



STATE OF COLORADO

Facility ID 487778  
Document #2358526

Deranleau - DNR, Greg <greg.deranleau@state.co.us>

**Re: Re: Form 15 [#404021594] Returned to Draft**

8 messages

**Weber - DNR, Kira** <kira.weber@state.co.us>

Tue, Jan 14, 2025 at 12:33 PM

To: "Wells, Matt" <Matthew\_Wells@oxy.com>

Cc: Laurel Faber DNR <laurel.faber@state.co.us>, Greg Deranleau - DNR <greg.deranleau@state.co.us>

Good Afternoon Matt,

Staff has completed our review on January 2, 2025. This Form 15 shows that it is pending final review with the Environmental Division. Please reach out to Greg Deranleau with questions or concerns.

Thank you,

**Kira Weber**

**Location Assessment Specialist**

My pronouns: she/her/hers



**COLORADO**  
**Energy & Carbon Management Commission**

Department of Natural Resources

P 303.894.2100 | F 303.894.2109

1120 Lincoln Street, Suite 801, Denver, CO 80203

[kira.weber@state.co.us](mailto:kira.weber@state.co.us) | [www.colorado.gov/ecmc](http://www.colorado.gov/ecmc)

On Tue, Jan 14, 2025 at 12:17 PM Wells, Matt <Matthew\_Wells@oxy.com> wrote:

Good afternoon,

I am just checking in to see how this was progressing. We plan to start construction in two weeks; do you think it will be approved by then?

Matt

---

**From:** Wells, Matt <[matt\\_wells@oxy.com](mailto:matt_wells@oxy.com)>  
**Sent:** Thursday, December 26, 2024 3:04 PM  
**To:** Weber - DNR, Kira <[kira.weber@state.co.us](mailto:kira.weber@state.co.us)>  
**Cc:** DJRegulatory <[DJRegulatory@oxy.com](mailto:DJRegulatory@oxy.com)>  
**Subject:** RE: [EXTERNAL] Re: Form 15 [#404021594] Returned to Draft

Thanks. I have resubmitted the new form 15.

Matt

---

**From:** Weber - DNR, Kira <[kira.weber@state.co.us](mailto:kira.weber@state.co.us)>  
**Sent:** Monday, December 23, 2024 10:29 AM

**To:** Wells, Matt <[matt\\_wells@oxy.com](mailto:matt_wells@oxy.com)>  
**Cc:** DJRegulatory <[DJRegulatory@oxy.com](mailto:DJRegulatory@oxy.com)>  
**Subject:** [EXTERNAL] Re: Form 15 [#404021594] Returned to Draft

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.**

---

Hi Matt,

Not to my knowledge.

Thank you,

**Kira Weber**  
Location Assessment Specialist  
My pronouns: she/her/hers



**COLORADO**  
Energy & Carbon Management  
Commission  
Department of Natural Resources

P 303.894.2100 | F 303.894.2109  
1120 Lincoln Street, Suite 801, Denver, CO 80203  
[kira.weber@state.co.us](mailto:kira.weber@state.co.us) | [www.colorado.gov/ecmc](http://www.colorado.gov/ecmc)

On Thu, Dec 19, 2024 at 10:26 AM Wells, Matt <[matt\\_wells@oxy.com](mailto:matt_wells@oxy.com)> wrote:

Besides uploading the full pit emission calculation doc, was there any other changes needed?

---

**From:** Weber, Kira <[kira.weber@state.co.us](mailto:kira.weber@state.co.us)>  
**Sent:** Thursday, December 19, 2024 10:12 AM  
**To:** DJRegulatory <[djregulatory@oxy.com](mailto:djregulatory@oxy.com)>; Wells, Matt <[matt\\_wells@oxy.com](mailto:matt_wells@oxy.com)>  
**Subject:** [EXTERNAL] Form 15 [#404021594] Returned to Draft  
**Importance:** High

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.**

---



Colorado Energy and Carbon Management Commission Department of Natural Resources

1120 Lincoln St. Suite 801 Denver, CO 80203 Phone: (303) 894-2100 FAX: (303) 894-2109 ECMC.state.co.us

Notice: Form Returned to Draft

Contact: Weber, Kira

ECMC staff has returned the captioned form to "Draft" status in eForms. Please direct any questions to the ECMC contact listed above.

