



Mackenzie Valley Land and Water Board
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Staff Report

Applicant: Apache Canada Ltd.	
Location: Pointed Mountain – Fort Liard area, NT	Application: MV2014X0011
Date Prepared: June 7, 2017	Meeting Date: June 22, 2017
Subject: 2016 Annual Progress Report	

1. Purpose/Report Summary

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) the 2016 Annual Progress Report (Report) submitted by Apache Canada Ltd. (Apache) as per condition 8 of Land Use Permit (Permit) MV2014X0011.

2. Background

- June 5, 2014 – Type A Permit MV2014X0011 issued for 5 years;
- March 31, 2017 – 2016 Annual Progress Report received;
- April 3, 2017 – Review commenced;
- April 25, 2017 – Reviewer comments and recommendations due and received;
- May 9, 2017 – Responses due;
- May 10, 2017 – Responses received;
- **June 22, 2017 – Report presented to the Board for decision;** and
- June 4, 2019 – Permit expires.

3. Discussion

Permit MV2014X0011 was issued to Apache to remediate the Pointed Mountain gas plant and associated sites, including decommissioning and dismantling all remaining facilities, remediation of any impacts to land and water, and reclamation of all project sites to achieve final closure.

Annual Progress Reports are filed in accordance with condition 8 of the Permit, which states:

The Permittee shall submit an annual progress report to an Inspector and the Board no later than March 31 following the calendar year reported, which shall contain at a minimum the following information:

- a) A detailed description of work completed during the year to remediate the site;*
- b) Any engineering studies/designs, monitoring results, or remediation research completed or updated during the year,*

- c) A detailed waste audit of all waste produced, transported, and disposal method/location (in volumes and by types). This includes all hazardous waste, waste petroleum products, and any other wastes identified in the Waste Management Plan;*
- d) A list of unauthorized discharges;*
- e) A summary of residual risks on the site to environmental, human and wildlife health;*
- f) Updated remediation cost liability and financial security estimates;*
- g) Updated life of project work plan for all project activities, including reclamation and monitoring activities; and*
- h) A summary of all activities that took place under the Engagement Plan.*

Although formal approval of this Report is not required under the Permit, the Board must be satisfied that Apache has reported in accordance with the requirements of their Permit.

Apache submitted their 2016 Annual Progress Report on March 31, 2017 (attached).

4. Comments

Apache submitted the Report with a concordance table (Table A), showing where in the Report the components of condition 8 of the Permit have been addressed.

5. Reviewer Comments

By April 25, 2017, comments and recommendations on the Report were received from:

- Government of the Northwest Territories - Department of Environment and Natural Resources (ENR); and
- GNWT - Department of Lands (Inspector); and
- Board staff.

Apache responded on May 10, 2017, one day after their review comment response deadline. The Review Summary and Attachments (attached) present the concerns identified through the review of the Report; a summary of major issues raised is provided below.

Naturally-Occurring Radioactive Materials (NORM)

In response to Comment IDs MVLWB 1 and GNWT-ENR 4, 5 and 6, Apache has indicated that they will be completing further NORM surveys in 2017 to identify and delineate the extent of NORM-affected materials on-site, and that results from that work will be supplied in the 2017 Annual Progress Report, and be included in the updated Remediation Plan. Apache has indicated that they will submit the 2016 NormTek report, which Board staff will place on the public registry when it is received.

Engagement

In response to Comment ID MVLWB 3, Apache stated that further community engagement is planned for the project beyond 2017, and will be included in a revised schedule within the Remediation Plan.

Security

Based on Comment ID GNWT-ENR 7, Apache stated that the revised Remediation Plan will include an estimate for remediation costs using Version 7 of the RECLAIM model. Apache further stated that there are major cost factors that remain unknown, namely the distance to a licensed landfill, that are currently being discussed. Board staff note that the revised Remediation Plan was due May 1, 2017;

when it is received, it will be distributed for review, at which time reviewers will have the opportunity to comment on estimated remediation costs.

