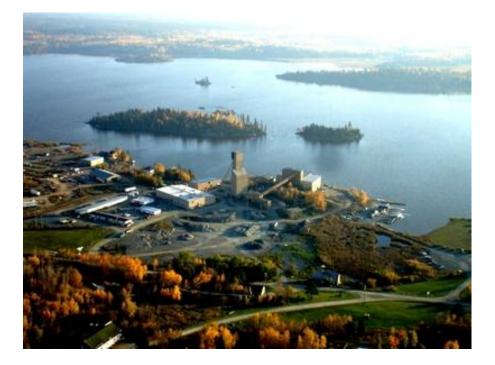
Parks Environmental Inc.

San Gold Corporation

Notice of Alteration



Prepared by:

Parks Environmental Inc.

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Date:

February 10 2012

February 10, 2012

Project Number: 10-02

Ms. Tracey Braun, M.Sc. Director Manitoba Conservation, Environmental Assessment and Licensing Branch 160-123 Main Street Winnipeg, Manitoba R3C 1A5 Tel: 204.945.7171 Fax: 204.945.5229 tracey.braun@gov.mb.ca

Re: Notice of Alteration - San Gold Corporation, Bissett, Manitoba

Dear Ms. Braun,

Further to our on-going correspondence on 7 March 2011 and January 23, 2012, Parks Environmental has been retained by San Gold Corporation to submit this Notice of Alteration ("NOA") regarding their Mine in Bissett, Manitoba for the major alterations summarized in the bullets below with references to the relevant sections of the License 2628 R (revised on 14 July 2004).

- <u>Section 11:</u> Expand the annual effluent discharge period from June 15 to the onset of freeze-up (30 November).
- <u>Section 11(b)</u>: Confirm the culvert under Vanson Road has been upgraded to accommodate a maximum effluent discharge rate of 0.20 m³/second.
- <u>Section 38:</u> Amend the surface water monitoring program by removing station NNC-GR from San Gold's sampling requirements under the License, due to a health and safety concern from hunting activity in the area. However, this station should be subject to future periodic reviews.
- Provided details for the proposed major Tailings Area Expansion (under separate cover by AECOM 2012 "*Request for Alteration to San Gold Corporation's Tailings Management Area*"
- Describe the portable crushing plant and incremental mill expansions.
- Confirm that radium-226 will be monitored in surface water and effluent accordance with the federal *Metal Mining Effluent* Regulations ("MMER"). Monitoring frequency for this expensive water quality parameter will be amended over time in accordance with the MMER provisions.
- Revise the current *Environmental Act* License to reflect an increase in the mill production rate to 2,500 tonnes per day based on an annual average for days that the mill is operating (*i.e.* the average does not include down time).

Please feel free to contact me if there are any questions or concerns.

Respectfully submitted,

Derek Parks, M.Sc. Principal – Senior Aquatic Biologist Parks Environmental Inc.

CC: Ms. Siobhan Burland Ross (Manitoba Conservation) Mr. John Hutchison (San Gold Corporation)

Executive Summary

This document constitutes the entire Notice of Alteration ("NOA") that is required under the *Environment Act* for the proposed major alterations to License 2628 R, which has been issued for the San Gold Corporation's Bissett, Manitoba operation.

Project Description

The proposed major alterations and clarifications included in this NOA are listed in the bullets below.

- <u>Section 11:</u> Expand the annual effluent discharge period from June 15 to the onset of freeze-up (30 November).
- <u>Section 11(b)</u>: Confirm the culvert under Vanson Road has been upgraded to accommodate a maximum effluent discharge rate of 0.20 m³/second.
- <u>Section 38:</u> Amend the surface water monitoring program by removing station NNC-GR from San Gold's sampling requirements under the License, due to a health and safety concern from hunting activity in the area. However, this station should be subject to future periodic reviews.
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- Describe the portable crushing plant and incremental mill expansions.
- Confirm that radium-226 will be monitored in surface water and effluent in accordance with the federal *Metal Mining Effluent* Regulations ("MMER"). Monitoring frequency for this expensive water quality parameter will be amended over time in accordance with the MMER provisions.
- Revise the current *Environmental Act* License to reflect an increase in the mill production rate to 2,500 tonnes per day based on an annual average for days that the mill is operating (*i.e.* the average does not include down time).