Confidentiality Notice: This electronic transmission and any attachments are confidential and intended solely for the attention and use of the named addressee(s). This information may be subject to legal professional or other privilege. Any disclosure distribution, copying or the taking of any action concerning the contents of this communication or any attachments by anyone other than the named recipient is strictly prohibited. If you have received it in error, please notify the sender immediately and delete the message from your systems.

Wells, Matt <Matthew\_Wells@oxy.com> Tue, Jan 14, 2025 at 12:35 PM To: "Weber - DNR, Kira" <kira.weber@state.co.us>, Greg Deranleau - DNR <greg.deranleau@state.co.us> Cc: Laurel Faber DNR <laurel.faber@state.co.us>

Thank you Kira.

@Greg Deranleau - DNR Hope all is well! Is there anything I can help answer with this Form 15?

[Quoted text hidden]

Deranleau - DNR, Greg <greg.deranleau@state.co.us> Tue, Jan 14, 2025 at 5:48 PM To: "Wells, Matt" <Matthew\_Wells@oxy.com> Cc: "Weber - DNR, Kira" <kira.weber@state.co.us>, Laurel Faber DNR <laurel.faber@state.co.us>, Taylor Robinson - DNR <taylor.robinson@state.co.us>

Matt, A few questions regarding this pit permit:

- 1. The operator comment on the Submit tab states "This is a new Form 15 application for the GLADE drilling pit. The pit size and location has changed. The original approved Form 15 is document #403750374 will need to be closed out." The approval of that form created Pit Facility ID 487778. It appears that this should have been submitted as a Pit Report to update the records of that previously approved, but presumably unbuilt pit. If the prior pit was built, it needs to be closed per Rule 913.c.(1)--i.e. with a Form 27. Can ECMC, with your permission, change this to a Pit Report for Facility 487778?
2. It's been a while since I've worked a Pit Permit. In the past, "closed loop" was used to indicate a pitless drilling system where all fluids were contained in above ground containers. I've also seen "closed loop" be used to describe a drilling system with specific controls to capture emissions. This appears to be neither. Please explain what is meant by "The pit will be part of the closed loop water-based mud system."
3. The emissions listed on the Conditions/Design&Construction tab do not match what was provided in the attached emissions calculations. Please explain the discrepancy and, with your permission, ECMC can change the value entered

on the Form if that is incorrect.

4. Please review the [Pit Emissions Working Group Recommendations](#) from June 2023 and indicate which recommended method of calculation you've used.
5. In the cross sections it shows that the pit fluid level will be above both the original surface and post construction grade. This practice is generally discouraged, however, in this case it is recognized that since the pit is lined and the elevation difference is approximately a foot, it is relatively low risk, and likely does not require engineering for the fill. To the extent practicable, Oxy should endeavor to operate the pit with the fluid level below surrounding grade.
6. Regarding the BMP for General Housekeeping: "The Pit will not be utilized longer than three years, unless otherwise approved of by ECMC." Please advise as to what the planned lifespan of the pit is and uses beyond drilling two wells as stated in the permit.

I've copied the whole ECMC review team, and anyone of them should be able to help you with the updates to the form upon your reply. Once these issues are addressed, I'll be able to provide the Director's Final Approval for this Form 15.

Thanks.

Greg

[Quoted text hidden]

--

Greg Deranleau (he/him/his)

Interim Deputy Director of Operations



**COLORADO**

**Energy & Carbon Management  
Commission**

Department of Natural Resources

C 303.725.3318

1120 Lincoln Street, Suite 801, Denver, CO 80203

[www.colorado.gov/ecmc](http://www.colorado.gov/ecmc)

---

**Wells, Matt** <Matthew\_Wells@oxy.com>

Wed, Jan 15, 2025 at 7:14 AM

To: "Deranleau - DNR, Greg" <greg.deranleau@state.co.us>

Cc: "Weber - DNR, Kira" <kira.weber@state.co.us>, Laurel Faber DNR <laurel.faber@state.co.us>, Taylor Robinson - DNR <taylor.robinson@state.co.us>

Thank you Greg. I have comments and questions below in red. I have more answers coming to you but here are a few to keep the ball rolling.

