

IN THE MATTER of a CONTRAVENTION
of the *OIL AND GAS ACTIVITIES ACT*
[SBC 2008] Chapter 36
before
The OIL and GAS COMMISSION
Case File 2018-156FSJ

BETWEEN

The Oil and Gas Commission

AND

Murphy Oil Company Ltd.

ADMINISTRATIVE FINDING

Before

Vice President, Operations, Andrew Johnson

Representing the Oil and Gas
Commission

Compliance & Enforcement Officer, Nicholas
Herrmann

Representing Murphy Oil
Company Ltd.

Jarred Anstett, Senior Regulatory &
Environmental Technologist

Decision Date

April 8, 2021

Introduction

1. On or about July 23, 2018, to on or about October 12, 2018, Murphy Oil Company Ltd. (Murphy) experienced a containment failure involving one of its five C-Rings at D 040-A/093-P-09, Well Authorization 24389 (the location).
2. The contravention report (Report) was sent to me on February 10, 2021, alleging that Murphy contravened sections 37(1)(a) and 37(2)(b) of the *Oil and Gas Activities Act* (OGAA) and section 51(6)(d) of the *Drilling and Production Regulation* (DPR).
3. The Report included an Agreed Statement of Facts between the BC Oil and Gas Commission (Commission), represented by the Compliance and Enforcement Officer who investigated the matter, and Murphy.
4. On February 18, 2021, the Commission sent Murphy a letter and copy of the Report. The letter informed Murphy that the Commission was considering making a finding that Murphy contravened sections 37(1)(a) and 37(2)(b) of the OGAA and section 51(6)(d) of the DPR.
5. The letter informed Murphy of its opportunity to be heard in written form and that a finding of contravention could result in the Commission imposing an administrative penalty in accordance with section 63 of the OGAA.
6. Murphy declined to provide a response in an email dated March 4, 2021 and instead relied upon the information it provided through the Agreed Statement of Facts.
7. Pursuant to my delegated authority under section 62 and 63 of the OGAA, I will be making a determination regarding whether Murphy contravened sections 37(1)(a) and 37(2)(b) of the OGAA and section 51(6)(d) of the DPR; whether to impose an administrative penalty under section 63 of the OGAA; and the amount of the penalty, if any. I have reviewed the Report including the Agreed Statement of Facts. In making a determination, I rely on these documents, and the applicable legislation.

Applicable Legislation

8. Section 37(1)(a) of the OGAA states:
 - (1) A permit holder, an authorization holder and a person carrying out an oil and gas activity must
 - (a) prevent spillage;
9. Maximum penalties for specific violations are set by regulation. Section 2(1) of the Administrative Penalties Regulation provides that a person who contravenes section 37(1)(a) of the OGAA is liable to an administrative penalty not exceeding \$500,000.
10. Section 37(2)(b) of the OGAA states:
 - (2) If spillage occurs, a permit holder, an authorization holder or person carrying out an oil and gas activity must promptly do all of the following:
 - (b) contain and eliminate the spillage
11. Section 2(1) of the Administrative Penalties Regulation provides that a person who contravenes section 37(2)(b) of the OGAA is liable to an administrative penalty not exceeding \$500,000.

12. At the time of the alleged contravention, section 51(6)(d) of the DPR stated:
 - (6) A well permit holder who uses an above ground structure with a liner as the primary means of containment to store water-based fluids with a concentration of total dissolved solids greater than 4 000 ppm must ensure that
 - (d) the structure is located and constructed in a place and manner that ensures the contained fluids will not migrate beyond the lease boundary in the event of a containment failure
13. Section 2(1) of the Administrative Penalties Regulation provides that a person who contravenes section 51(6)(d) of the DPR is liable to an administrative penalty not exceeding \$50,000.
14. Section 62(1) of the OGAA states that, after providing an opportunity to be heard to a person who is alleged to have contravened a provision of the OGAA, the regulations, a permit, an authorization or an order, the Commission may find that the person has contravened the provision.
15. Section 62(5) of the OGAA states that the Commission may not find that a person has contravened a provision of the OGAA or the regulations if the person demonstrates to the satisfaction of the Commission that the person exercised due diligence to prevent the contravention or that the person's actions were the result of an officially induced error.
16. Section 63(1) states that, if the Commission finds that a person contravened a provision of the OGAA or its regulations, the Commission may impose an administrative penalty. Section 63(2) of the OGAA sets out the factors that must be considered when determining whether to impose an administrative penalty under section 63(1) and the amount of the penalty. These include:
 - (a) previous contraventions by, administrative penalties imposed on, or orders issued to the person;
 - (b) the gravity and magnitude of the contravention;
 - (c) the extent of harm to others resulting from the contravention;
 - (d) whether the contravention was repeated or continuous;
 - (e) whether the contravention was deliberate;
 - (f) any economic benefit derived by the person from the contravention;
 - (g) the person's efforts to prevent and correct the contravention; and
 - (h) other prescribed matters.