Potential Impacts and Mitigation Measures

Potential negative impacts from the proposed major alterations include an increase in fugitive dust emissions and an increase in noise emissions. The Best Management Practices Plan for the Control of Fugitive Dust (Appendix C) outlines details concerning the routine monitoring and mitigation of these potential impacts.

Significance of Residual Impacts after the Application of Mitigation Measures

The application of the impact mitigation measures described herein will avoid significant negative residual impacts resulting from the proposed major alterations.

Consultation

Aboriginal consultation has been completed with the San Gold Aboriginal Liaison Officer, Mr. Rod Bushie, a local Hollow Water First Nation member. There has been public consultation with respect to this NOA, as it has been viewed as a major alteration following discussions with Manitoba Conservation officials on March 7, 2011 and January 23rd, 2012. Details of the public consultation are found in the AECOM 2012 report provided in support of this NOA

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Attachment

1 Parks Environmental Inc. (2012) Tailings Management Area Expansion Notice of Alteration - Five Year Water Quality Summary (2007-2011)

DEFINITION OF TERMS AND ACRONYMS

- **BMP:** Best Management Practices Plan for the Control of Fugitive Dust (working draft prepared by San Gold for the Mine).
- CALA: Canadian Association for Laboratory Accreditation
- DFO: Department of Fisheries and Oceans
- EC: Environment Canada
- **EDC:** Effluent Discharge Campaign
- **EEM:** Environmental Effects Monitoring, a requirement under the federal Metal Mining Effluent Regulations.

License: Environment Act License 2628 R, and subsequent amendments.

Mine: San Gold Corporation's Bissett, Manitoba Mine

MMER: Metal Mining Effluent Regulations, promulgated under the federal Fisheries Act

NOA: Notice of Alteration.

San Gold: San Gold Corporation

TMA: Tailings Management Area associated with San Gold Corporation

1. Introduction

Section 1 provides background information regarding the proponent and the Project, as well as describing the regulatory context and scope for this NOA in respect to air and water quality. The submitted NOA for San Gold has a supporting document provided by AECOM (2012) "*Request for Alteration to San Gold Corporation's Tailings Management Area*" that must be read in conjunction with this report.

1.1 Background

San Gold Corporation owns the Mine (herein referred to as the "Mill", "Mine" or "Property") located in Bissett, Manitoba which currently operates under *Environment Act* Licence 2628 R. The San Gold Corporation Project includes five active underground gold mines (Rice Lake, Hinge, 007 Zone, Cohiba, and Cartwright), the SG1 Mine (currently on care and maintenance status), a mill complex and a tailings management area.

The Mine area is comprised of Mineral Lease 63, covering an area of 996.9 hectares around San Gold Corporation, and 40 mining claims covering an area of 4,658 hectares contiguous to Mineral Lease 63. An additional 41 non-contiguous mining claims covering an area of 4,032 hectares are located in the surrounding area to the west, south and east of Mineral Lease 63. All of the current operations are located on the Mineral Lease.

A summary of previous ownership and operations were recently submitted by AECOM (2010) (Appendix B).

1.2 Proposed Alterations

The proposed alterations and clarifications are listed in the bullets below.

- <u>Section 11:</u> Expand the annual effluent discharge period from June 15 to the onset of freeze-up (30 November).
- <u>Section 11(b)</u>: Confirm the culvert under Vanson Road has been upgraded to accommodate a maximum effluent discharge rate of 0.20 m³/second.
- <u>Section 38:</u> Amend the surface water monitoring program by removing station NNC-GR from San Gold's sampling requirements under the License, due to a health and safety concern from hunting activity in the area. However, this station should be subject to future periodic reviews.
- Provided details for the proposed major Tailings Area Expansion (under separate cover by AECOM 2012 "Request for Alteration to San Gold Corporation's Tailings Management Area"
- Describe the portable crushing plant and incremental mill expansions.
- Confirm that radium-226 will be monitored in surface water and effluent in accordance with the federal *Metal Mining Effluent* Regulations ("MMER"). Monitoring frequency for this expensive water quality parameter will be amended over time in accordance with the MMER provisions.
- Revise the current *Environmental Act* License to reflect an increase in the mill production rate to 2,500 tonnes per day based on an annual average for days that the mill is operating (*i.e.* the average does not include down time).

