David Doyle

Comment #1
Page 11 of the draft permit requires Whole Effluent Testing (acute and chronic). The submitted application does not contain any results of Whole Effluent Testing to support the DEQ's issuance of a draft permit containing W.E.T. parameters. The application should be revised to include results of Whole Effluent Testing.

Comment #2
Oilfield produced water usually contains many organic chemicals that are harmful to aquatic life including VOCs, hydrocarbon species, PAHs and phenols. While BTEX is listed in the draft permit as a quarterly instream sample parameter, other VOCs such as methanol, PAHs and phenols are not reported in the application or the draft permit. Have these types of organic chemicals been investigated by either the applicant or the DEQ as possible contaminants?

Comment #3
In my previous work, ammonia in the effluent of a reverse osmosis plant for treating produced water was found to be a significant contributor to W.E.T. mortality. Has the applicant investigated ammonia as a possible contaminant?

Comment #4
The list of anticipated treatment chemicals included with the application appears to be very short. It includes only 3 water clarifiers and one scale inhibitor. Oilfield produced water handling and treatment facilities almost universally require other water treatment chemicals. It is almost inconceivable that the facility will operate without biocides to control bacteria that will cause corrosion, damage membranes and generally interfere with water treatment. I suggest that DEQ encourage the applicant to further investigate their current and planned water treatment chemical usage and amend Attachment B application accordingly.

Comment #5
Regarding the Applicant's Attachment C in response to DEQ application requirement 12:

Identifying inlets and outlets to a black box labeled "HERO Water Treatment Plant" does not constitute "a schematic line drawing showing the water flow and water balance through the facility". If the DEQ expects the applicant to submit a Process Flow Diagram *through* the facility, Attachment C is not responsive to requirement 12 and should be revised.