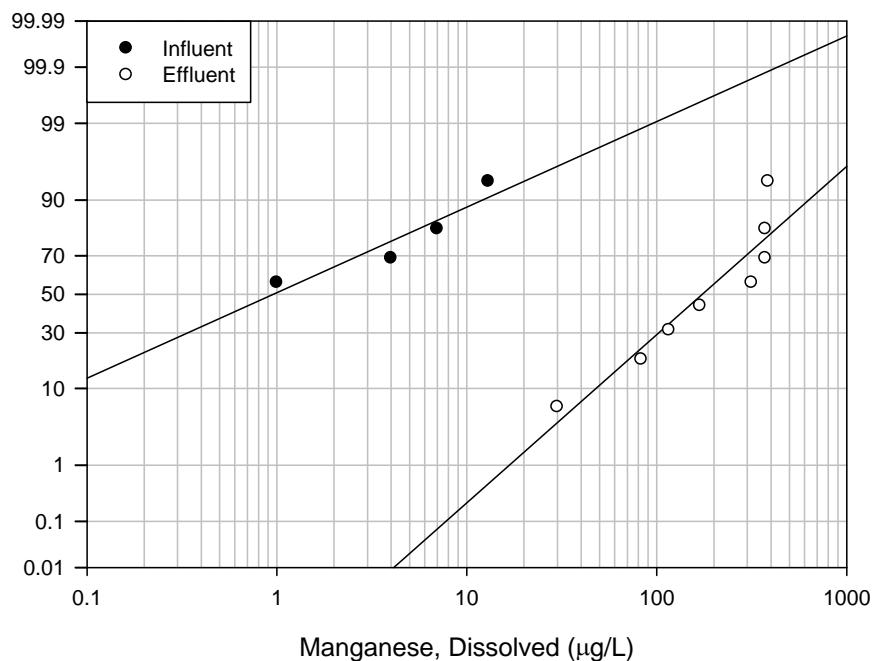


## Manganese, Filtered

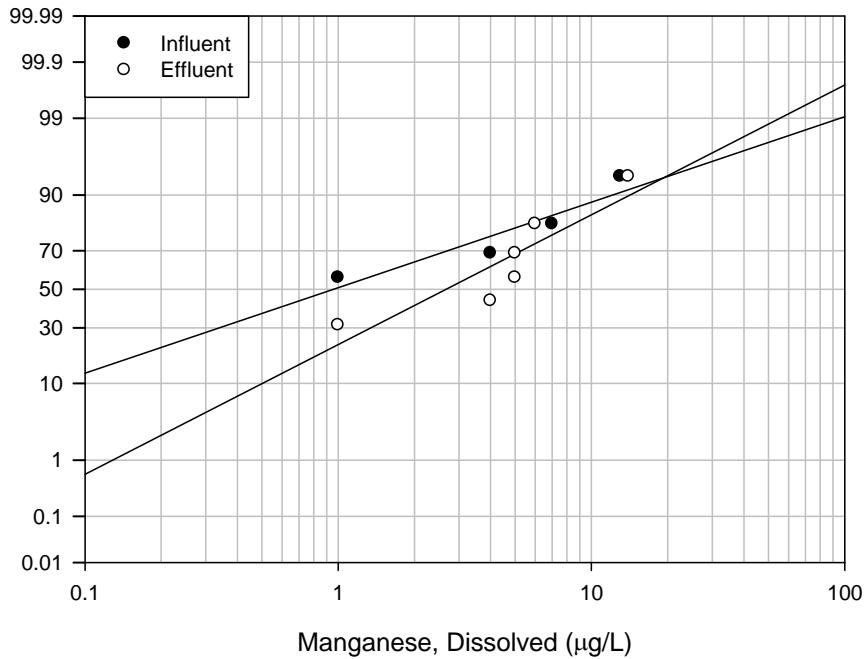
Dissolved Manganese  
Granular Activated Carbon (GAC)



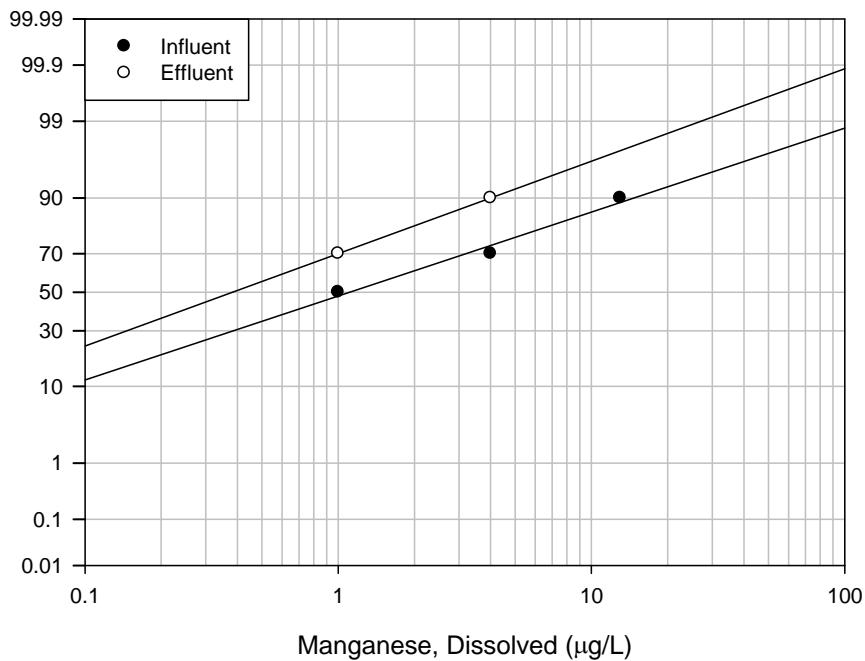
Dissolved Manganese  
Peat Moss (P)



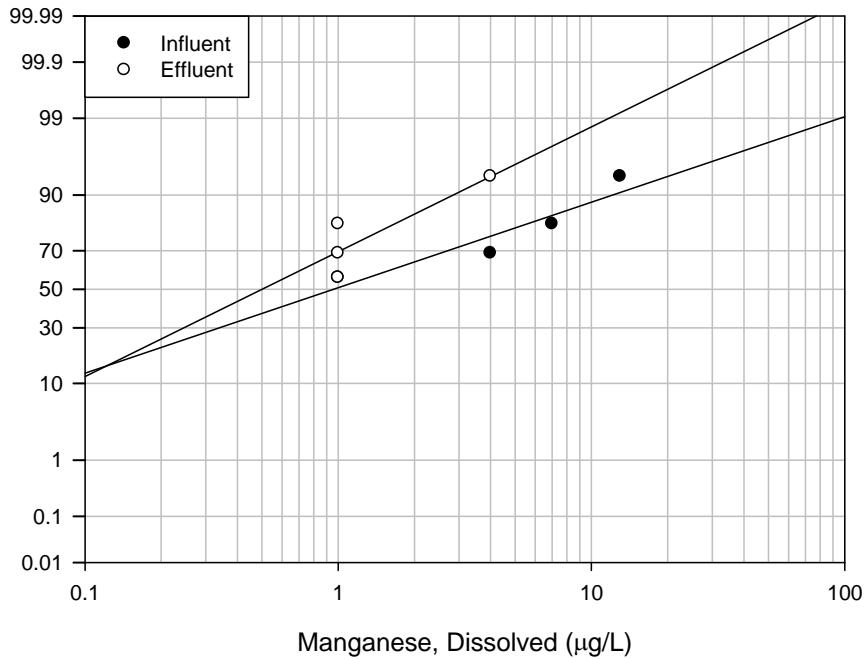
Dissolved Manganese  
Rhyolite Sand (R)



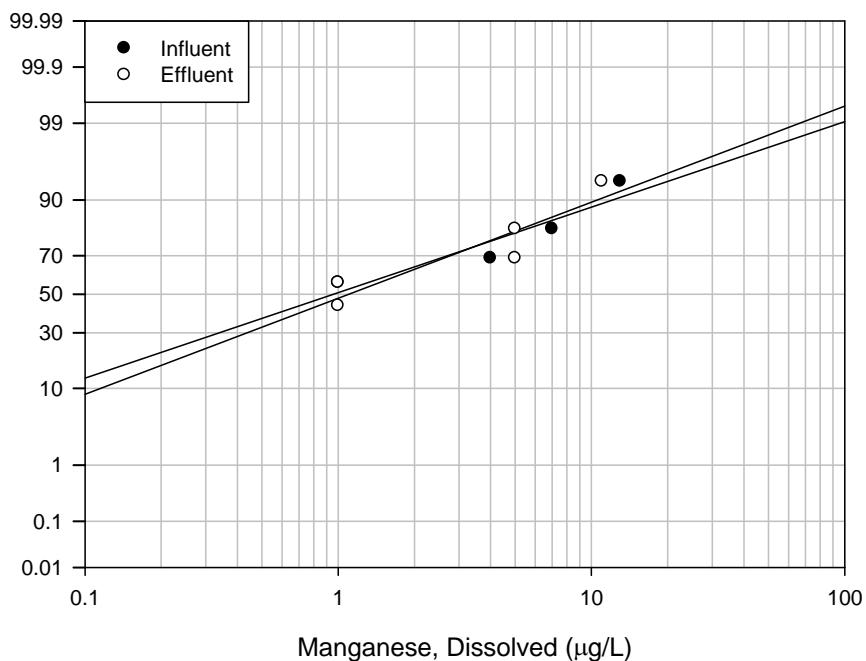
Dissolved Manganese  
Site Sand (S)



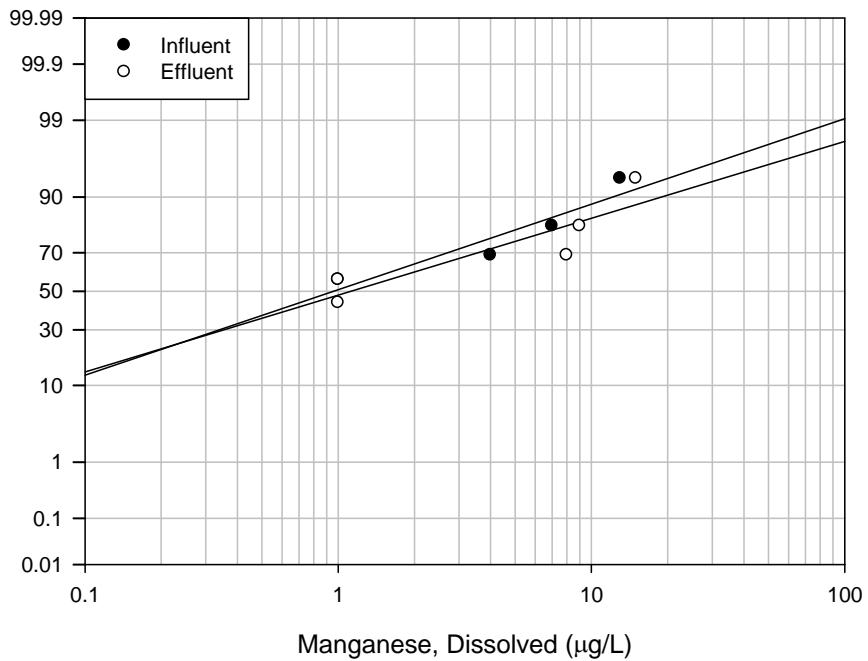
Dissolved Manganese  
Site Zeolite (Z)



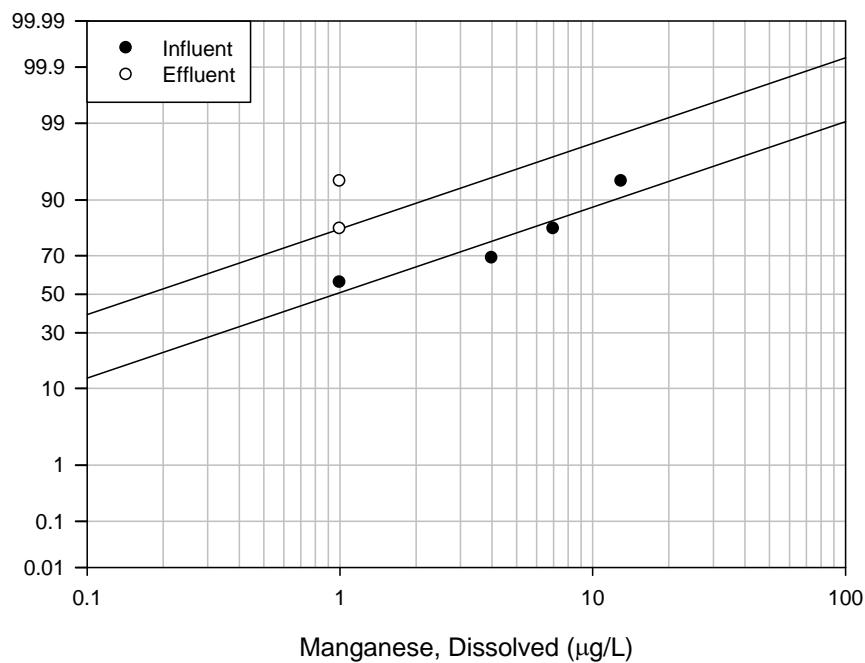
Dissolved Manganese  
Surface Modified Zeolite (SMZ)



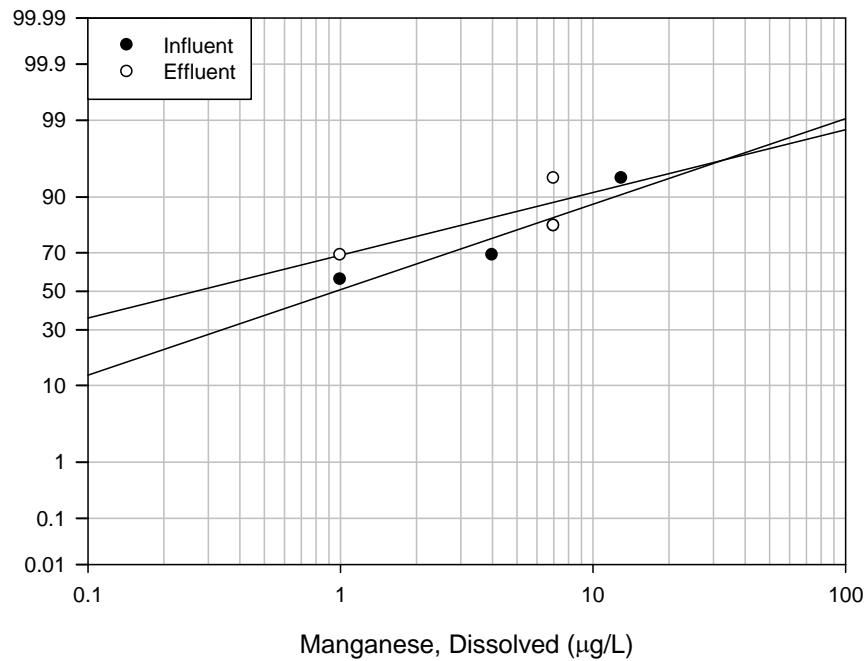
**Dissolved Manganese**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



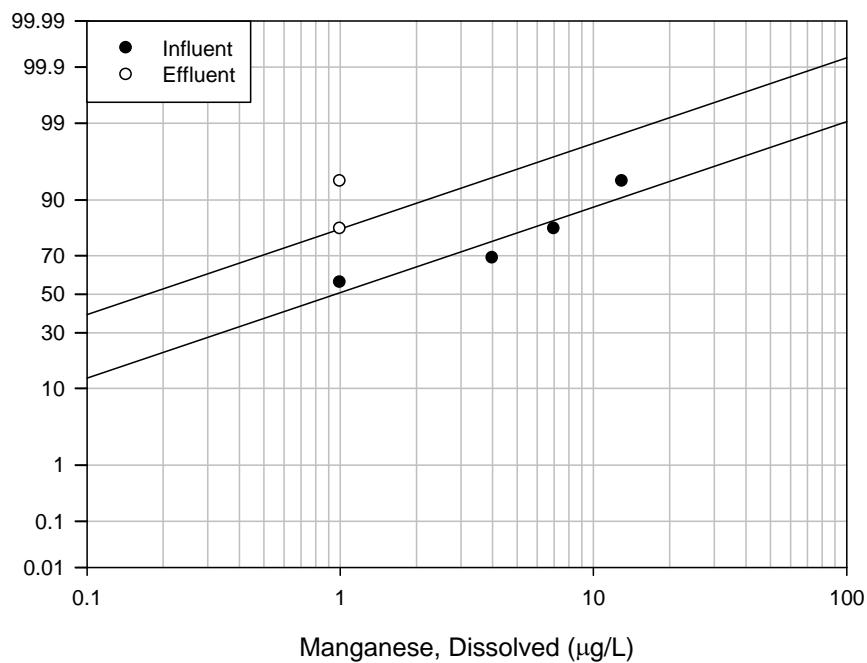
**Dissolved Manganese**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



**Dissolved Manganese**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

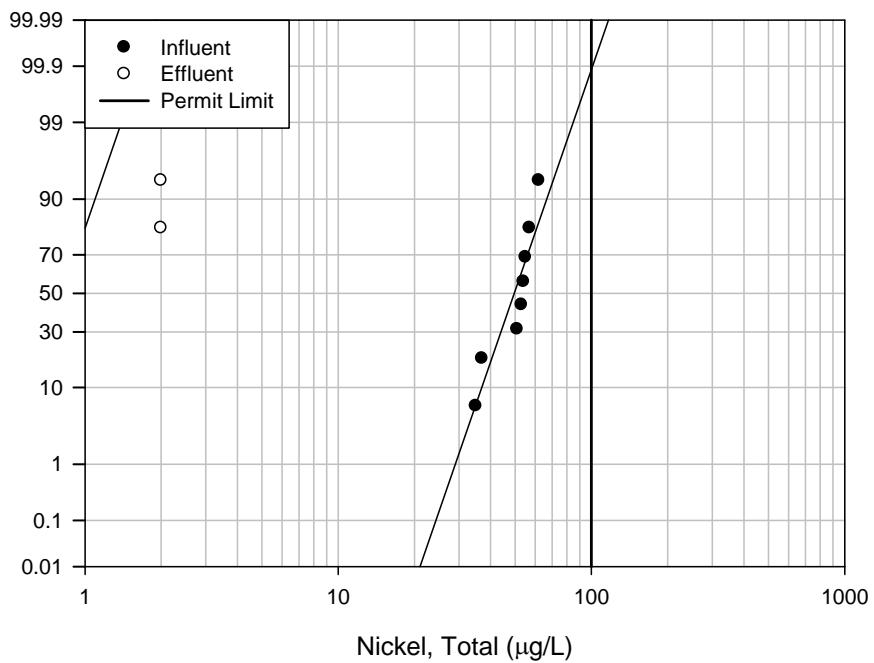


**Dissolved Manganese**  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)



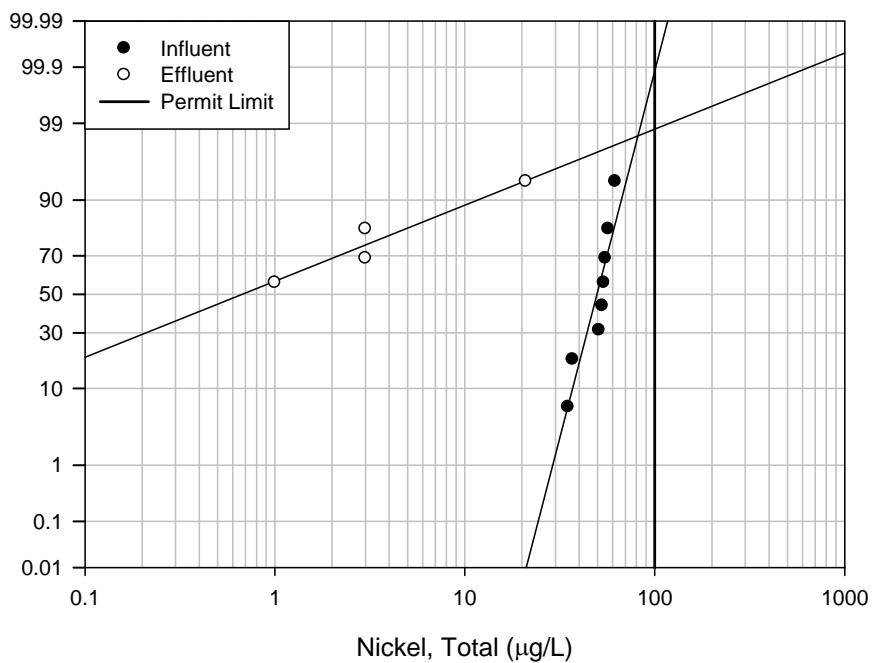
## Nickel, Total

Total Nickel  
Granular Activated Carbon (GAC)