1.3 Regulatory Process

The *Environment Act* ((the Act); Government of Manitoba 2012) regulates the environmental assessment and licensing of projects in the Province of Manitoba. The Act is administered by Manitoba Conservation and also addresses issues related to alterations to already licensed developments. Under the Act, an approval is required before the alteration can be implemented at a licensed development if the alterations do not conform to the current licence requirements or are likely to change the environmental impact. Alterations to a licensed development can be either minor or major. An alteration is considered minor if the potential negative environmental effects resulting from the alteration are insignificant and there is not an alteration to a licence condition amended by an appeal. If an alteration is deemed to be a major alteration then a new proposal is required for approval consideration.

1.4 Notice of Alteration Document Structure

The remainder of this report is separated into five main sections (Sections 2.0 to 6.0). A description of the sections and report structure is as follows:

Section 2.0 describes the proposed alterations to *Environment Act* Licence 2628 R.

Section 3.0 assesses the anticipated environmental impacts and mitigation measures to the proposed alterations.

Section 4.0 provides a summary of the residual impacts after mitigation measures are applied in response to the alterations that are proposed as part of this NOA.

Section 5.0 summarizes the consultation with local communities with respect to the Mine and the proposed alterations in the NOA.

Section 6.0 provides a summary of the environmental monitoring proposed as part of this NOA.

Discussion on the Tailing Management Area Expansion is based on the AECOM 2012, Request for Alteration to San Gold Corporation's Tailings Management Area and provided under separate cover by AECOM in support of this NOA.

2. Project Description

Section 2 summarizes the proposed changes to the previously submitted NOA (AECOM 2010; Appendix B) for the Project.

2.1 **Project Location**

No material change proposed.

2.2 Geology

No material change proposed.

2.3 Resource Estimate

The most recent resource estimate for the San Gold Corporation Project reports a total measured mineral resource of 2,432,610 tons grading at 0.33 oz. Au/ton and total inferred resource of 6,211,660 tons grading at 0.29 oz. Au/ton, A total of 2,627,140 contained ounces of gold was reported which was comprised of 812,270 measured ounces and 1,814,870 inferred ounces within the Project (GeoEx 2010).

2.4 Mining Rate and Mining Life

For the San Gold Corporation Project, the Life of Mine (LOM) is estimated at 5.5 years based on a mill capacity of 1,250 tons/day (GeoEx 2010). The LOM is based solely on measured plus indicated resources. GeoEx (2010) strongly acknowledges that it is probable that the inferred resources identified will be converted into measured resources which will extend the LOM for at least 10 years.

2.5 Development Schedule

No material change proposed.

2.6 Surface Structures

San Gold is required to expand their Tailing Management Area (TMA) for operational purposes. Details of the modification and its impacts are outlined in the AECOM (2012) report entitled "Request for Alteration to San Gold Corporation's Tailings Management Area", and should be reviewed as part of this major NOA.

2.7 Support Infrastructure

No material change proposed.

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2.8 Explosives

Based on the five year review of water quality (PEI 2012; Attachment 1), San Gold is preparing to implement housekeeping measures in regard to underground explosives handling as there has been an increase in nitrate detected in the EOP discharge.

2.9 Equipment and Mining Method

No material change proposed.

2.10 Ore and Waste Rock Management

Waste rock and ore sampling at the Mine is conducted following the guidelines outlined by the Mine's *Environmental Act* License. The Mine has operated under two licenses since 1998. San Gold has submitted three NOAs concerning the sampling requirements of the current License which were amended to incorporate the monitoring requirements of recently discovered deposits at the SG 1, Cartwright and Hinge Zone Mine into the current License. A summary of the Projects *Environment Act* License sampling requirements are provided in Table 2-1.

