Manitoba

Conservation and Water Stewardship

Climate Change and Environmental Protection Division
Environmental Approvals Branch
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5
T 204 945-8321 F 204 945-5229
www.gov.mb.ca/conservation/eal

File: 2435.40
August 24, 2012

William Weaver, M.Sc.
Manitoba Conservation and Water Stewardship
Box 14 – 200 Saulteaux Crescent
Winnipeg MB R3J 3W3

Dear William Weaver:

Re: San Gold Corporation – Tailings Management Area Expansion - Environment Act Proposal

The responses from the Technical Advisory Committee (TAC) that requested additional information regarding the Environment Act Proposal for San Gold Corporation's Tailings Management Area Expansion were forwarded to the proponent for response.

Please find attached San Gold Corporation's August 21, 2012 letter responding to the comments and requests for additional information presented by the TAC. You will note in their response that a second report specifically addressing Aboriginal Consultation issues will be submitted at a later date. Please review the information provided to determine if your comments or concerns have been satisfactorily addressed.

Your comments, if any, are required to be submitted to the Environmental Approvals Branch by September 14, 2012. No response on your part will be assumed to indicate no concern.

If you have any questions, please contact me at 204-945-7012.

Yours truly,

Jennifer Winsor, P.Eng.
Environmental Engineer

Attachment

c. Don Labossiere, Director – Environmental Compliance and Enforcement, Conservation and Water Stewardship
Ernest Armitt, Director – Manitoba Innovation, Energy and Mines
Public Registries

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File: 2435.40
August 24, 2012

Kris Innes
Manitoba Conservation and Water Stewardship
Box 4000
Lac du Bonnet MB R0E 1A0

Dear Kris Innes:

Re: San Gold Corporation – Tailings Management Area Expansion - Environment Act Proposal

The responses from the Technical Advisory Committee (TAC) that requested additional information regarding the Environment Act Proposal for San Gold Corporation's Tailings Management Area Expansion were forwarded to the proponent for response.

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Jennifer Winsor, P.Eng.
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File: 2435.40
August 24, 2012

Ryan Coulter, P.Eng.
Manitoba Infrastructure and Transportation
Highway Planning and Design Branch
14th Floor – 215 Garry Street
Winnipeg MB R3C 3P3

Dear Ryan Coulter:

Re: San Gold Corporation – Tailings Management Area Expansion - Environment Act Proposal

The responses from the Technical Advisory Committee (TAC) that requested additional information regarding the Environment Act Proposal for San Gold Corporation's Tailings Management Area Expansion were forwarded to the proponent for response.

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If you have any questions, please contact me at 204-945-7012.

Yours truly,

JWinsor

Jennifer Winsor, P.Eng.
Environmental Engineer

Attachment

c. Don Labossiere, Director – Environmental Compliance and Enforcement, Conservation and Water Stewardship
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File: 2435.40
August 24, 2012

Jonathan Wiens, MSc.
Manitoba Conservation and Water Stewardship
Box 24 – 200 Saulteaux Crescent
Winnipeg MB R3J 3W3

Dear Mr. Jonathan Wiens:

Re: San Gold Corporation – Tailings Management Area Expansion - Environment Act Proposal

The responses from the Technical Advisory Committee (TAC) that requested additional information regarding the Environment Act Proposal for San Gold Corporation's Tailings Management Area Expansion were forwarded to the proponent for response.

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Yours truly,

Jennifer Winsor, P.Eng.
Environmental Engineer

Attachment

c. Don Labossiere, Director – Environmental Compliance and Enforcement, Conservation and Water Stewardship
Ernest Armitt, Director – Manitoba Innovation, Energy and Mines
Public Registries

San Gold Corporation

Environmental Act Proposal (2012)
Response to the Technical Advisory Committee

Prepared by:

Parks Environmental Inc.
18 Werstine Terrace. Cambridge, Ontario, N3C 4G7
T 519.222.6463 www.parksenvironmental.com

August 21, 2012

August 21, 2012

Project Number: 10-02

Ms. Jennifer Winsor
Manitoba Conservation, Environmental Assessment and Licensing Branch
Suite 160 - 123 Main St.
Winnipeg, MB
R3C 1A5

Dear Ms. Winsor:

Re: San Gold Corporation – Response to the Technical Advisory Committee

On behalf of San Gold Corporation's Bissett, Manitoba operations, Parks Environmental Inc. and AECOM are pleased to provide a response to the comments and concerns that the Technical Advisory Committee has raise in review of the San Gold Corporation Tailings Management Area Expansion *Environmental Act* Proposal. We hope that the information contained within this report also addresses the requests for additional information that were made by the Committee.