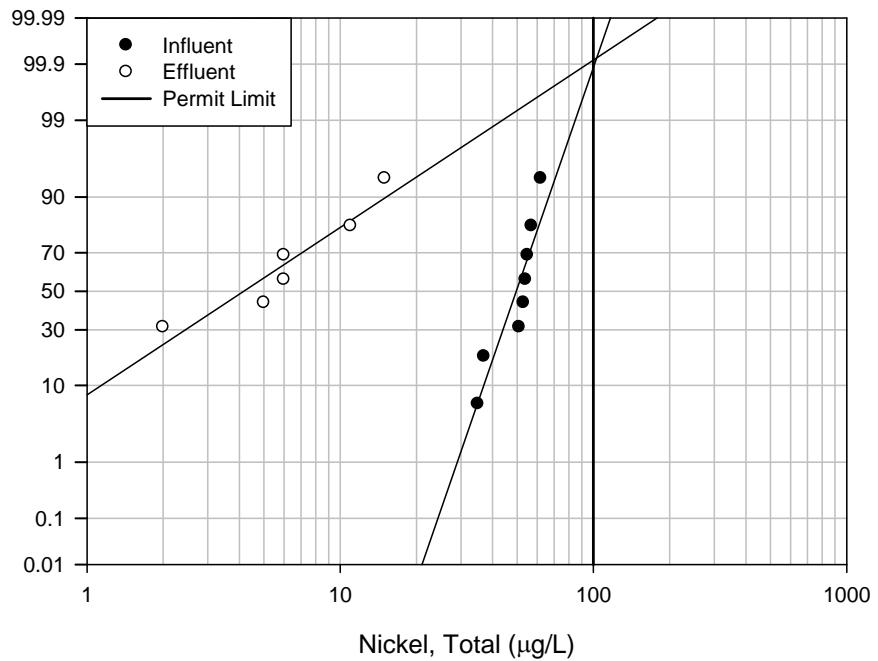


Total Nickel

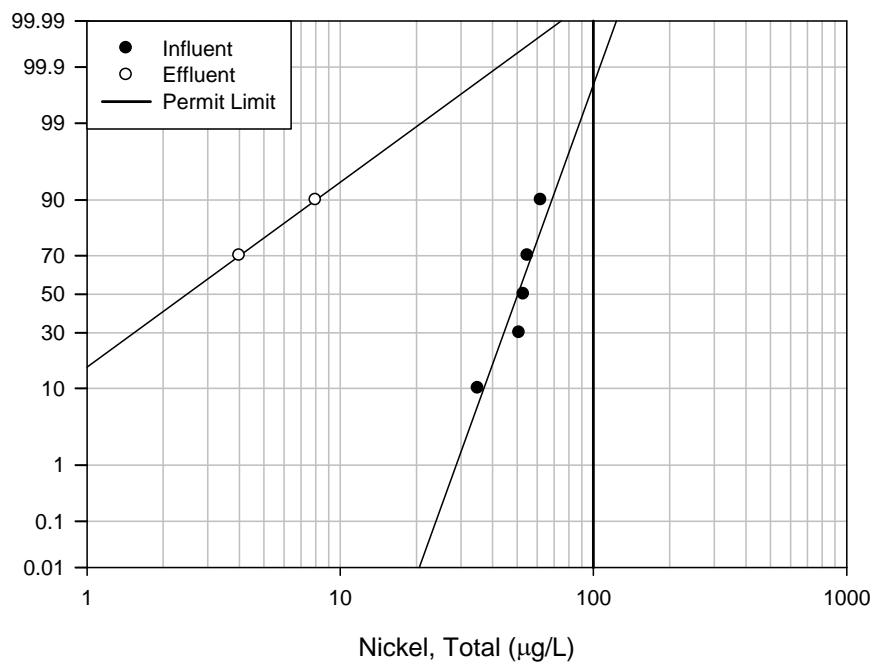
Peat Moss (P)



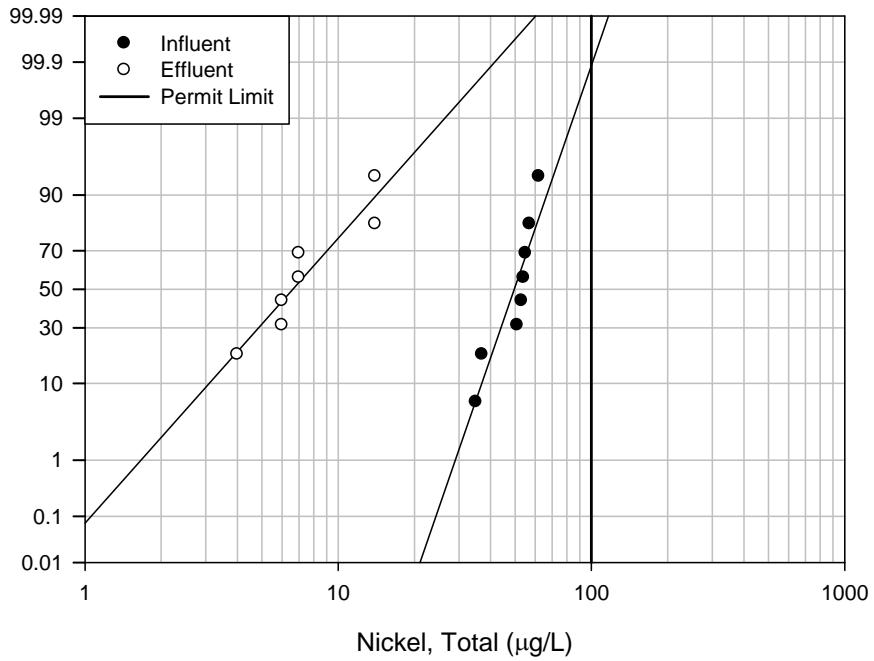
Total Nickel  
Rhyolite Sand (R)



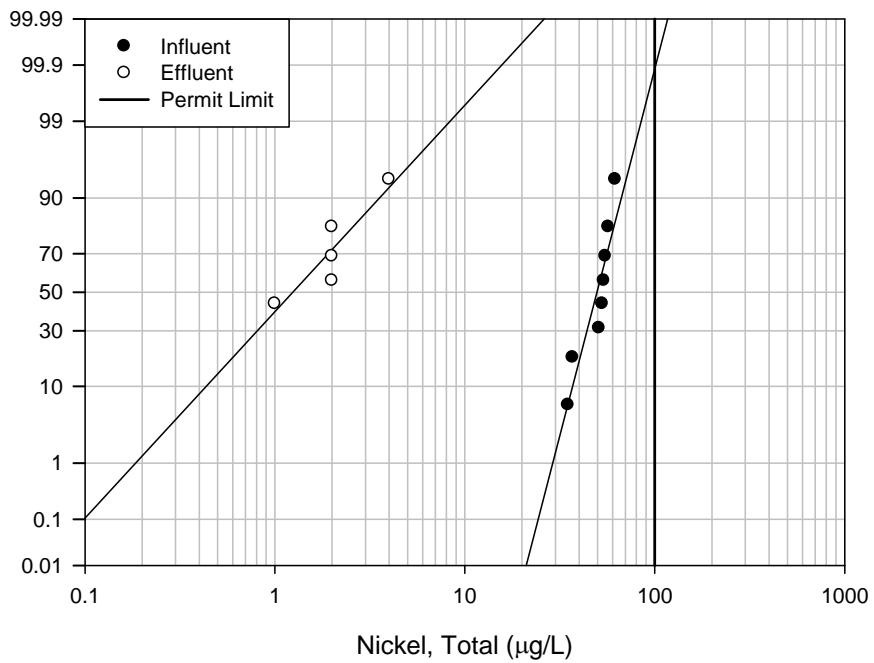
Total Nickel  
Site Sand (S)



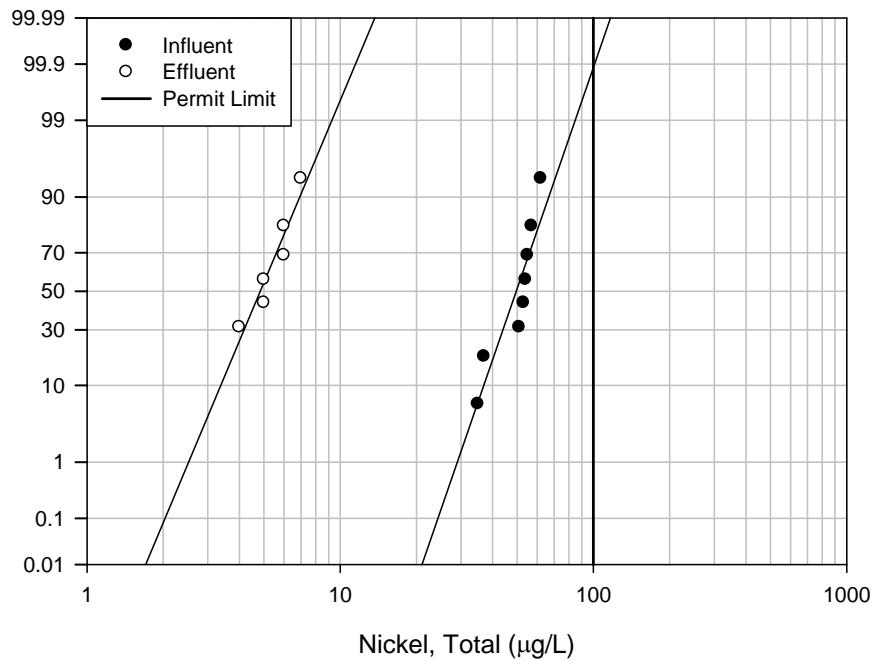
Total Nickel  
Site Zeolite (Z)



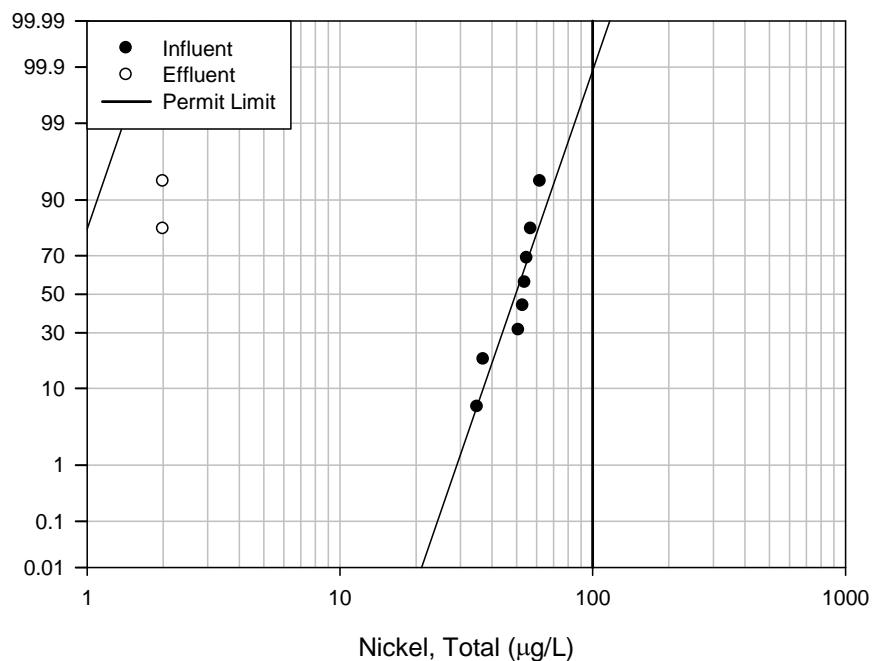
Total Nickel  
Surface Modified Zeolite (SMZ)



Total Nickel  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

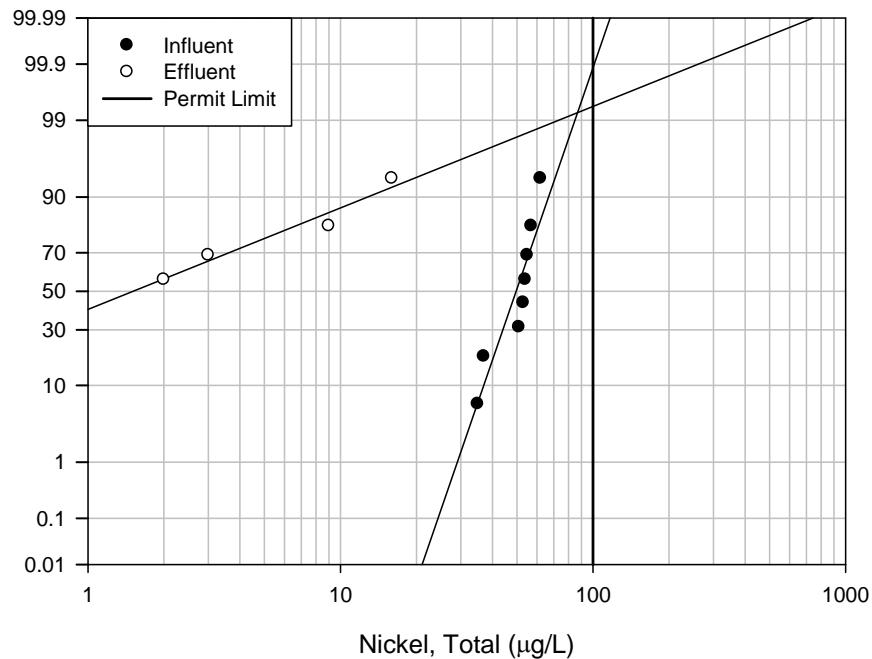


Total Nickel  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



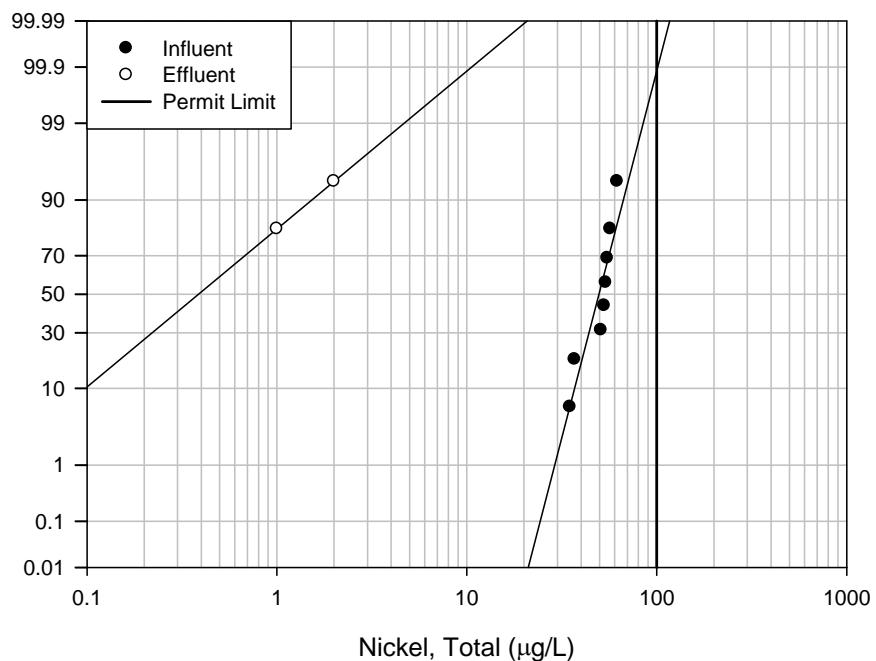
### Total Nickel

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



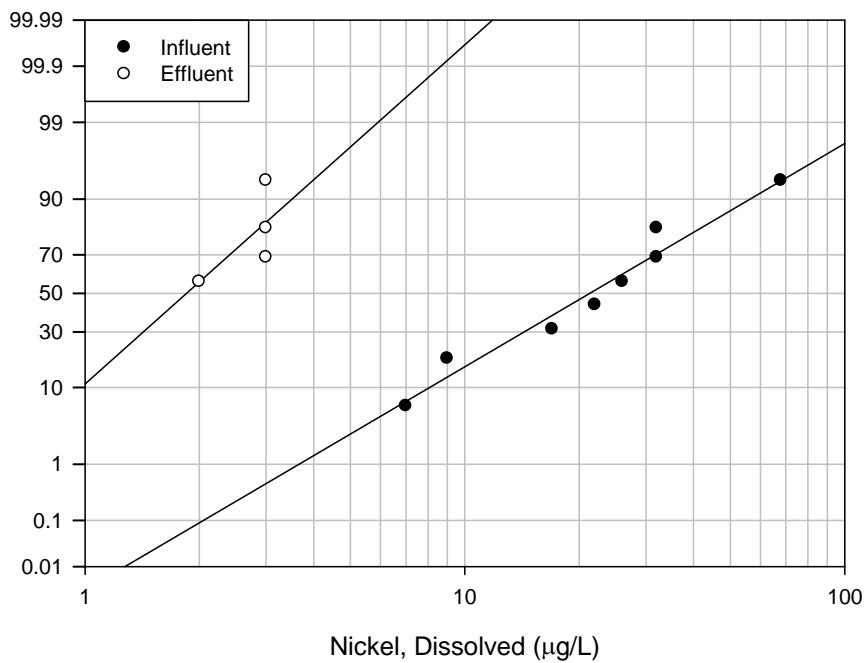
### Total Nickel

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

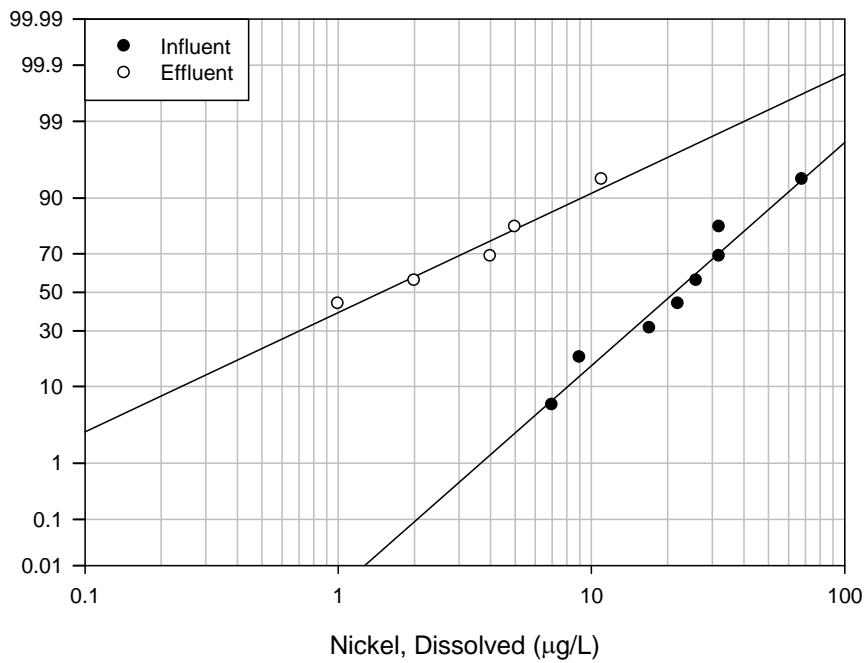


## Nickel, Filtered

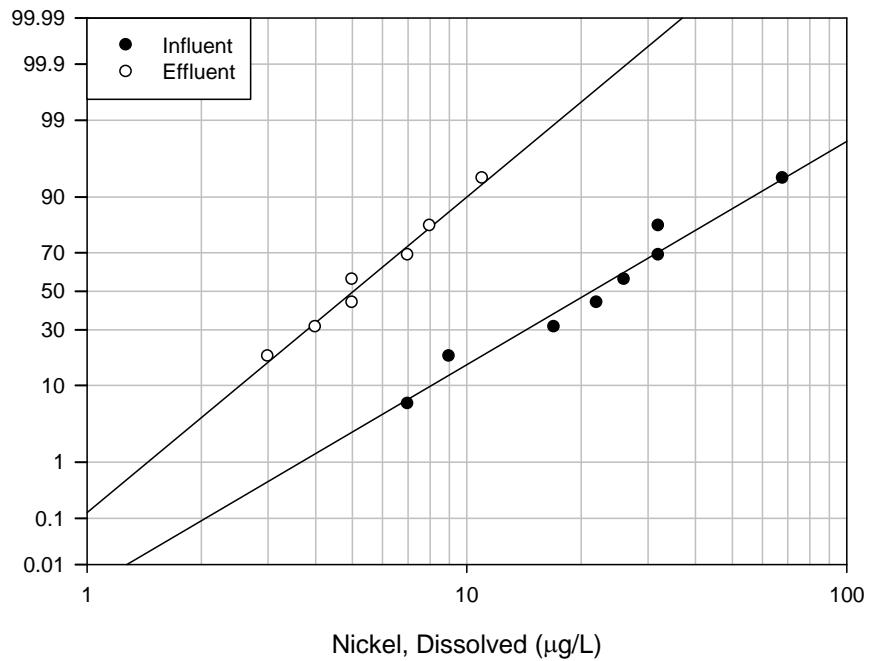
Dissolved Nickel  
Granular Activated Carbon (GAC)



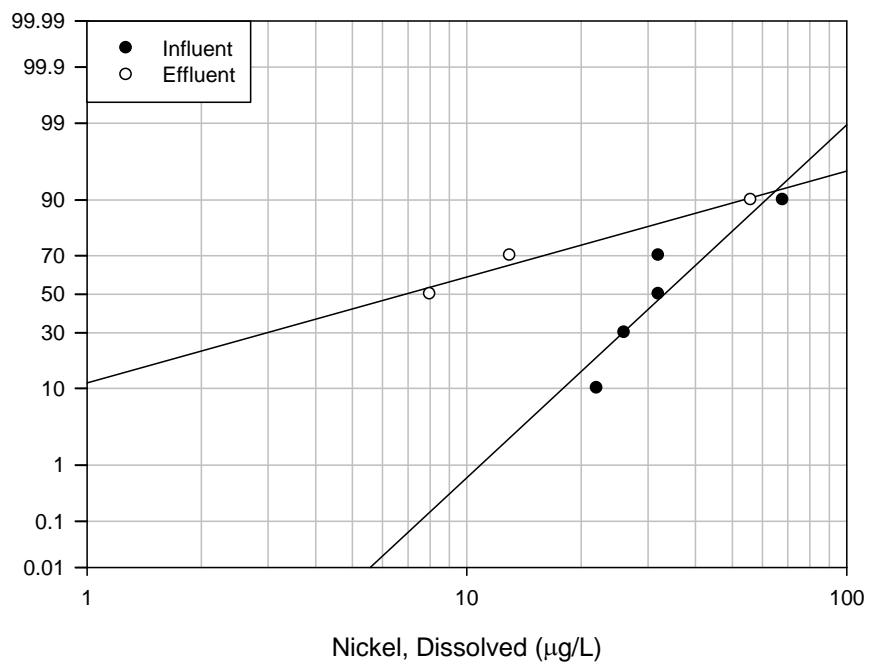
Dissolved Nickel  
Peat Moss (P)



