From:	Andrew Gardner
To:	DAUGHERTY Katie * DEQ; Todd SLATER
Cc:	Brendan Robinson; Chase McLaughlin; Madison Rosen; Josh Hancock; THOMAS Wesley * DEQ; LACEY David J * DEQ; LUTEY Amber * DEQ
Subject:	RE: Arkema December 2023 MPR
Date:	Monday, February 19, 2024 8:11:52 AM
Attachments:	image001.png image002.png image003.png Arkema Portland_Dec 2023 MPR_2024.02.15_Compiled_reduced.pdf

---

Hey Katie,

The December 2023 MPR is attached. Please confirm receipt.

Thank you!

ERM
Sustainability is our business

Andrew Gardner, EIT (OR)
Managing Consultant, Engineering
He/Him/His

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From: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>
Sent: Monday, January 22, 2024 7:53 AM
To: Andrew Gardner <Andrew.Gardner@erm.com>; Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema October MPR

EXTERNAL MESSAGE

Hi Todd,

DEQ noticed this report introduces the concept of "area-wide average" for measuring progress towards achieving inward gradients, and adds an 'average' line to the plots in Attachment B2 and B3. DEQ does not agree with and has not approved using the 'average' for interpreting gradient trends or capture success. As shown in the shallow zone plot in Attachment B2, the 'average' appears to be trending towards an inward gradient, but that is primarily driven by large inward gradients at GCC2 (and the lack of data for GCC6), which washes out the poor performance in GCC 4 and GCC 5. It is also notable that data are not always available for all of the gradient clusters (i.e., GCC 6), so the 'average' value is not based on the same data each month (not apples-to-apples), and it doesn't make a reliable gauge of trends. Ultimately, the inward gradients need to be established and maintained across the entire barrier wall, and an 'average' value doesn't have much use. Please remove the use of "average" as an interpretation tool in future MPRs.

Thanks,
Katie

Katie Daugherty, R.G | she/her
Project Manager
Oregon DEQ | NWR Cleanup Section
700 NE Multnomah Street, Suite 600
Portland, OR 97232
503-860-3943
Katie.Daugherty@deq.oregon.gov

From: Andrew Gardner <Andrew.Gardner@erm.com>
Sent: Tuesday, January 16, 2024 11:53 AM
To: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>; Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema October MPR

> Some people who received this message don't often get email from andrew.gardner@erm.com. Learn why this is important

Hi Katie,

The November MPR is attached. Please confirm receipt of this email.

Thank you!
Andrew

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From: Andrew Gardner <Andrew.Gardner@erm.com>
Sent: Monday, December 18, 2023 8:38 AM
To: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>; Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin

<chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema October MPR

Hi Katie,

The October MPR is attached. Please confirm receipt of this email and let me know if you have any questions or comments.

Thank you,
Andrew

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From: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>
Sent: Thursday, November 16, 2023 7:47 AM
To: Andrew Gardner <Andrew.Gardner@erm.com>; Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema September MPR

EXTERNAL MESSAGE

Hi Andrew,

Received.

Thank you,
Katie

From: Andrew Gardner <Andrew.Gardner@erm.com>
Sent: Wednesday, November 15, 2023 4:11 PM
To: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>; Todd SLATER <todd.slater@totalenergies.com>

Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema September MPR

Hi Katie,

The September MPR is attached. Please confirm receipt of this email and let me know if you have any questions or comments.

Thank you,
Andrew

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From: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>
Sent: Wednesday, October 25, 2023 10:43 AM
To: Andrew Gardner <Andrew.Gardner@erm.com>; Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema August MPR

EXTERNAL MESSAGE

Thanks for sending. That is so weird. I have no record of that coming in. I'll have to check to see if Wes, Dave, and Amber received it and it was just me or all of us. They implemented new email quarantine rules recently so maybe it fell afoul of that. I did receive the quarterly report form Avery on 10/18 but nothing back about the FS walk through request or from Josh on MPR question.

From: Andrew Gardner <Andrew.Gardner@erm.com>

Sent: Tuesday, October 17, 2023 10:44 AM
To: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>; Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema August MPR

Hi Katie,

The August 2023 MPR is attached. This MPR incorporates your October 9th comments. A few additional notes:

- Figure 1-2 has been added to show Average Monthly Pumping Rate. Figure 1-1 continues to show Average Operational Pumping Rates.
- The rate in July was down from June due to low water levels on site as well as a few other factors discussed in section 3.3.2.

Please let me know if you have any questions.

Thanks,
Andrew Gardner

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From: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>
Sent: Monday, October 9, 2023 10:31
To: Todd SLATER <todd.slater@totalenergies.com>
Cc: Brendan Robinson <Brendan.Robinson@erm.com>; Andrew Gardner <Andrew.Gardner@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>; Josh Hancock <Josh.Hancock@erm.com>; THOMAS Wesley * DEQ <Wesley.THOMAS@deq.oregon.gov>; LACEY David J * DEQ <David.J.LACEY@deq.oregon.gov>; LUTEY Amber * DEQ <Amber.Lutey@deq.oregon.gov>
Subject: RE: Arkema July MPR - ODEQ Comments for next MPR

EXTERNAL MESSAGE

Hi Todd,

Below is some feedback on the July MPR that ODEQ is requesting be incorporated into future MPRs.

- Significant reduction due to "pressure filter fouling". Average extraction rate for July down to 28 gpm compared to 66 gpm in June. After the filter was repaired the flow rate went up to 48 gpm, which is still down from June. It is not clear to ODEQ why. Is it because some wells are still down or because water levels are down. Additional details on what is causing the reduction is needed.
- Note that Figure 1-1 Monthly Pumping Rate Contribution-Note that for July 23 they are graphing the "Operational Rate" of 49 gpm, instead of the "Average Pumping Rate" of 29 gpm. "Operational Rate" is a new term used this report. ODEQ is requesting that LSS/ERM graph the "Average Rate" so ODEQ can evaluate the impact of extraction rate on gw elevation.

Thanks,
Katie

Katie Daugherty, R.G | she/her
Project Manager
Oregon DEQ | NWR Cleanup Section
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From: Josh Hancock <Josh.Hancock@erm.com>
Sent: Monday, September 18, 2023 12:14 PM
To: DAUGHERTY Katie * DEQ <Katie.DAUGHERTY@deq.oregon.gov>
Cc: Todd SLATER <todd.slater@totalenergies.com>; Brendan Robinson <Brendan.Robinson@erm.com>; Andrew Gardner <Andrew.Gardner@erm.com>; Chase McLaughlin <chase.mclaughlin@erm.com>; Madison Rosen <madison.rosen@erm.com>
Subject: Arkema July MPR

Good morning Katie, hope you had a good weekend. Attached, please find the July 2023 MPR for the Arkema site. Let us know if you have any questions or comments.

Regards,

Joshua Hancock
Principal Consultant

he/him/his

M 206 402 2796
E Josh.Hancock@erm.com | **W** www.erm.com

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