

TO: Eric Winiecki, U.S. Environmental Protection Agency, Region 10

FROM: Eric Weber and Kaila Anderson, Landau Associates, Inc.

CC: Don Claybaugh and Jennifer MacDonald, U.S. Environmental Protection Agency, Region 10
Adam Dolsen, and Jeff Boivin, Cow Palace, LLC
Brendan V. Monahan and Mathew Harrington, Stokes Lawrence, P.S.

RE: **Docket No. SDWA-10-2013-0080; Yakima Valley Dairies
February 2022 Monthly Progress Report**

This progress report describes activities performed in compliance with Administrative Order on Consent (AOC) Docket No. SDWA-10-2013-0080 between February 11, 2022 and March 10, 2022. This progress report is submitted by Landau Associates, Inc. (Landau) on behalf of Cow Palace, LLC (Cow Palace).

1. Major Accomplishments and Issues

Cow Palace experienced no major issues during the current reporting period and has continued to meet its obligations under the AOC.

The Yakima Valley Dairies (Dairies) submitted the 2021 Annual Report/Year Eight Report to the U.S. Environmental Protection Agency (EPA) on March 4, 2022.

Cow Palace received Letter 277¹ from the EPA on January 27, 2022 regarding the revised *Cow Palace Dairy Lagoon No. 1 and Safety Debris Catch Basin Completion Report*, dated November 24, 2021. The EPA addressed its concerns with the Lagoon 1 liner integrity and requested specific edits to the report. A revised report with supporting documentation was submitted to the EPA on February 25, 2022.

Agrimanagement, Inc. (Agrimanagement) completed fall post-harvest soil sampling at the Dairies on November 19, 2021. In accordance with AOC Scope of Work Section III.A.3.e(2), the Post-Harvest Dairy Application Field Report was submitted to the EPA on February 25, 2022.

¹ EPA. 2022. Letter 277 re: Cow Palace Dairy Lagoon 1 Closure Report; Administrative Order on Consent ("Consent Order"); Docket No. SDWA-10-2013-0080. Yakima Valley Dairies, Washington. From Eric Winiecki, U.S. Environmental Protection Agency; to Mark Larson, Anchor QEA, LLC; and Eric Weber, Landau Associates, Inc. January 27

2. Other Actions Taken to Comply with the Administrative Order on Consent

Anchor is coordinating with Independent Water Service, Inc., for planned maintenance of the installed reverse osmosis systems at off-site residences. Associated reporting will be performed by Anchor.

3. Irrigation Sensor Management

Table 1 includes the status of the moisture sensors and corrective measures that are underway to restore operability.

Table 1 – Irrigation Sensors

Field ID	Individual Station ID	Data Logger Operational as of 3/11/2022?	Sensor Operational as of 3/11/2022?	Reason for Being Out of Service/Other Notes	Corrective Measures
CP-SU01	CP-SU01-I-1	Yes	No	Sensor wires damaged by implement	New sensors to be installed
	CP-SU01-I-2	Yes	Yes	NA	NA
	CP-SU01-I-3	Yes	Yes	NA	NA
CP-SU02	CP-SU02-I-1	Yes	No	All sensors failed	New sensors to be installed
	CP-SU02-I-2	No	No	Needs Troubleshooting	Troubleshoot; replace defective parts
CP-SU03	CP-SU03-I-1	Yes	Yes	NA	NA
	CP-SU03-I-2	Yes	No	2-foot sensor not working	Needs troubleshoot, possibly bad sensor interface or replace sensor
	CP-SU03-I-3	Yes	Yes	NA	NA
CP-SU04A	CP-SU04A-I-1	Yes	No	3-foot sensor not working	Sensor to be replaced
	CP-SU04A-I-2	Yes	Yes		None
CP-SU04B	CP-SU04B-I-1	No	No	Data logger damaged (knocked over)	Data logger to be replaced
	CP-SU04B-I-2	Yes	Yes	NA	NA
CP-SU05	CP-SU05-I-1	Yes	Yes	NA	NA
	CP-SU05-I-2	Yes	Yes	NA	NA
CP-SU06	CP-SU06-I-1	No	No	Data logger damaged (motherboard failed)	Motherboard to be replaced
	CP-SU06-I-2	Yes	Yes	NA	NA
	CP-SU06-I-3	Yes	Yes	NA	NA

Abbreviations and Acronyms:

ID = Identification

NA = not applicable

4. Work in Progress

Table 2 outlines the updated deliverable schedule. Please note that completed deliverables referenced in Table 2 have been submitted to EPA but remain in Table 1 pending confirmation from EPA. Groundwater monitoring deliverables will continue to be submitted by Anchor and are not included in this table.