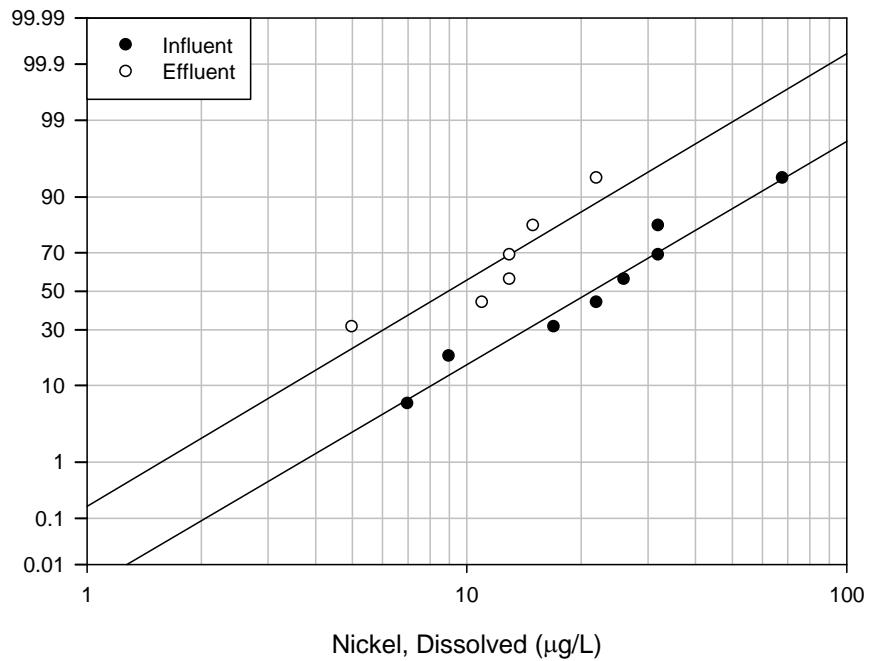
Dissolved Nickel  
Rhyolite Sand (R)



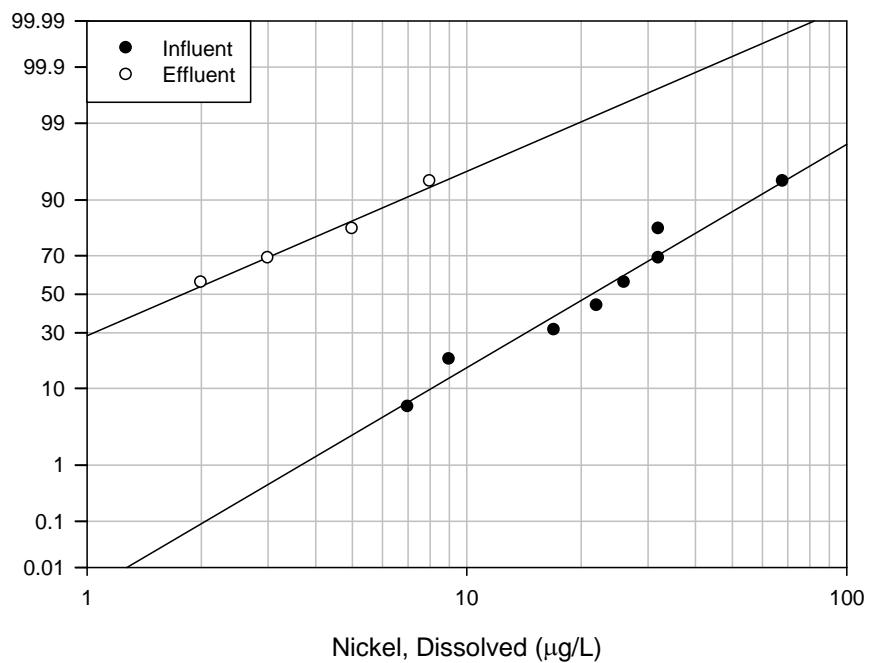
Dissolved Nickel  
Site Sand (S)



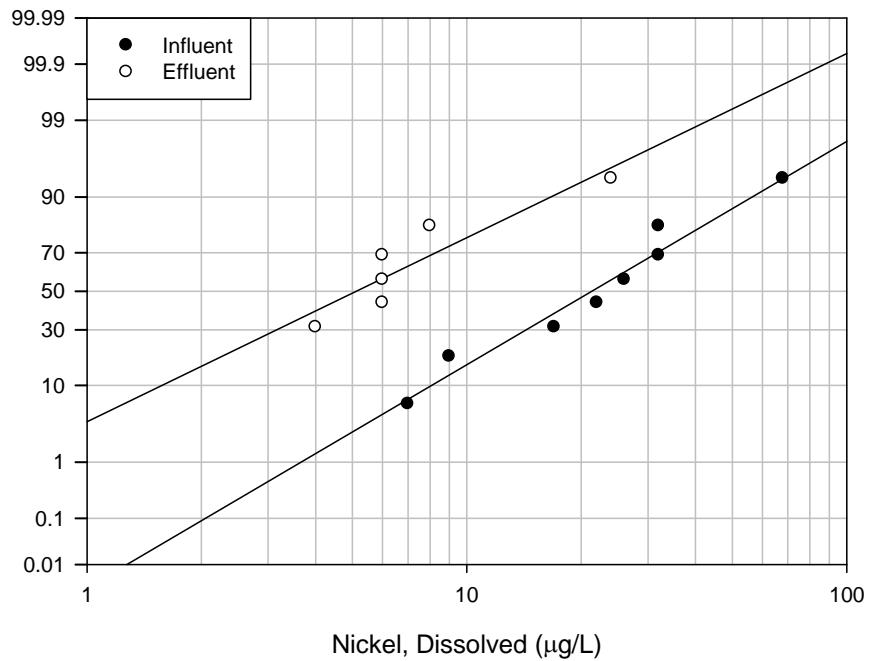
Dissolved Nickel  
Site Zeolite (Z)



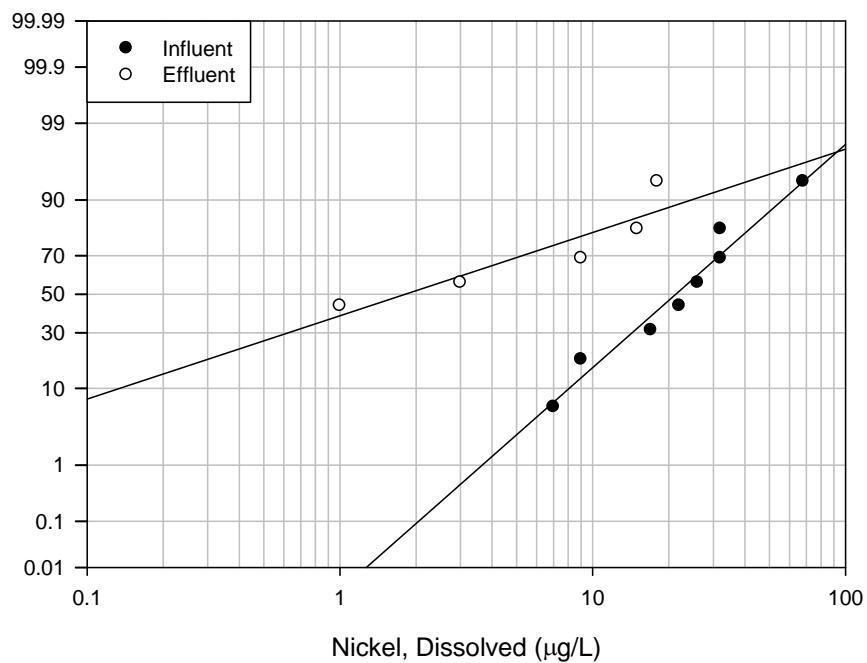
Dissolved Nickel  
Surface Modified Zeolite (SMZ)



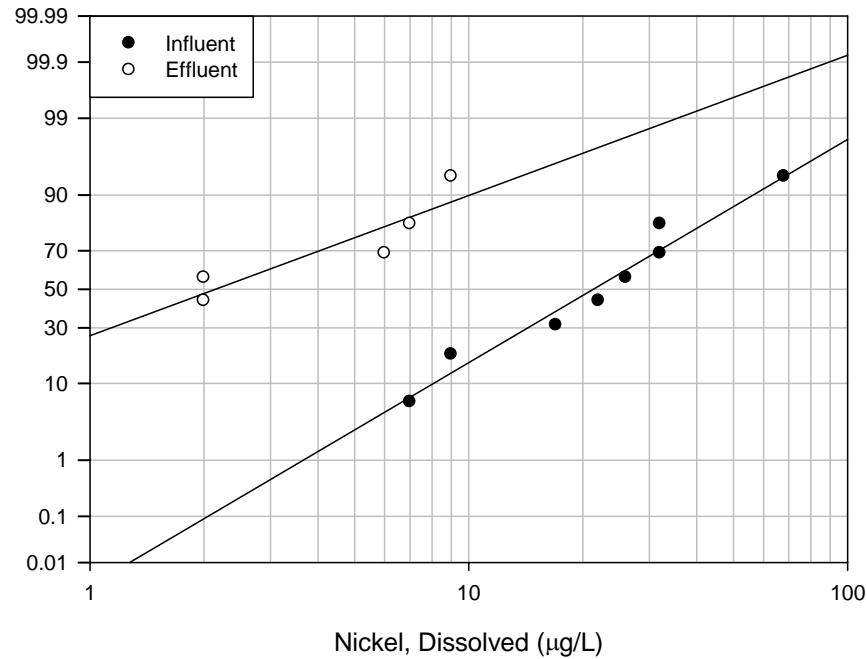
**Dissolved Nickel**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



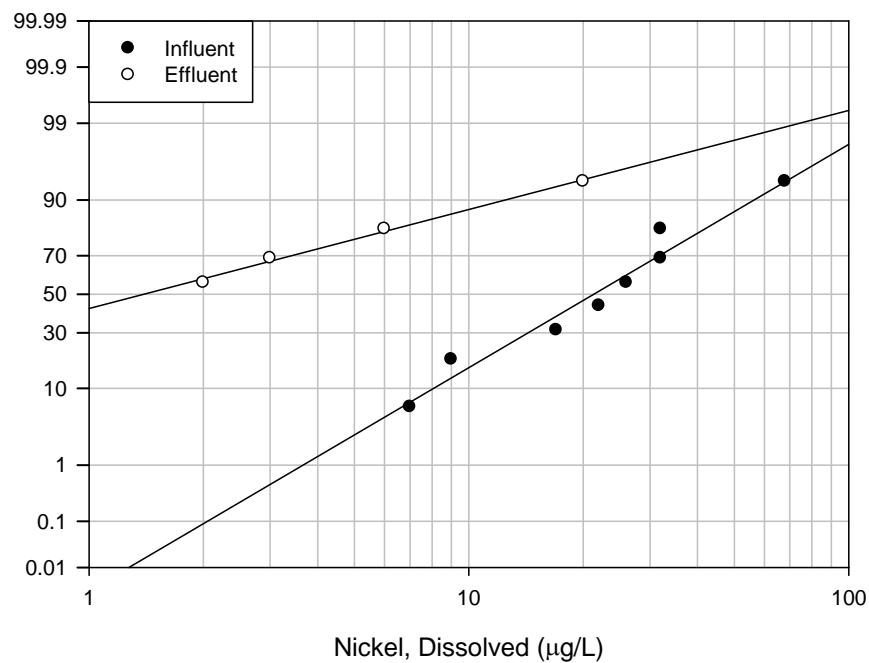
**Dissolved Nickel**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



**Dissolved Nickel**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

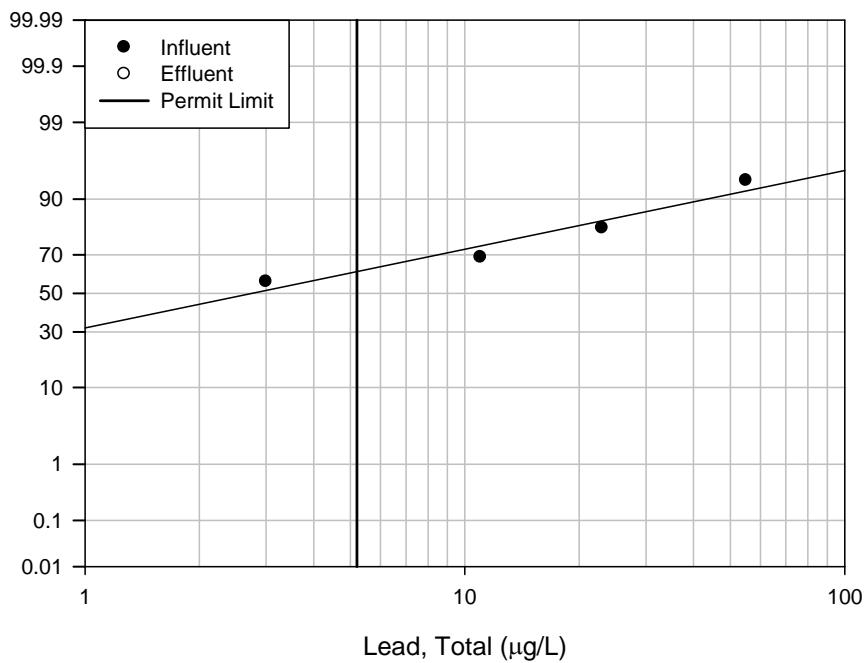


**Dissolved Nickel**  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)



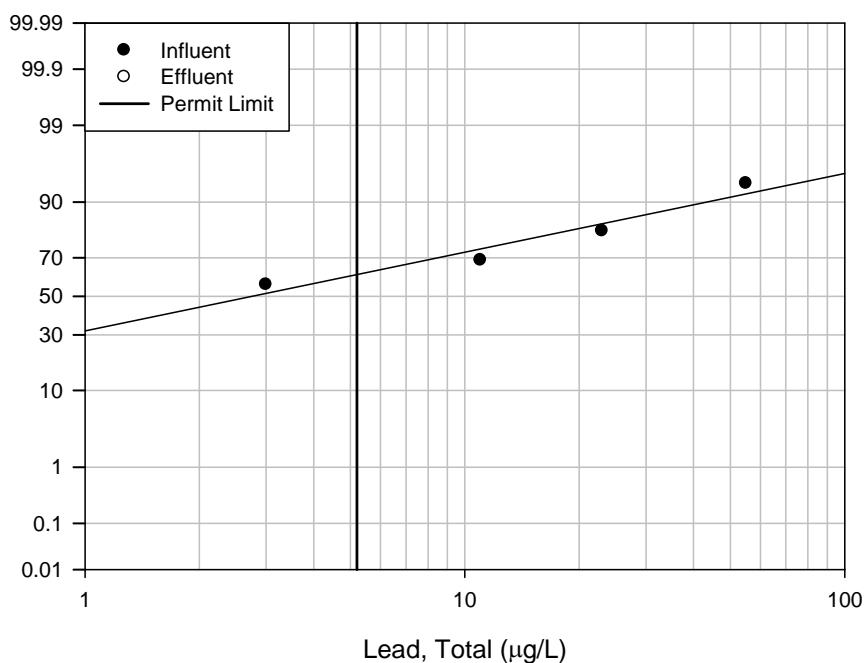
## Lead, Total

Total Lead  
Granular Activated Carbon (GAC)

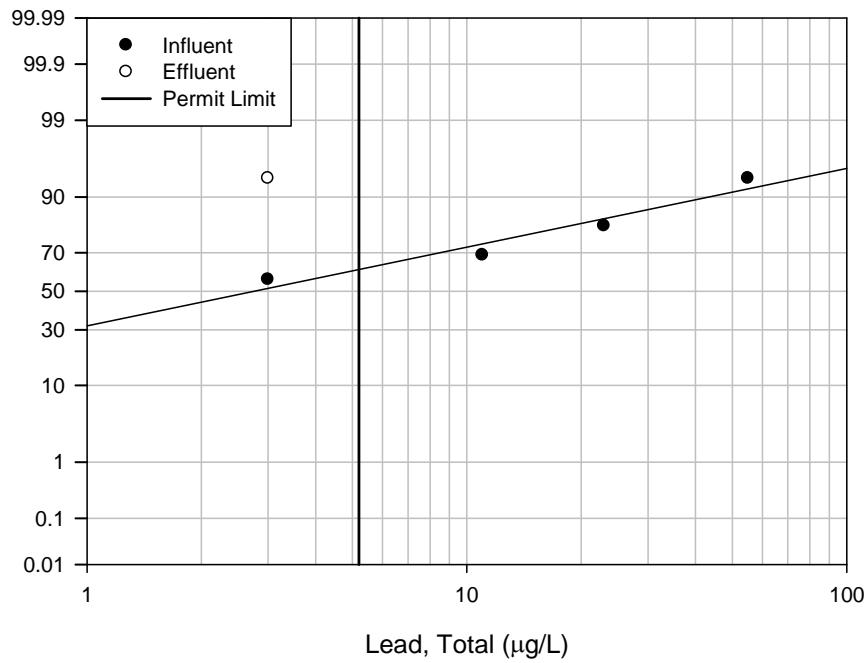


Total Lead

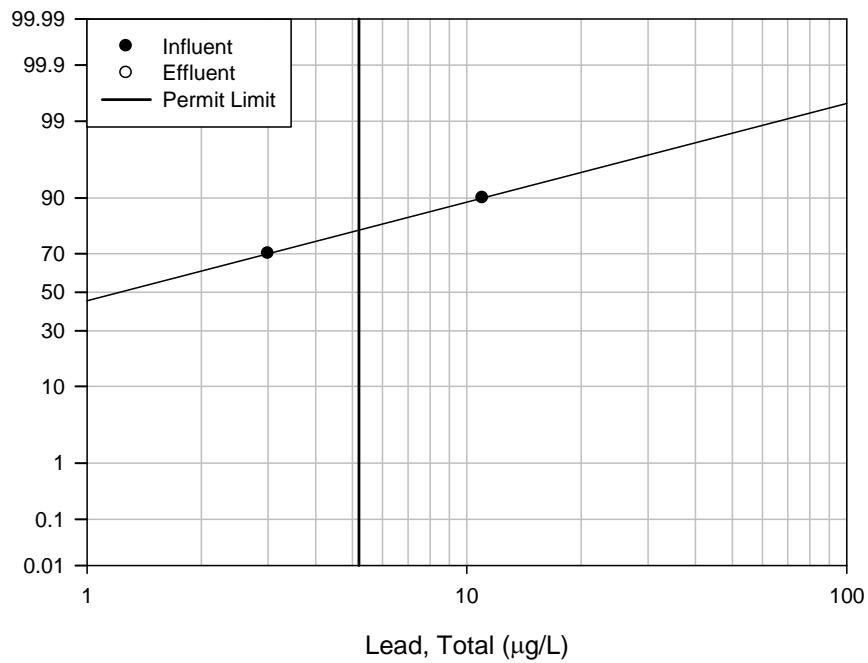
Peat Moss (P)



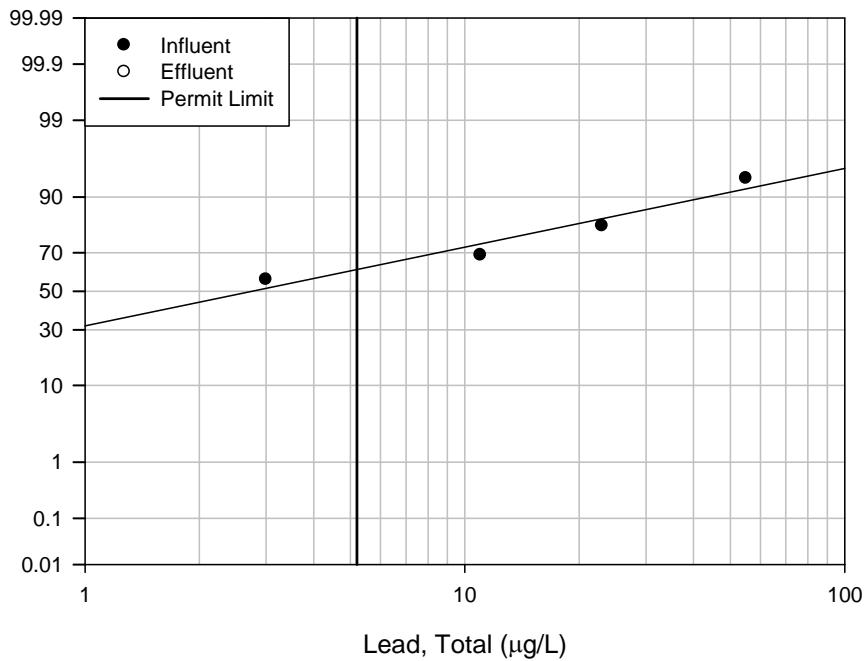
Total Lead  
Rhyolite Sand (R)



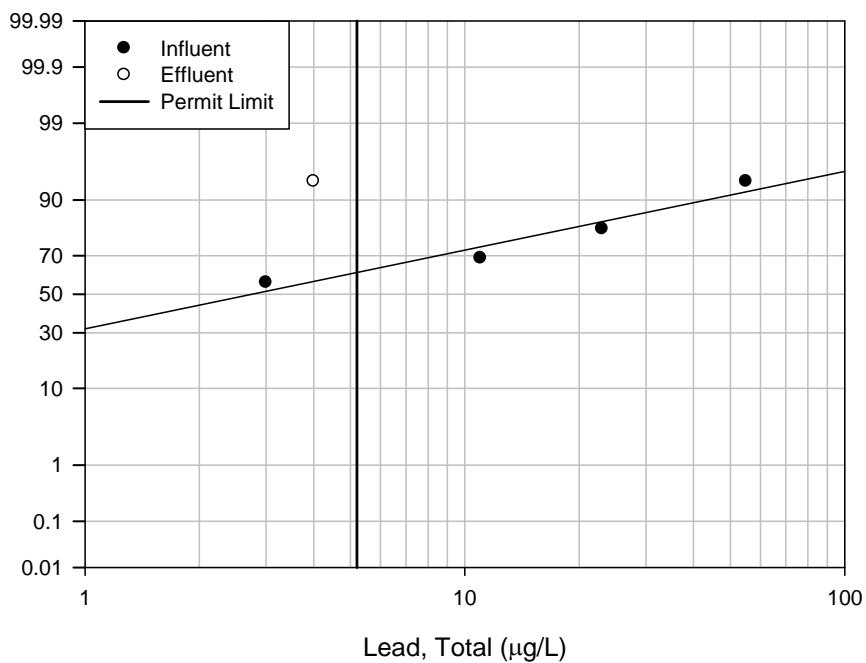
Total Lead  
Site Sand (S)