Additional Authorizations

GNWT-ENR submitted a comment to the effect that the Board require Apache to seek a Type B Water Licence for the proposed remediation undertakings prior to the 2017 remediation season (Comment ID ENR 1). However, the GNWT-Lands Inspector submitted a 'No Comment' comment (Comment ID Lands 1). The Board may wish to encourage the GNWT and Apache to work together and discuss whether or not a Type B Water Licence is required, and at what point it may be required. Board staff can be available to assist and/or participate in these discussions.

6. Security

A security of \$400,000.00 is held by the GNWT – Lands for this Permit (attached).

7. Conclusion

Board staff conclude that further information was provided by Apache in their responses to reviewer comments, and anticipate that Apache will submit additional information with their revised Remediation Plan, which was due May 1, 2017. Board staff suggest the 2016 Annual Progress Report is in conformity with the requirements of condition 8 of Permit MV2014X0011.

Annual Progress Reports are not for Board approval; however, the Board may wish to follow up with Apache, based on the information provided in the Report and through the review process.

8. Recommendation

Board staff recommend the Board accept the 2016 Annual Progress Report, and have prepared a draft acceptance letter (attached).

Board staff recommend including the following text in the acceptance letter:

The Board notes that Apache's revised Remediation Plan was due May 1, 2017, and reminds Apache to include the following in the revised Plan:

- A revised estimate for remediation costs;
- Remedial actions to address NORM-affected materials; and
- Revised details concerning community engagement activities in 2017.

With respect to information that should be included in future annual progress reports, the Board reminds Apache to include details on NORM surveys conducted and results obtained.

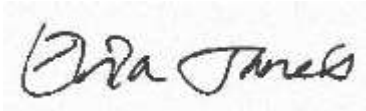
The Board encourages Apache to work with the GNWT to discuss whether or not a Type B Water Licence is required for the remediation work at the Pointed Mountain site, and at what point it may be required. Board staff can be available to assist and/or participate in these discussions.

Apache shall adhere to the commitments made in their responses to reviewer comments dated May 10, 2017.

9. Attachments

- [2016 Annual Progress Report](#)
- Review Summary and Attachments
- [Security confirmation for GNWT-Lands](#)
- Draft Acceptance Letter from the Board

Respectfully submitted,

A handwritten signature in black ink that reads "Erica Janes". The signature is written in a cursive, flowing style.

Erica Janes
Regulatory Specialist

Review Comment Table

Board:	MVLWB
Review Item:	Apache Canada Ltd. - 2016 Annual Progress Report for former Pointed Mountain Gas Field remediation (MV2014X0011)
File(s):	MV2014X0011
Proponent:	Apache Canada Ltd.
Document(s):	MV2014X0011 - Apache Canada - 2016 Annual Progress Report - Mar31-17 (348 KB)
Item For Review Distributed On:	Apr 3 at 10:46 Distribution List
Reviewer Comments Due By:	Apr 25, 2017
Proponent Responses Due By:	May 9, 2017
Item Description:	<p>Apache Canada has submitted a 2016 Annual Progress Report to meet the requirements Condition 8 of their Land Use Permit MV2014X0011. Although formal approval of Annual Progress Reports is not required under the Permit, the Board must be satisfied that Apache has reported in accordance with the requirements of their Permit.</p> <p>Reviewers are invited to submit comments, questions or recommendations, using the Online Review System, by April 25, 2017. Reviewers are encouraged to refer to the concordance included on page 2, which identifies where in the Report the pertinent requirements of the Permit (i.e. Condition 8, items a) – h)) are addressed.</p> <p>If you have any questions or comments regarding this Annual Report or using the Online Review System, please contact Erica Janes at (867) 766-7466 or ejanes@mvlwb.com.</p>
General Reviewer Information:	<p>In addition to the email distribution list, the following organizations received review material by fax:</p> <ul style="list-style-type: none"> • Fort Liard Metis Local #67 - Ernie McLeod, President: (867)770-4573; • Fort Simpson Métis Local #52 - Marie Lafferty, President: (867)695-2040; • Hay River Metis Council - Trevor Beck, President: (867)874-4472; and • Northwest Territory Métis Nation - Tim Heron, NWTMN IMA Coordinator: (867)872-3586.
Contact Information:	Erica Janes 867-766-7466 Jen Potten 867-766-7468

