

**From:** [Shannon Allerston](#)  
**To:** [Markey, Andrea \(AADNC/AANDC\)](#)  
**Cc:** [Candace.Decoste@canada.ca](mailto:Candace.Decoste@canada.ca); [Katherine Harris](#)  
**Bcc:** [Kimberley Murray](#); [Heather Scott](#); [Tyree Mullaney](#)  
**Subject:** RE: Giant MV2007L8-0031 September 2020 SNP report - submitted  
**Date:** Friday, November 13, 2020 3:28:00 PM  
**Attachments:** [MV2007L8-0031 - CIRNAC-GMRP - September 2020 SNP Report Comments.pdf](#)

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Hi Andrea,

We have attached a table with Board staff comments on the September 2020 SNP Report. If there are responses to some comments or recommendations that would help clarify things now, please provide a response for the record. Otherwise, please take these comments and recommendations into consideration when drafting future SNP reports for submission.

Board Staff do not have any comments on noted non-compliance issue with SNP 43-21 sampling requirements for the upcoming October SNP Report. We appreciate GMRP notifying the Board of the issue and note that GMRP are working on a solution that hopefully mitigates this error in future.

Thank you,

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**From:** Markey, Andrea (AADNC/AANDC) <[andrea.markey@canada.ca](mailto:andrea.markey@canada.ca)>  
**Sent:** Monday, November 2, 2020 3:22 PM  
**To:** Shannon Allerston <[sallerston@mvlwb.com](mailto:sallerston@mvlwb.com)>  
**Cc:** DeCoste, Candace (AADNC/AANDC) <[candace.decoste@canada.ca](mailto:candace.decoste@canada.ca)>  
**Subject:** Giant MV2007L8-0031 September 2020 SNP report - submitted

Hi Shannon

I just wanted to let you know I submitted the Sept 2020 SNP monthly report a few moments ago via the FTP site.

Please let me know if you do not receive it or have any questions or concerns.

Thanks very much,  
Andrea

Andrea Markey, MSc, P.Geol.  
Environmental Scientist  
Giant Mine Remediation Project  
Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)  
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Topic	Comment	Recommendation
Table D - EQC Comparison: MAC Calculation	<p>Board staff note that additional monitoring data beyond the required weekly sampling was provided for SNP 43-1. In addition, a monthly average was calculated and compared to the Maximum Average Concentration. While the extra monitoring data are appreciated, the GMRP is reminded that the Maximum Average Concentration is defined in Part A of the Licence as "the concentration of a parameter that cannot be exceeded by the running average of any four consecutive analytical results, collected in accordance with the sampling and analysis requirements specified in the Surveillance Network Program (SNP)." The monthly average is not equivalent to the Maximum Average Concentration because it consists of more than four consecutive samples. GMRP can adjust the running average calculation to encompass the additional data or clearly indicate the individual weekly compliance samples used in the running average calculation. Board staff note that the concentrations of all samples are well below any EQC and non-compliance as a result of EQC exceedances is not an issue; however, correct calculation of MAC values is required.</p>	<p>Could GMRP please provide an updated table for SNP43-1 that provides the running average of four consecutive analytical results as required by Licence MV2007L2-0031.</p>
Table D - Hold Time Exceedances	<p>Board staff note a number of hold time exceedances. For example, eleven out of thirteen samples from SNP 43-1 are identified as having exceeded the recommended hold time for nitrate, which is a regulated parameter in the water licence. Similar hold time issues are identified in relation to surface water and groundwater samples. This appears to be an ongoing problem that requires corrective action to mitigate this issue from continuing.</p>	<p>Could GMRP please explain the corrective action(s) being taken to minimize ongoing hold time exceedances for future sampling events.</p>
Table E - Turbidity Values	<p>There are a number of occurrences of turbidity being reported as 0 NTU, which seems suspect given the nature of this water management system (i.e., unlined polishing pond, natural creek) and reportable concentrations of total</p>	<p>Could GMRP please confirm the procedures for validating field-based parameters.</p>

	suspended solids and laboratory-measured turbidity from the same sample.	
Table D - Footnote	Table D includes a footnote re: bold font indicating the most stringent guidelines. Board staff would like to clarify that EQC are different than guidelines as EQC must be met to be in compliance with the water licence. Maximum Grab Concentration is applicable to any individual sample regardless of whether it is a grab or autosampler composite sample. Maximum Average Concentration is applicable to the running average of four consecutive samples.	GMRP should confirm comparison to EQC is done appropriately in future reports.
Tables - Formatting	Board staff appreciate that the data were provided in electronic (Excel) format. It would be helpful if future reports could format the pdf version of tables to include the list of parameters and EQC (where applicable) on all pages for multi-page tables to help facilitate the review. Board staff note that Table H has an issue with overlapping table title and column header and Table C has an issue with the footnote re: stations not being scheduled for sampling being cut off.	For future reporting, GMRP should adjust the table formatting in the pdf file as well as verify information is complete.
Table D and E - Hold Time Discrepancy	There appears to be a discrepancy between Tables D and E regarding hold times related to TSS. Table D includes a footnote for TSS for 2 September 2020 that hold time was exceeded due to delayed transit from Yellowknife. Table E includes a footnote for this sample/parameter and states it was a delay related to a demand on the lab at the time of sample receipt. Table E also indicates that TSS in the sample from 3 September 2020 experienced the same hold time exceedance for the same reason, but this hold time exceedance is not indicated in Table D.	Could GMRP please confirm the correct information for hold time exceedances between Tables D and E as well as provide information regarding any corrective actions being implemented with the laboratory to mitigate hold time exceedances for future sampling events.
Table E - Petroleum Hydrocarbon Detection Limit Variability	The detection limits for PHCs are variable, but this is not reflected in the detection limit column. For example, the detection limit for the C6-C50 fraction is listed as 0.4 mg/L but varies from 0.4 to 0.53 mg/L, and the detection limits for the C16-C34 and C34-C50 fractions vary slightly from 0.25 to 0.30 mg/L. Board staff note that all	Could GMRP please explain the reason(s) for the petroleum hydrocarbon detection limit variability.

	<p>samples were below respective detection limits, but the reason(s) for the variation in detection limits is not provided, which is inconsistent with the remainder of the table.</p>	
Table A	<p>Board staff note that the dash (-) is defined as "Not Applicable, Data not available, Data invalid or Not calculated". These all mean very different things and can have potential implications on compliance. More clearly defining these four terms in a manner that facilitates reviewers understanding of the reason for the lack of data would be helpful.</p>	<p>Could GMRP please clarify which term is relevant to specific data.</p>
Tables - Units	<p>The units reported in Tables E and H for temperature are missing the degrees (°) (i.e., they are reported just as "Celsius").</p>	<p>Future reporting should correct the temperature units.</p>
Quality Control Samples	<p>According to the SOP, an equipment rinsate sample is to be collected with all groundwater programs. Results for this sample are not provided.</p>	<p>Could GMRP please confirm whether an equipment rinsate QC sample was collected during the groundwater sampling, and either provide these results or an explanation why this was omitted.</p>
Data Validation	<p>Board staff note that most tables include a footnote stating that the results are draft and potentially subject to change pending final data validation. Board staff note that it would be helpful if any changes that occur be identified or summarized in the Annual Report.</p>	<p>GMRP should consider including a summary of any SNP data changes in the Annual Report.</p>