Background

17. There is very little evidence in dispute in this case. The background I have provided below is primarily taken from the Agreed Statement of Facts which I have reviewed and find reliable and supported by evidence otherwise provided in the Report. I appreciate the cooperation of both parties in this matter.
18. Murphy is the permit holder at the location where operations included five C-Rings. The C-Ring that was the subject matter of this incident was constructed as of October 16, 2017 with a dual liner system consisting of a primary and secondary liner using 30mm synthetic liner material.
19. Murphy began filling the C-Ring with produced water in early January 2018. In late February 2018, Murphy began draining the produced water from the C-Ring. The ice that had formed on top of the fluid contained within the C-Ring had not been fully thawed prior to withdrawal operations. The decrease of fluid from the C-Ring caused the ice sheet to contact the folds of the liner as it moved, resulting in 23 tears to the primary liner.
20. On or about July 23, 2018, Murphy refilled the C-Ring with produced water, with a total dissolved solids concentration greater than 4,000 ppm, to a measured depth of 300cm above the C-Ring floor or an approximate total volume of 5400m³. The resulting increase in hydrostatic pressure caused a rock lodged between the C-Ring's steel wall and secondary liner, approximately 23cm above ground level, to puncture the C-Ring's secondary liner.
21. Due to the tears to the primary liner and the puncture to the secondary liner, the C-Ring began to leak produced water on approximately July 23, 2018.
22. Between July 23, 2018 and October 12, 2018, fluid loss from the C-Ring and rain eroded the site's perimeter berm and provided a pathway for the contaminated fluids to escape Murphy's permitted operating area. In addition, between October 10 and October 12, 2018, a Murphy Field Operator observed water pooling in the containment area of the C-Ring. Without testing the pooled water, the Field Operator deliberately breached the site's perimeter berm to allow surface water to drain off site onto adjacent land owned by Murphy.
23. From July 23, 2018 until October 12, 2018 Murphy's daily inspection logs indicated that the produced water remained 300cm above the C-Ring floor. On October 12, 2018, a Murphy Field Operator recorded a contained fluid level of 275cm above the C-Ring floor. A decrease of 25 cm represents approximately 440m³ of produced water. On October 13, 2018, the same Field Operator conducted the required daily inspection and verified the previous measurement of 275cm. This was reported to the Field Foreman who tested the pooled surface water around the C-Ring and detected chloride levels significantly higher than normal.
24. Murphy began to empty and transfer fluid out of the C-Ring on October 16, 2018 and notified the Commission of the incident.

Issues

25. The issues which I will decide are:

Section 37(1)(a) of the OGAA:

- Did Murphy prevent spillage?
- Did Murphy exercise due diligence to prevent spillage?
- Was any noncompliance due to an officially induced error?
- Did Murphy contravene section 37(1)(a) of the OGAA?

Section 37(2)(b) of the OGAA:

- Did Murphy promptly contain and eliminate the spillage?
- Did Murphy exercise due diligence to contain and eliminate spillage?
- Was any noncompliance due to an officially induced error?
- Did Murphy contravene section 37(2)(b) of the OGAA?

Section 51(6)(d) of the DPR:

- Did Murphy ensure that the structure was located and constructed in manner that ensures the contained fluids will not migrate beyond the lease boundary in the event of a containment failure?
- Did Murphy exercise due diligence in the location and construction of the structure?
- Was any noncompliance due to an officially induced error?
- Did Murphy contravene section 51(6)(d) of the DPR?

Section 63 of the OGAA:

- If Murphy is found to have contravened sections 37(1)(a) and/or 37(2)(b) of the OGAA and/or section 51(6)(d) of the DPR what if any, administrative penalty to impose?

Section 37(1)(a) of the OGAA:

Did Murphy fail to prevent spillage?

26. In the Agreed Statement of Facts Murphy admitted that it failed to prevent spillage. I am satisfied that approximately 440m³ of produced water escaped from one of Murphy's C-Rings, left its permitted area, and flowed onto adjacent private land and that this constituted a failure to prevent spillage.

Did Murphy exercise due diligence to prevent spillage?

27. Pursuant to section 62(5) of the OGAA, I may not find that Murphy contravened section 37(1)(a) of the OGAA if Murphy demonstrates to my satisfaction that it exercised due diligence to prevent the contravention. The test to be applied is whether Murphy has

demonstrated that it took all reasonable steps to prevent the contravention. Murphy is not required to show that it took all possible or imaginable steps to avoid the contravention. The standard is not one of perfection, but rather of a reasonable person in similar circumstances.