Comment Summary

GNWT - ENR: Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
7	General File	Comment (doc) General File Recommendation		Noted.
2	Topic 1: Water Licence	Comment In Apache Canada Ltd.'s (Apache) proposed Final Reclamation Plan (Version 2), ENR previously commented and recommended that Apache apply for a Type "B" Water Licence for the remediation of the site. As stated, ENR considers this undertaking to require a Type "B" Water Licence under Schedule D, Item 3 (f) of the Waters Regulations. Item 3 (f) states that the Deposit of Waste for all other industrial undertakings requires a Type "B" Water Licence. Apache's April 8th, 2016, response to ENR's recommendation for a Water Licence stated that: "Apache will work with the MVLWB to implement a Type "B" Water Licence for the Site to comply with legislation regarding water use or waste discharge for the remediation program. However, we believe it is premature to acquire a Water Licence at this time for an inactive, pre-existing contaminated site which is analogous to other existing inactive contaminated sites in the Territory that do not have Water Licences. The existing chloride plume down gradient of the surge pond is the result of historic industrial activity at the site. No further waste is being discharged. Apache believes that the appropriate	May 10: On July 22, 2016 the MVLWB provided a document to Apache outlining the triggers for the remediation program that would require additional amendments or permits to be acquired. Apache intends to follow the guidance provided by the MVLWB in this document.	Apache and GNWT should be encouraged to discuss whether or not a Type B Water Licence is required for this undertaking. Staff can be available to assist and/or participate in these discussions.

	<p>time to apply for a Water Licence will be in 2017 once we have decided upon the option of an on-Site landfill and identified the specific method, treatment system and schedule for waste water disposal." While ENR recognizes Apache has indicated a willingness work with the Board to obtain a Water Licence, ENR disagrees that a Water Licence is not needed at this time. ENR is aware that chloride contaminated water leaving the surge pond at the plant site has negatively impact local vegetation. This release of water constitutes a "direct or indirect deposit of waste" which requires a Water Licence (i.e. seepage, overflow, etc.). Additionally, the remediation of this contaminated water, whether active or passive, would also require a Water Licence. This is consistent with another project in the NWT, notable the Repsol Oil and Gas - Panarctic F-68 abandoned wellsite remediation, where a Water Licence was required for remediation of historical contaminated material and remediation of surface materials. The contaminated water at the Pointed Mountain site, regardless of its age, is still considered a "waste" under the Waters Act and must be appropriately regulated. Regarding the proposed remediation activities, ENR understands that in 2020 Apache plans to "Remove water from surge pond. Sample and discharge at site to surface if water</p>		
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		meets discharge criteria or haul for off-site disposal." This will require approval which can only be granted by a water Licence with appropriate EQC and monitoring requirements. Recommendation 1) The MVLWB require that Apache seek a Type B Water Licence for the proposed undertaking. The company and the Board should work together to expedite the Licence issuance such that it is in place prior to the 2017 remediation season.		
3	None	Comment None Recommendation 2) It is recommended that Apache engage with the Board and ENR on establishing discharge criteria, per Apache's April 8th, 2017 submission to the Board.	May 10: Apache looks forward to working with the MVWLB and ENR to establish appropriate criteria for water that may be discharged as part of the remediation program.	Noted. See Board staff analysis for Comment ID ENR 1, above.
4	Topic 2: NORM Report	Comment The Progress Report indicates a Naturally Occurring Radioactive Materials (NORM) assessment was performed by NormTek Radiation Services Ltd in 2016 to assess what NORM contamination may exist. The report states that NormTek found two (2) wells at the Plant site may have some NORM contamination. However, the report does not discuss the extent of contamination at the Plant site or whether there may be any surface water (i.e. Surge Pond) or groundwater contamination associated with the radioactive material contamination. ENR is unable to locate the 2016 Nortek report referenced in the Progress Report.	May 10: Apache will submit the 2016 NormTek report to the MVLWB for reference. The report will be submitted as a stand alone document and not as part of the Remediation Plan.	Noted. Board staff will post the 2016 NormTek report on the public registry when it is received.