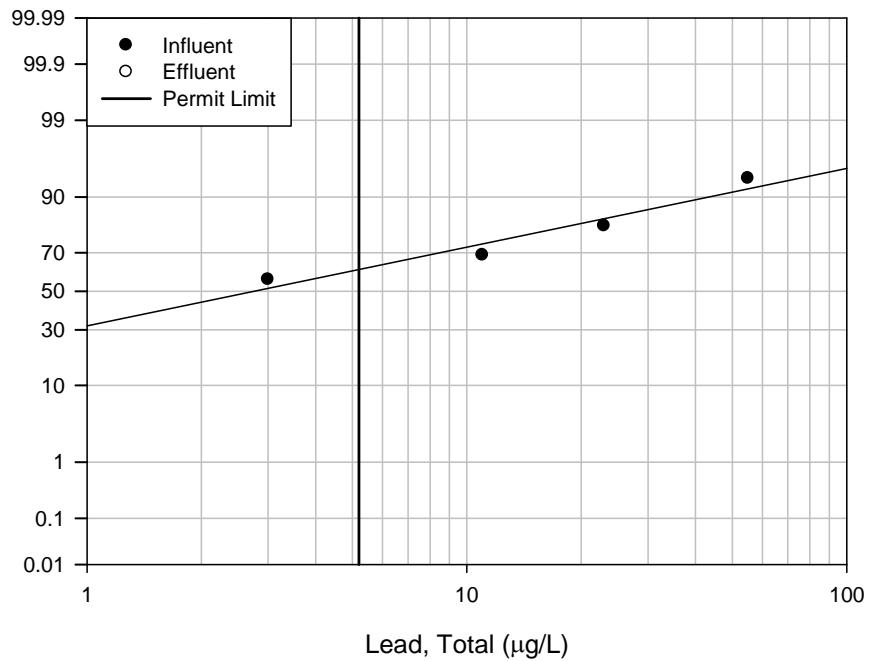
Total Lead  
Site Zeolite (Z)



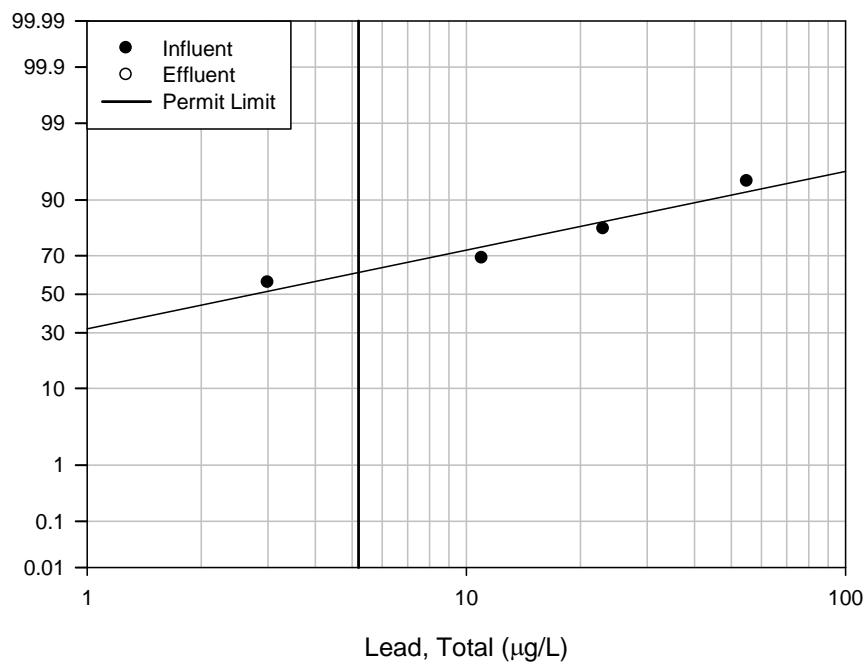
Total Lead  
Surface Modified Zeolite (SMZ)



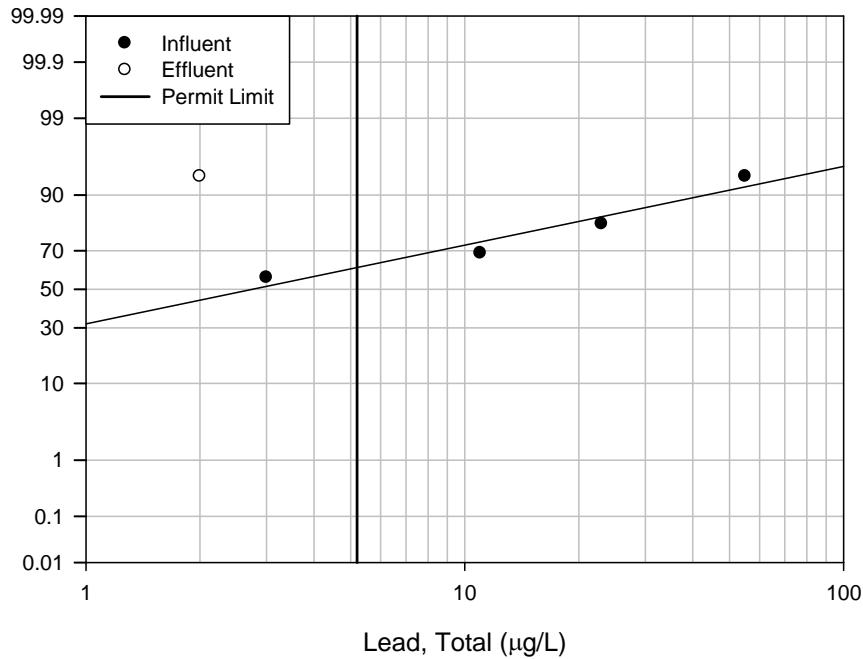
Total Lead  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



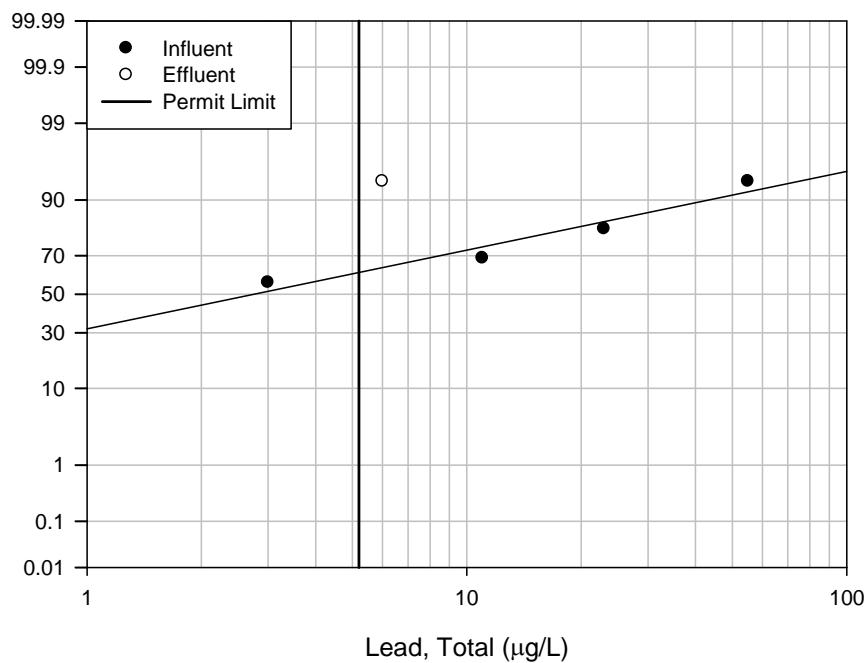
Total Lead  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



**Total Lead**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

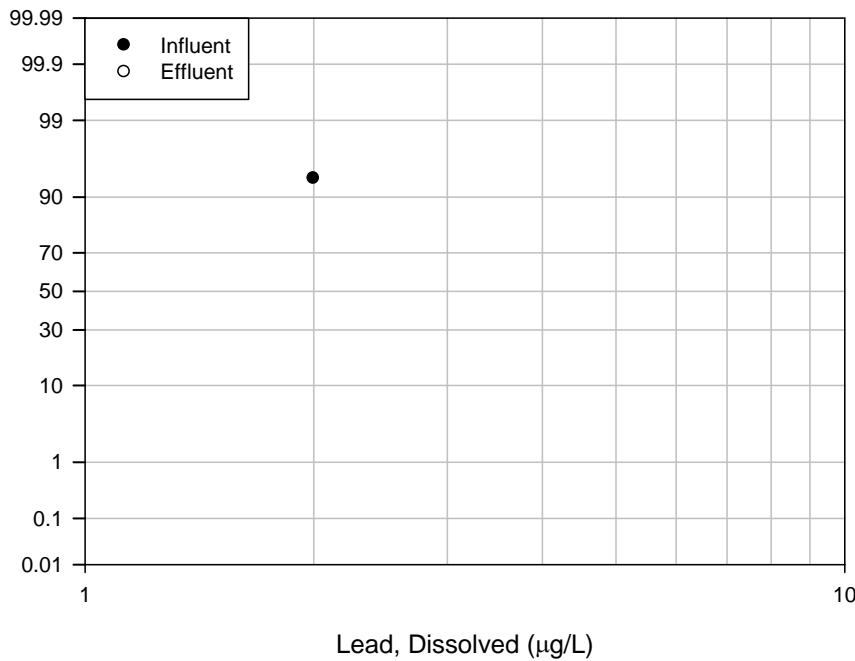


**Total Lead**  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

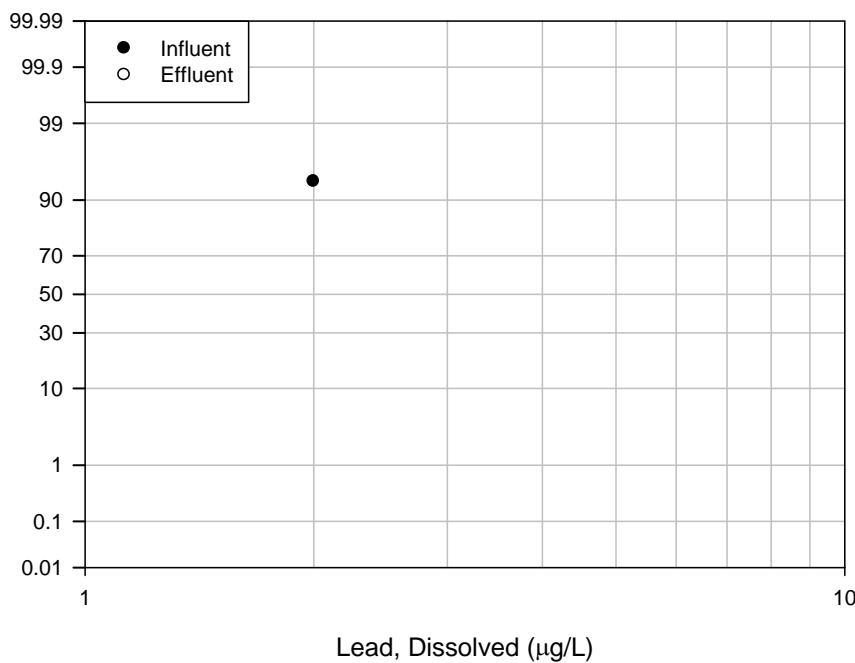


## Lead, Filtered

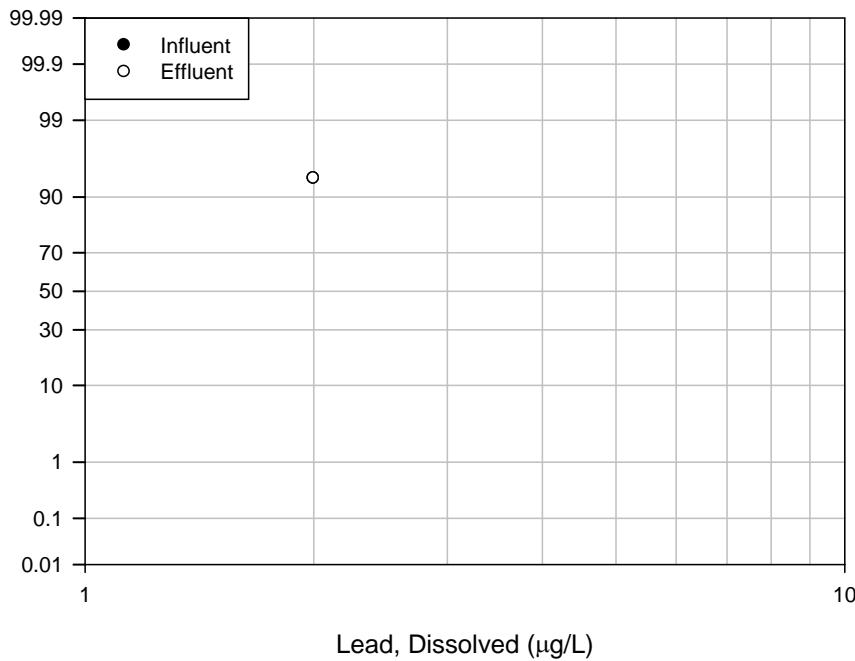
Dissolved Lead  
Granular Activated Carbon (GAC)



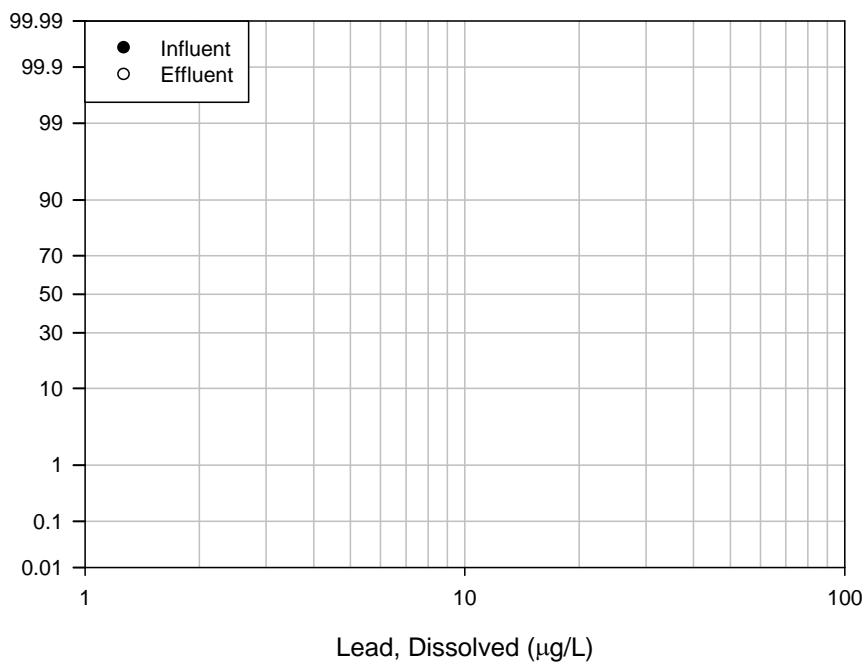
Dissolved Lead  
Peat Moss (P)



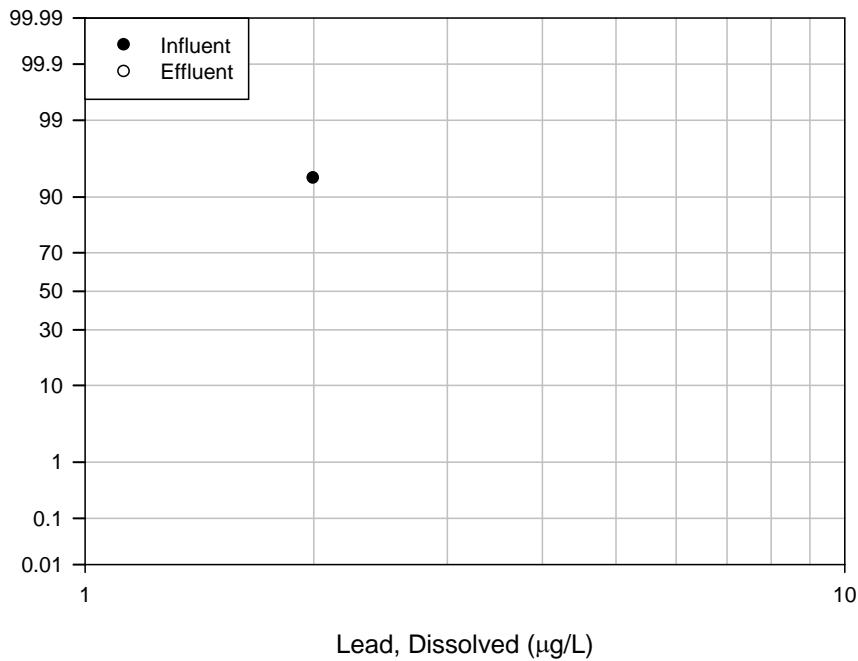
**Dissolved Lead**  
Rhyolite Sand (R)



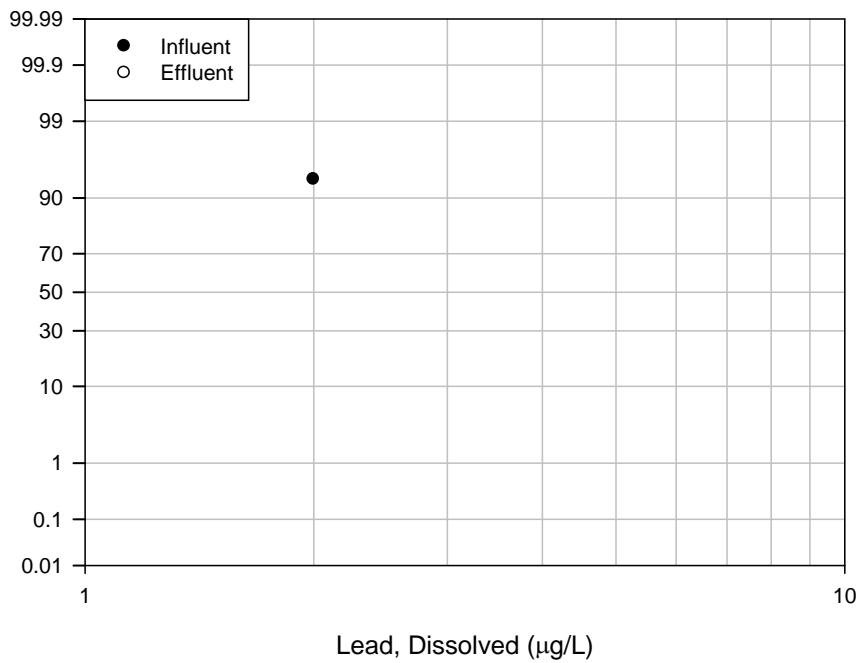
**Dissolved Lead**  
Site Sand (S)



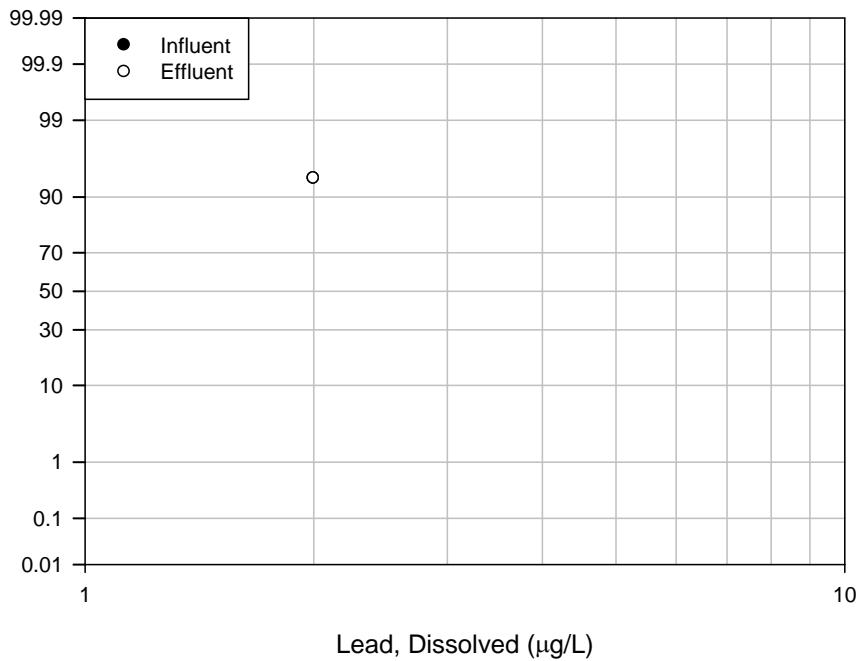
Dissolved Lead  
Site Zeolite (Z)