Table 2 - Deliverable Schedule

Deliverable Name or Event	Date of Most Recent EPA Comment Letter (If Any)	Current Due Date (If Any) Established by AOC/Date Indicated in EPA Comment Letter	Anticipated Start/End Date	On Track to Meet Due Date/Start or End Date? (Yes/No; If No, Explain in Item 5)
GROUNDWATER MONITORING (III.E)				
Final Groundwater Monitoring QAPP	2/28/2018 (Conditional Approval, EPA Letter 164)	4/1/2018	Complete	QAPP revised and resubmitted to EPA on 3/8/20
Third Quarter 2020 Groundwater Monitoring Data Report (Revised)	12/22/2021 (EPA Letter 264)	1/22/2022	Complete	First revision submitted by Anchor to EPA on 3/21/2021. Second revision submitted by Anchor to EPA on 5/13/2021. Third revision submitted to Anchor to EPA.
Fourth Quarter 2021 Groundwater Monitoring Data Report	--	2/14/2022	Complete	Submitted by Anchor to EPA 2/15/2022
IMMEDIATE SOURCE CONTROL ACTIONS (III.F)				
Lagoon No. 1 and Safety Debris Catch Basin As-Built Report	1/27/2022 (EPA Letter 277)	Revision due 2/25/2022	Complete	Revised report submitted to EPA 2/25/2022
Settling Basins A & B As-Built Report	2/18/2020 (EPA Letter)	2/28/2021	Complete	Submitted to EPA 2/26/2021
2021 Post-Harvest Dairy Application Field Report Memorandum	—	2/25/2022	Complete	Submitted to EPA 2/25/2022
REPORTING (III.K)				
Monthly Progress Report	10/18/2018 (EPA Letter 184)	15th of each month (AOC)	15th of each month	Yes
2013 Annual Report (Revised)	12/30/2015 (EPA Letter 95)	2/27/2016 (EPA Letters 104, 116, 121, and 128)	Complete	Submitted by Anchor to EPA on 11/18/2016
2014 Annual Report (Revised)	2/2/2016 (EPA Letter 101)	4/1/2016 (EPA Letters 109 and 128)	Complete	Submitted by Anchor to EPA on 11/18/2016
2015 Annual Report (Revised)	1/3/2017 (EPA Letter 133)	1/31/2017 (EPA Letter 133)	Complete	Submitted by Anchor to EPA on 1/31/2017
2016 Annual Report	—	3/1/2017	Complete	Submitted by Anchor to EPA on 3/1/2017
2017 Annual Report (Revised)	3/21/2018 (EPA Letter 166)	4/18/2018	Complete	Submitted by Anchor to EPA on 4/17/2018
2020 Annual Report	1/24/2022 (EPA Letter 274)	Revision due 2/23/2022	Complete	Revised report submitted to EPA 2/23/2022

Deliverable Name or Event	Date of Most Recent EPA Comment Letter (If Any)	Current Due Date (If Any) Established by AOC/Date Indicated in EPA Comment Letter	Anticipated Start/End Date	On Track to Meet Due Date/Start or End Date? (Yes/No; If No, Explain in Item 5)
2021 Annual Report	—	3/4/2022	Complete	Submitted to EPA on 3/4/2022

Notes:

— = not applicable

5. List of Completed Administrative Order on Consent Work

Table 3 lists AOC work that has been completed and approved by EPA.