		Recommendation 1) It is recommended that Apache provide the 2016 NormTek Radiation Services Ltd Report as an appendix in the Remediation Plan, to be submitted by May 1, 2017.		
5	None	Comment None Recommendation 2) It is recommended that Apache update the Remediation Plan and the remedial actions to deal with NORM material and or waters.	May 10: The updated Remediation Plan will address NORM affected material.	Noted.
6	None	Comment None Recommendation 3) It is recommended that Apache should clearly identify and fully delineate the amount/extent of NORM contamination at the site.	May 10: Apache intends to identify and delineate the extent of NORM affected material at the Site in 2017.	Noted. Apache should include this information in their 2017 Annual Progress Report and the Remediation Plan, as appropriate.
7	Topic 3: Security	Comment ENR has not been able to complete a detail reclamation cost estimate for the proposed remediation project a specific project details and degree and extent of contamination have not been provided to the MVLWB or the GNWT. ENR understands that internal estimate of liability at the Pointed Mountain Plant Site may be in the range of \$15 to \$20 M (Section 8 of 2016 Annual Progress Report; Final Reclamation Plan Version 2). Apache has noted that the current cost estimate was based on updated information from the 2014 Supplementary Phase 2 ESA and "reflects changes in Apache's understanding of the nature and volume of contaminated soil, road	May 10: Apache will include an estimate for remediation costs using the RECLAIM Model as available from ENR. Apache notes that there are cost factors that remain unknown. The single major factor that will affect the cost of remediation is the distance to a licensed landfill. There are currently three viable options for landfill disposal that are under consideration and under discussion with the local community and Apache is therefore unable to outline these costs.	Noted.

		<p>conditions on the B Mountain and a more refined selection of remediation strategies" (Apache Canada 2015 Annual Progress Report - Staff Report and Comments - June 9 2016). ENR notes that Apache has not provided a comprehensive RECLAIM Estimate for the site using the RECLAIM Model (v.7). We note that as per the Mine Site Policy for the Northwest Territories, which was adopted by the GNWT, the liabilities for the Pointed Mountain site should be the responsibility of the proponent and should not fall to the government and taxpayers of the NWT. Without significant detailed information from Apache on the reclamation scope, level of contamination, remediation plans and timelines and estimated work required, ENR is unable to neither provide a sufficient review on the liability associated with the site nor validate the amount referenced by the company (i.e. \$15 - \$20 M range).</p> <p>Recommendation 1) Apache include a thorough RECLAIM Estimate with its revised Remediation Plan which is to be submitted to the MVLWB May 1, 2017, using the RECLAIM Model v.7. This estimate should include details and references to the documents utilized in Apache's internal estimate which range in the order of \$15 to \$20 M (Section 8 of 2016 Annual Progress Report; Final Reclamation Plan Version 2).</p>		
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GNWT - Lands: Kyle Christiansen				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
1	No Comment	Comment Inspectors reviewed the 2016 Annual Progress Report and have no comments. Recommendation Not applicable	None.	Noted.
MVLWB: Erica Janes				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
1	Section 4: Work Completed in 2016	Comment This section refers to a Natural Occurring Radioactive Materials (NORM) assessment conducted by NormTek, and associated recommendations that Apache plans to carry out, but the assessment is not included with the Report and has not been received by the Board. Recommendation Please submit the 2016 NORM assessment conducted by NormTek. How will NORM-related updates to appropriate plans and procedures/operations be provided?	May 10: Apache will submit the 2016 NormTek report to the MVLWB for reference. Remediation of NORM affected soil is planned for the summer of 2017. Further NORM surveys will be completed at that time to assess residual NORM material. Details from the results of the 2017 NORM work will be supplied to the MVLWB as part of the 2017 Annual Progress Report.	Noted. See also analysis of ENR Comment ID4.
2	Section 7: Residual Risks	Comment This section refers to the following additional risks at the site that have been identified: ' . two barrels of product. and 10 landfills or areas of buried debris.' Recommendation Please clarify what type of 'product' in barrels has been identified, and what the nature of the buried debris is.	May 10: The details of waste material at the Site are described in the 2014 Supplementary Phase 2 Environmental Site Assessment (WorleyParsons, 2015).	Noted.
3	Table C: Draft Remediation Schedule	Comment Board staff note the inclusion of community engagement activities in 2017, but not in following years. Board staff further	May 10: Community engagement is planned for the project beyond 2017 and will be included in a revised	Noted.

