

Administrative Penalty Director's Decision

Named Party: ConocoPhillips Canada Operations ULC¹ **BA Code:** 0XL9

File No. Investigation 2016-012

Legislative Authority

Section 237 of the *Environmental Protection and Enhancement Act (EPEA)* and section 1 of the Schedule in the *Administrative Penalty Regulation*

Sections 59.3 through 59.8 of the *Public Lands Act (PLA)* and section 171(2) of the *Public Lands Administration Regulation*

Sections 70 through 75 of the *Responsible Energy Development Act (REDA)* and section 8.1 of *REDA General Regulation*

Preliminary Assessment

Number of Counts Identified	Base Assessment Amount	Factor Variance(s)	
Count 1	\$5000	+\$2000 ²	
Count 2	\$165 000		
Count 3	\$5000		
Count 4	\$5000		
Total Counts: 4	Total Base Assessment: \$180 000	Total Variance:	+\$2000

Total Preliminary Assessment: \$180 000

¹ Effective March 10, 2017, the BA Code holder changed its name from ConocoPhillips Canada Operations Ltd. to ConocoPhillips Canada Operations ULC.

² Per section 3(3) of the *Administrative Penalty Regulation*, section 171(5) of the *Public Lands Administration Regulation*, and section 8.3(3) of the *Responsible Energy Development Act General Regulation*, the maximum amount cannot exceed \$5000 for each day or part of a day on which a contravention occurs or continues.

Director's Decision Summary

On March 21, 2018, I, Mark R. Miller, Director, for the Alberta Energy Regulator (AER), spoke with Kimberly Iverson, Government and External Relations Manager for ConocoPhillips Canada Operations ULC (ConocoPhillips) to discuss the Preliminary Administrative Penalty Assessment (Assessment) for AER Investigation 2016-012. Ms. Iverson agreed to meeting in person to discuss the investigation findings and Assessment. The Assessment was emailed to Ms. Iverson on March 22, 2018.

On April 23, 2018, I, Mark R. Miller, Director for the AER met with ConocoPhillips representatives, Kimberly Iverson and Stephen Bradley, Vice President, Canada Operations and Capital Execution.

The purpose of the meeting was to review the facts on which the Assessment was based, how the Assessment was calculated, and provide an opportunity for ConocoPhillips to share with the AER any relevant information not previously submitted to be considered prior to making a final decision.

During the meeting ConocoPhillips requested time to submit a written response to the Assessment and a deadline of April 27, 2018, was agreed upon for submitting the response.

The Assessment identified the following:

Pipeline Rules

COUNT 1

On or about June 9, 2016, in the Province of Alberta, the AER became aware that ConocoPhillips Canada Operations ULC did fail to develop, implement, and regularly update a leak-detection manual for liquid hydrocarbon pipelines contrary to section 9(4) of the *Pipeline Rules*, which is an offence under section 52(2)(a) of the *Pipeline Act*.

BASE PENALTY TABLE				
Seriousness of Contravention				
		Major	Moderate	Minor
Extent of actual or potential loss or damage	Major	5000	3500	2500
	Moderate	3500	2500	1500
	Minor to	2500	1500	1000
	None	1000	600	250

Seriousness of Contravention: Major

Leak detection manuals, including their implementation, are foundational in mitigating the degradation of pipelines and the associated risks to the environment and public safety. Leaks and releases must be prevented as much as possible. It was entirely foreseeable that a leak could occur without detection for a considerable period of time, with the absence of appropriate leak detection procedures and activities.

The AER requires licensees to not only have manuals but to implement the procedures contained in these manuals. This reduces the risk of pipeline leaks and ensures that when a pipeline leak does occur it is discovered as soon as possible to prevent the release from continuing and causing further damage or impact to the environment or public safety.

Extent of Actual or Potential Loss or Damage: Major

The purpose of a leak detection manual, and implementing its procedures to detect leaks, is to protect public safety and the environment from pipeline incidents which can be significant, especially in cases where releases occur over an extended period of time. By failing to have a leak detection manual, fully in effect and implemented, ConocoPhillips caused significant loss of, and damage to, vegetation, wildlife, waterways, and public land.