If you have any questions, or require further information on the report, please do not hesitate to contact us.

Sincerely,

Derek Parks, B.Sc. M.Sc.
Director and Senior Aquatic Specialist
derek.parks@parksenvironmental.com

DJP:djp

Encl.
cc: Mr. John Hutchison , San Gold Corporation

Table of Contents

Appendices

This report responds to the letter from the Manitoba Conservation and Water Stewardship Climate Change and Environmental Protection Division dated June 6, 2012. In that correspondence, a request was made the Environmental Approvals Branch to provide detailed responses and additional information requested by the Technical Advisory Committee and the public. This is the first of two reports with respect to these requests which specifically addresses the Technical Advisory Panel concerns. A second report is currently being compiled to address the concerns and request of the public that were communicated in that letter.

2. Response to the Technical Advisory Committee

2.1 Government of Manitoba – Mines Branch

Cal Liske, P. Eng. – Chief Mining Engineer

With respect to the San Gold *Environmental Act* Proposal, Mr. Liske has requested the following information:

1. ***Identify all First Nations and Aboriginal communities whose traditional activities may be impacted by the project;***

San Gold Corporation:

San Gold Corporation's response to the Government of Manitoba – Mines Branch with respect to the First Nation and Aboriginal Communities will be included in the second report dealing with public comments and concerns.

2. ***Engage with identified First Nations and Aboriginal communities;***

San Gold Corporation:

San Gold Corporation's response to the Government of Manitoba – Mines Branch with respect to the First Nation and Aboriginal Communities will be included in the second report dealing with public comments and concerns.

3. ***Report on the engagement and integrate any community issues and concerns into the EIS;***

San Gold Corporation:

San Gold Corporation's response to the Government of Manitoba – Mines Branch with respect to the First Nation and Aboriginal Communities will be included in the second report dealing with public comments and concerns.

4. ***Provide and assessment of what effects the project may have on the exercise of Aboriginal and Treaty rights of the identified First Nations and Aboriginal Communities;***

San Gold Corporation:

San Gold Corporation's response to the Government of Manitoba – Mines Branch with respect to the First Nation and Aboriginal Communities will be included in the second report dealing with public comments and concerns.

5. ***Outline any proposed accommodation measures to address the identified effects; and***

San Gold Corporation:

San Gold Corporation's response to the Government of Manitoba – Mines Branch with respect to the First Nation and Aboriginal Communities will be included in the second report dealing with public comments and concerns.

6. ***Provide and update to the existing Mine Closure Plan for approval of the Director of Mines by September 30, 2012.***

San Gold Corporation:

San Gold Corporation began updating its Mine Closure Plan in the fourth quarter of 2011 prior to submitting its *Environmental Act* Proposal. The Closure Plan has been amended to include decommissioning of the proposed tailings management area expansion and closure costs are currently being assessed. Once the closure costs are calculated, only determining the appropriate form of security remains to be completed. It is anticipated that the updated Mine Closure plan will be submitted to the Director of Mines for approval by September 30, 2012 as requested.

2.2 Government of Manitoba – Manitoba Conservation Wildlife Branch

Jonathan Wiens, M.Sc. – Habitat Specialist

Mr. Wiens has noted that San Gold has tried to mitigate the loss of functional forest habitat by locating the tailings management area expansion immediately adjacent to the current facility. However, the propose development will still negatively affect available wildlife habitat in particular the newly designated "Moose Conservation Zone".

1. Since the avoidance of major impact on wildlife is not feasible, financial compensation is requested to meet the draft provincial policy of habitat protection.