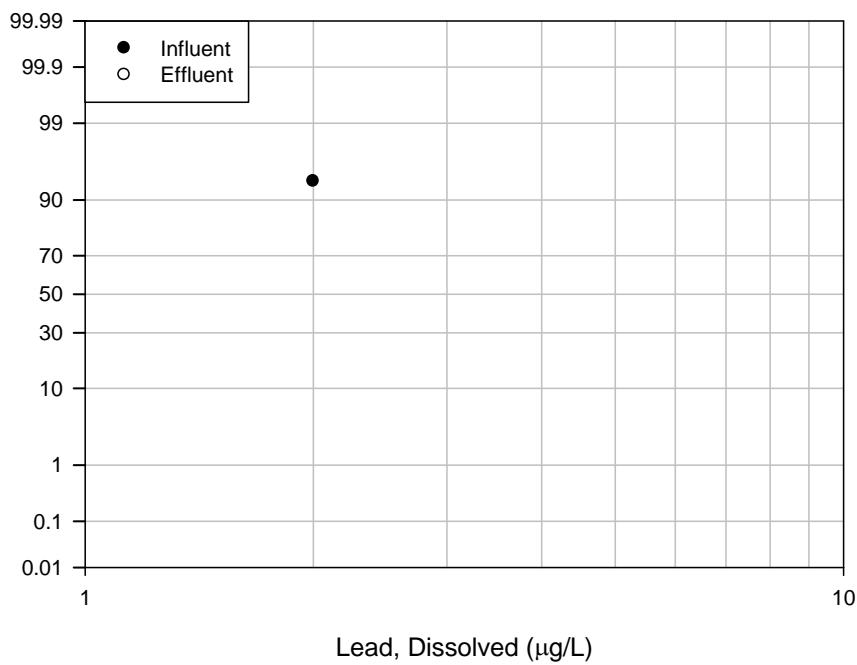
Dissolved Lead  
Surface Modified Zeolite (SMZ)



**Dissolved Lead**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

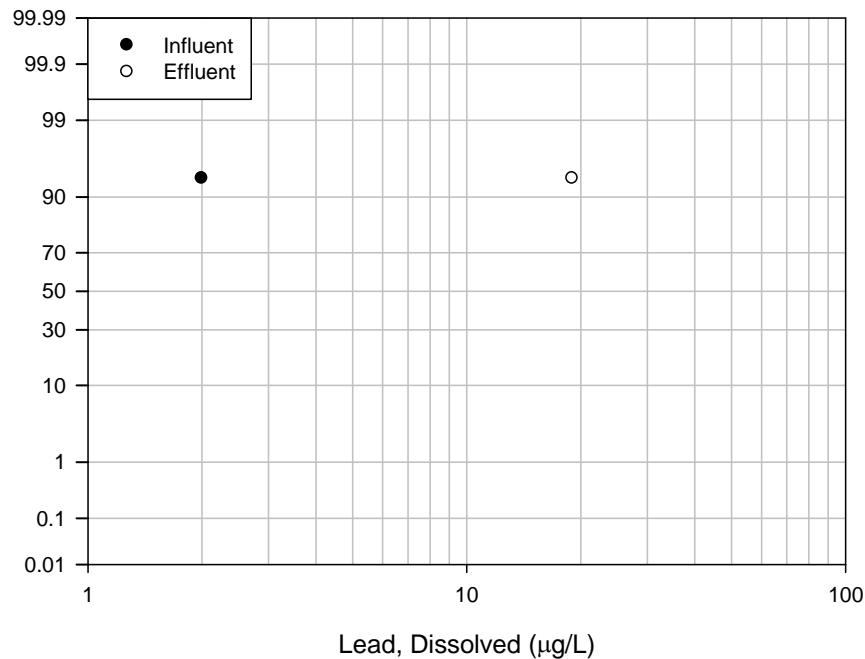


**Dissolved Lead**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



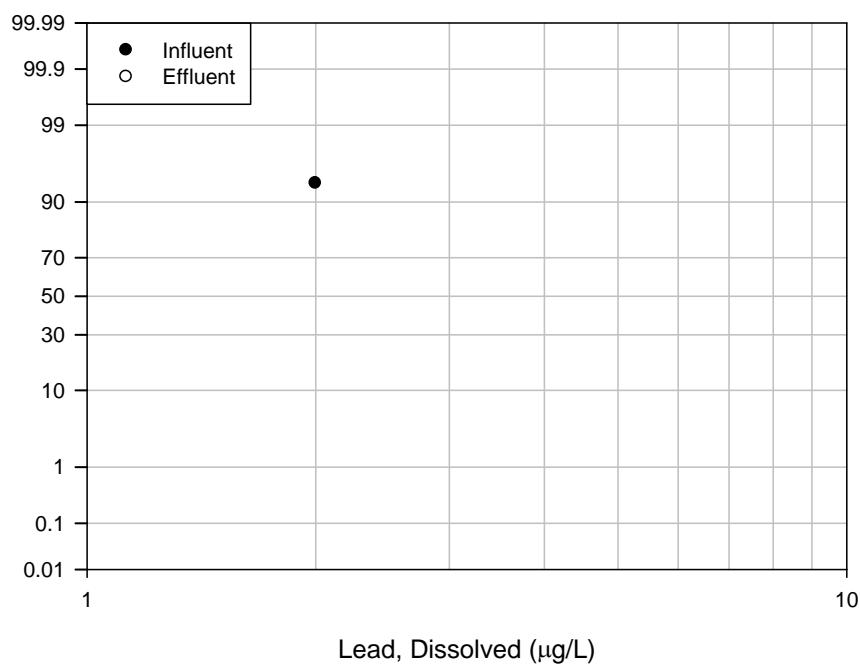
### Dissolved Lead

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



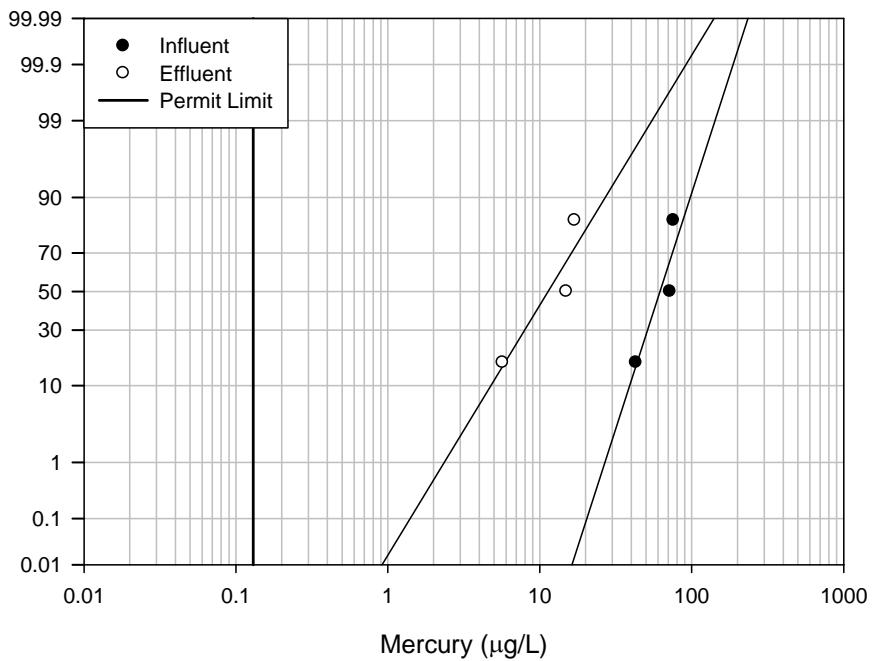
### Dissolved Lead

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

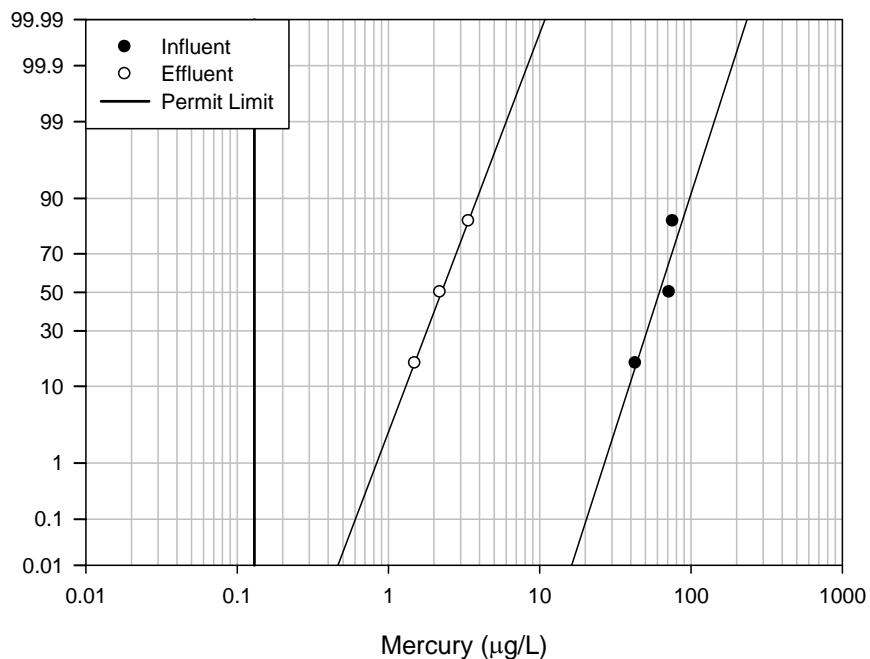


## Mercury

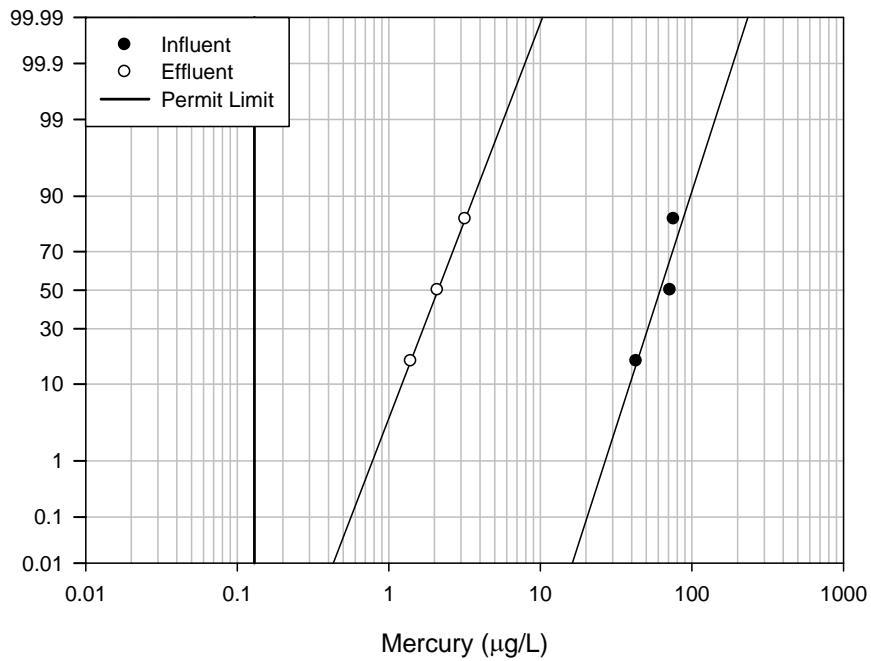
Mercury  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



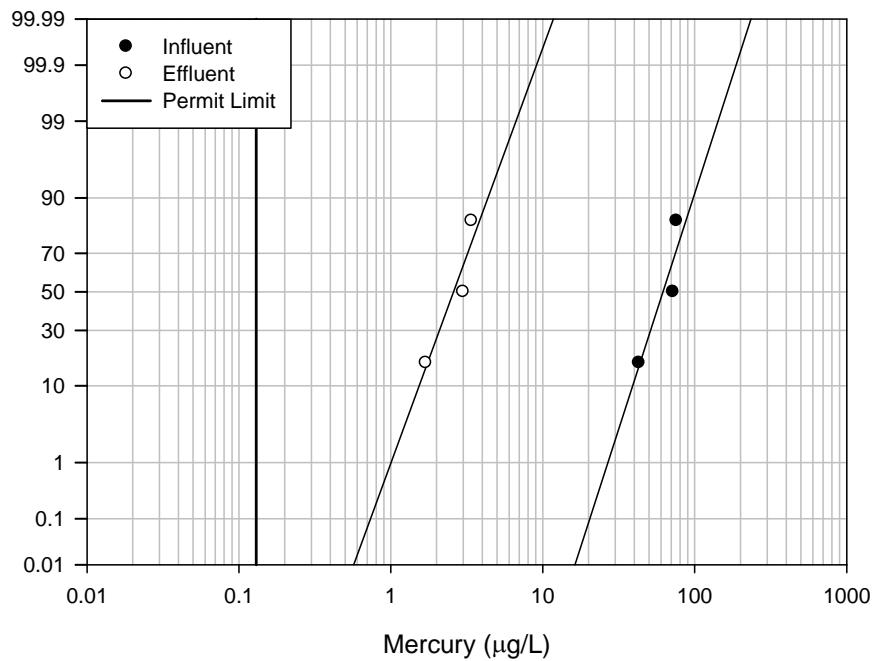
Mercury  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Medi:



**Mercury**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

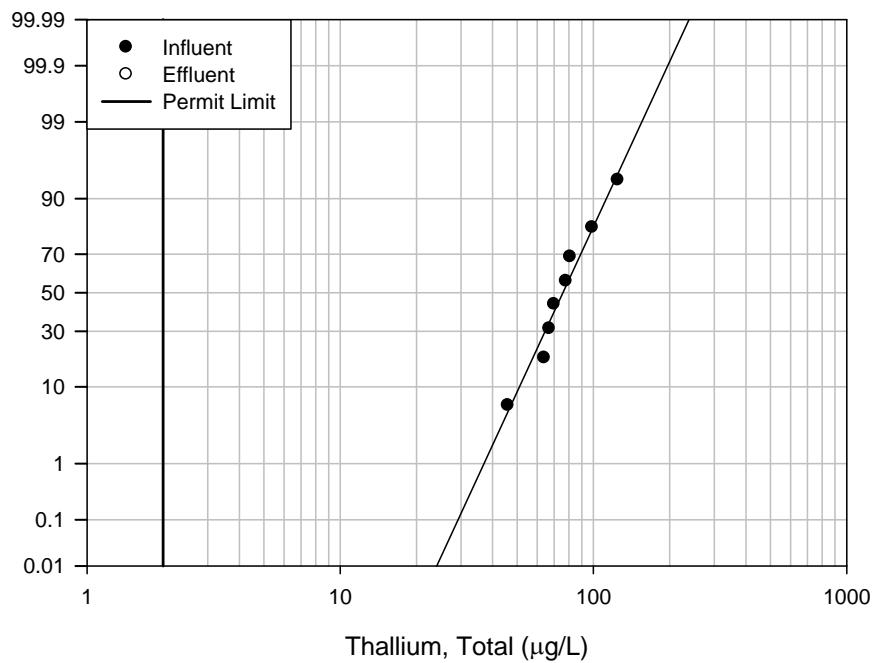


**Mercury**  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

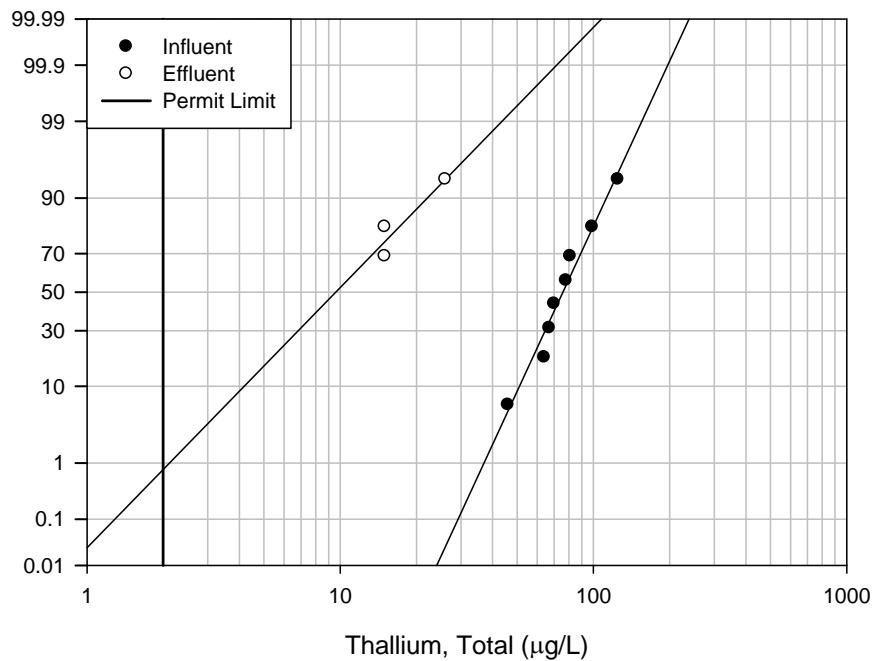


## Thallium, Total

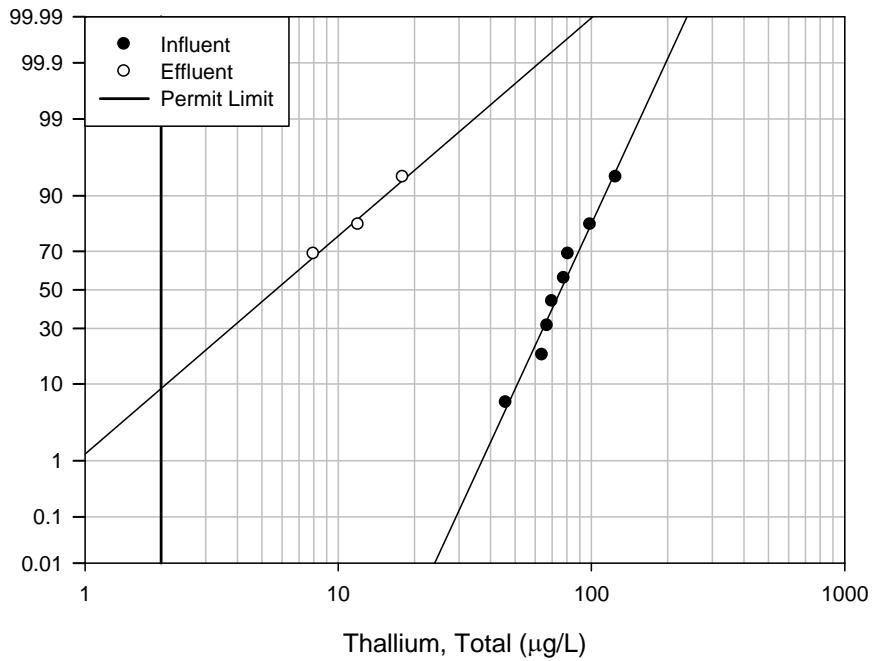
Total Thallium  
Granular Activated Carbon (GAC)



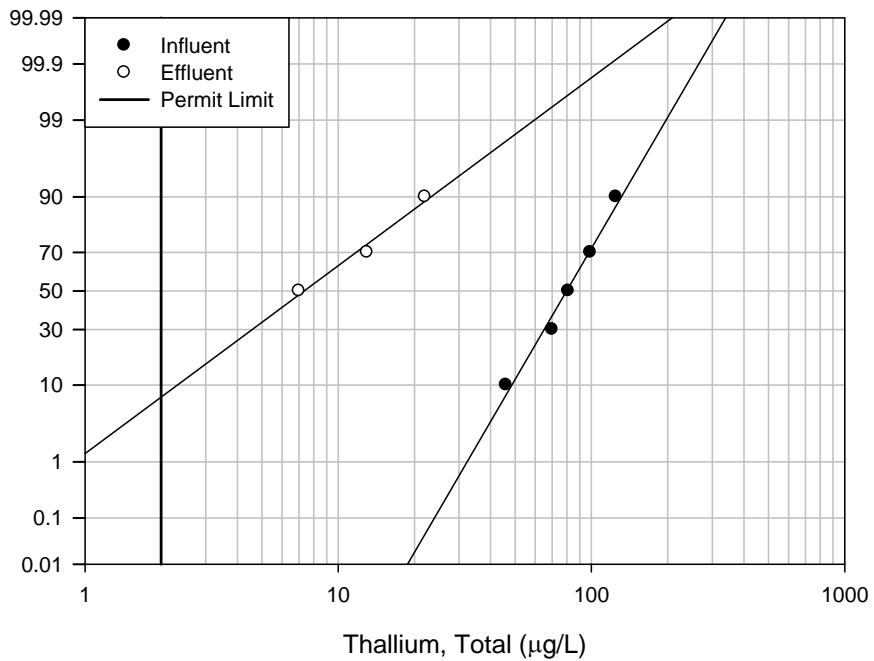
Total Thallium  
Peat Moss (P)



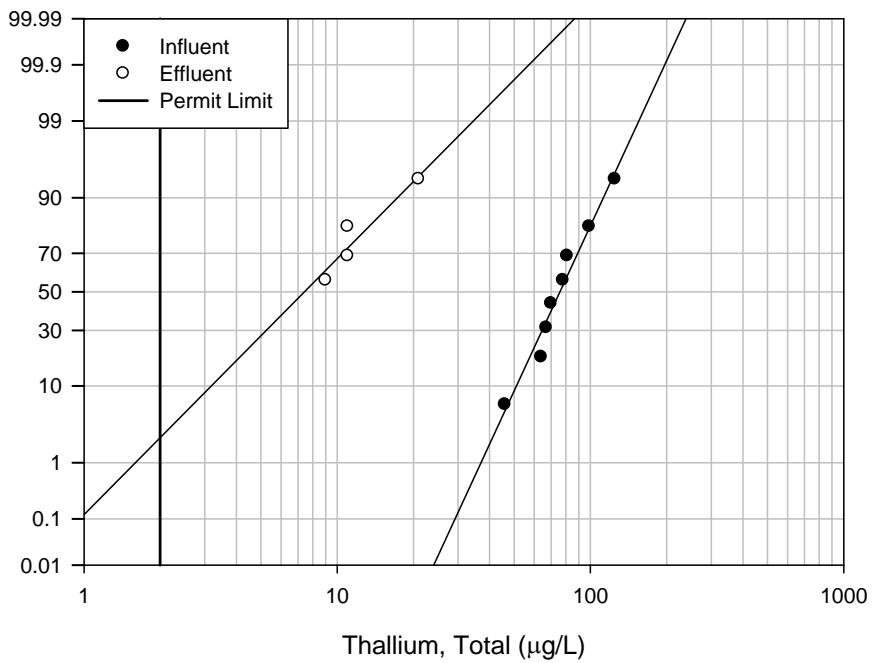
Total Thallium  
Rhyolite Sand (R)