---

**From:** Deranleau - DNR, Greg <greg.deranleau@state.co.us>

**Sent:** Tuesday, January 14, 2025 5:49 PM

**To:** Wells, Matt <Matthew\_Wells@oxy.com>

**Cc:** Weber - DNR, Kira <kira.weber@state.co.us>; Laurel Faber DNR <laurel.faber@state.co.us>; Taylor Robinson - DNR <taylor.robinson@state.co.us>

**Subject:** [EXTERNAL] Re: Re: Re: Form 15 [#404021594] Returned to Draft

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS,  
particularly with links and attachments.**

---

Matt,

A few questions regarding this pit permit:

1. The operator comment on the Submit tab states "This is a new Form 15 application for the GLADE drilling pit. The pit size and location has changed. The original approved Form 15 is document #403750374 will need to be closed out." The approval of that form created Pit Facility ID 487778. It appears that this should have been submitted as a Pit Report to update the records of that previously approved, but presumably unbuilt pit. If the prior pit was built, it needs to be closed per Rule 913.c.(1)--i.e. with a Form 27. Can ECMC, with your permission, change this to a Pit Report for Facility 487778? **Yes, that pit was never built. I have never done any of this before so it is all new to me. So I am going to lean**

on you to do what is needed to close out the old never built pit documentation and approve this new drilling pit application. So, yes you have my permission.

- 2. It's been a while since I've worked a Pit Permit. In the past, "closed loop" was used to indicate a pitless drilling system where all fluids were contained in above ground containers. I've also seen "closed loop" be used to describe a drilling system with specific controls to capture emissions. This appears to be neither. Please explain what is meant by "The pit will be part of the closed loop water-based mud system." I reached out to our SME and will provide answer soon.
- 3. The emissions listed on the Conditions/Design&Construction tab do not match what was provided in the attached emissions calculations. Please explain the discrepancy and, with your permission, ECMC can change the value entered on the Form if that is incorrect.

I had trouble entering the 0.04081 number into the Webform field so a "0" was entered and the VOC number was inputted into the "Other information" field instead. If you can on the back end input the 0.04081 number for tpy VOC that would be great.

Operational Lifespan, per manufacturer's specs (years):

**Pit Emissions**  
 Estimated tons per year (tpy) of volatile organic compounds (VOCs): Attach Pit Emission Calculations.

Other Information:

Operator: This is a new Form 15 application for the GLADE drilling pit. The pit size and location has changed. The original approved Form 15 is document #A03750374 will need to be closed out

Total Number of Wells	2
Rig flare control %	0.95
SCF/yr	3,401
Pollutant	Total Uncontrolled Emissions (tpy)
VOCs	0.040811
Data Source	

EPA 1997 [1] page 89. EF obtained through "personal communications" with the Western Oil API 2009 [3] uses the wellbore gas composition to speciate CH<sub>4</sub> emissions. However, if these

- 4. Please review the Pit Emissions Working Group Recommendations from June 2023 and indicate which recommended method of calculation you've used. This link does not work. Can you double check and send me a new one?
- 1. In the cross sections it shows that the pit fluid level will be above both the original surface and post construction grade. This practice is generally discouraged, however, in this case it is recognized that since the pit is lined and the elevation difference is approximately a foot, it is relatively low risk, and likely does not require engineering for the fill. To the extent practicable, Oxy should endeavor to operate the pit with the fluid level below surrounding grade. This has been noted and communicated with the drilling team and they plan to keep the fluid level below surface grade.
- 5. Regarding the BMP for General Housekeeping: "The Pit will not be utilized longer than three years, unless otherwise approved of by ECMC." Please advise as to what the planned lifespan of the pit is and uses beyond drilling two wells as stated in the permit. The drilling pit will not be in use after the two test geothermal wells are drilled this summer. The plan is to only use this drilling pit for the two test geothermal wells that will be drilled in 2025. If the geothermal wells prove to be successful and the company decides to continue with the project (drill more geothermal wells on that location) then Oxy will go through the newly minted ECMC Geothermal well permitting process and will submit the necessary required drilling pit form as well. If the project is not moved forward after these two test wells then the only location including the drilling pit will be reclaimed.