San Gold Corporation:

The alteration that is being proposed is temporary in nature and requires a suitable closure plan, acceptable to the province, to be proposed and completed at the closure of the mine. The Tailings Management Area currently provides habitat for migrating shorebirds and moose, as a cow has around for the past two years, with successful rearing of a calf annually. The expansion of the TMA will also eliminate hunting in the vicinity for the protection of mine workers.

San Gold is working with the Hollow Water First Nation to develop some environmental programs to assist in their understanding of our operations and thus financial compensation for the environment is indirectly being provided via the local First Natin.

2.3 Government of Manitoba – Manitoba Conservation and Water Stewardship

Kris Innes – Environmental Compliance and Enforcement Officer

Mr. Innes has requested the following information with respect to San Gold Corporation's recent submission:

1. ***Conservation and Stewardship notes that copper and aluminum have exceeded applicable guidelines in effluent and water samples and requests information in relation to strategies that will be employed at the Mine to mitigate exceedances of the applicable criteria for effluent and sediments in the future.***

San Gold Corporation:

Upon second review, it has been determined that there have been no exceedances of applicable guidelines in effluent samples collected from 2007 to 2011 for copper and aluminum. Because only one sample was collected in November 2010, only the criteria for a grab samples is applicable and the total copper concentration was well below the maximum daily allowable limit. Canadian Council of Ministers of the Environment guidelines (CCME 2011) are for surface waters only and do not apply to effluent; therefore, no exceedances were observed for aluminum. The San Gold Corporation *Environmental Act* License requires Mine effluent to meet *Metal Mining Effluent Regulation* Criteria (Government of Canada 2011) and *Manitoba Water Quality Standards, Objectives and Guidelines* Tier III Drinking Water guidelines (Government of Manitoba 2011). Neither of these two regulations have a guideline for aluminum.

Total copper concentrations in effluent do become elevated at the end of the fall discharge in 2010 as a result of the Mine trying to lower water levels in the polishing pond too far in an attempt to prevent the need for another emergency discharge in 2011. In doing so, it is thought that sediments were disturbed in the pond which resulted in the increase in copper concentrations. This interpretation is supported by a similar increase in turbidity and total suspended solids.

The exceedances with respect to water quality in the Wanipigow River pertain to total concentrations of copper, aluminum and iron. These three parameters were elevated above CCME guidelines (CCME 2011) in both upstream and downstream samples which is likely the result of local geological conditions. It should be noted that dissolved concentrations of these parameters did not exceeded *Manitoba Water Quality Standards, Objectives and Guidelines.*

2. ***Conservation and Water Stewardship requests further clarification on how the final annual discharge volume is calculated. Specifically, as mine water and mill discharge are pumped into the TMA, are the water savings resulting from this practice accounted for within a reduction of mine water input? In particular, the end use of reclaim water is unclear as this water is presumably pumped back into the TMA after reuse. Furthermore, the total amount of water is based on a best case scenario in which a daily maximum drilling rate of 2,500 sdtpd is practiced.***

San Gold Corporation:

The final annual discharge volume from the Polishing Pond is a result of various inputs to and outputs from the TMA and Polishing Pond. These include runoff from rainfall/snowmelt, mill discharge pumped into the TMA, mill process recycle water, annual TMA pump out, and evaporation. A water balance was performed calculating the difference between inputs and outputs to draw the total volume stored in the Polishing Pond down to near zero at the end of the milling year.

The water balance model was based on the assumption of annual precipitation, assumptions of tailings and wastewater volumes based on licensed milling rates, and end of milling year release volumes based on the license milling rate of 1,200 short dry tons per day sdtpd. It is understood that a portion of the total mill discharge pumped into the TMA is recycled back into the mill for mine processing. The total annual, or monthly, volume of mill discharge water recycled back into the mill is not explicitly measured. The recycled percentage of the total mill discharge water was reverse-engineered based on the difference between the estimated inflows and the annual mill discharge from recent years.

The practice of recycling mill discharge water from the TMA to be used for mill processing is accounted for in the water balance model and reduces the mine production water input. This recycled mill discharge water ultimately returns to the TMA and at year end there is a net surplus of treated water in the TMA that must be released in accordance with the licensed discharge.

