



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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OFFICE OF
WATER AND WATERSHEDS

August 12, 2014

Kevin Freeman
Project Coordinator
ARCADIS
695 N. Legacy Ridge Drive, Suite 200
Liberty Lake, WA 99019

Re: Irrigation Water Management Plans Conditional Approval
Administrative Order on Consent ("Consent Order")
Docket No. SDWA-10-2013-0080
Yakima Valley Dairies, Washington

Dear Mr. Freeman:

EPA has completed our review of your August 4, 2014 letter to EPA which has the subject heading: "DOCKET NO. SDWA-10-2013-0080, Yakima Valley Dairies ARCADIS Response to EPA Letter 'EPA Comments Regarding Irrigation Water Management Plans' dated June 20, 2014." We have also completed our review of the following documents.

- Cow Palace Dairy Quality Assurance Project Plan Irrigation Water Management, August 4, 2014
- Liberty Dairy Quality Assurance Project Plan Irrigation Water Management, August 4, 2014
- George DeRuyter & Son Dairy Quality Assurance Project Plan Irrigation Water Management, August 4, 2014

Pursuant to paragraph 14 of the Consent Order, these irrigation water management (IWM) plans are conditionally approved with modification. EPA's approval is conditioned on Respondents modifying the Plans as directed by EPA in this letter. The Plans are hereby modified as specified below:

1. The response to EPA Comment 5a states that this project will have a completeness goal of 80 percent as is consistent with a previous Whatcom project. The Whatcom project is significantly different than this one. Propose a completeness goal that will meet the objectives for this project, and explain why the proposed completeness goal is expected to meet the objectives for this project. Delete the reference to the Whatcom project.
2. In response to EPA Comment 9b, ARCADIS states that field instrumentation calibration will follow the manufacturer's procedures as included in Appendix C. The EC-5 User's Manual allows for some variability in the calibration process as the user could utilize the factory calibration, or as encouraged by the manufacturer, perform a soil-specific

calibration. Provide additional detail in Section 2.7 of the QAPP to explain the exact procedures that will be used for instrument calibration.

3. Revise text to provide for review of the Plans in November, 2015, with potential modification required by EPA at that time to achieve the goals of the Plans, consistent with the Consent Order.
4. Section 1.2.4, Irrigation.
 - a. Revise the sentence at the end of the first paragraph that states, "If this occurs, the potential exists for these nutrients to be carried downward through the subsurface to underlying groundwater," To "If this occurs, nitrate, a form of nitrogen which is highly mobile in water, would be carried down through the subsurface to the underlying aquifer."
 - b. From the last sentence in the second paragraph, delete the phrase, "...and no methods are available that could conceivably be implemented that would allow the Dairy to control soil moisture under these conditions." This phrase is not necessary for the purposes of this plan and no demonstration has been made to support this point.
 - c. In the seventh paragraph, delete the statements: "In most agricultural situations, large-scale salt flushing is not required. Normal management of irrigation water application and dairy salt use in addition to winter precipitation events are typically sufficient to reduce salt accumulation to promote [*sic*] crop health." The terms "large-scale" and "normal" are undefined, and it's not clear how these general statements may or may not pertain to the Respondents' dairy operations.
 - d. Delete the last sentence of this section which states, "It is understood that salt flushing will not be permitted by EPA in fields that exceed the 45 parts per million nitrate threshold identified in the AOC SOW if flushing would pose an unacceptable risk to groundwater." This statement is inconsistent with Comment number 3.c of EPA's June 20, 2014 comment letter. Any irrigation to leach salts should be done only when the nitrogen content of the soil is low.
5. Section 1.3.2, Project Schedule. Change the "start date" of "field capacity soil testing" to, "Upon EPA approval of the QAPP, and within one week following harvest of the 2014 growing season crops."

Respondents must submit the final modified Plans including the revisions specified above to EPA no later than seven days of your receipt of this letter. In accordance with paragraph III.F.2 of the Consent Order, the final Plans must be implemented within 30 days of your submittal date of the final plans to EPA.

You may contact me at (206) 553-6904, or your legal counsel may contact Jennifer MacDonald, Assistant Regional Counsel, at (206) 553-8311, if you have any questions regarding this letter.

Sincerely,



Eric Winiiecki
EPA Project Coordinator
Office of Water and Watersheds

Enclosures

cc: Jennifer MacDonald
Rene Fuentes