[Quoted text hidden]

[Quoted text hidden]

Deranleau - DNR, Greg <greg.deranleau@state.co.us>

Wed, Jan 15, 2025 at 8:51 AM

To: "Wells, Matt" <Matthew\_Wells@oxy.com>

Cc: "Weber - DNR, Kira" <kira.weber@state.co.us>, Laurel Faber DNR <laurel.faber@state.co.us>, Taylor Robinson - DNR <taylor.robinson@state.co.us>

Thanks Matt.

Please see below for further follow up.

Greg

On Wed, Jan 15, 2025 at 7:14 AM Wells, Matt <Matthew\_Wells@oxy.com> wrote:

Thank you Greg. I have comments and questions below in red. I have more answers coming to you but here are a few to keep the ball rolling.

**From:** Deranleau - DNR, Greg <greg.deranleau@state.co.us>  
**Sent:** Tuesday, January 14, 2025 5:49 PM  
**To:** Wells, Matt <Matthew\_Wells@oxy.com>  
**Cc:** Weber - DNR, Kira <kira.weber@state.co.us>; Laurel Faber DNR <laurel.faber@state.co.us>; Taylor Robinson - DNR <taylor.robinson@state.co.us>  
**Subject:** [EXTERNAL] Re: Re: Re: Form 15 [#404021594] Returned to Draft

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.**

Matt,

A few questions regarding this pit permit:

1. The operator comment on the Submit tab states "This is a new Form 15 application for the GLADE drilling pit. The pit size and location has changed. The original approved Form 15 is document #403750374 will need to be closed out." The approval of that form created Pit Facility ID 487778. It appears that this should have been submitted as a Pit Report to update the records of that previously approved, but presumably unbuilt pit. If the prior pit was built, it needs to be closed per Rule 913.c.(1)--i.e. with a Form 27. Can ECMC, with your permission, change this to a Pit Report for Facility 487778? **Yes, that pit was never built. I have never done any of this before so it is all new to me. So I am going to lean on you to do what is needed to close out the old never built pit documentation and approve this new drilling pit application. So, yes you have my permission. Thanks, we will do so.**
2. It's been a while since I've worked a Pit Permit. In the past, "closed loop" was used to indicate a pitless drilling system where all fluids were contained in above ground containers. I've also seen "closed loop" be used to describe a drilling system with specific controls to capture emissions. This appears to be neither. Please explain what is meant by "The pit will be part of the closed loop water-based mud system." **I reached out to our SME and will provide answer soon. Thanks, Look forward to it.**
3. The emissions listed on the Conditions/Design&Construction tab do not match what was provided in the attached emissions calculations. Please explain the discrepancy and, with your permission, ECMC can change the value entered on the Form if that is incorrect.

**I had trouble entering the 0.04081 number into the Webform field so a "0" was entered and the VOC number was inputted into the "Other information" field instead. If you can on the back end input the 0.04081 number for tpy VOC that would be great. Thanks. I misread the emissions calculations attachment. I now see that the 0.04081 number is consistent.**

Operational Lifespan, per manufacturer's specs (years):

**Pit Emissions**

Estimated tons per year (tpy) of volatile organic compounds (VOCs): Attach Pit Emission Calculations.

Other Information:

Operator: [This is a new Form 15 application for the GLADE drilling pit. The pit size and location has changed. The original approved Form 15 is document #403750374 will need to be closed out.]

<b>Total Number of Wells</b>	<b>2</b>
<b>Rig flare control %</b>	<b>0.95</b>
<b>SCF/yr</b>	<b>3,401</b>
<b>Pollutant</b>	<b>Total Uncontrolled Emissions (tpy)</b>
<b>VOCs</b>	<b>0.040811</b>
<b>Data Source</b>	

EPA 1997 [1] page 89. EF obtained through "personal communications" with the Western Oil  
 API 2009 [3] uses the wellbore gas composition to speciate CH<sub>4</sub> emissions. However, if these