The water used for the daily maximum milling rate of 2,500 sdtpd comes from the assumption that the recycle rate computed using the 1,200 sdtpd would scale proportionally with the milling rate. As such, the total amount of reclaimed water is based on a best case scenario of a 2,500 sdtpd milling rate and the same ratio of mill discharge to recycle volume.

3. ***Conservation and Water Stewardship requests an assessment of the potential for suspension of existing polishing pond sediments resulting from the practice of transferring treated effluent from the new polishing pond and existing tailings pond into the existing polishing pond. The suspension of sediments may be further exacerbated by***

the practice of discharging cell contents until "practically empty". If these practices have the potential to reduce effluent quality beyond the applicable criteria, what are San Gold Corporation's mitigation strategies to address these concerns? It is also noted that Figure 7 suggests that there is a continuous flow from TP1 into PP1 which is not described in Section 2.3.3 of the report.

San Gold Corporation:

The point of transfer from the new polishing pond to the existing polishing pond will occur on the east side of the existing polishing pond. The current and future point for discharge from the existing polishing pond to No Name Creek is situated in the northwest corner of the existing polishing pond which is expected to allow for sufficient settlement of sediment. In addition, discharge to No Name Creek is accomplished using a floating pump and pumping is terminated once the pump is in close proximity to the pond bottom. However, the transfers of water will be monitored and mitigation measures will be employed on an as needed basis (such as staggering water transfers between the polishing ponds and the discharge to No Name Creek) to ensure that TSS concentrations do not exceed the maximum water quality discharge allowances stipulated in the current operating license.

With respect to Figure 7, the figure is depicting the continuous flow of water from the existing main pond to the existing tailings pond once tailings are no longer being deposited in the existing main pond and water no longer requires treatment (to be confirmed by analytical results).

4. ***Conservation and Stewardship requests San Gold Corporation to identify strategies to prevent excessive mounding of the tailings slurry which may occur from the general filling strategy of the proposed new main pond and result in an unauthorized release from the TMA.***

San Gold Corporation:

As is current practice in the existing TMA, tailings will be deposited in the new TMA at several discharge points over time to avoid excessive mounding.

5. ***Conservation and stewardship wants San Gold Corporation to comment on the risk of groundwater contamination as a result of the proposed TMA and the operation of the existing TMA and how any risks will be mitigated.***

San Gold Corporation:

The risk of impact to local groundwater is deemed low as appropriate construction methods have been used for recent dyke raises at the existing TMA (low hydraulic conductivity achieved through appropriate construction methods and compaction testing of placed materials) and will be used for the dykes and base of the proposed TMA (dykes will be constructed in such a manner as to achieve a sufficiently low permeability of materials used in construction and the permeability of base materials will be assessed and amended with synthetic liners used as required). The current monitoring well network will be used to

monitor groundwater in the vicinity of the existing TMA and the proposed TMA with additional monitoring wells installed to ensure that groundwater quality can be adequately assessed in these areas.

William Weaver, M.Sc. – Environmental Review Officer

Mr. Weaver has requested that the following conditions be included in the Mine's *Environmental Act* License:

1. ***The Licensee shall not release any effluent from a final discharge point if: a) the quality or toxicity of the effluent is in non-compliance with the federal Metal Mining Effluent Regulations under the Fisheries Act, or b) the effluent quality is resulting in, or is likely to directly or cumulatively result in, a downstream degradation of the water quality immediately beyond a maximum 10% mixing zone (by volume) within No Name Creek and/or the Wanipigow River, relative to Manitoba Water Quality Standards, Objectives and Guidelines under the Water Protection Act and/or nutrient control strategies and regulations developed by the Manitoba Department of Conservation and Water Stewardship.***

San Gold Corporation:

San Gold Mine effluent will be compliant with *Metal Mining Effluent Regulations* prior to the initiation of any effluent discharge and therefore does not object to the inclusion of Part a of the condition in the *Environmental Act* license. As outlined in the current License, prior to discharge, an effluent sample will be collected from the polishing pond surface, middle and bottom of the water column at the deepest location in the polishing pond and each sample will be tested to assure that effluent quality meets the criteria outlined in Schedule 4 of the *Metal Mining Effluent Regulations* and drinking water health related parameters outlined in *Manitoba Water Quality Standards, Objectives and Guidelines Regulations* under the *Water Protection Act.* Samples will also be tested for acute lethality to rainbow trout and *Daphnia magna* following procedures identified in the *Metal Mining Effluent Regulations.*