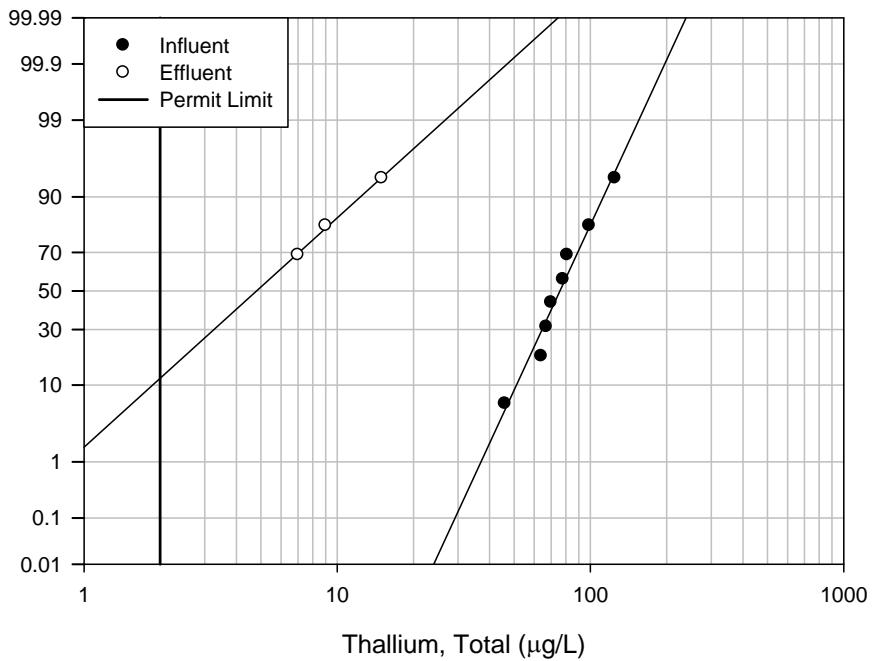
Total Thallium  
Site Sand (S)



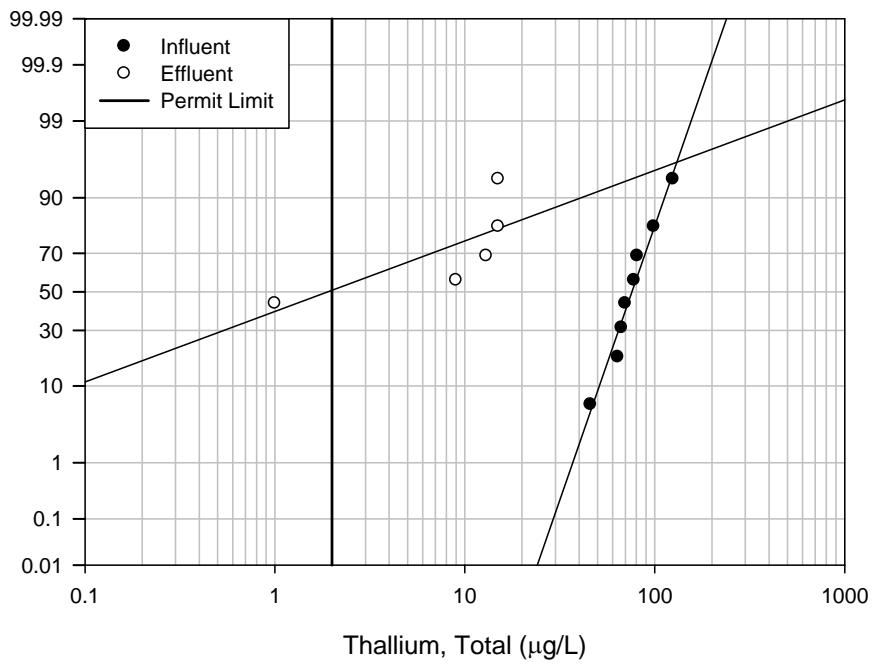
Total Thallium  
Site Zeolite (Z)



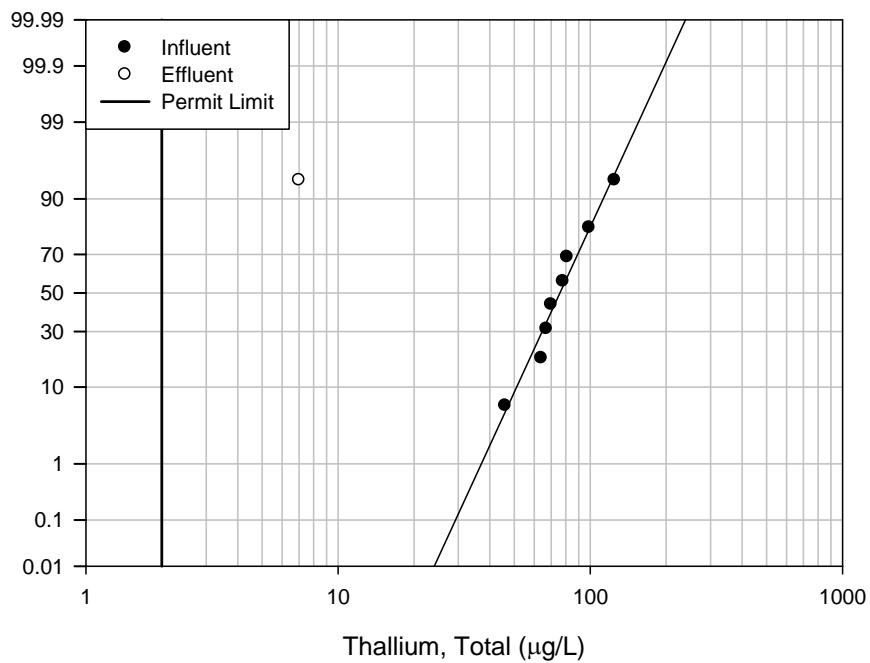
Total Thallium  
Surface Modified Zeolite (SMZ)



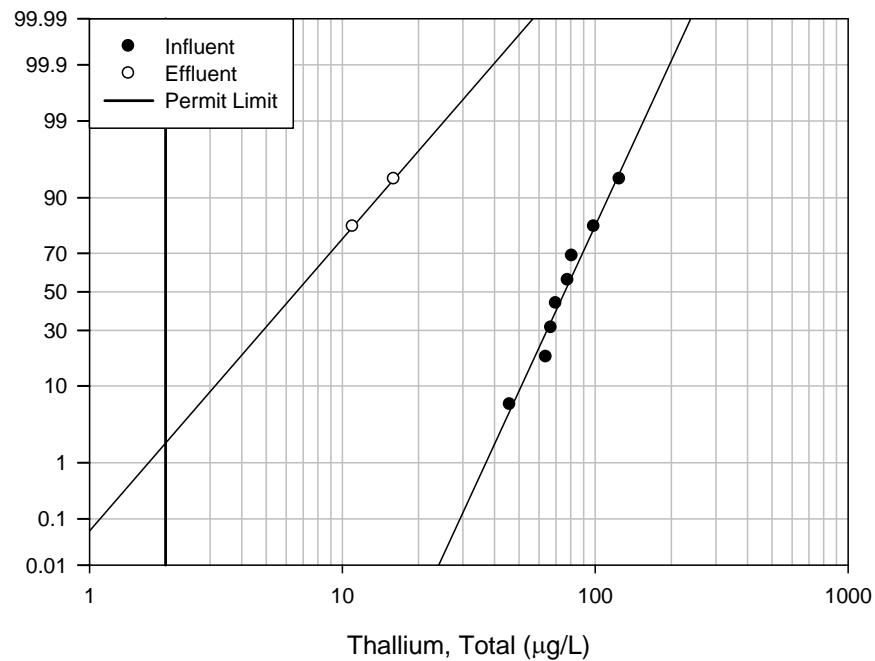
Total Thallium  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



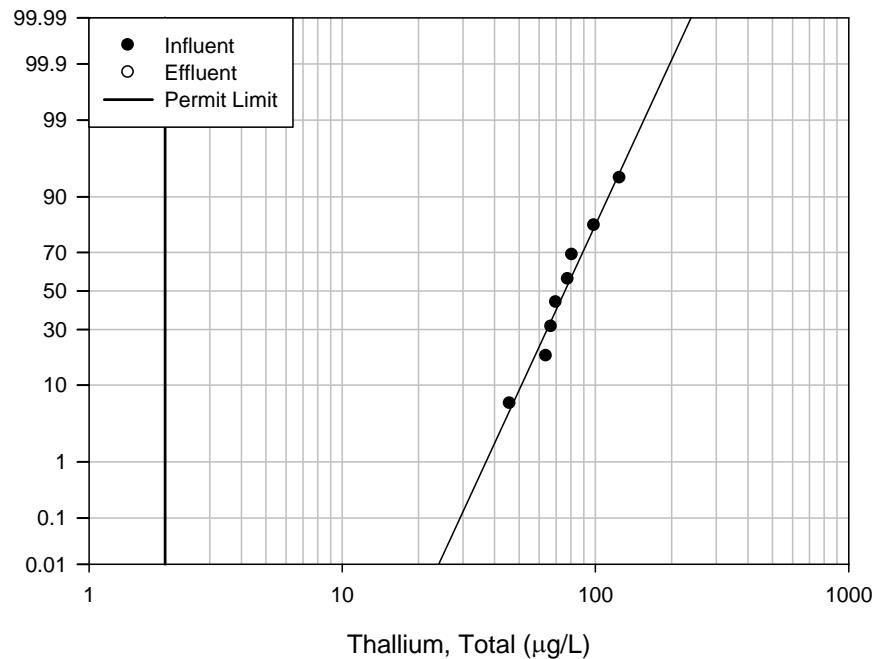
Total Thallium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Thallium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

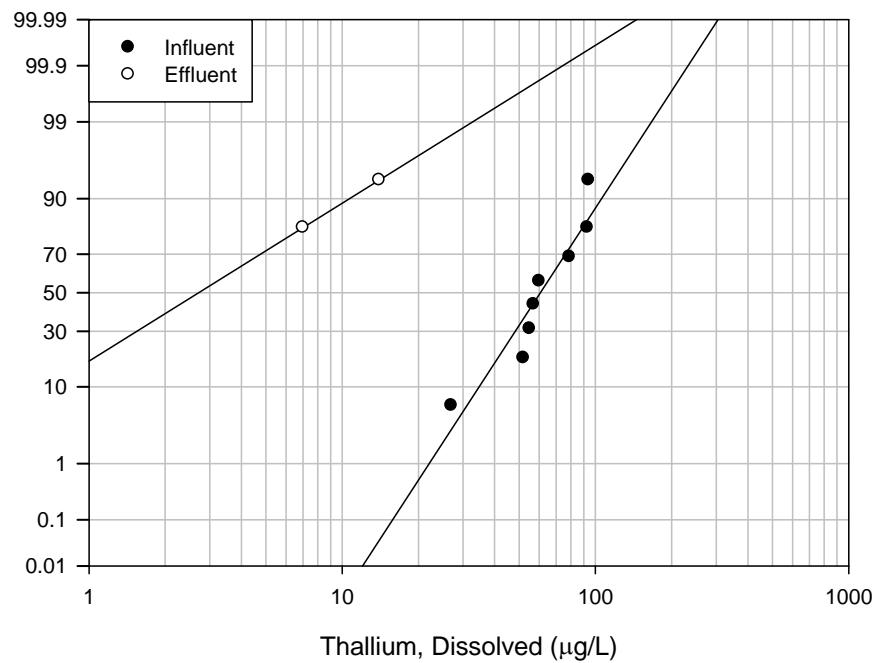


Total Thallium  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

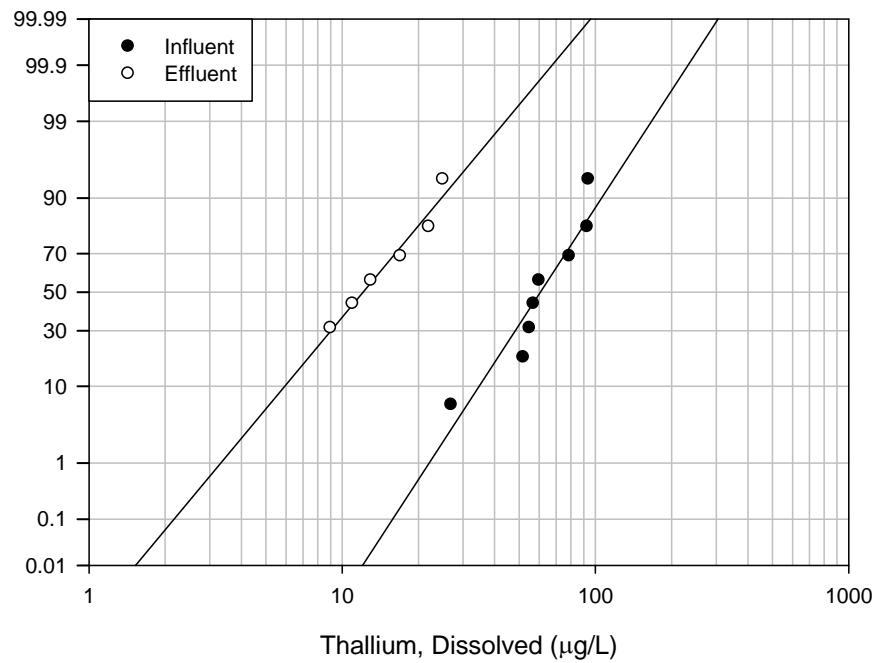


## Thallium, Filtered

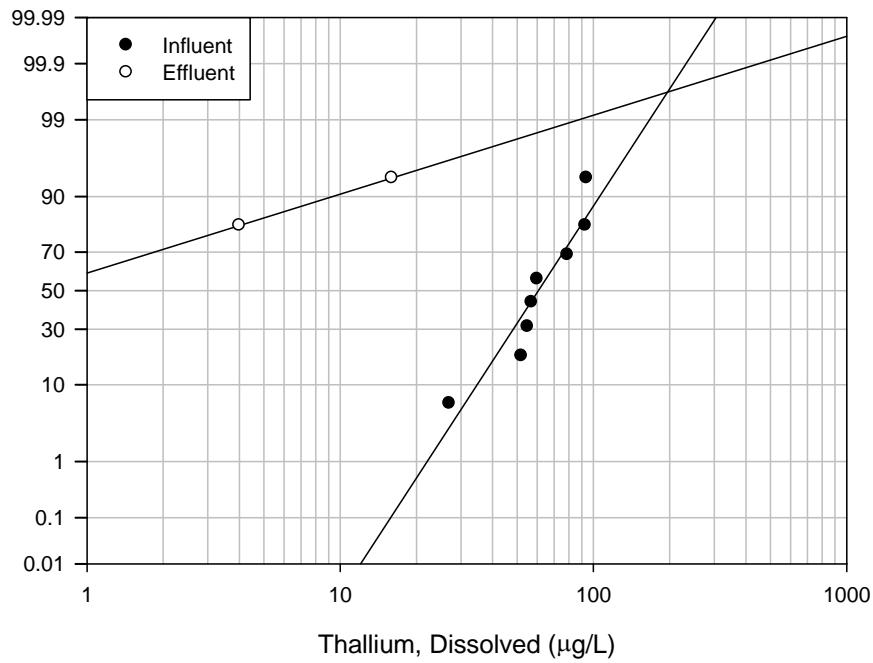
Dissolved Thallium  
Granular Activated Carbon (GAC)



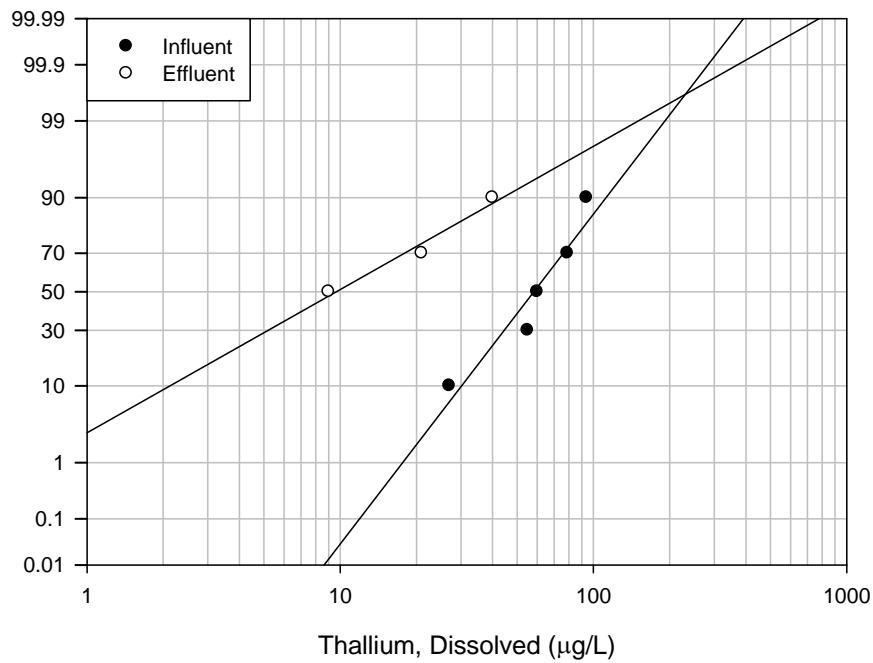
Dissolved Thallium  
Peat Moss (P)



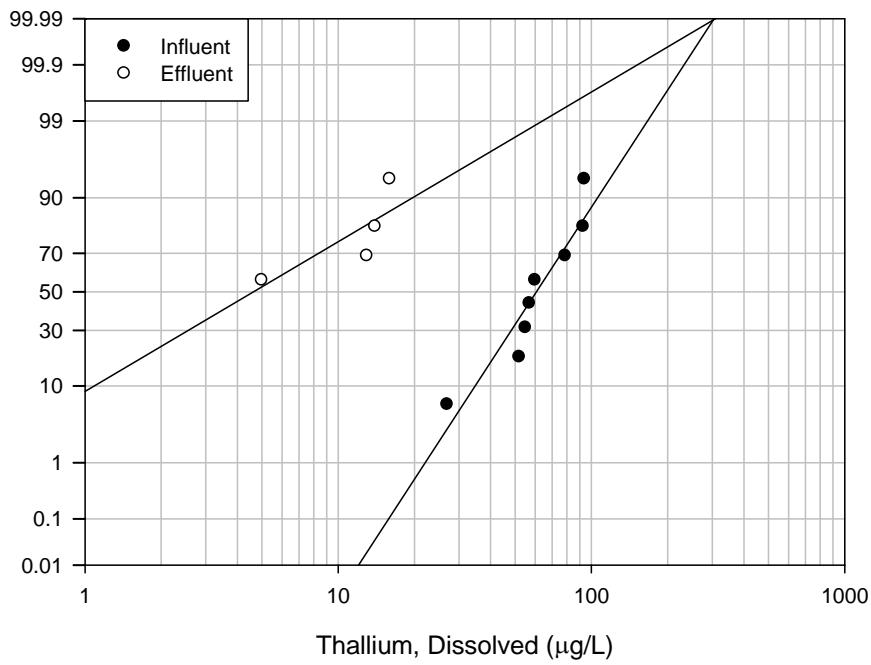
Dissolved Thallium  
Rhyolite Sand (R)



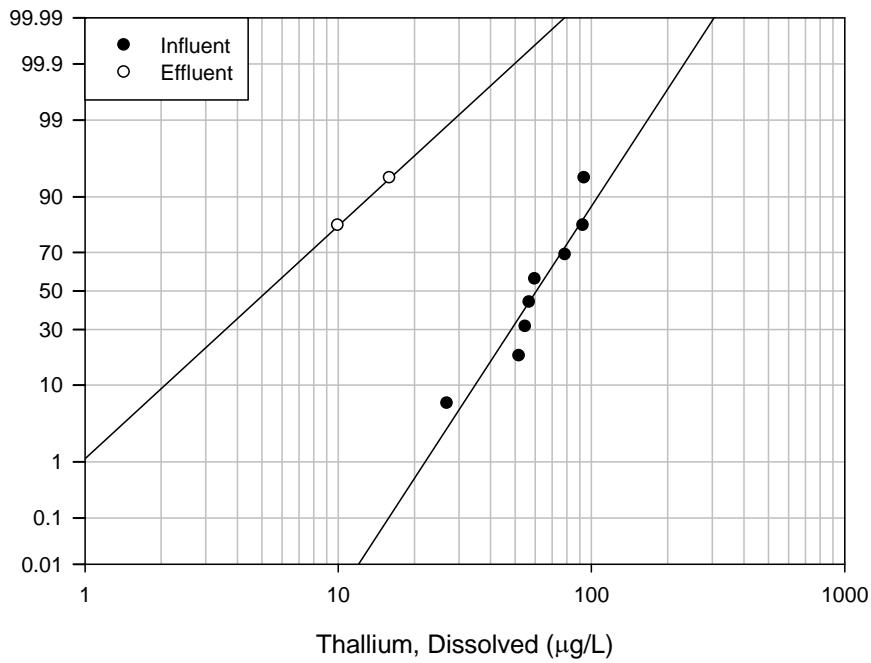
Dissolved Thallium  
Site Sand (S)



