

IN THE MATTER of a CONTRAVENTION
of the *OIL AND GAS ACTIVITIES ACT*
[SBC 2008] Chapter 36
before
The BC OIL AND GAS COMMISSION
Case File 2015-107

BETWEEN

The BC Oil and Gas Commission

AND

Progress Energy Canada Ltd.

ADMINISTRATIVE FINDING

Before	Vice President, Operations, Lance Ollenberger
Representing the Oil and Gas Commission	Operations Supervisor, Dax Bourke
Representing Progress Energy Canada Ltd.	Regulatory Counsel, Trena Grimoldby
Decision Date	November 17, 2017

Introduction:

1. On August 26, 2015, Progress Energy Canada Ltd. (Progress) was conducting hydraulic fracturing operations on a wellsite located at C-E025-D/094-G-10, WA 31073. During a temporary shutdown of activities, an aboveground walled storage system (AWSS) overflowed spilling approximately 51m³ of produced liquid.
2. Progress had suspended operations temporarily for mechanical maintenance during which time each service was required to cease their individual works and wait for notification to continue. Energy Fluid Services (EFS) was tasked with filling the AWSS during this period. At 0200hrs a truck operator encountered fluids and communicated via radio that the produced water pit was overflowing.
3. A Contravention Report (the Report) was prepared by an Operations Supervisor and sent to me by the Director, Compliance and Enforcement on February 10, 2017 alleging that Progress contravened section 37(1)(a) of the *Oil and Gas Activities Act* (OGAA) and/or sections 50(1) and 51(1)(c) of the *Drilling and Production Regulation* (DPR).
4. On February 16, 2017, the BC Oil and Gas Commission (the Commission) sent Progress a letter and the Report informing Progress that the Commission was considering making a finding that Progress contravened section 37(1)(a) of OGAA and/or sections 50(1) and 51(1)(c) of the DPR. The letter informed Progress of its opportunity to be heard in written form (the OTBH Letter) and advised that a finding of contravention might result in the Commission imposing an administrative penalty in accordance with section 63 of OGAA.
5. Progress provided a response in a letter dated March 30, 2017 (the Response).
6. I have been delegated authority under sections 62 and 63 of OGAA. I will be making a determination with regards to: whether Progress contravened section 37(1)(a) of OGAA and/or sections 50(1) and 51(1)(c) of the DPR; whether to impose an administrative penalty under section 63 of OGAA; and the amount of the penalty, if any. I have reviewed the Report and Progress' Response. In making a determination, I rely on these documents, and the applicable legislation.

Applicable Legislation

7. Section 37(1)(a) of OGAA states that a permit holder and a person carrying out an oil and gas activity must prevent spillage.
8. Maximum penalties for specific violations are set by regulation. Section 2(1) of the *Administrative Penalties Regulation* (APR) states that a person who contravenes section 37(1) of OGAA is liable to an administrative penalty not exceeding \$500,000.
9. Section 50(1) of the DPR states that a permit holder must take every reasonable precaution to prevent loss or waste of oil, gas or water in drilling, producing and processing operations, and, in storing, piping or distributing, oil or gas must not be used wastefully or allowed to leak or escape from natural reservoirs, wells, tanks, containers or pipes.
10. Section 5(4) of the APR states that a person who contravenes section 50(1) of the DPR is liable to an administrative penalty not exceeding \$100,000.

11. Section 51(1)(c) of the DPR states that a well permit holder must ensure that formation water, oil, drilling fluid, completion fluid, waste, chemical substances or refuse from a well, tank or other facility do not do any of the following: run over, pollute or damage any land or public road.
12. Section 5(1) of the APR states that a person who contravenes section 51(1) of the DPR is liable to an administrative penalty not exceeding \$500,000.
13. Section 62(1) of OGAA states that, after providing an opportunity to be heard to a person who is alleged to have contravened a provision of the Act, the regulations, a permit, an authorization or an order, the Commission may find that the person has contravened the provision.
14. Section 62(5) of OGAA states, in part, that the Commission may not find that a person has contravened a provision of OGAA or the regulations if the person demonstrates to the satisfaction of the Commission that they exercised due diligence to prevent the contravention.
15. Section 63(1) states that, if the Commission finds that a person contravened a provision of OGAA or its regulations, the Commission may impose an administrative penalty. Section 63(2) of 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.