The condition with respect to the 10% by volume mixing zone typically applies to effluent discharges entering a larger body of water (K. Jacobs, Personal Communication). Because effluent discharge comprises the majority of flow in No Name Creek, the application of mixing zones outlined within the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* under the *Water Protection Act* does not apply in this situation and Part b of the condition should be excluded from the License.

2. ***The Licensee shall, in the course of developing a program for Environmental Effects Monitoring studies, as required by the Metal Mining Effluent Regulations under the Fisheries Act, consult with Manitoba Department of Conservation and Water Stewardship for possible additional inclusions or considerations respecting site specific water quality and biological issues, prior to finalizing and under taking the required Environmental Effects Monitoring studies.***

San Gold Corporation:

Manitoba Conservation and Water Stewardship are already consulted with respect to the Environmental Effects Monitoring studies conducted at the San Gold Corporation facility as the Environment Canada Technical Advisory Panel that reviews the Study Designs and Interpretative Reports includes 2 Manitoba Water Stewardship reviewers. In the future, should the Manitoba Water Stewardship loose its representation on the Technical Advisory Panel, San Gold Corporation will seek consultation from Water Stewardship for the possible inclusion or considerations in Environmental Effects Monitoring Study Designs. This condition is included in the current *Environmental Act* License and San Gold Corporation does not object to its inclusion in the amended License.

3. ***All monitoring data shall be summarized and interpreted in an annual report. In addition to current requirements this report would be required to:***
    - ***Evaluate the concentrations of metals in reference to previous years monitoring and baseline conditions at each site.***
    - ***The report will include any changes in concentrations over baseline conditions and the direction of the change.***
    - ***The report will include accidents and malfunctions at the site.***
    - ***The report will include a summary of results from all toxicity tests including a discussion of all acute and sub-lethal toxicity results.***
    - ***San Gold Corporation will provide an electronic copy of all aquatic monitoring data to the Water Quality Management Section of the Manitoba Department of Conservation and Water Stewardship.***

San Gold Corporation:

Aspects of the above conditions are already incorporated in the Mine's current *Environmental Act* License and have been followed since the License was issued on November 6, 2003 and revised on July 14, 2004. San Gold Corporation has no objections with respect to the inclusion of the additional reporting conditions stated above.

4. ***The Licensee shall construct the tailings facility to achieve a maximum hydraulic conductivity of $1*10^{-7}$ cm/s, including implementing a liner of compacted clay, synthetic material, or other approved material.***

San Gold Corporation:

As discussed in Section of 2.3.2.3 of the San Gold Corporation *Environmental Act* Proposal, Dykes will be constructed of a clay core with a permeability of no greater than$1*10^{-7}$ cm/s. Once the clay materials are identified that will be used in the construction of the dykes are identified, they will undergo Proctor testing and laboratory triaxial permeability testing to confirm that they meet the permeability requirements.

Two soil samples were submitted for geotechnical analysis at the National Testing Laboratories Limited (Winnipeg, MB) on February 13, 2012 to confirm that the area in which the Tailings Area Expansion is located has a hydraulic conductivity no greater than $1*10^{-7}$ cm/s. The two drill core samples from 10 feet to 12 feet had a hydraulic conductivity (k_{20}) of $4.7 * 10^{-8}$ cm/s and $1.8 * 10^{-7}$ cm/s (Appendix A) and therefore meet permeability requirements.

As the design of the proposed expansion meets the above conditions, San Gold Corporation does not object with its inclusion in the *Environmental Act* License.

