

**0121.000 MONITORING GROUNDWATER FOR METALS TO DETERMINE COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS**

**Level One** Arizona Department of Environmental Quality

**Originator:** Gary C. Burchard, Hydrologist, WQD,  
Water Protection Approvals and Permits Section

**Contact for Information:** Gary C. Burchard

**Issue Date:** May 9, 1997

**PURPOSE**

This policy establishes the dissolved metals approach as an accepted method for analyzing the metals content in groundwater for comparison with aquifer water quality standards (AWQS). The total metals analysis can include metals-containing particles contained in the geologic medium or from corroded well casings and/or pumps rather than only those metals dissolved in and flowing with the groundwater. This policy recognizes that groundwater sampling may have two different objectives: 1) to determine what humans are ingesting and 2) to determine what is moving in the groundwater. The focus of this policy is the latter.

**POLICY**

Unless inconsistent with the purpose of the investigation, analysis of metals in groundwater samples for comparison with AWQS should be collected using a dissolved metals approach. Sample preparation should be in accordance with the Quality Assurance Project Plan protocols for the dissolved metals approach. This policy applies to the following metals for which numeric standards have been adopted:

Arsenic	Beryllium	Lead	Selenium
Antimony	Cadmium	Mercury	Thallium.
Barium	Chromium	Nickel	

[A.A.C. R18-11-406.B.]

Other trace elements not listed above should be sampled with the same dissolved-metals approach.

This policy does not apply to water samples collected for comparison to or compliance with safe drinking water program maximum contaminant levels.

**RESPONSIBILITY**

All ADEQ employees sampling or supervising sampling of groundwater for metals or reviewing results of such sampling when the results may be used for comparison or compliance with AWQS are responsible for knowledge and implementation of this policy.

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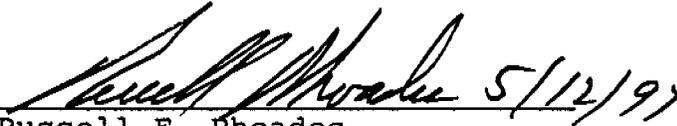
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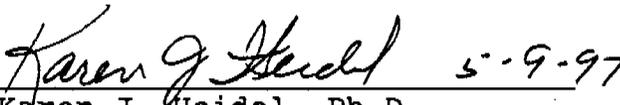
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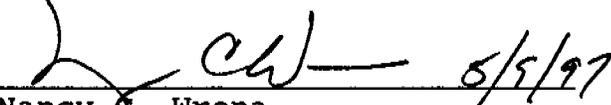
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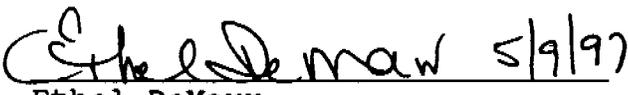
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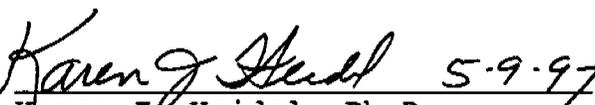
Arizona Department of Environmental  
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Russell F. Rhoades Date  
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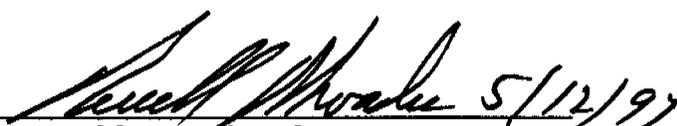
  
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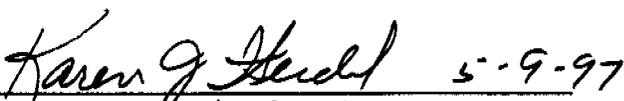
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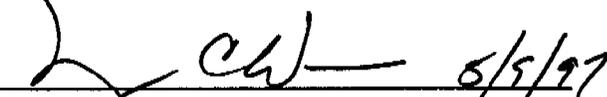
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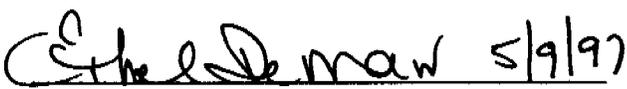
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