Preliminary Issues

16. Progress raised a number of factual and procedural issues in its Response. To the extent that I feel those issues require a response and are not addressed elsewhere in this decision, I will address them here.
17. The Report contains all pertinent investigative evidence brought forward by staff that the Commission takes under consideration in making a determination. It is up to the statutory decision maker to make findings of fact based on all of the evidence and to determine the weight to attach to each piece of evidence. As previously mentioned, not only do I consider the Report but I also consider the submissions contained in the Response in determining the appropriate weight to attach to the evidence presented.
18. Progress indicates concerns regarding an inordinate and unexplained delay in completion of the investigation and contravention report for this incident. Section 68 of OGAA states the time limit for making a finding under section 62 and giving notice under section 64 is 3 years after the date on which the act or omission that is alleged to constitute the contravention occurred. The Commission is well within the timelines set out by legislation as the event occurred on August 26 2015. In addition, the Commission notes that after repeated requests by the Commission investigator, Progress took 10 months to provide the final post incident Environmental Consultant Report (Environmental Report) prepared by environment and engineering consultants, Matrix Solutions Inc. (Matrix) confirming Progress had addressed all environmental impacts. This delay

hindered the Commission's ability to complete its investigation and proceed with its decision based on all relevant facts.

19. The Report attachments are bookmarked electronically in the portable document format (PDF) to enable easy accessibility and manipulation. The standard bookmarking features are available in any PDF readable program. Progress could have reached out to the Commission if it required clarification on the delineation of specific appendices during the course of its review; it chose not to do so. In the future, the Commission will endeavor to ensure that attachments included in the appendices of the Reports are clearly marked.
20. The Commission attached Appendix 13 as a separate zipped file due to its size and Progress' email restrictions. The appendix was Progress' own Environmental Report submitted to the Commission previously and was part of the same email containing the OTBH letter and the Report sent electronically to and received by Progress' Manager of Regulatory and Operational Compliance Glen Swanson on February 16, 2017.

Background

21. On August 26, 2015, EFS was providing water services as a contractor for Progress during hydraulic fracturing operations at wellsite, WA 31073. On the day of the incident, the Progress well site supervisor (also known as the Completions Supervisor) met with all on-site personnel, including EFS representatives which consisted of one supervisor and one employee, to conduct a safety and pre-operational meeting to discuss responsibilities and procedures. The EFS employees were assigned the task of monitoring the fluid levels of the AWSS, taking measurements and providing numbers to the data-van; however, critical information, including shutdown procedures were not communicated between the EFS employees.
22. Progress initiated hydraulic fracturing operations at the wellsite but halted the operation late in the evening to enable Progress to perform maintenance on equipment. The well site supervisor gave notification to personnel via the radio to cease their operation and await further instruction to resume. The Progress supervisor requested that EFS continue with the water transfer activity in order to fill the AWSS in preparation for when fracture operations resumed.
23. At 0200hrs, a nitrogen truck operator noticed the AWSS overflowing and communicated the spill over the radio. Water transfer operations were stopped and Progress initiated cleanup of the spill and off-site fluids. Vacuum and tank trucks were dispatched to the site as well as environmental professionals to collect soil and surface water samples.
24. 51m³ of produced fluids overflowed from the AWSS. The fluids migrated across the pad and along the north and south pad catchment ditches where it pooled in the southwest corner surface water retention pond. An undetermined amount of fluid moved off-site from this location.

Issues

25. The issues which I will decide are:

Section 37(1)(a) of OGAA:

- Did Progress fail to prevent spillage?
- Did Progress exercise due diligence in its efforts to prevent spillage?
- Did Progress contravene section 37(1)(a) of OGAA?

Section 50(1) of the DPR:

- Did Progress fail to take every reasonable precaution to prevent loss or waste of oil, gas or water in drilling, producing and processing operations?
- Did Progress exercise due diligence in its efforts to take every reasonable precaution to prevent the loss or waste of oil, gas or water in drilling, producing and processing operations?
- Did Progress contravene section 50(1) of the DPR?

Section 51(1)(c) of the DPR:

- Did Progress fail to ensure completion fluid from a tank did not run over, pollute or damage any land or public road?
- Did Progress exercise due diligence in its efforts to ensure completion fluid from a tank did not run over, pollute or damage any land or public road?
- Did Progress contravene section 51(1)(c) of the DPR?

If Progress is found to have contravened section 37(1)(a) of OGAA, and/or sections 50(1) and 51(1)(c) of the DPR what if any, administrative penalty to impose?

Section 37(1)(a) of OGAA:

Did Progress fail to prevent spillage?

26. Progress does not dispute that approximately 51m³ of produced water was spilled during a maintenance shutdown at wellsite C-E025-D/094-G-10.
27. Progress reported the spill to the Commission as minor on August 27, 2015 and updated the incident to level 1 on August 28, 2015. Progress submitted a post incident report indicating 50m³ of fluid returns overflowed from the AWSS and acknowledged in its Response that the spill occurred. Therefore, I find that Progress failed to prevent spillage.

Did Progress exercise due diligence in its efforts to prevent spillage?