San Gold has conducted routine sampling of ore and waste rock at the Mine dating back to July 1998. All acid-base accounting tests conducted on waste rock and ore until December 2008 were included in the previously submitted NOA (AECOM 2010; Appendix B). The results of all samples assayed from the Rice Lake, SG1, the Cartwright and the Hinge Zone deposits indicated that these deposits were not acid-generating.

Waste rock and waste ore sampling has continued at the Mine following the sampling requirements outlined in the last NOA in 2010. Samples were collected quarterly from all active mines and combined into a single composite sample for a once per year analysis. Samples from each deposit were analyzed separately. The results of the acid-base accounting tests are presented in Appendix D. The results from all tests conducted indicated that waste rock and ore at the mines continues to be not acid-generating. This includes results from the newly developed 007 Zone.

The only deposit that has not been assessed for its acid-generating potential is the newly discovered Cohiba Zone. As the Cohiba Zone is part of the same geological formation as the Rice Lake, Cartwright, Hinge, SG 1 and 007 Deposits (Archean Rice Lake-Beresford Lake Greenstone Belt), it is anticipated that the waste rock and ore will also be not acid-generating. Once ore is extracted from the Cohiba zone, acid-base accounting assays will be conducted immediately to confirm this assumption. Recommendations concerning ongoing monitoring of waste rock and ore are included in Section 6.2.

| EA Licence or Notice of Alteration | Date of Issue | Required Sampling Frequency |
|---------------------------------------|-------------------|---|
| 2161 S1 RR | September 1998 | Waste rock bulk sample collected every 6 months for the first 2 years, one bulk sample collected every 12 months thereafter. Samples must undergo tests for acid-generation potential. |
| 2628R | November 2003 | Waste rock and waste ore bulk sample collection every 3 months each year new waste rock or new ore is added to the respective surface stockpile. Annually, the bulk sample collected from the previous 12 months must undergo tests for acid- generation potential. |
| San Gold No. 1 Mine NOA | June 2006 | Proposal to sample waste rock and waste ore once every 10,000 tonnes of waste generated for acid- generation potential was accepted by Manitoba Conservation. |
| Cartwright Mine NOA | March 2008 | Proposal to collect one representative waste rock sample on a quarterly basis to create an annual composite sample for acid-generation potential assay. Waste rock from the SG-1 and Cartwright Mines collected and analyzed separately. Proposed sampling frequency was accepted by Manitoba Conservation. |
| Cartwright NOA Revision | April 2010 | Collect one representative sample quarterly which are combined to form a composite annual sample that is tested for acid-generating potential. Samples from Rice Lake, Cartwright and the Hinge Zone would be processed separately. |

Table 2-1 Environment Act License sampling requirements.

| Source | Sample Type | Date | # of Samples | Sampling Frequency |
|--------------------|-----------------|--------------------------------|-----------------|--------------------------------|
| | Tailings | July 2000 | 1 | not recorded |
| | Waste Rock | July 1998 - July 2000 | 6 | not recorded |
| | | December 2008 | 1 | not recorded |
| | | December 2009 | 1 | Collected quarterly into a |
| | | 2010 | 1 | single annual composite |
| Rice Lake Mine | | December 2011 | 1 | sample |
| | Waste Ore | July 1998 - July 2000 | 5 | not recorded |
| | | December 2008 | 1 | not recorded |
| | | December 2009 | 1 | Collected quarterly into a |
| | | 2010 | 1 | single annual composite |
| | | December 2011 | 1 | sample |
| | Waste Rock | February 2005 - September 2005 | 14 | every 1,000 tonnes |
| | | October 2005 - March 2006 | 6 | every 5,000 tonnes |
| | | April 2006 - April 2007 | 12 | not recorded |
| SG-1 | | December 2008 | 1 | not recorded |
| | Waste Ore | December 2005 - April 2007 | 13 | every 200 to 9,000 tonnes |
| | | December 2008 | 1 | not recorded |
| Cartwright Deposit | Core Samples | January 2007 | 14 | once |
| | Core Samples | August 2007 | 10 | once |
| | Waste Rock | December 2008 | 1 | not recorded |
| | | December 2009 | 1 | Collected quarterly into a |
| Hinge Zone | | 2010 | 1 | single annual composite |
| Deposit | | December 2011 | 1 | sample |
| | Waste Ore | December 2008 | 1 | not recorded |
| | | December 2009 | 1 | Collected quarterly into a |
| | | 2010 | 1 | single annual composite |
| | | December 2011 | 1 | sample |
| | Waste Rock | 2010 | 1 | Collected quarterly into a |
| 007 7 0 | | December 2011 | 1 | single annual composite sample |
| 007 Zone Deposit | Waste Ore | 2010 | 1 | Collected quarterly into a |
| | | December 2011 | 1 | single annual composite sample |
| | | | | |