4. Please review the [Pit Emissions Working Group Recommendations](https://ecmc.state.co.us/documents/library/Special_Projects/Pit_Emissions_Workgroup_Recommendations.pdf) from June 2023 and indicate which recommended method of calculation you've used. **This link does not work. Can you double check and send me a new one? Try this: https://ecmc.state.co.us/documents/library/Special\_Projects/Pit\_Emissions\_Workgroup\_Recommendations.pdf**

1. In the cross sections it shows that the pit fluid level will be above both the original surface and post construction grade. This practice is generally discouraged, however, in this case it is recognized that since the pit is lined and the elevation difference is approximately a foot, it is relatively low risk, and likely does not require engineering for the fill. To the extent practicable, Oxy should endeavor to operate the pit with the fluid level below surrounding grade. **This has been noted and communicated with the drilling team and they plan to keep the fluid level below surface grade. Thank you. Are you willing to include this as a BMP? If so, please provide language and we can add it.**

5. Regarding the BMP for General Housekeeping: "The Pit will not be utilized longer than three years, unless otherwise approved of by ECMC." Please advise as to what the planned lifespan of the pit is and uses beyond drilling two wells as stated in the permit. The drilling pit will not be in use after the two test geothermal wells are drilled this summer. **The plan is to only use this drilling pit for the two test geothermal wells that will be drilled in 2025. If the geothermal wells prove to be successful and the company decides to continue with the project (drill more geothermal wells on that location) then Oxy will go through the newly minted ECMC Geothermal well permitting process and will submit the necessary required drilling pit form as well. If the project is not moved forward after these two test wells then the only location including the drilling pit will be reclaimed. To clarify, additional geothermal wells would be used on this same location? Thus the use of this pit would be extended in duration? My concern is that this pit is not designed, constructed, or intended to meet the requirements of Rule 907 for Centralized E&P Waste Management Facility, so it needs to be properly closed before the end of the three year cut-off for those more robust facilities. Therefore, in advance, KMG should be aware, that this pit will not be approved for use beyond three years.**

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

**Wells, Matt** <Matthew\_Wells@oxy.com>

Wed, Jan 15, 2025 at 10:55 AM

To: "Deranleau - DNR, Greg" <greg.deranleau@state.co.us>

Cc: "Weber - DNR, Kira" <kira.weber@state.co.us>, Laurel Faber DNR <laurel.faber@state.co.us>, Taylor Robinson - DNR <taylor.robinson@state.co.us>, "Tartaglia, Stephen" <Stephen\_Tartaglia@oxy.com>, "Rhodes, Ryan" <Ryan\_Rhodes@oxy.com>

Greg,

Following up on those last items. The newest updated comments are in green.

A few questions regarding this pit permit:

1. The operator comment on the Submit tab states "This is a new Form 15 application for the GLADE drilling pit. The pit size and location has changed. The original approved Form 15 is document #403750374 will need to be closed out." The approval of that form created Pit Facility ID 487778. It appears that this should have been submitted as a Pit Report to update the records of that previously approved, but presumably unbuilt pit. If the prior pit was built, it needs to be closed per Rule 913.c.(1)--i.e. with a Form 27. Can ECMC, with your permission, change this to a Pit Report for Facility 487778? **Yes, that pit was never built. I have never done any of this before so it is all new to me. So I am going to lean on you to do what is needed to close out the old never built pit documentation and approve this new drilling pit application. So, yes you have my permission. Thanks, we will do so.**
2. It's been a while since I've worked a Pit Permit. In the past, "closed loop" was used to indicate a pitless drilling system where all fluids were contained in above ground containers. I've also seen "closed loop" be used to describe a drilling system with specific controls to capture emissions. This appears to be neither. Please explain what is meant by "The pit will be part of the closed loop water-based mud system." **I reached out to our SME and will provide answer soon. Thanks, Look forward to it.**
  - The drilling pit is only being installed as a contingency measure for well control scenarios, such as a steam kick, due to the exploratory nature of the wells and the uncertainty of downhole conditions. Its primary purpose will be to capture diverted fluids and provide sufficient volume to retain drilling fluids in such events. The rig will be equipped with a mud gas separator to separate steam from drilling fluids while drilling through the basement rock. In the event of steam generation, the steam will be diverted to the pit, where the resulting fluid will be captured as it condenses. Routine drilling returns will not be directed to the earthen pit. Instead, they will flow into the rig's closed-loop system, which consists of tanks designed for efficient fluid handling and solids control.
3. The emissions listed on the Conditions/Design&Construction tab do not match what was provided in the attached emissions calculations. Please explain the discrepancy and, with your permission, ECMC can change the value entered on the Form if that is incorrect.