28. Pursuant to section 62(5) of OGAA, I may not find that Progress contravened section 37(1)(a) of OGAA if Progress demonstrates to my satisfaction that it exercised due diligence to prevent the contravention. The test to be applied is whether Progress has demonstrated that it took all reasonable steps to prevent the contravention. Progress 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.
29. Progress states that it exercised due diligence by having procedures in place at the time of the incident. This included its Produced Water Storage: C-ring Storage, Inspection and Spill Prevention procedure. The written onsite procedures were not followed during water transfer activity. The procedure indicates that a 0.5 m freeboard clearance will be maintained at all times and that filling operations will be suspended as soon as this level has been reached; however, this was not adhered to by Progress, EFS or the contractor operating the pumps.
30. On site at the time of the incident was the Progress wellsite supervisor who had assumed the role of the frac-fluid coordinator during the night shift, one EFS supervisor and one EFS worker tasked with monitoring the AWSS as well as a third party service provider operating the water pump.

Progress maintains that all contractors were aware of their roles and responsibilities and that it was the EFS employee's personal choice not to follow both EFS' and Progress' procedures.

31. Progress did not, however, present any evidence to demonstrate that it has any sort of training and orientation process established to convey policy and procedures to contractors and third party service providers. Progress has not provided any records or documentation to substantiate the claim that roles and responsibilities relating to water pumping operations are clearly defined and understood by all parties participating in Progress' well operations nor how those procedures are communicated, applied and managed.
32. Progress does not generally contest the circumstances surrounding how the incident transpired, but it attributes fault to the EFS personnel as the responsible parties due to personal choice, a lack of communication between the two employees and the lack of experience of the EFS worker. While these may have been major contributing factors, it is reasonable to expect that Progress would continuously supervise and manage its subcontractors by monitoring and overseeing all service providers. Progress indicates that the on-site frac fluid coordinators responsibilities included supervising third party contractors and ensuring operations are compliant with regulatory, corporate HSE and Operations Guidelines. This did not occur as evidenced by the two EFS employees remaining in their truck for over three and a half hours unsupervised by Progress. The EFS workers did not perform their assigned tasks to regularly observe and measure the levels in the AWSS.
33. For the reasons outlined above, Progress has not demonstrated to my satisfaction that it exercised due diligence to prevent the contravention.

Did Progress contravene section 37(1)(a) of OGAA?

34. Based on the reasons above, I have found that Progress failed to prevent spillage and further that it did not act diligently to prevent that spillage. As such, I find that Progress contravened section 37(1)(a) of OGAA.

Section 50(1) of the DPR:

Did Progress fail to take every reasonable precaution to prevent loss or waste of oil, gas or water in drilling, producing and processing operations?

35. Progress reported the incident indicating water-based fracturing fluid returns and produced water had been spilled during a temporary mechanical maintenance shutdown of fracturing operations. The AWSS overflowed and fluids travelled along the catchment ditches migrating offsite. I have already found there were steps Progress could have taken to prevent the spill and it could have taken the same steps to prevent loss or waste.
36. Additionally, reasonable precautions Progress could have taken would be to have a secondary containment around the AWSS to capture any fluids in the event of a spill. High water marks or alarms could have been installed to ensure the 0.5-meter freeboard was maintained at all times along with a two-way communication system to report fluid levels in the AWSS periodically even during shut-downs.
37. For those reasons, I find that Progress failed to take every reasonable precaution to prevent loss or waste of oil, gas or water in drilling, producing, and processing operations.

Did Progress exercise due diligence in its efforts to take every reasonable precaution to prevent loss or waste of oil, gas or water in drilling, producing, and processing operations?

38. Progress maintains it had its Produced Water Storage: C-ring Storage, Inspection and Spill Prevention procedure in place at the time of the incident. This procedure states that when pumping operations are ongoing, inspections should be done regularly throughout the day and that c-rings will be maintained with at least 0.5-metre freeboard at all times. Pumping into or truck filling operations will be suspended as soon as this level has been reached. There is no evidence before me to suggest Progress or its contractors conducted regular inspections to ensure maintenance of the required freeboard.
39. A reasonable step that Progress could have taken would have been to do periodic check-ins via radio to all contractors and service providers during the maintenance period. Progress states that radio communication was tested and confirmed between all services prior to the incident. Consequently, it would be a reasonable expectation that Progress would monitor the status of its contractors by requesting an update of their individual operations to ensure they are complying with requirements to cease or continue with their job tasks and responsibilities.
40. I am not satisfied that Progress exercised due diligence in its efforts to prevent the contravention.

Did Progress contravene section 50(1) of the DPR?

41. Based on the above, I find that Progress contravened section 50(1) of the DPR.

Section 51(1)(c) of the DPR:

The Commission acknowledges omission of the subsection in respect to section 51(1)(c) of the DPR in its correspondence with Progress. However, notably on page 6 of the Report delineating the alleged contraventions attributed to Progress, number 4 quotes the appropriate section of OGAA in its entirety. It is evident from the Response that this grammatical error did not prevent Progress from understanding the allegations being made against it.

