UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

ENFORCEMENT &
COMPLIANCE ASSURANCE
DIVISION

May 12, 2022

Mark Larsen
Project Coordinator
ANCHOR QEA, LLC
1119 Pacific Avenue, Suite 1600
Tacoma, Washington 98402

Re: Bosma Lagoons 1, 2, and 3 Abandonment Plan
Administrative Order on Consent ("Consent Order")
Docket No. SDWA-10-2013-0080
Yakima Valley Dairies, Washington

Dear Mr. Larsen:

EPA has completed our review of:

- H&S Bosma Dairy Lagoon Nos. 1, 2, and 3 Abandonment Plan (April 25, 2022)

Based on our review, EPA has these comments:

1. Based on the soil data from Bosma Lagoon 3 provided in Table 2 of this Plan, Bosma Lagoon 3 is likely a significant source of nitrate contamination to the drinking water aquifer. Bosma Lagoons 1 and 2 may be as well.

2. It's important to characterize organic nitrogen in addition to ammonium and nitrate because organic nitrogen is also likely to end up in the groundwater in the form of nitrate.

3. The results of recent soil sampling done by Respondents at Bosma Lagoon 3 are of concern because they show that soils beneath Lagoon 3 exceed the cleanup target concentration to at least a depth of 10 feet in two sampling locations. The deep soil contamination indicates that this earthen lagoon did not effectively contain nitrogen and allowed it to migrate far below the bottom of the lagoon. The deep soil sampling data measures nitrogen that leaked from the lagoon and was retained in the soil; it does not measure nitrogen that migrated through the soils toward the groundwater over the years and was not retained. Water level measurements taken by the Dairies indicate that Bosma Lagoon 3 is approximately 1000 feet upgradient of the most contaminated monitoring well at the site, DC-03, which contained 185 milligrams per liter (mg/l) nitrate in the second quarter of 2021. Lagoon 3 is also upgradient of residential drinking water wells that exceeded 40 mg/L nitrate-N.

4. As you are aware, Lagoon 3 was supposed to have been abandoned in 2021 but the Bosma Dairy failed to complete the work. EPA has informed the Dairy that it is at risk of stipulated penalties.

5. Work to characterize the extent of contamination at Bosma Lagoons 1, 2, and 3, which appear to have been dug in relatively porous soils, must proceed expeditiously so that appropriate measures can be identified to address contamination. The work schedule as described in your draft plan is insufficient to ensure that the work can be completed this year. Your draft plan represents that the Dairy has enough liquid animal waste storage capacity to allow for the abandonment of Lagoons 1, 2 and 3, yet sampling of Lagoon 1 soils cannot proceed until the Dairy empties it of liquid animal waste.

6. You did not address all of the comments EPA provided in our March 9, 2022 comment letter (EPA Letter No. 281) as required by that letter and the Consent Order.

In accordance with Consent Order Paragraph 14, EPA is modifying the H&S Bosma Dairy Lagoon Nos. 1, 2, and 3 Abandonment Plan, including the title, and hereby approving it as modified. The EPA-approved "H&S Bosma Dairy Lagoon Nos. 1, 2, and 3 Soil Sampling Plan" (May 12, 2022) is enclosed. In accordance with Consent Order Paragraph 14, it must be implemented as approved.

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

Sincerely,

ERIC WINIECKI

Digitally signed by ERIC WINIECKI
Date: 2022.05.12 10:11:02 -07'00'

Eric Winiecki
EPA Project Coordinator
Enforcement and Compliance Assurance Division

Enclosure

cc: Jennifer MacDonald
Don Clabaugh