Base Assessment: \$5000

EPEA

COUNT 2

On or about May 7, 2016 to June 9, 2016 (thirty three days), in the Province of Alberta, ConocoPhillips Canada Operations ULC failed to report to the AER a release into the environment of condensate that may cause, is causing, or has caused an adverse effect as soon as ConocoPhillips Phillips Canada Operations ULC ought to have known of the release, contrary to section 110(1)(a) of the *Environmental Protection and Enhancement Act*, which is an offence under section 227(j) of that act.

		BASE PENALTY TABLE		
		Type of Contravention		
Potential For Adverse Effect		Major	Moderate	Minor
	Major	5000	3500	2500
	Moderate	3500	2500	1500
	Minor to None	2500	1500	1000

Type of Contravention: Major

A licensee’s duty to self-report releases to the environment that may cause, are causing, or have caused an adverse effect as soon as they ought to have known is a cornerstone to the legislative system under *EPEA* and crucial to protecting the environment.

ConocoPhillips had the volume and pressure loss information necessary to ensure that they ought to have known a leak or release was occurring in a timelier manner, yet still failed to identify the release for 33 days, which the AER considers to be a significant period of time.

Potential for Adverse Effect: Major

The impacts of the release, as reported by ConocoPhillips, include 619 potential and 38 wildlife mortalities but this does not include any impacts from before the release was reported. The extent of the release (2 800 000 m² and including waterways) and its lengthy duration of remaining in the environment may have caused adverse effects to other forms of wildlife. In Webb Creek, for example, the reduction of productive capacity and suitability of habitat, including the loss of all spawning output for the year, as indicated by the fisheries biologist, only add to the already significant adverse effects and potential adverse effects. The failure to report and take remedial actions as soon as ConocoPhillips ought to have known very likely resulted in a greater degree of adverse effects to the environment that could have been mitigated if dealt with sooner.

Section 237(2)(a) of *EPEA* allows the AER to impose a daily administrative penalty amount for each day or part of a day which the contravention occurs or continues. In this case, the contravention occurred and continued for 33 days.

Accordingly, a daily administrative penalty amount will be imposed for each of the 33 days on which the contravention occurred or continued.

Base Assessment: \$5000 x 33 days = \$165 000

EPEA

COUNT 3

On or about May 7, 2016, in the Province of Alberta, ConocoPhillips Canada Operations ULC failed to take all reasonable measures to repair, remedy and confine the effects of the condensate released into the environment as soon as ConocoPhillips Phillips

Canada Operations ULC ought to have known of the release, contrary to section 112(1)(a)(i) of the *Environmental Protection and Enhancement Act*, which is an offence under section 227(j) of that act.

		BASE PENALTY TABLE		
		Type of Contravention		
Potential For Adverse Effect		Major	Moderate	Minor
	Major	5000	3500	2500
	Moderate	3500	2500	1500
	Minor to None	2500	1500	1000

Type of Contravention: Major

Immediate reasonable action to repair, remedy and confine the adverse effects of a substance once released to the environment as soon as a responsible party ought to have known about the release is a major requirement that exists to ensure environmental protection. The requirement’s purpose is to reduce adverse environmental effects that occur or could occur if remedial actions are not taken immediately. If immediate action is not taken, even if it is just confining a release, then there is a greater chance of adverse effects to the environment, including more severe adverse effects.

Potential for Adverse Effect: Major

The impacts of the release, as reported by ConocoPhillips, include 619 potential and 38 wildlife mortalities but this does not include any impacts from before the release was reported. The extent of the release (2 800 000 m² and including waterways) and its lengthy duration of remaining in the environment may have caused adverse effects to other forms of wildlife. In Webb Creek, for example, the reduction of productive capacity and suitability of habitat, including the loss of all spawning output for the year, as indicated by the fisheries biologist, only add to the already significant adverse effects and potential adverse effects. The failure to report and take remedial actions as soon as ConocoPhillips ought to have known very likely resulted in a greater degree of adverse effects to the environment that could have been mitigated if dealt with sooner.

Base Assessment: \$5000

COUNT 4

On or about June 9, 2016, in the Province of Alberta, the AER became aware that ConocoPhillips Canada Operations ULC did permit the release into the environment of 379.4 m³ of condensate that caused damage to public land contrary to section 54(1)(a.1) of the *Public Lands Act*, which is an offence under section 56(1)(g) of that act.