Table 2-2 Waste rock and waste ore sampling summary, San Gold Corporation; 2000 – 2011.

2.11 Water Management

The proposed changes to water management at the Mine are described below.

- <u>Section 11 of the License:</u> San Gold proposes to expand the annual effluent discharge period from June 15 to the onset of freeze-up (30 November). The current practice of storing water and releasing water on an annual basis during the autumn discharge window has resulted in annual requests to Manitoba Conservation for permission to conduct an emergency discharge. The expansion to the discharge window will result in operational flexibility. *All existing conditions within the current EAL will be followed prior to any effluent discharge from the TMA*.
- <u>Section 11(b) of the License:</u> San Gold confirms that the culvert under Vanson Road has been upgraded to accommodate a maximum effluent discharge rate of 0.20 m³/second.

No other material changes are proposed.

2.12 Mine Emissions (to air and water)

San Gold has installed a portable crushing plant adjacent to the mill to reduce material size and increase mill throughput. In the future, San Gold plans to upgrade the portable unit to a SAG mill to reduce material size. This future upgrade will also help reduce fugitive dust emissions as this is a wet process. San Gold is currently developing a Best Management Practices Plan for the Control of Fugitive Dust at their Mine operations. The working draft is provided in Appendix C.

No other material changes to mine emissions (air or water) are proposed.

2.13 Milling

San Gold is currently extracting ore from the Rice Lake Mine shaft (to a depth of ~5000') and 2 additional declines which access near surface deposits. As production from these deposits increases, San Gold would like to improve the existing mill to achieve a throughput capacity of 2500 TPD by improving production efficiency through the optimization of operational practices (finer crushing of feed, etc.). San Gold is currently making a significant investment in infrastructure (such as electricity supply) and is implementing upgrades in a phased approach to expand their project as it evolves. The most recent upgrade at the Mine is a newly installed portable crusher that reduces the ore size prior to being processed at the Mill. The crusher consists of a 30X42 primary jaw crusher, a 300 mm gyratory secondary crusher and a tertiary 30 inch Barmac vertical shaft impact crusher. A deck screen plant is associated with the portable crusher unit which incorporates three 7X20 deck screens and the required conveyor systems. The conveyors have discharge hoods and covers that actively manage the moisture content of ore stock piles to reduce fugitive dust emissions.

The San Gold Corporation Mill is the only mill in the Bissett district. With the recent upgrades and proposed expansion, the mill could potentially process ore from other mines in the area in the future as well.

The current License states that the production rate at the Mill is 1000 tonnes per day which was intended to be an annual average for days that the mill is operating (*i.e.* the average does not include down time). San Gold is requesting that Manitoba Conservation revise the current *Environmental Act* License to reflect an increase in the mill production rate to 2,500 tonnes per day based on an annual average for days that the mill is operating (*i.e.* the average does not include down time).

2.14 Tailings Management and Disposal

The estimated lifespan of the existing TMA (with the completion of the final dyke raise) at the current tailings deposition rate is 3-4 years. The proposed increase in milling capacity reduces this timeframe to ~1.5 years. The proposed expansion to the TMA (AECOM 2012) includes the construction of an additional main pond to hold tailings from the Mill and an additional polishing pond to provide secondary treatment of effluent discharged from the new main pond. Effluent from the two new treatment ponds will be pumped into the existing TMA polishing pond for discharge (via pumps) into No Name Creek on an annual basis during the open water discharge period (anticipated to occur from June 15 to November 30.