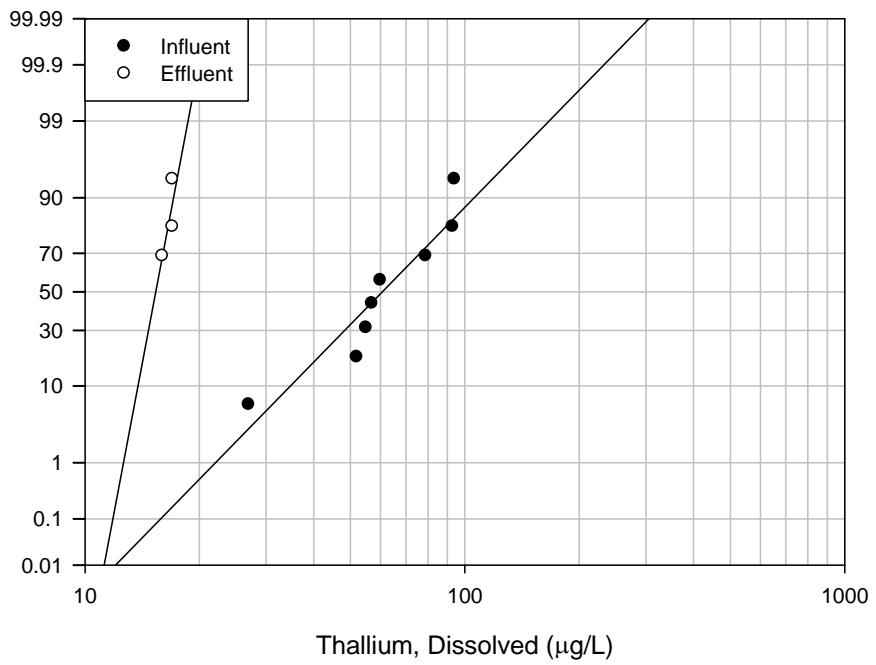
Dissolved Thallium  
Site Zeolite (Z)



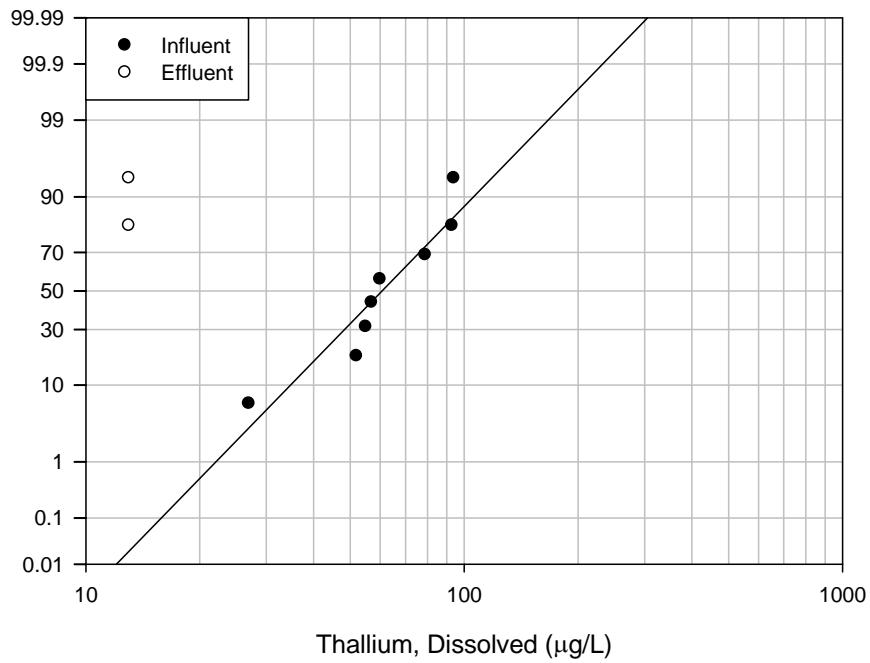
Dissolved Thallium  
Surface Modified Zeolite (SMZ)



Dissolved Thallium  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)

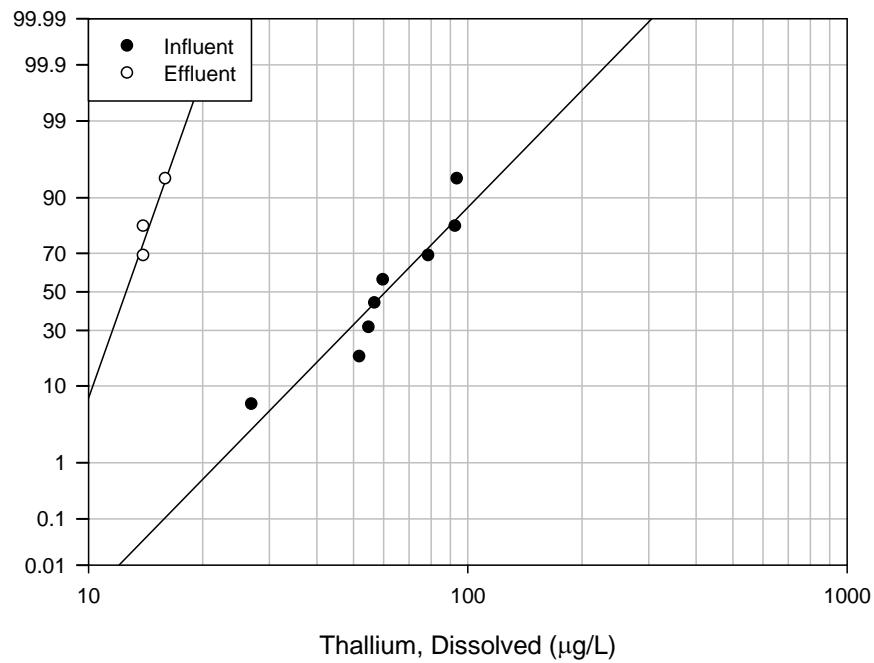


Dissolved Thallium  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



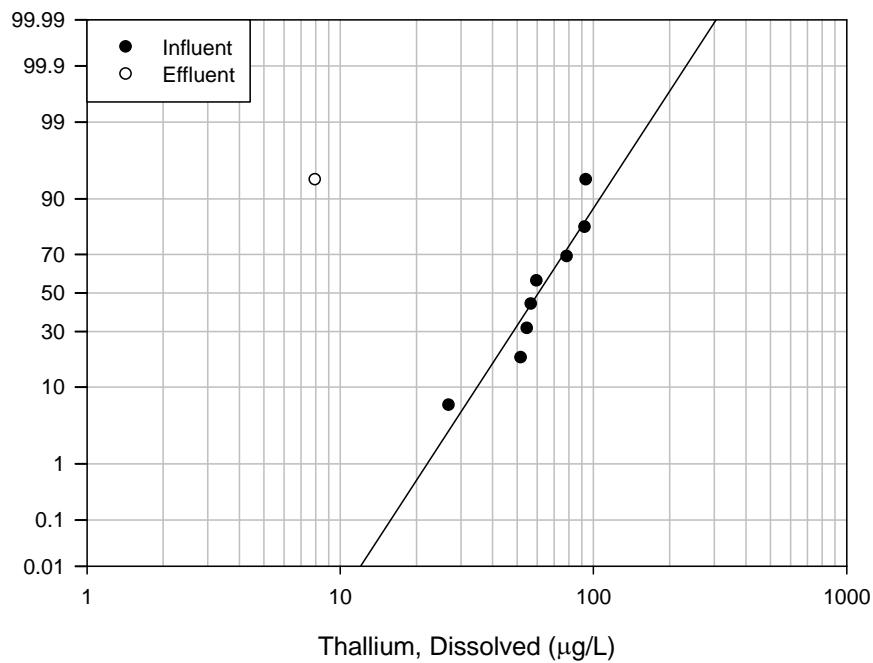
### Dissolved Thallium

Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



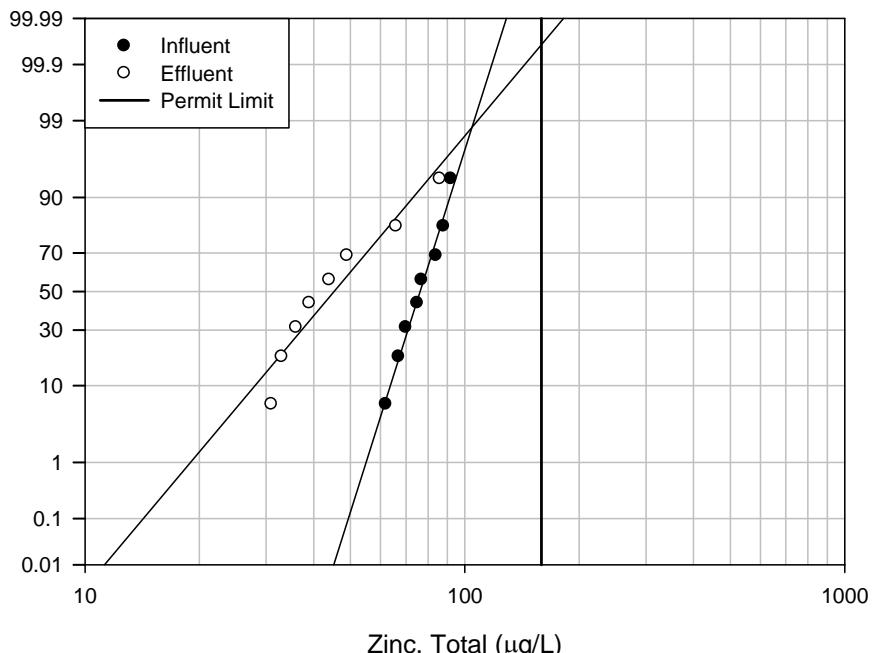
### Dissolved Thallium

Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

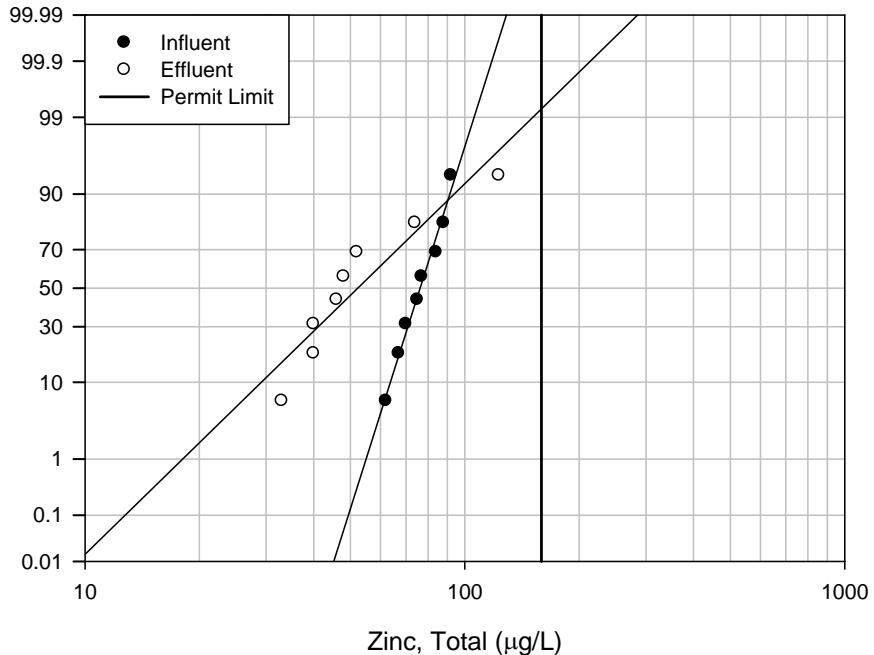


## Zinc, Total

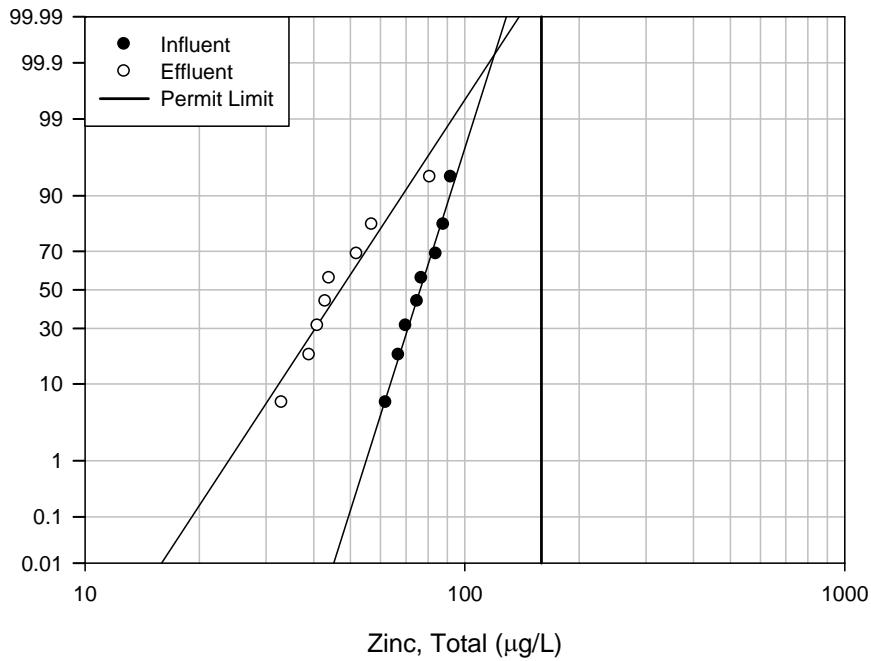
Total Zinc  
Granular Activated Carbon (GAC)



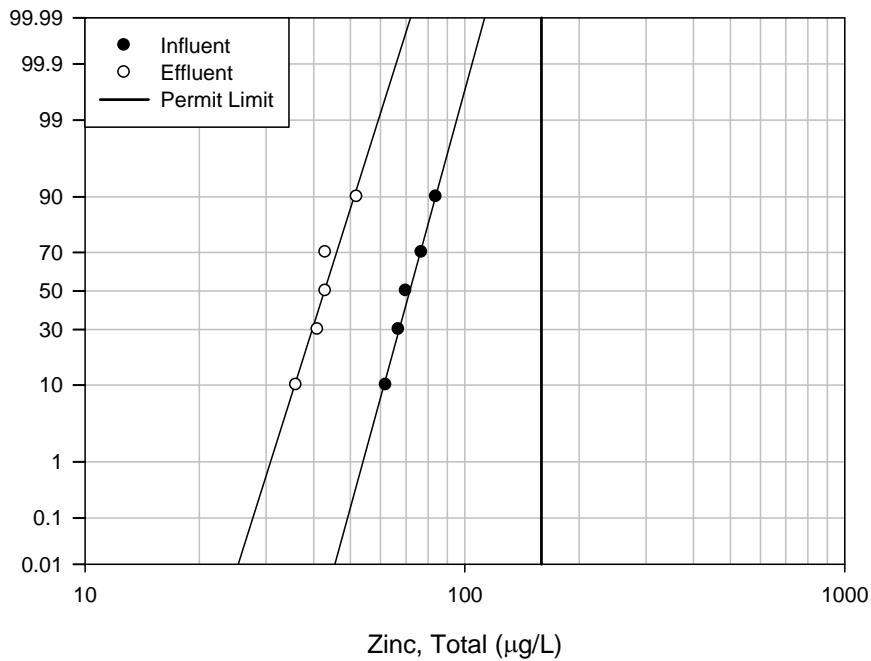
Total Zinc  
Peat Moss (P)



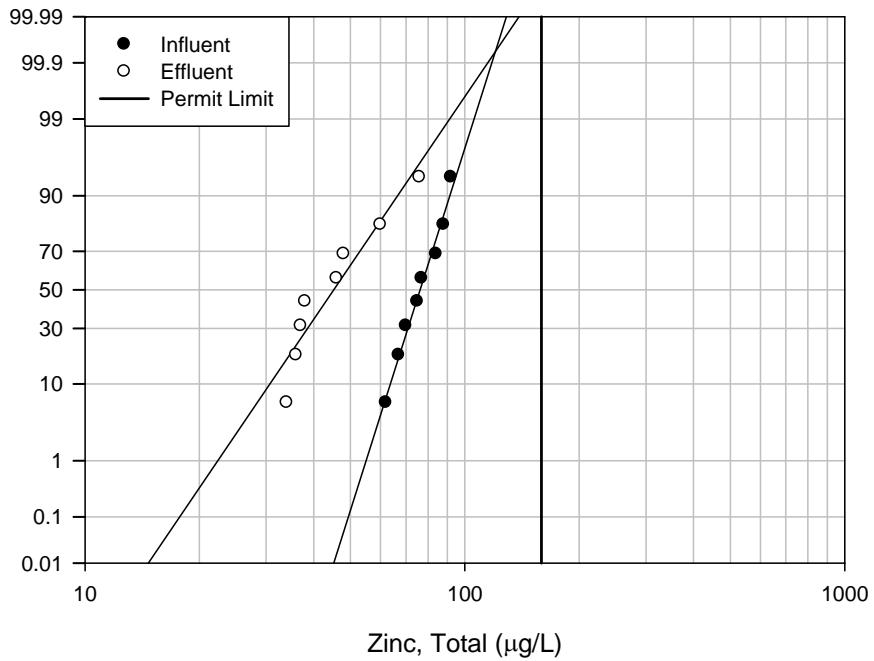
Total Zinc  
Rhyolite Sand (R)



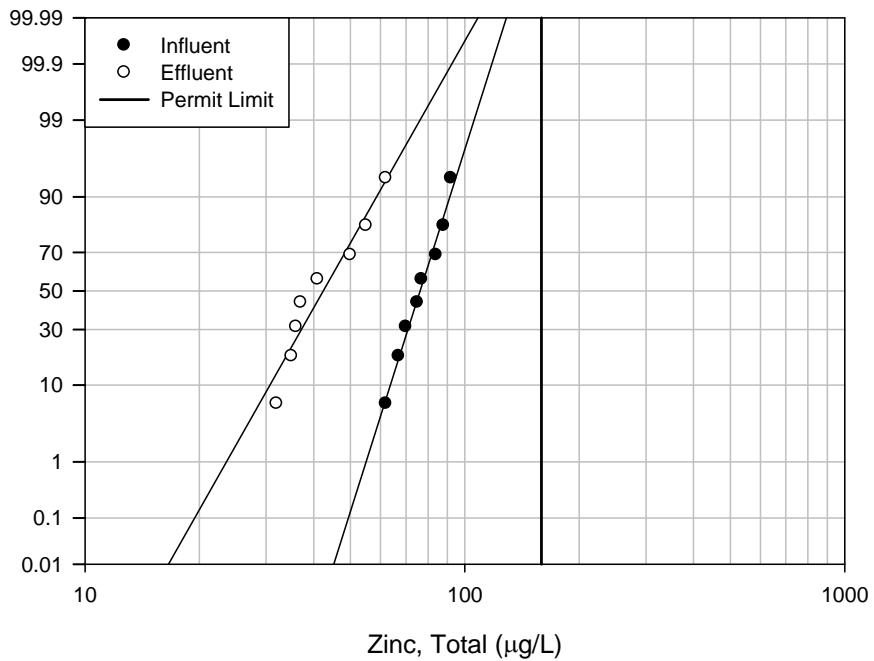
Total Zinc  
Site Sand (S)



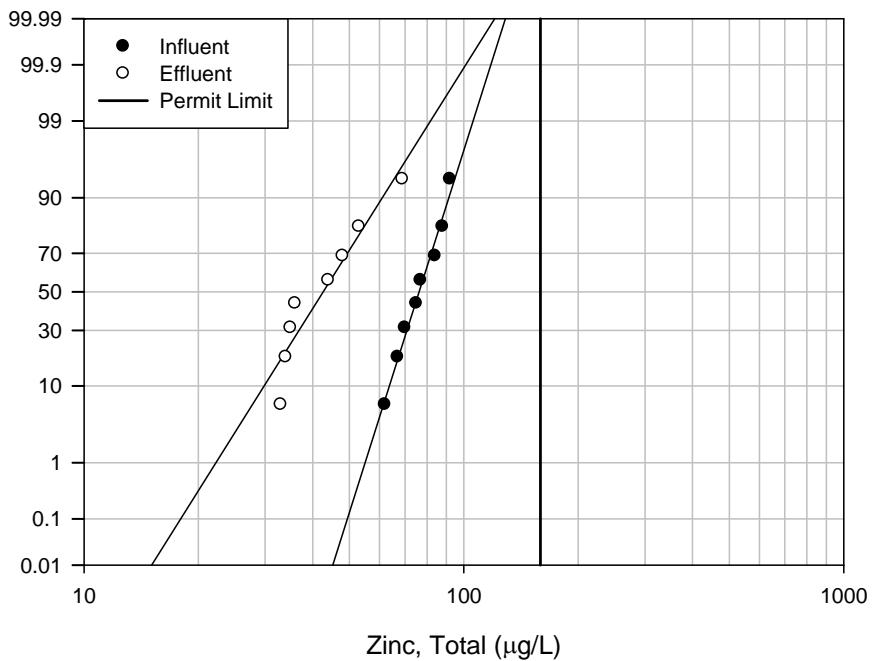
Total Zinc  
Site Zeolite (Z)



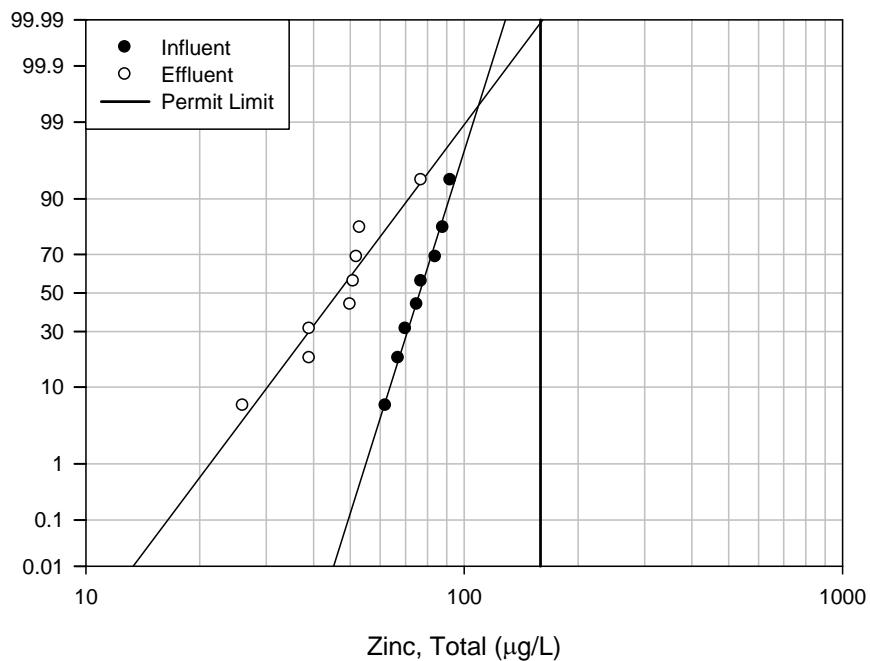
Total Zinc  
Surface Modified Zeolite (SMZ)