BASE PENALTY TABLE				
Seriousness of Contravention				
Extent of actual or potential loss or damage	Seriousness of Contravention			
		Major	Moderate	Minor
	Major	5000	3500	2500
	Moderate	3500	2500	1500
	Minor	2500	1500	1000
None	1000	650	250	

Seriousness of Contravention: Major

Public lands are a valuable resource and entitled to be protected for the benefit of all Albertans. As the economy of Alberta expands and diversifies, pressures will be increasingly exerted on public lands to accommodate additional activity. It is necessary to ensure public lands are not damaged so that existing and future generations of Albertans can benefit from them. Any loss or damage to public lands is considered as serious breach of legislation. ConocoPhillips had the necessary information to discover the leak sooner and had they done so the loss or damage would have been reduced.

Extent of Actual or Potential Loss or Damage: Major

The release resulted in significant loss or damage to public land, including heavily vegetated and forested land, two waterways, and soil. At an extent of approximately 2 800 000 m² and over a distance of about 5.6 km, the released 379.4 m³ of condensate was present in flowing water, marshy areas, hillside seeps, and shoreline vegetation resulting in the removal of vegetation and over 600 m³ of soil and sediment that were a part of public lands.

Base Assessment: \$5000

Factors to be considered to vary the Assessment

Factors	<i>REDA General Regulation</i>	<i>EPEA</i>	<i>PLA</i>
(a)	the importance to the regulatory scheme of compliance with the provision that was contravened;	the importance to the regulatory scheme of compliance with the provision;	the importance to the regulatory scheme of compliance with the provision that was contravened;
(b)	the degree of willfulness or negligence, if any, on the part of any person responsible for the contravention;	the degree of willfulness or negligence in the contravention;	the degree of willfulness or negligence, if any, on the part of any person responsible for the contravention;
(c)	any steps taken by a person responsible for the contravention to avoid or limit the extent of any actual loss or damage that resulted or any potential loss or damage that may reasonably be expected to result from the contravention;	whether or not there was any mitigation relating to the contravention;	any steps taken by a person responsible for the contravention to avoid or limit the extent of any actual loss or damage that resulted or any potential loss or damage that may reasonably be expected to result from the contravention;

(d)	any steps taken by a person responsible for the contravention to prevent its recurrence;	whether or not steps have been taken to prevent reoccurrence of the contravention;	any steps taken by a person responsible for the contravention to prevent its recurrence;
(e)	any previous contravention of a provision prescribed by section 8.1 by a person responsible for the contravention;	whether or not the person who receives the notice of administrative penalty has a history of noncompliance;	any previous contravention of a provision prescribed by subsection (2) by a person responsible for the contravention;
(f)	whether a person responsible for the contravention derived or is likely to derive any economic benefit from the contravention;	whether or not the person who receives the notice of administrative penalty has derived any economic benefit from the contravention;	whether a person responsible for the contravention derived or is likely to derive any economic benefit from the contravention;
(g)	any other factor that, in the opinion of the Regulator, is relevant.	any other factors that, in the opinion of the Director, are relevant.	any other factor that, in the opinion of the director, is relevant.

Factors applicable to this case

Factor from above	Amount Varied	Description/Comments
(a)	+\$1 000	Adherence to the requirements to immediately self-report and remediate releases that may cause an adverse effect to the environment as soon as the responsible party ought to have known are vitally important to the AER's regulatory framework and mandate. Not being aware of the release for an extended period of time is an aggravating factor.
(b)	+\$1 000	Failing to have an effective leak detection manual available for staff use and not taking more appropriate steps sooner, based on the available volume (meter) and pressure test information, are factors that likely contributed to 1) a significant delay in identifying a release had occurred and, 2) greater damage and adverse effects to the environment.
(c)	Neutral	This factor is not applicable. Once the release was identified steps taken to contain and remediate the release were commensurate with AER requirements and expectations.
(d)	Neutral	This factor is not applicable.
(e)	Neutral	This factor is not applicable.
(f)	Neutral	This factor is not applicable.
(g)	Neutral	This factor is not applicable.

Discussion

At the April 23, 2018, meeting ConocoPhillips indicated it did not agree with the “should have known” comments in the Assessment and would be providing a written submission. ConocoPhillips’ written submission was received by email on April 27, 2018. The submission, also dated April 27, 2018, was written in letter format and addressed to me. The three-page submission indicates that ConocoPhillips disagrees with the AER finding that ConocoPhillips “should have been aware of or should have been investigating a pipeline failure seven days after the first failed meter reconciliation.”