Mr. Weaver has expressed the following concerns on behalf of the Water Stewardship Division:

1. ***There is concern with the proposed increased discharge period with respect to ensuring that water and sediment quality downstream of the Mine are protected to prevent adverse changes to the following receiving waters: No Name Creek, Horseshoe Creek, Wanipigow River and Lake Winnipeg.***

San Gold Corporation:

San Gold Corporation anticipates that the effects from the proposed increased discharge period will be negligible. Although the period that effluent discharge may occur has been extended, there has only been a marginal increase in the maximum discharge rate and surface water quality should remain unchanged. In fact, the expanded Tailings Management Area should increase effluent quality by providing additional retention time for the volatilization of ammonia, the natural degradation of cyanide and the settling of suspended solids. San Gold Corporation will continue to monitor surface water quality as outlined in its *Environmental Act* License and should water quality decline due to the lengthened discharge period, the Mine will employ mitigative measures (i.e. additional treatment of effluent) to ensure that water quality in the receiver is compliant with *Manitoba Water Quality Standards, Objectives and Guidelines.*

2. ***The Wanipigow River provides habitat throughout the year for a number of large and small-bodied fish, Further, the Wanipigow River is classified as a Class 1 system, meaning it has a high capability for the production of fish.***

San Gold Corporation:

San Gold Corporation understands the importance of the Wanipigow River as fish habitat and will make every effort to limit the effect that the construction and operation of the proposed expansion will have on surface water quality.

3. ***Recent discharge data have indicated that dissolved copper levels in the Wanipigow River downstream of the discharge site were double the concentration found at an upstream location. Hardness in the Wanipigow River is only one third of the hardness in No Name Creek which makes it more sensitive than No Name Creek. Similarly, ammonia concentrations in recent discharge samples have been near or above water quality***

objectives, in particular the 30-day objective. Adequate monitoring and if necessary water quality modeling may be required to ensure the proposed development meets this requirement, in particular under low flow conditions in No Name Creek and the Wanipigow River.

San Gold Corporation:

Although dissolved copper concentrations are greater in downstream Wanipigow River samples they remain below *Manitoba Water Quality Standards, Objectives and Guidelines* and pose no threat to aquatic life. Ammonia concentrations were elevated in samples collected at the final discharge point in July 2011 but there are no *Metal Mining Effluent Regulation* criteria or health-related drinking water guidelines for ammonia. Mr. Jacobs form the Manitoba Department of Water Stewardship notes that concentrations of many parameters decrease and typically meet *Manitoba Water Quality Standards, Objectives and Guidelines* at Station No Name Creek Vanson Road; however, there must be lengths of No Name Creek between the final discharge point and Vanson Road that do not (K. Jacobs, Personal Communication). This section of No Name Creek can be classified as an intermittent creek with $_7Q_{10}$ flows less than 0.001 m^3/s (AECOM 2012). This section does contain pools that remain even when no flow is observed in the creek but these pools are not utilized as fish habitat (D. Parks, Personal Communication) and therefore Tier II Water Quality Objectives should not apply.

Mr. Weaver has provided the following comments on behalf of the Water Stewardship Division:

1. ***The Water Stewardship doses not object to the approval of this proposal, at this time.***

San Gold Corporation:

San Gold Corporation acknowledges the Water Stewardship Division's position with respect to the proposal.

2. *San Gold Corporation needs to be informed with respect to the following:*
    - *Erosion and sediment control structures should be implemented until all of the sites have stabilized.*
    - *The Water Rights Act requires a person to obtain a valid license to control water or construct, establish or maintain any "water control works". Water control works are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water that temporarily or permanently alters or may alter the flow or water level, including but not limited to water in a water body, by any means, including drainage, or changes or may change the location or direction of flow of water, including drainage. If the San Gold Corporation proposal advocates any of the aforementioned activities, a person is required to submit an application for a Water Rights License to Construct Water Control Works. A contact person is Mr. Geoff Reimer C.E.T., Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Conservation and Water Stewardship.*

San Gold Corporation:

The San Gold *Environmental Act* Proposal includes mitigative measures to control erosion such as minimizing the height of stockpiles and covering them, locating stockpiles away from drainage paths and potential sources of water and minimizing and re-vegetating disturbed areas, where required. The proposed development is located in a low-lying area which limits exposure to wind and prevents surface run off from flowing into local waterways. Should an increase in suspended solids be observed in surface waters, then additional control structures will be put in place and site runoff will be redirected into the Tailings Management Area for treatment.