Did Progress fail to ensure that completion fluid from a tank did not run over, pollute or damage any land or public road?

42. The Report alleges that Progress failed to ensure completion fluid from a tank did not run over, pollute or damage any land or public road. The post incident report submitted by Progress indicates that fluids migrated across the pad, followed along the catchment ditches, pooling in the southwest corner and moving offsite from this location. The excavation of an offsite bell hole was completed to allow for the accumulation and collection of residual fluids.
43. The Matrix Environmental Report submitted to the Commission in June 2016 identifies that the chloride concentrations exceeded the applicable industrial standards both on and off lease in several areas during the delineation of the spill area subsequent to the incident. Matrix recommended follow up soil and surface water sampling for any residual impacts of the forested and offsite areas. A final environmental report was submitted by Progress in November 2016 denoting the completion of full remediation of the impacted soil and conclusion of any further impacts offsite remaining from the release.
44. I find that Progress did fail to ensure that completion fluid from a tank did not run over, pollute or damage any land or public road. While the contamination and impacts may have been temporary

in nature, the AWSS did overflow and completion fluids did run over the land at the time of the incident.

Did Progress exercise due diligence in its efforts to ensure that completion fluid from a tank did not run over, pollute or damage any land or public road?

45. As discussed above, I have already identified reasonable measures Progress could have taken to prevent the spillage. Similarly, these steps could have been implemented to ensure completion fluid from a tank did not run over, pollute or damage any land or public road. The Management of Saline Fluid for Hydraulic Fracturing Guideline available on the Commission's website recommends that an AWSS be located and constructed in a place and manner that ensures the contained fluids will not migrate beyond the lease boundary in the event of containment failure. Progress may have responded quickly and efficiently to remediate following the spill; however, to make sure fluids would not migrate beyond the lease boundary, a reasonable step would be to have secondary containment on the AWSS as a proactive mechanism in the event fluid runs over.

46. Progress has failed to satisfy me that it took all reasonable steps to prevent the contravention.

Did Progress contravene section 51(1)(c) of the DPR?

47. I find that Progress has failed to ensure that completion fluid from a tank did not run over, pollute or damage any land or public road. I am not satisfied that Progress exercised due diligence to prevent the contravention. As such, I find that Progress contravened section 51(1)(c) of the DPR.

If Progress is found to have contravened section 37(1)(a) of OGAA, and/or sections 50(1) and 51(1)(c) of the DPR what if any, administrative penalty is to be imposed?

48. Section 63 of 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.

49. In 2014, Progress was found in contravention of section 37(1) of OGAA and section 51(1)(c) of the DPR for a similar noncompliance where produced water spilled from a pit and ran off the lease and onto Crown Land and an administrative penalty of \$10,000 was imposed.

50. The contravention was of relatively minor gravity and magnitude. A small amount of fluid was released; the impact to the environment was temporary; and a follow-up inspection confirmed the vegetation in the offsite spill area was not negatively affected.

51. There was no harm to others as a result of this contravention.

52. There is no evidence that the contravention was repeated or continuous and Progress took corrective action as soon as it became aware of the incident.

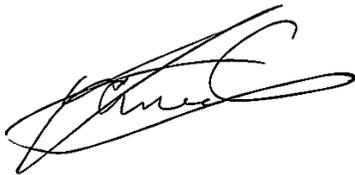
53. The contravention was not deliberate but rather attributed to EFS' lack of proper monitoring and attention to the pumping operations and insufficient supervision by Progress.

54. Progress did not derive any significant economic benefit and the expenses incurred for containment, clean-up, environmental assessments and remedial works were substantial.

55. As outlined above, Progress made efforts to prevent the contravention by implementing several mitigation measures following the 2013 spill which included identifying a maximum/minimum fill level; developing a planning process that incorporated a formal risk assessment process and putting procedures in written format and distributing them to contractors. Five corrective actions outlined in the post incident report following this incident were put into practice by Progress including: issuing a safety alert; designating a frac water supervisor for night shifts; evaluating operations and third party service provider personnel; developing and implementing a spot check checklist for use in the field training component; and implementing high-level alarms on all c-rings and buffer tanks.
56. The subsequent implementation of further corrective actions and operational measures in order to prevent another incident from reoccurring does warrant some consideration; nevertheless, this is Progress' second contravention under section 37(1) of OGAA and 51(1)(c) of the DPR in similar circumstances.

Conclusion

57. In consideration of the foregoing, I find that Progress contravened sections 37(1)(a) of OGAA, and sections 50(1) and 51(1)(c) of the DPR. I am imposing an administrative penalty of \$15,000.



Lance Ollenberger
Vice President, Operations
BC Oil and Gas Commission

Date: November 17, 2017