ConocoPhillips’ rationale, summarized from the written submission, and my response is noted below:

- Corrosion was not expected in this pipeline as condensate pipelines are not typically subject to internal corrosion. Notwithstanding this, ConocoPhillips conducted testing and analysis for commonly found corrosive bacteria as part of the pipeline operation. Analysis results did not identify any of the commonly found corrosive bacteria.
 - *ConocoPhillips assumed that corrosion was not a concern in this pipeline as the product being transported was condensate. I find that this assumption was an error in judgment. ConocoPhillips did not construct or test this pipeline originally. It appears that ConocoPhillips did not account for construction and testing protocols which may have caused damage or contributed to its failure when the pipeline was constructed or during operation prior to their acquisition of the line. There is evidence to support that this pipeline was originally tested with fresh water from a nearby creek. Test records do not indicate that corrosion inhibitor or biocide was applied to the test medium or that a corrosion inhibitor was applied after the dewatering process before the line was brought into service. Had ConocoPhillips reviewed these records upon acquiring the pipeline, they would have known this pipeline was at a higher risk of corrosion for these reasons. ConocoPhillips only became aware of this information after the AER made its initial information request on July 12, 2016. ConocoPhillips stated in their submissions to the AER, this pipeline is operated on an intermittent basis. Pipelines operated intermittently are also at a higher risk for microbial induced corrosion. In their Pipeline Operations and Maintenance Manual, ConocoPhillips indicates that corrosion coupons are being installed during construction of new pipelines but the installation and use of coupons on this line could not be validated. This indicates that ConocoPhillips was not actively monitoring for internal corrosion on this pipeline.*
- Failure to reconcile the Coriolis meters results on the first attempt (April 30, 2016) was not an unexpected outcome. It was expected that it would be challenging to balance these meters due to the rises and drops in the profile of the terrain and due to intermittent batch use of the pipeline. However, the meter imbalance was not ignored and recalibration work was undertaken in addition to more right of way (ROW) inspections.
 - *The ability to manually calculate condensate volumes was available to ConocoPhillips. ConocoPhillips calculated that the release began on April 21, 2016. This date was calculated using data from the field-data capture system, including facility condensate production, LACT data, tank volumes, trucking tickets and information from its SCADA system. This calculation, which confirmed a release by indicating a discrepancy between*

volumes shipped and volumes received (379.4 m³), was done after the release was discovered on June 9, 2016. Had this calculation been done after the first failed meter reconciliation attempt and the significant loss of pressure on the May 6 – 7, 2016, in-service pressure test, ConocoPhillips would have discovered the leak in a reasonable timeframe.

- An operational pressure test was conducted on May 6/7 (2016) and Jun 5/6 (2016) and the pressure in the pipeline decreased but did not go to zero (in both tests). ConocoPhillips believed that overnight ambient temperature changes contributed to the pressure loss in addition to the belief that inlet and outlet valves on the pipeline were leaking and also contributed to the pressure loss. Additional ROW inspections were conducted as well.
 - *I find this approach of relying on these beliefs without verification or further investigation to be unreasonable. During the operational (in-service) pressure tests conducted by ConocoPhillips on May 6 – 7 and June 5 – 6, 2016, the initial pressure was noted by the operator as 950 kPa. Overnight the pressure was noted to have dropped to 250 kPa in both tests. This almost 75 per cent decrease in pressure, even in an in-service pressure test, should have been questioned, considered an unsuccessful test, and requiring of further investigation. Reasonable measures would have included attempts at reconciling or verifying the temperature and valve leakage factors as actual causes of this pressure loss. The results of the May 6 – 7, 2016, in-service test coupled with the failed attempt to reconcile the meters should have been enough indication that there was a leak in the pipeline. At this point it would have been reasonable to take the pipeline out of service so that proper testing could be done to verify a leak, such as a standard pipeline hydro test.*
- ConocoPhillips was actively looking for a spill on the pipeline ROW with increased inspections and, not finding one, believed the operations pressure test and meter imbalance were due to other common circumstances. ConocoPhillips stated that common field industry experience and expectations are that if a pipeline has a leak the substance will be visible on the pipeline ROW. In this instance, the spill travelled counter to what common field experience would expect and followed a subsurface pathway away from the ROW that was not immediately visible on the ROW. In addition, the terrain and trees in the area made it difficult to see off of the pipeline ROW.
 - *ConocoPhillips acknowledged that it did not have an effective leak detection manual for the Resthaven pipeline. In addition, relying solely on pipeline ROW inspections concentrating only on the visible ROW with no accounting for terrain and the substantial elevation changes was in this case an inadequate leak detection strategy. It is my view that it would be reasonable to believe a small leak might take a gravity driven flow path and not surface in the immediate vicinity of the leak source. Therefore, further investigation off the pipeline ROW may have resulted in a timelier discovery of the leak and subsequent response.*