		<p>note that this table is subject to Board approval, following Apache's submission of an updated Final Remediation Plan by May 31, 2017.</p> <p>Recommendation Is community engagement planned for the project beyond 2017?</p>	<p>schedule within the Remediation Plan.</p>	
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April 24, 2017

Jen Potten
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor – 4910 50th Avenue
P.O. Box 2130
Yellowknife, NT
X1A 2P6

Dear Ms. Potten,

**Re: Apache Canada Ltd.
Land Use Permit – MV2014X0011
2016 Annual Progress Report
Former Pointed Mountain Gas Field Remediation
Request for Comments**

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT) has reviewed the report at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Species at Risk (NWT) Act*, the *Waters Act* and the *Wildlife Act* and provides the following comments and recommendations for the consideration of the Board.

Topic 1: Water Licence

Comment(s):

In Apache Canada Ltd.'s (Apache) proposed Final Reclamation Plan (Version 2), ENR previously commented and recommended that Apache apply for a Type "B" Water Licence for the remediation of the site. As stated, ENR considers this undertaking to require a Type "B" Water Licence under Schedule D, Item 3 (f) of the Waters Regulations. Item 3 (f) states that the Deposit of Waste for all other industrial undertakings requires a Type "B" Water Licence.

Apache's April 8th, 2016, response to ENR's recommendation for a Water Licence stated that:

“Apache will work with the MVLWB to implement a Type “B” Water Licence for the Site to comply with legislation regarding water use or waste discharge for the remediation program. However, we believe it is premature to acquire a Water Licence at this time for an inactive, pre-existing contaminated site which is analogous to other existing inactive contaminated sites in the Territory that do not have Water Licences. The existing chloride plume down gradient of the surge pond is the result of historic industrial activity at the site. No further waste is being discharged. Apache believes that the appropriate time to apply for a Water Licence will be in 2017 once we have decided upon the option of an on-Site landfill and identified the specific method, treatment system and schedule for waste water disposal.”

While ENR recognizes Apache has indicated a willingness work with the Board to obtain a Water Licence, ENR disagrees that a Water Licence is not needed at this time. ENR is aware that chloride contaminated water leaving the surge pond at the plant site has negatively impact local vegetation. This release of water constitutes a “direct or indirect deposit of waste” which requires a Water Licence (i.e. seepage, overflow, etc.). Additionally, the remediation of this contaminated water, whether active or passive, would also require a Water Licence. This is consistent with another project in the NWT, notable the Repsol Oil and Gas - Panarctic F-68 abandoned wellsite remediation, where a Water Licence was required for remediation of historical contaminated material and remediation of surface materials. The contaminated water at the Pointed Mountain site, regardless of its age, is still considered a “waste” under the *Waters Act* and must be appropriately regulated.

