**Application of Human Health and Ecological Risk Assessment – Tools for Assessment, Remediation and Cost Savings**

**International Environmental Petroleum Conference, November 8, 2007, Houston, TX**
**Wednesday, November 7, 2007, 1:30pm – 4:30pm**

**Goal:** Review the fundamentals of human health and ecological risk assessment and methodologies to reduce cleanup costs in the oilfield using site-specific clean-up criteria.

**Topics:**
Will include how risk assessment can be utilized to determine environmentally acceptable endpoints, to develop the scope of potential remediation/action, derive cost effective remediation goals and as a tool to communicate with the public. Risk assessment is a multi-disciplinary process and therefore the presenters will come from a variety of disciplines:

**Presenters:**
Margaret Roy, URS, Austin, TX – Ecological Risk Assessor
Sandra Smith, URS, Austin, TX - Human Health Risk Assessor
Dr. Brenda Basile, URS, Houston, TX – Environmental Chemist
Dr. Ron Porter, noblis, San Antonio, TX – Environmental Toxicologist

**Examples of issues that will be addressed include:**

• How and when do you collect environmental analytical data and when is there enough data?
• What consideration needs to be given to environmental chemistry, detections limits, and quality assurance procedures in the laboratory?
• What are human health and ecological risk based screening values based on and how are they used?
• What does the risk output mean in human health and ecological assessments.

To address these questions and others several case studies in risk assessment will be presented:
• Risk evaluation on the North Slope of Alaska – These sites presented logistical challenges for sampling and therefore chemistry data was limited. The client needed a risk-based method to evaluate these sites for both human health and ecological receptors unique to the area and make decisions on if remediation would be necessary.
• Closed AFB in the central US – The course will discuss how the traditional CERCLA risk assessment process was applied to multiple sites across this former base. There are both no further action sites and sites requiring remediation. The short course will discuss how the ecological process was organized and streamlined for multiple sites.
• Superfund Site on the Texas coast – A former waste disposal site was evaluated using the EPA's ecological and human health risk assessment guidance; however, the Texas process was incorporated. The course will describe how the two processes were intertwined to finalize the risk assessments and achieve clean-up goals.