Final Decision

I, Mark R. Miller, Director for the AER, after having fully considered all of the information collected in the investigation and the verbal submission presented to me by ConocoPhillips in the April 23, 2018, meeting as well as the written submission sent to me from ConocoPhillips on April 27, 2018, find that there is lack of evidence to support due diligence by ConocoPhillips for the following reasons:

- Pipeline ROW inspections were limited to the visible portion of the ROW with no accounting for the terrain and substantial elevation changes the pipeline traverses.
- The in-service pressure test conducted on May 6 – 7, 2016, showed a significant drop in pressure and was dismissed as evidence of a leak because of a belief that causation was due to other common operating conditions with no actual verification of these conditions, which were not reasonable assumptions in the circumstances.
- Condensate volume balance calculations were not conducted until after the pipeline leak was discovered even though there were indications of a leak as early as April 30, 2016, (failure to reconcile newly installed meters) and May 6 – 7, 2016, (in-service pressure test loss of pressure).
- Pipeline records acquired from the previous operator, which would have provided ConocoPhillips valuable information on risks associated with microbial induced corrosion in this pipeline, were not reviewed by ConocoPhillips until after the investigation was initiated by the AER.
- The overall lack of an established and effective leak detection program appears to have contributed to ConocoPhillips disregard for obvious warning signs of a pipeline leak and continued operation of the pipeline long after it should have been shut in.

It is my opinion that it would have been reasonable for ConocoPhillips to have, after failing to reconcile the Coriolis meters on the first attempt (April 30, 2016) and discovering a significant pressure loss in the first in-service pressure test (May 6 – 7, 2016), shut in the pipeline. Dismissing these obvious warning signs, not using all the data available to them, acting on assumptions without verifying and eliminating them as factors, and continuing to operate the pipeline does not demonstrate ConocoPhillips' assertion it was diligently investigating for a possible pipeline leak. Had ConocoPhillips followed these steps they ought to have known on May 7, 2016, they had a pipeline leak and notified the AER.

In conclusion, I am of the opinion that the contraventions described did occur, are supported by the evidence, and that there is a lack of due diligence on the part of ConocoPhillips. Therefore, the total amounts in the base penalty for counts 1, 2, 3, and 4 in the Assessment are reasonable and remain the same. All other factors assessed in the Assessment are reasonable and remain the same; however, given the regulatory maximum of \$5000 for each count the variance factors will not be applied.

Number of Counts Identified	Base Assessment Amount	Factor Variance(s)	
Count 1	\$5000	+\$2000 ³	
Count 2	\$165 000		
Count 3	\$5000		
Count 4	\$5000		
Total Counts: 4	Total Base Assessment: \$180 000	Total Variance:	+ \$2000

Final Assessment: \$180 000.00

Date: May 30, 2018

Director's Signature: <original signed by>
Mark R. Miller, Director, Environment and Operational Performance, AER

³ Under section 3(2) of the *Administrative Penalty Regulation*, section 171(4) of the *Public Lands Administration Regulation*, and section 8.3(2) of the *Responsible Energy Development Act General Regulation*, the AER may increase or decrease the amount of an administrative penalty after considering certain factors. However, per section 3(3) of the *Administrative Penalty Regulation*, section 171(5) of the *Public Lands Administration Regulation*, and section 8.3(3) of the *Responsible Energy Development Act General Regulation*, the maximum amount cannot exceed \$5000 for each day or part of a day on which a contravention occurs or continues.

Given the above, the amounts of the administrative penalty associated with the relevant counts cannot be increased by any factor variance. The assessment of the factors and factor variance will remain as part of the final administrative penalty assessment as the evidence supports the increased amounts described in the factors table.