Based on an average milling rate of 2,500 short dry tons per day, the lifespan of the proposed TMA expansion is expected to be 10 years. Through additional dyke raising stages, there is the potential to increase the capacity of the proposed TMA expansion to extend its operational period (AECOM 2012).

The mine is also examining the use of paste backfill to reduce the quantity of tailings deposited into the TMA and increase operational lifespan of the current TMA, should concern/questions arise during the permitting of the TMA expansion.

There is no material change in process proposed.

2.15 Solid Waste and Sanitary Waste

No material change proposed.

2.16 Decommissioning and Closure Plan

The Decommissioning and Closure Plan of the TMA will be expanded to include the proposed TMA Expansion. The details of the additional closure activities associated with the expansion are outlined in the AECOM (2012) report, entitled "*Request for Alteration to San Gold Corporation's Tailings Management Area*" submitted in support of this NOA.

2.17 Description of the Environment

No material change is proposed to this aspect of the License's ancillary documents. However, information pertaining to the changes to the environment resulting from the TMA expansion can be found in the

supplement AECOM (2012) report, entitled "*Request for Alteration to San Gold Corporation's Tailings Management Area*" submitted in support of this NOA.

3. Potential Effects and Mitigation

Section 3 describes the potential effects resulting from the proposed changes to production processes and capacity at the Mine and the mitigation measures to minimize residual effects. The potential effects and mitigations in relation to the design of TMA expansion are provided under separate cover by AECOM (2012) entitled "*Request for Alteration to San Gold Corporation's Tailings Management Area*" submitted in support of this NOA

3.1 Air and Noise

3.1.1 Air

Development and operation of the portable crusher have the potential to cause increased dust in the vicinity of the Mill complex. Dust production during operations is expected to be minimal due to the dust suppression measures previously discussed. Increase in ore crushing will potentially increase generated dust emissions from the loading, hauling and dumping activities in the vicinity of the mill complex, these are anticipated to be minor in nature and be typical of current and historic operations. A more comprehensive discussion of dust suppression measures implemented at the Mine is outlined in Appendix C (Control of Fugitive Dust).

The Mill will remain within its currently permitted air emission guidelines, so other emissions to air from the operation will remain within historic levels.

3.1.2 Noise

Noise emissions during crushing operations are expected to be minimal, as the portable crusher is located adjacent to the Mill and other Mill circuit equipment that have similar noise levels.

3.2 Water Resources

San Gold proposes to expand the annual effluent discharge period from June 15 to the onset of freeze-up (30 November). The current practice of storing water and releasing water on an annual basis during the autumn discharge window has resulted in annual requests to Manitoba Conservation for emergency discharges. These discharges are required some years due to higher than normal surface runoff from snowmelt and rainfall events in the area which have resulted in elevated water levels in the treatment ponds.

The reason for the expansion of the effluent discharge window is to allow a greater flexibility in managing tailing pond effluent levels based on climatic conditions. Requests for emergency discharges have occurred three times over the past three years and a request for an early discharge had been submitted for 2012. In an attempt to eliminate emergency discharge requests, San Gold is requesting an expanded discharge window during the ice free season as no discernible impact to the aquatic environment has been detected at the Mine (PEI 2011 and PEI 2012)

Comments received from Watershed Stewardship in the previously submitted NOA indicated that there were several concerns in regard to water quality and that a more detailed review of past water quality and the potential implications of a prolonged discharge needed to be further discussed. PEI has completed a 5 year review of water quality data collected from 2007-2011 under the EAL in support of this submitted NOA which is attached as a separate report entitled "San Gold Corporation - Tailings Management Area Expansion Notice of Alteration - Five Year Water Quality Summary (2007-2011)". The included supporting report outlines water quality during operations and discusses potential implications, proposed effluent limits and acknowledges that San Gold will be able to meet Manitoba Tier II water quality guidelines within the Wanipigow River.

Hydrological Assessment for determining the $7Q_{10}$ flows contained in the five year summary were discussed and verified with Mr. Duane Kelln at Manitoba Conservation to ensure the methodology used for the assessment would meet the provincial requirements prior to completing the historic water quality review and discussion of potential implications to the aquatic environment.