**I had trouble entering the 0.04081 number into the Webform field so a "0" was entered and the VOC number was inputted into the "Other information" field instead. If you can on the back end input the 0.04081 number for tpy VOC that would be great. Thanks. I misread the emissions calculations attachment. I now see that the 0.04081 number is consistent.**

4. Please review the [Pit Emissions Working Group Recommendations](#) from June 2023 and indicate which recommended method of calculation you've used. **This link does not work. Can you double check and send me a new one? Try this: [https://ecmc.state.co.us/documents/library/Special\\_Projects/Pit\\_Emissions\\_Workgroup\\_Recommendations.pdf](https://ecmc.state.co.us/documents/library/Special_Projects/Pit_Emissions_Workgroup_Recommendations.pdf)**
  - The emissions were developed using a mass balance approach and assumes all VOCs will be emitted to atmosphere. The calculation use EPA 1977 emission factors for mud degassing and a gas composition from API 2009 Table 5-17.

5. In the cross sections it shows that the pit fluid level will be above both the original surface and post construction grade. This practice is generally discouraged, however, in this case it is recognized that since the pit is lined and the elevation difference is approximately a foot, it is relatively low risk, and likely does not require engineering for the fill. To the extent practicable, Oxy should endeavor to operate the pit with the fluid level below surrounding grade. This has been noted and communicated with the drilling team and they plan to keep the fluid level below surface grade. Thank you. Are you willing to include this as a BMP? If so, please provide language and we can add it.

- We do not plan to regularly contain any fluids in this pit, but rather it will be used to capture diverted fluids in the event of a steam kick.

6. Regarding the BMP for General Housekeeping: "The Pit will not be utilized longer than three years, unless otherwise approved of by ECMC." Please advise as to what the planned lifespan of the pit is and uses beyond drilling two wells as stated in the permit. The drilling pit will not be in use after the two test geothermal wells are drilled this summer. The plan is to only use this drilling pit for the two test geothermal wells that will be drilled in 2025. If the geothermal wells prove to be successful and the company decides to continue with the project (drill more geothermal wells on that location) then Oxy will go through the newly minted ECMC Geothermal well permitting process and will submit the necessary required drilling pit form as well. If the project is not moved forward after these two test wells then the only location including the drilling pit will be reclaimed. To clarify, additional geothermal wells would be used on this same location? Thus the use of this pit would be extended in duration? My concern is that this pit is not designed, constructed, or intended to meet the requirements of Rule 907 for Centralized E&P Waste Management Facility, so it needs to be properly closed before the end of the three year cut-off for those more robust facilities. Therefore, in advance, KMG should be aware, that this pit will not be approved for use beyond three years.

- Thank you for the clarification. We are aware this pit would not be approved for use beyond three years. And if we ever decided to drill more geothermal wells at this location (and assuming we needed a drilling pit) we would need to file new Form 15.

I hope that answers all your question.

Matt

[Quoted text hidden]

Wells, Matt <Matthew\_Wells@oxy.com>  
To: "Deranleau - DNR, Greg" <greg.deranleau@state.co.us>

Wed, Jan 22, 2025 at 11:07 AM

Greg,

Just touching base. How is this looking and do you need anything else from me?

Matt

[Quoted text hidden]

Deranleau - DNR, Greg <greg.deranleau@state.co.us>  
To: Greg Deranleau <Greg.Deranleau@state.co.us>

Wed, Jan 22, 2025 at 8:33 PM

Sent from mobile device, please excuse typos.

[Quoted text hidden]

2 attachments



image001.png  
28K

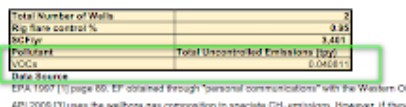


image002.png  
37K