Table 3 - Work Product Status Update

Work Product	Submittal Date (Report Cover Date) ¹	Status
PROVISION OF WATER (III.D)		
Residential Well Sampling QAPP (III.D.2)	4/26/2013	APPROVED
Residential Well Sampling Report	12/20/2013	APPROVED
GROUNDWATER MONITORING (III.E)		
Groundwater Monitoring Well Installation Report (III.E.2)	10/06/2014	APPROVED
Data Usability Report (III.A.3.e.(1)) ²		
Third Quarter 2013	10/14/2015	APPROVED
Fourth Quarter 2013	10/14/2015	APPROVED
First Quarter 2014	10/14/2015	APPROVED
Second Quarter 2014	10/14/2015	APPROVED
Third Quarter 2014	10/14/2015	APPROVED
Fourth Quarter 2014	5/21/2015	APPROVED
First Quarter 2015	5/21/2015	APPROVED
Second Quarter 2015	10/14/2015	APPROVED
Quarterly Groundwater Monitoring Data Report (III.E.3)		
Third Quarter 2013	1/14/2016	APPROVED
Fourth Quarter 2013	1/14/2016	APPROVED
First Quarter 2014	1/14/2016	APPROVED
Second Quarter 2014	9/4/2015	APPROVED
Third Quarter 2014	1/14/2016	APPROVED
Fourth Quarter 2014	1/14/2016	APPROVED
First Quarter 2015	1/14/2016	APPROVED
Second Quarter 2015	1/14/2016	APPROVED
Third Quarter 2015	12/14/2015	APPROVED
Fourth Quarter 2015	3/31/2016	APPROVED
First Quarter 2016	5/31/2016	APPROVED

Work Product	Submittal Date (Report Cover Date)¹	Status
Second Quarter 2016	9/6/2016	APPROVED
Third Quarter 2016	3/20/2017 (Cover: March 2017)	APPROVED 4/3/2017
QAPP Addendum No. 1	11/10/2016 (Cover: November 2016)	APPROVED 1/13/2017
Fourth Quarter 2016	5/1/2017 (Cover: May 1, 2017)	APPROVED 5/26/2017
First Quarter 2017	8/18/2017 (Cover: August 22, 2017)	APPROVED 8/19/2019
Second Quarter 2017	08/07/2017 (Cover: August 7, 2017)	APPROVED 8/19/2019
Third Quarter 2017	11/27/2017 (Cover: November 27, 2017)	APPROVED 8/19/2019
Fourth Quarter 2017	Uploaded to FTP 9/11/2019 (Cover: February 2, 2018)	APPROVED 8/19/2019
First Quarter 2018	Uploaded to FTP 9/10/2019 Cover: May 21, 2018	APPROVED 8/19/2019
Second Quarter 2018	Uploaded to FTP 9/11/2019 Cover: August 10, 2018	APPROVED 8/19/2019
Third Quarter 2018	Uploaded to FTP 9/11/2019 Cover November 9, 2018	APPROVED 8/19/2019
Fourth Quarter 2018	2/11/2019	APPROVED 8/19/2019
First Quarter 2019	5/21/2019	APPROVED 8/19/2019
Second Quarter 2019	8/05/2019	APPROVED 8/19/2019
Third Quarter 2019	1/15/2021	APPROVED 1/25/2021
Fourth Quarter 2019	1/15/2021	APPROVED 1/25/2021
First Quarter 2020	2/3/2021	APPROVED 12/22/2021
Second Quarter 2020	2/3/2021	APPROVED 12/22/2021
Fourth Quarter 2020	5/13/2021	APPROVED 12/22/2021
First Quarter 2021	4/28/2021	APPROVED 12/22/2021
Second Quarter 2021	8/9/2021	APPROVED 12/22/2021