4. Significance of Residual Impacts

Significance is commonly considered in the context of its magnitude, geographic extent, duration, frequency, degree of reversibility and possibility of occurrence or any combination of these factors.

The significance criteria used in this analysis are defined in Table 4-1, as well as a description of the significance level (I to III) for each criterion. As presented in Table 4-1, significance in this analysis is a gradient of not significant (Level I) to potentially significant (Level II) to very significant (Level II).

4.1 Air and Noise

The BMP provides for the on-going monitoring and mitigation of fugitive dust and noise emissions from the outdoor crushing plant.

The significance of the potential impact associated with this proposed change is deemed to be no higher than Level I. Accordingly, the summary evaluation for this potential impact is deemed to be not significant.

4.2 Water Resources

San Gold proposes to expand the annual effluent discharge period from March 15 or the commencement of spring melt to the onset of freeze-up (30 November). The current practice of storing water and releasing water on an annual basis during the autumn discharge window results in a release that is disproportionate to flows in the receiving environment. The expansion to the discharge window will result in a discharge rate that is more proportionate to flows in the receiving environment (*i.e.* a flow paced discharge), thereby maximizing the dilution ratio of effluent in the receiver. Therefore, this proposed change will reduce the potential for a negative impact compared to the current mode of operation.

The significance of the potential impact associated with this proposed change is deemed to be no higher than Level I. Accordingly, the summary evaluation for this potential impact is deemed to be not significant.

4.3 TMA Expansion

Details for Significance of Residuals for the actual expansion of the TMA are discussed in the supporting Document provided by AECOM (2012) "*Request for Alteration to San Gold Corporation's Tailings Management Area*"

San Gold Corporation Notice of Alteration

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Table 4-1 Significance Criteria and Levels of Significance

| i | Con | Context | | | | |
|-----------------------|---|--|---|--|--|---------------------------------------|
| Significance Level | Ecological / Biophysical | Socio-Cultural | Magnitude / Geographic Extent | Duration / Frequency | LIKelinood of Occurrence | Reversibility |
| _ | No meaningful adverse biophysical effects | No meaningful adverse effects to socio- economic interests | Magnitude and/or geographical extent of impact(s) considered to be minor, and primarily or solely confined to Mine site | Construction phase of Mine, or during closure phase(s) | Unlikely to Occur | Readily reversible |
| = | Adverse effects involve commonplace species or communities | Adverse effects would involve meaningful inconvenience to local residents or land users | Magnitude and/or geographical extent of impact(s) have the potential to meaningfully affect off- property residents, lands or receiving waters | Life of Mine | Could reasonably be expected to occur | Can be reversed with difficulty |
| Ξ | Adverse effects involve locally or regionally important species or communities | Adverse effects to livelihoods and/or property values | Magnitude and/or geographical extent of impact(s) expected to meaningfully affect off- property residents, lands or receiving waters | Extends beyond life of Mine | Will occur, or is likely to occur | Not reversible |

5. Consultation

The Mine is described in the License (as amended), which provides operational details and provides an anticipated schedule that is contingent on permit acquisition, procurement (goods and services), successful financing, encountered ground conditions and continued positive exploration results.

Consultation for the Tailing Management Expansion is provided under separate cover of AECOM (2012)

5.1 Aboriginal

Aboriginal consultation has been completed with the San Gold Aboriginal Liaison Officer, Mr. Rod Bushie, a local Hollow Water First Nation member.

5.2 Public

With the expansion of the TMA, an open house with the residents of Bissett was held on October 12th, 2011 along with meeting municipal councillors and Town staff earlier in the day. Details of the open house are provided in the AECOM 2012 supporting report.

5.3 Government

San Gold met with representatives from Manitoba Conservation on March 7, 2011 to discuss the original NOA. Comments provided by Manitoba Conservation on the June 15th, 2011 submittal and follow up meeting on January 24th, 2012 have been incorporated into this major NOA.