28. In the Agreed Statement of Facts Murphy acknowledged that it did not have adequate procedures for the management of ice on C-rings during winter operations. It would be reasonable to have foreseen the impact of the ice build-up and damage to the liner and that Murphy would have a procedure and training in place to mitigate the risks.
29. It also would have been reasonable to expect that a Field Operator would be well trained on the hazards of breaching a perimeter berm without testing any accumulated water.
30. Murphy has failed to satisfy me it took all reasonable steps to prevent spillage.

Was any noncompliance the result of an officially induced error?

31. I have no evidence before me of officially induced error.

Did Murphy contravene section 37(1)(a) of the OGAA?

32. I find that Murphy has failed to comply with section 37(1)(a) of the OGAA by not preventing spillage.

Section 37(2)(b) of the OGAA:

Did Murphy contain and eliminate spillage?

33. Murphy acknowledged in the Agreed Statement of Facts that it failed to contain and eliminate spillage. It is clear that fluids escaped between approximately July 23, 2018 and October 16, 2018, which represents a significant delay between when the spill first began and when it was ultimately resolved. Information provided by Murphy in response to information requests identified that Murphy Field Operators were not checking the C-Ring levels as required and therefore were unaware of the spillage that was occurring. Further, when pooled water was actually observed in the containment area of the C-Ring, instead of testing the pooled water, the perimeter berm was deliberately breached to allow that water to drain off site.
34. I am satisfied that Murphy did not contain or eliminate spillage.

Did Murphy exercise due diligence to contain and eliminate spillage?

35. The Agreed Statement of Facts identifies that Field Operators willfully breached a berm meant to contain spillage. Although Murphy indicated that its well site inspection checklist required the condition of the site berm to be inspected and recorded, neither of the breaches – the manmade nor the one that resulted from erosion – were recorded.
36. In addition, Murphy indicated in response to information requests that C-Ring measurements were likely falsified on the daily inspection reports to indicate that inspections were being completed when they were not.
37. Murphy agrees that its training of Field Operators was insufficient.

38. I also would have expected Murphy Field Supervisors to have completed some measure of verification of the work being performed by the Field Operators. This might have shortened the period of time that the C-Ring was leaking by making Murphy aware sooner and prevented the intentional breach of the berm.
39. I am satisfied that Murphy did not exercise due diligence to contain and eliminate the spillage.

Was any noncompliance the result of an officially induced error?

40. I have no evidence before me of officially induced error.

Did Murphy contravene section 37(2)(b) of the OGAA?

41. I find that Murphy has failed to comply with section 37(2)(b) of the OGAA.

Section 51(6)(d) of the DPR:

Did Murphy ensure that the structure was located and constructed in a manner that ensures the contained fluids will not migrate beyond the lease boundary in the event of a containment failure?

42. Approximately 440M³ of produced water was released from the site due to breaches to the berm. One of the breaches was a result of erosion.
43. The Agreed Statement of Facts indicates that the erosion was a result of the pooled fluids from the C-Ring and rain. It is expected that C-Rings will be located and constructed specifically to prevent contaminated fluids from migrating beyond the berm; this is, after all, the purpose of the containment system. The fact erosion occurred less than one year after construction due to the existence of rain and product is problematic. Nonetheless, there is insufficient evidence before me to conclude that the erosion was the result of construction/location issues and therefore I find that there is no contravention of section 51(6)(d) of the DPR.
44. As I have concluded there is no contravention of section 51(6)(d) of the DPR, I do not need to consider the defenses of due diligence or officially induced error.

If Murphy is found to have contravened sections 37(1)(a) and/or 37(2)(b) of the OGAA and/or section 51(6)(d) of the DPR what if any, administrative penalty is to be imposed?

45. Section 63 of the OGAA sets out factors that the Commission must take into consideration when determining whether or not to impose an administrative penalty. In the following paragraphs, I consider the applicability of those factors to these contraventions.
46. Murphy has had one previous contravention for failing to minimize the risk of loss of well control where an administrative penalty of \$8,000 was issued. Murphy has eight previous orders.
47. The gravity and magnitude of the contravention is considered moderate due to the quantity of produced water that went offsite.
48. There is no evidence to suggest harm to others as a result of the contravention.

49. The contravention was not repeated but was continuous until the spillage was noted and corrected.
50. There is no evidence to suggest that the contravention was deliberate.
51. There is insufficient evidence to indicate that Murphy gained any significant economic benefit from the contravention.
52. Murphy took full responsibility for its actions and subsequently updated checklists, training, and improvements to its oversight.

Conclusion

53. In consideration of the foregoing, I have found that Murphy contravened sections 37(1)(a) and 37(2)(b) of the OGAA. Based on the above discussion of the various factors set out in section 63(2), I am imposing an administrative penalty of \$25,000 for these contraventions.



Andy Johnson
Vice President, Operations
BC Oil and Gas Commission

Date: April 8, 2021