Work Product	Submittal Date (Report Cover Date) ¹	Status
IMMEDIATE SOURCE CONTROL ACTIONS (III.F)		
Dairy Facility Application Field Management Plan(s) (III.F.1)	11/18/2013	APPROVED; revised DFAFMPs submitted to EPA on 5/31/2016; updated DFAFMPs submitted to EPA on 5/15/2018
2013 Post-Harvest Dairy Application Field Reports	8/29/2015	APPROVED
2014 Pre-Plant Dairy Application Field Reports	8/13/2015	APPROVED
2014 Post-Harvest Dairy Application Field Reports	8/14/2015	APPROVED
2015 Pre-Plant Dairy Application Field Reports	3/27/2017	APPROVED
2015 Post-Harvest Dairy Application Field Reports	3/27/2017	APPROVED
2016 Pre-Plant Dairy Application Field Reports	3/27/2017	APPROVED
2016 Post-Harvest Dairy Application Field Reports	1/3/2017 (Cover: January 3, 2017)	APPROVED 3/27/2017
2017 Pre-Plant Dairy Application Field Reports	7/31/2017 (Cover: July 2017)	APPROVED 8/1/2017
2017 Post-Harvest Dairy Application Field Reports	Uploaded to FTP 9/13/2019 (Cover: December 2017)	APPROVED 8/30/2019
2018 Pre-Plant Dairy Application Field Reports	Uploaded to FTP 9/13/2019 (Cover: July 2018)	APPROVED 8/30/2019
2018 Post-Harvest Dairy Application Field Report Memorandum	Uploaded to FTP 9/12/2019 Cover: 1/1/2019)	APPROVED 8/30/2019
2019 Pre-Plant Dairy Application Field Report Memorandum	Uploaded to FTP 9/12/2019 (Cover: 8/10/2019)	APPROVED 8/30/2019
2019 Post-Harvest Dairy Application Field Report Memorandum	1/8/2020, revised cover 1/31/2022	APPROVED 1/13/2022
2020 Pre-Plant Dairy Application Field Report Memorandum	2/2/2021	APPROVED 2/11/2021
2020 Post-Harvest Dairy Application Field Report Memorandum	2/2/2021	APPROVED 2/11/2021
2021 Pre-Plant Dairy Application Field Report Memorandum	8/13/2021, revised cover 1/31/2022	APPROVED 1/13/2022
Irrigation Water Management Plan(s) (III.F.2)	8/15/2014	APPROVED
Lagoon Review Report(s) (III.F.6)	8/22/2013	APPROVED
Lagoon Evaluation Plans (III.F.6)	2/6/2015	NOT REQUIRED; Dairies elected to line lagoons
Cow Palace Lagoon Work Plan (III.F.6)	3/11/2016	APPROVED
Cow Palace Lagoon QAPP (III.F.6)	3/11/2016	APPROVED
Cow Palace NW Catch Basin 100% Design (III.F.6)	6/20/2016	APPROVED

Work Product	Submittal Date (Report Cover Date)¹	Status
Cow Palace Abandonment Plan for Northeast Catch Basin	9/10/2018 (Cover: 9/11/2018)	APPROVED 9/12/2018
Cow Palace Safety Debris Catch Basin 100% Basis of Design Report	7/10/2019 (Cover: 6/25/2019; Modified cover: 7/17/2019)	APPROVED WITH MODIFICATIONS 7/17/2019
Completion Report for Northeast Catch Basin Abandonment	1/31/2019	APPROVED 2/2/2021
Settling Basin AB Design Plans	7/15/20 (Modified 8/19/20, 9/15/20, and 9/22/20)	APPROVED WITH MODIFICATIONS 9/18/20
REPORTING (III.K)		
Monthly Progress Reports (III.K.1)	15th of the following month	Current through the current month
Health and Safety Plan	9/13/2016 (Cover: September 2016)	Current version ³
2018 Annual Report	3/6/2020 (Cover: March 6, 2020)	APPROVED 2/6/2020
2019 Annual Report	3/1/2020 (Modified 9/1/2020)	APPROVED WITH MODIFICATIONS 9/17/2020

Notes:

- (1) Deliverables dated prior to April 15, 2020 were submitted by Anchor on behalf of Cow Palace.
- (2) Following the second quarter of 2015, Data Usability Reports are no longer required as separate deliverables.
- (3) This is the current version of the project Health and Safety Plan. EPA does not provide formal review and approval of the Health and Safety Plan, though it is provided for use.

Abbreviations and Acronyms:

DFAFMP = Dairy Facility Application Field Management