6. Monitoring and Reporting

This Section outlines the proposed changes to the monitoring and reporting program for the Mine. The TMA Expansion is discussed under separate cover of AECOM (2012) "*Request for Alteration to San Gold Corporation's Tailings Management Area*"

6.1 Routine Monitoring and Reporting

6.1.1 Water and Air

Due to the low risk of significant residual impacts resulting from the proposed alterations described in this NOA and the explicit requirements of the License and requirements of regulations (Metal Mining Effluent Regulations promulgated under *Fisheries Act*) that regulate each stage of the Mine life, no additional water or effluent monitoring is warranted. Routine monitoring of effluent and surface water is described in the License. The proposed changes are listed in the bullets below.

- <u>Section 38 of License</u>: Amend the surface water monitoring program by removing station NNC-GR from San Gold's sampling requirements under the current license. However, this station should remain subject to future periodic reviews of monitoring data. There are no identified impacts at this monitoring station, as evidenced by the attached PEI (2012) report. There is a Health and Safety concern associated with this sampling location as there are numerous hunters within the vicinity of this sample station during the hunting season. The access road to this station travels through a forest in which numerous recreational hunters have been noted along with ATV and pedestrian traffic.
- Radium-226 will be monitored in surface water and effluent accordance with the federal MMER. Monitoring frequency for this expensive water quality parameter will be amended over time in accordance with the MMER provisions.

Routine monitoring of fugitive dust sources at the Mine is outlined in the draft BMP (Appendix C).

There are no changes to the reporting requirements of the License.

6.1.2 Waste Rock and Ore

San Gold will maintain the ARD monitoring program that was included in the Cartwright NOA submitted by AECOM (2010; Appendix B) and previously approved.

Waste rock and ore are currently being assayed from the 007 zone under the same conditions that are outlined in the License for the Rice Lake, Cartwright, SG 1 and Hinge deposits. It is recommended that the license be revised to reflect the sampling that is currently being undertaken on 007 Zone deposits.

Once the Cohiba Zone moves into production, it is proposed that waste rock and ore extracted from this deposit be sampled under the same conditions that are outlined for the Rice Lake, SG 1, Cartwright and Hinge Zone deposits. After an initially confirming that the waste rock and ore from the Cohiba Zone are not acid-generating, this would involve collecting quarterly samples from the two deposits and combining

then into a composite sample to be analyzed once per year as an independent samples from each respective zone.

6.2 Triggered Monitoring and Reporting

In accordance with San Gold Standard Task Procedures, an exceedence of an effluent limit or an accidental release to water would trigger an appropriate monitoring program to determine the effects, if any. Spills or exceedences would be reported to Manitoba Conservation in accordance with the License.

In accordance with San Gold Standard Task Procedures, a public complaint would trigger an appropriate monitoring campaign to determine the source of the complaint and the type of remedial action required to resolve the complaint along with the appropriate documentation of San Gold's response.

7. Conclusions

The proposed alterations are not regarded as environmentally significant, as demonstrated herein. Based on on-going consultation, San Gold has not been made aware of any complaints or negative comments from the surrounding communities and stakeholders regarding the Mine. For these reasons, the proposed alterations described herein are believed to be not material.

8. References

- AECOM 2012. Request for Alteration to San Gold Corporation's Tailings Management Area, *prepared for* San Gold Corporation
- AECOM 2010. San Gold Corporation, Notice of Alteration for the Cartwright Mine, Bissett, Manitoba prepared for San Gold Corporation
- Environment Canada, 2009. Environmental Code of Practice for Metal Mines.
- GeoEx 2010. Technical Report Mineral Reserves, Mineral Resources and Economic Assessment, Rice Lake Project, Rice Lake Greenstone Belt, Bissett, Manitoba, *prepared for* San Gold Corporation, 47pp plus Appendices
- Government of Manitoba. 2012. The Environment Act. From Manitoba Laws. Available from <u>http://web2.gov.mb.ca/laws/statutes/ccsm/e125e.php</u> . (Accessed February 2012).
- PEI 2012. Rice Lake Gold Annual Effluent Discharge Campaign Report, 2011, *prepared for* San Gold Corporation.
- PEI 2011. Rice Lake Gold Cycle 1 EEM Interpretative Report, prepared for San Gold Corporation.