

Reverse Osmosis Roundtable

April 4, 2006 - 9:00 – 11:30 am
Farmer's Reservoir and Irrigation Company

MINUTES

Attendance:

Kipp Scott – ECCV	James Graber – Metro Wastewater
Charlene Seedle – South Adams County - WSD	Alan Ellingson – Brown and Caldwell
Vic Lucero – City of Thornton	Karla Kinser - MWH
Amy Woodis – Metro Wastewater	Andrew Neuhart – Water Quality Control Division
David Holm – City of Aurora	Brad Wind – Northern Colo Water Conservancy District
Blair Corning – South Adams County - WSD	Gil Crozes – Carollo Engineers
Manuel Montoya – FRICO	Sharon Williams – Carter and Burgess
Laurie Rink - FRICO	Hank Waggy - Carter and Burgess
Dave Akers - WQCD	David Anderson – City of Brighton
Cindy Titus – Lochbuie	Jennifer Richards – CH2M Hill
Shonnie Cline – City of Brighton	Nicole Rowan – CDM
Katie Fendel – Leonard Rice Engineers	Phil Brandhuber - HDR
Kelly DiNatalie - CDM	John Akolt - FRICO
Newell Wright – Gateway	
Steve Rogers – Stewart Environmental	

1. Introductions

See above list of attendees.

2. Discussion – Participation and Expertise

It was agreed that Roundtable participation should be expanded to include all entities considering similar water treatment options. Dave Akers and Andrew Neuhart will ask Division District Engineers for any information/contacts for upcoming and future treatment needs around the state. They will also review existing information/contacts available through the Safe Drinking Water System program. Vic agreed to make an announcement at the Water Utility Council meeting. It was also suggested that the Water Congress be notified of the Roundtable efforts.

It was agreed that the Roundtable members collectively possess an adequately high level of technical expertise for analyzing the issues at hand. No additional, outside expertise is needed at this time.

3. Roundtable Mission Discussions

Kipp and Marco had revised the draft mission statement to reflect modifications discussed at the March meeting. The group reviewed the draft and raised a few issues. One issue was regarding the use of the term reverse osmosis which may be limiting in its description and as a technology. Another issue was expressed concern with the mission to assure “RO as a viable treatment option”.

Most of the discussion revolved around wording and intent concerning statewide applications and Front Range solutions.

Kipp took notes and agreed to post another revised draft of the mission statement within a week on the website.

4. Brine Concentrate Presentation

Gil Crozes from the Boise office of Carollo Engineers gave a brief presentation on state of the art technologies and research for further concentration of brine waste. He touched on the subjects of precipitation and secondary desalting, membrane distillation, forward osmosis, enhanced evaporation ponds, ion-exchange resin removal for nitrate, and combinations of techniques.

5. Subgroup Reports

- A. **Survey of State Regulatory Programs.** Vic and other members of the subgroup conducted a phone and internet survey to determine how other states treat the regulation of brine discharges (Texas, Florida, Arizona, New Mexico). Vic presented a verbal summary of their findings and handed out portions of Texas' water quality regulations that establish TDS limits on a segment-specific basis. Vic indicated that additional information/research would be forthcoming from their subgroup and will be posted on the website. He also intended to provide an update on workgroup findings at the May meeting.
- B. **Treatment Technology/Disposal Analysis.** Alan Ellingson led the subgroup effort on this topic and provided a summary table for review and discussion. The summary listed the treatment options and evaluated advantages, disadvantages and relative costs of each as they applied to the South Platte basin. Feedback for the subgroup focused on how the evaluation could be expanded as a case-specific evaluation tool. It was agreed that all options as presented should remain and be expanded to include combinations of treatments. The analysis could be further developed to describe a set of circumstances or conditions when the option would become suitable. It was agreed that the analysis will need further refinement as regulatory opportunities and constraints are analyzed. The subgroup intends to work on additional refinements for presentation at the May meeting
- C. **Review of Colorado Regulatory System.** Amy Woodis presented a verbal report on behalf of the subgroup and had a couple of handouts for discussion. The handouts contained a preliminary list of issues that the subgroup intends to investigate. They also developed a laundry list of existing regulations that will need to be analyzed for adequacy and overlap. The subgroup intends to provide an update at the May meeting.

6 Next Meeting

The next meeting will be held on Tuesday, May 2nd from 9:00 to 11:30 at the offices of FRICO, 80 S. 27th Avenue, Brighton.

An agenda will be posted on the new website approximately one week prior to the meeting date. Anyone who wishes to post work products or other items prior to the meeting should send them to Shonnie Cline at scline@brightonco.com. If you copy me on the request, Laurie Rink will send out E-mail notification to Roundtable members alerting them to the posting (lrink@uos.net).