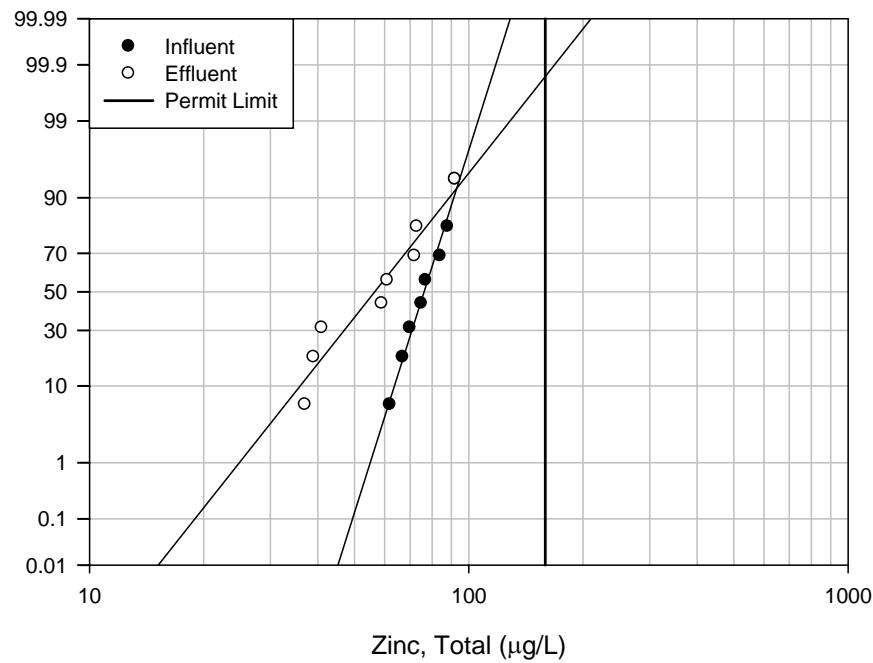
Total Zinc  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



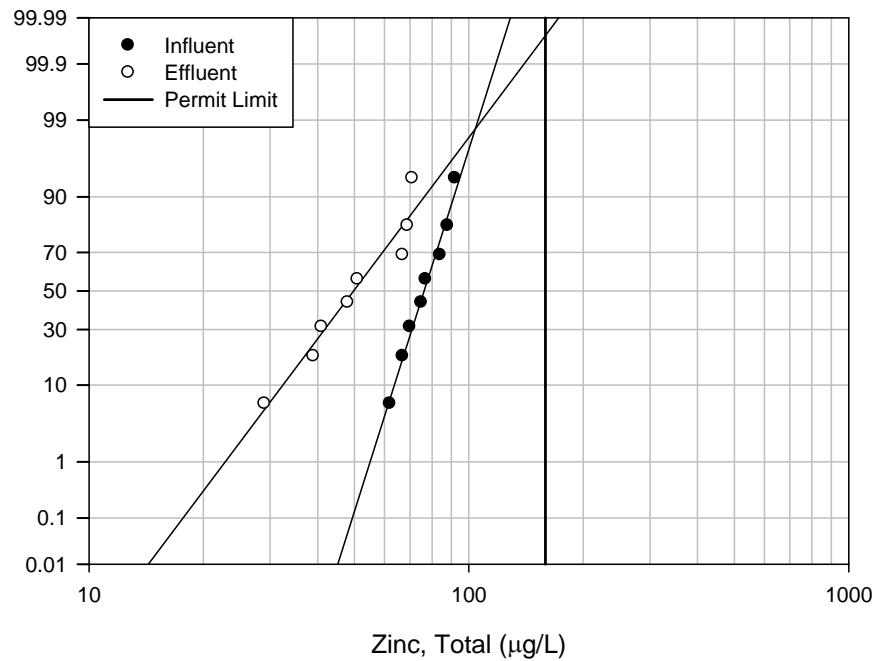
Total Zinc  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Total Zinc  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)

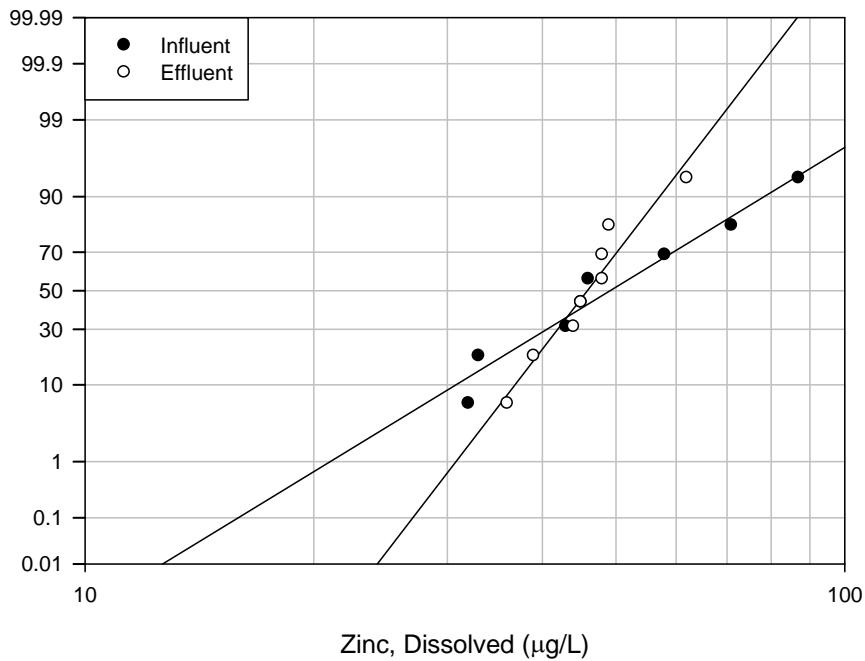


Total Zinc  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

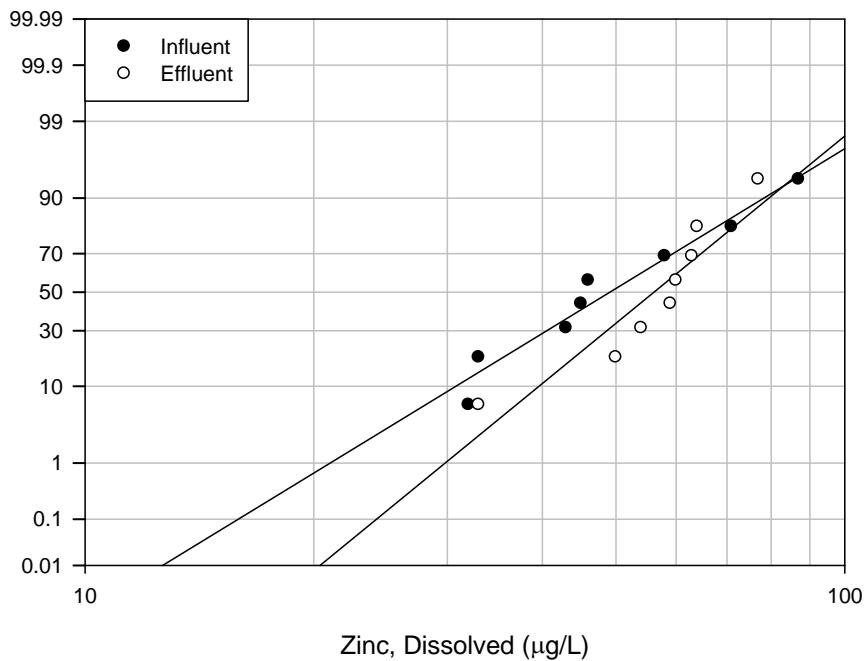


## Zinc, Filtered

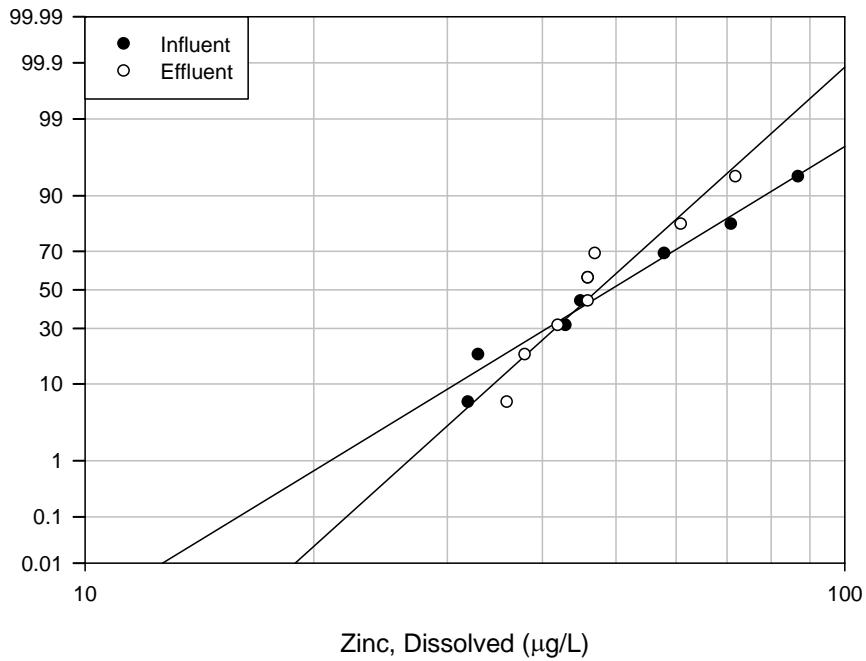
Dissolved Zinc  
Granular Activated Carbon (GAC)



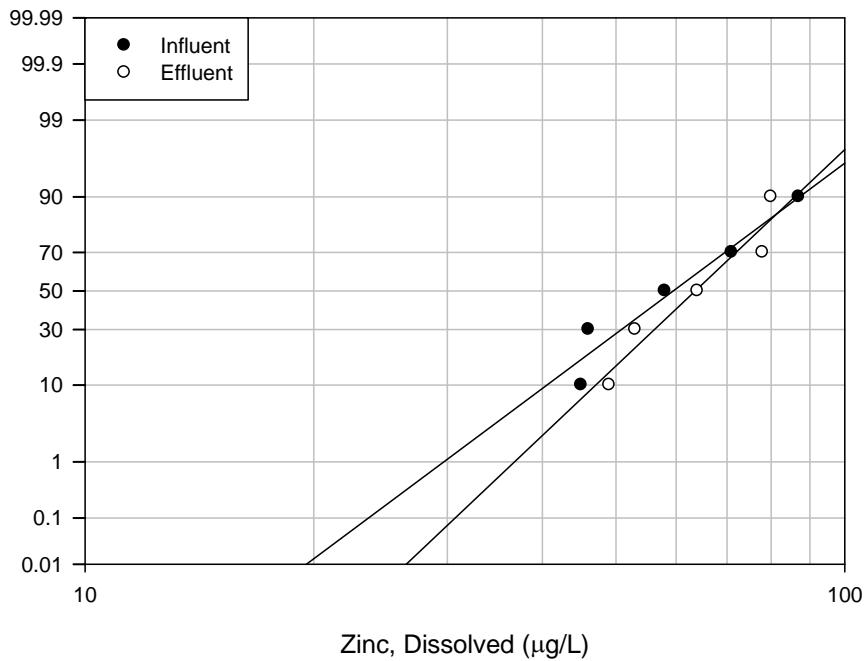
Dissolved Zinc  
Peat Moss (P)



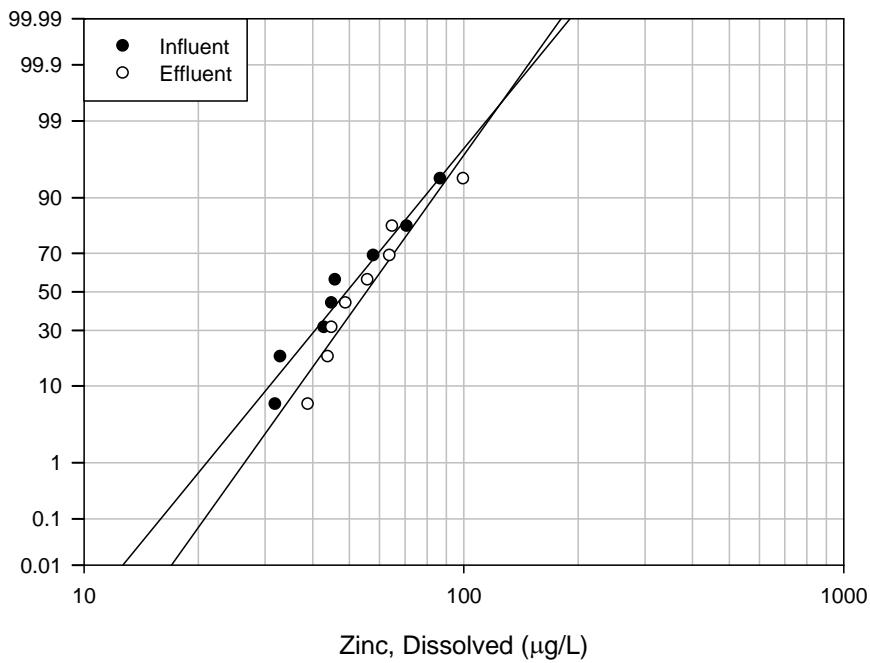
Dissolved Zinc  
Rhyolite Sand (R)



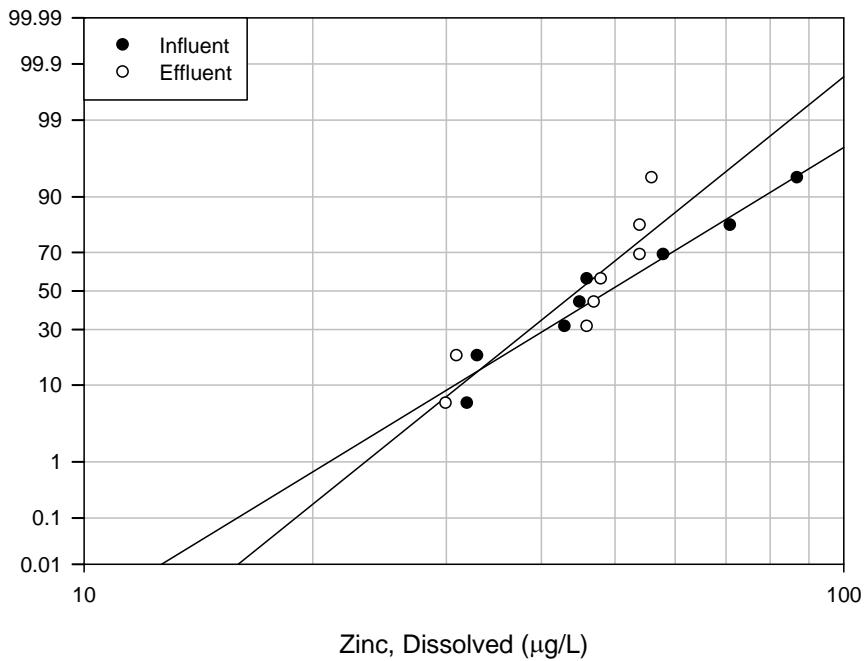
Dissolved Zinc  
Site Sand (S)



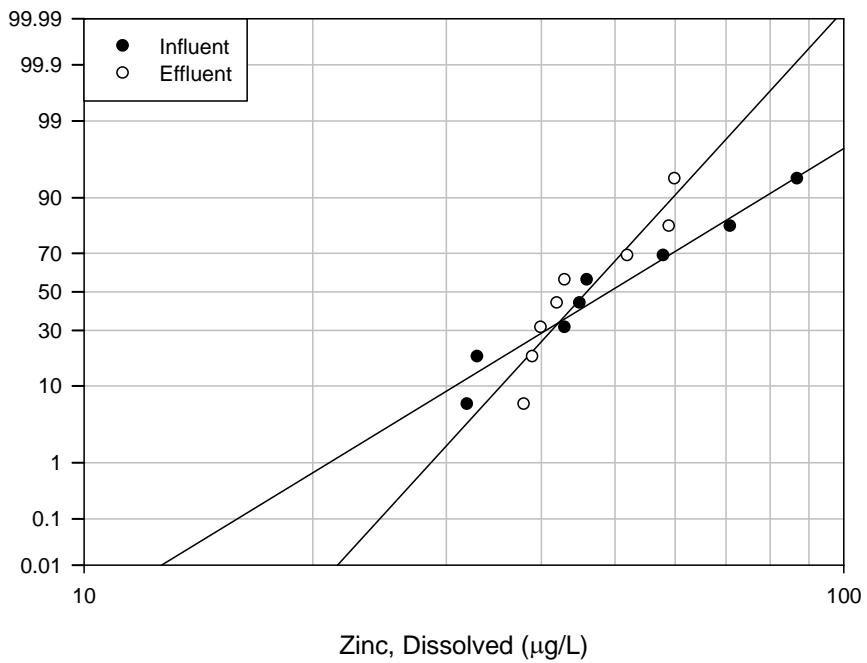
Dissolved Zinc  
Site Zeolite (Z)



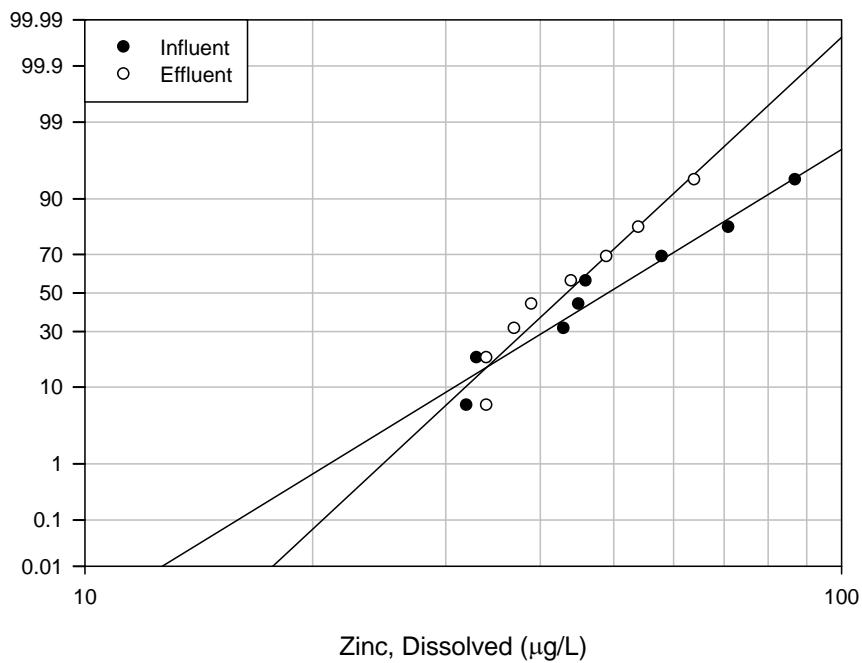
Dissolved Zinc  
Surface Modified Zeolite (SMZ)



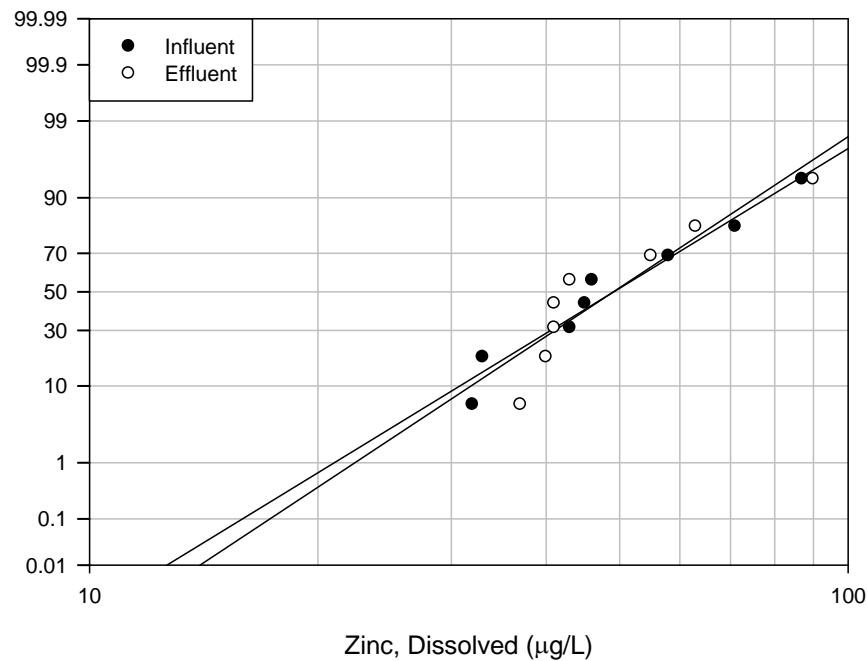
**Dissolved Zinc**  
Rhyolite Sand - Surface Modified Zeolite (R - SMZ)



**Dissolved Zinc**  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon (R - SMZ - G) Mixed Media



Dissolved Zinc  
Rhyolite Sand - Surface Modified Zeolite - Granular Activated Carbon - Peat Moss (R - SMZ - G - P)



Dissolved Zinc  
Layered Site Sand - Site Zeolite - Granular Activated Carbon (SZG)

