

From: "Jan Hendrickx" <...>
To: "Jim Ruby"
CC: "Bruce Buchanan"
Date: 2/13/2009 12:14 PM
Subject: Questions

Good Afternoon Jim:

Yesterday Bruce and I had a long meeting and we went over several key materials that you have provided to us. Several questions came up that we like you and/or others to address in any way that you feel is appropriate. We are getting a grip on the science issues involved but for a sound advice to the council we need to know more about the permitting context. The questions are:

1. Assume that you know exactly the EC and SAR value of the historical water in the drainages, how is Tier II implemented using these numbers?
2. Assume that you also know exactly the temporal variability of the EC and SAR values of the historical water in the drainages, how is Tier II implemented? Will the threshold value be the average, the minimum, or the maximum of these values?
3. If one cannot determine the EC and SAR value of the historical water in the drainages, what will happen? Go to Tier III?
4. Is Tier I as simple as: (1) Check if SAR is less than 10, if yes proceed without restriction. If no, go to (2) Check if EC and SAR are below the Hanson line. If yes, proceed without restrictions. If no, go to Tier II.
5. When is Tier III invoked? Is it the default for Tier II only? Or, can any producer and land owner come to a mutual agreement that is worked out in a Tier III procedure?
6. Is there no state oversight for Tier III? In other words, could a land owner follow Tier III to sacrifice his land quality to make it available for release of low quality produced waters?
7. When a producer has Tier I water quality, can the landowner refuse release of this water in the landowner's drainage?
8. Is there any mention of the quantity of produced water that can be released in a drainage? Maybe the discharge of produced water (cubic feet per second) is always less than the discharge of the drainage. But what on an annual basis (cubic feet per year)?

We look forward to receiving some feedback on these issues.

It also will be helpful if you send us the Tier I, II & III guidelines with some explanation of how the state and/or industry works through these guidelines.

Kind Regards, Jan.

Jan M.H. Hendrickx, Ph.D., Jr.