Regarding the proposed remediation activities, ENR understands that in 2020 Apache plans to “Remove water from surge pond. Sample and discharge at site to surface if water meets discharge criteria or haul for off-site disposal.” This will require approval which can only be granted by a water Licence with appropriate EQC and monitoring requirements.

Recommendation(s):

- 1) The MVLWB require that Apache seek a Type “B” Water Licence for the proposed undertaking. The company and the Board should work together to expedite the Licence issuance such that it is in place prior to the 2017 remediation season.
- 2) It is recommended that Apache engage with the Board and ENR on establishing discharge criteria, per Apache’s April 8th, 2017 submission to the Board.

Topic 2: NORM Report

Comment(s):

The Progress Report indicates a Naturally Occurring Radioactive Materials (NORM) assessment was performed by NormTek Radiation Services Ltd in 2016 to assess what NORM contamination may exist. The report states that NormTek found two (2) wells at the Plant site may have some NORM contamination. However, the report does not discuss the extent of contamination at the Plant site or whether there may be any surface water (i.e. Surge Pond) or groundwater contamination associated with the radioactive material contamination. ENR is unable to locate the 2016 Nortek report referenced in the Progress Report.

Recommendation(s):

- 1) It is recommended that Apache provide the 2016 NormTek Radiation Services Ltd Report as an appendix in the Remediation Plan, to be submitted by May 1, 2017.
- 2) It is recommended that Apache update the Remediation Plan and the remedial actions to deal with NORM material and or waters.
- 3) It is recommended that Apache should clearly identify and fully delineate the amount/extent of NORM contamination at the site.

Topic 3: Security

Comment(s):

ENR has not been able to complete a detail reclamation cost estimate for the proposed remediation project a specific project details and degree and extent of contamination have not been provided to the MVLWB or the GNWT. ENR understands that internal estimate of liability at the Pointed Mountain Plant Site may be in the range of \$15 to \$20 M (Section 8 of 2016 [Annual Progress Report; Final Reclamation Plan Version 2](#)). Apache has noted that the current cost estimate was based on updated information from the 2014 Supplementary Phase 2 ESA and “reflects changes in Apache’s understanding of the nature and volume of contaminated soil, road conditions on the B Mountain and a more refined selection of remediation strategies” ([Apache Canada 2015 Annual Progress Report – Staff Report and Comments – June 9 2016](#)).

ENR notes that Apache has not provided a comprehensive RECLAIM Estimate for the site using the RECLAIM Model (v.7). We note that as per the [Mine Site Policy for the Northwest Territories](#), which was adopted by the GNWT, the liabilities for the Pointed Mountain site should be the responsibility of the proponent and should not fall to the government and taxpayers of the NWT. Without significant detailed

information from Apache on the reclamation scope, level of contamination, remediation plans and timelines and estimated work required, ENR is unable to neither provide a sufficient review on the liability associated with the site nor validate the amount referenced by the company (i.e. \$15 – \$20 M range).

Recommendation(s):

- 1) Apache include a thorough RECLAIM Estimate with its revised Remediation Plan which is to be submitted to the MVLWB May 1, 2017, using the RECLAIM Model v.7. This estimate should include details and references to the documents utilized in Apache's internal estimate which range in the order of \$15 to \$20 M (Section 8 of 2016 [Annual Progress Report](#); [Final Reclamation Plan Version 2](#)).

Comments and recommendations were provided by ENR technical experts in Water Resources Division and the Dehcho Region, and were coordinated and collated by the Environmental Assessment and Monitoring Section, Conservation, Assessment and Monitoring (CAM).

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email patrick.clancy@gov.nt.ca.

Sincerely,



Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Conservation, Assessment and Monitoring Division
Department of Environment and Natural Resources
Government of the Northwest Territories