San Gold Corporation is aware of its obligation to obtain a Water Rights License to Construct Water control Works prior to the construction of the proposed Tailings Management Area Expansion. Once the project is approved by Manitoba Conservation, Mr. Reimer will be contacted to begin the application process.

2.4 Government of Manitoba – Manitoba Infrastructure and Transportation – Highway Planning and Design Branch

Christopher Clary-Lemon, P.Eng, P.E. – Manger of Environmental Services

Mr. Clary-Lemon has expressed the following comments on behalf of Manitoba Infrastructure and Transportation:

1. ***San Gold Corporation requires a permit from Manitoba Infrastructure and Transportation for the 2 proposed access connections unto Provincial Road 304 as required under the Highways and Transportation Act.***

San Gold Corporation:

San Gold Corporation is aware of its obligation to obtain the required permits prior to constructing the 2 proposed access roads described in the *Environmental Act* Proposal.

2. ***San Gold will require a permit from Manitoba Infrastructure and Transportation for any structures (including buildings, dykes, advertising signs, wells, septic fields, ect.) on, under or above the ground within the 38.1 m (125 feet) controlled area adjacent to a Provincial Road, any discharging of water or other liquid materials into the Provincial Road's ditch and placing of any plantings within 15.2 m (50 feet) of the Provincial Road's right-of-way.***

San Gold Corporation:

There are currently no plans to construct any structures within the controlled areas adjacent the Provincial Road 304, discharge any liquids into Provincial Road 304's ditch or place any plantings within 15.2 m of Provincial Road 304.

3. ***For permitting requirements, please contact Mr. Kevin Nimchuk, Senior Access Management Analyst, at (204) 945-5658.***

San Gold Corporation:

San Gold Corporation thanks Mr. Clary-Lemon for providing the appropriate contact information.

References

AECOM. 2012. Request for Alteration to San Gold Corporation's Tailings Management Area. *Prepared for* San Gold Corporation. pp. 324.

Canadian Council of Ministers of the Environment (CCME). 2011. Canadian Environmental Quality Guidelines. Environment Canada, Quality and Standards Division, Ottawa. Publication No. 1299; ISBN 1-896997-34-1.

Government of Manitoba. 2011. Manitoba Water Quality, Standards, Objectives, and Guidelines. Manitoba Water Stewardship Report No. 2011-01, 4-July 2011. Water Science and Management Branch, Manitoba Water Stewardship, Winnipeg, MB. 72pp. Available from: http://www.gov.mb.ca/waterstewardship/water_quality/quality [accessed April 2012].

Appendix A

San Gold Corporation

Environmental Act Proposal (2012) – Response to the Technical Advisory Committee

- ASTM Measurement of Hydraulic Conductivity Tests Certificate of Analysis

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

199 Henlow Bay
Winnipeg, MB R3Y 1G4
Phone (204) 488-6999
Fax (204) 488-6947
Email info@nationaltestlabs.com
www.nationaltestlabs.com

AECOM Canada Ltd.
99 Commerce Dr.
Winnipeg, Manitoba
R3P 0Y7

February 22, 2012

Attention: Stephen Petsche

Project: TMA Expansion 2012
60116437

Two soil samples, identified as RLGM-TH12-02-T8-(10'-12') and RLGM-TH12-11-T72-(10'-12') were submitted to our laboratory on February 13, 2012.The samples were tested in accordance with ASTM D5084, Measurement of Hydraulic Conductivity of Saturated Porous Materials using a Flexible Wall Permeameter. The test results are provided in the attached hydraulic conductivity reports and are summarized in the following table:

Sample ID	Sample Depth (ft)	Hydraulic Conductivity, "k_{20}"
RLGM-TH12-02-T8	10-12	4.7×10^{-8} cm/s
RLGM-TH12-11-T72	10-12	1.8×10^{-7} cm/s

We appreciate the opportunity to assist you in this project. Please call if you have any questions regarding this report.

Farouk Fourar-Laidi, EIT
Geotechnical Engineering

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

HYDRAULIC CONDUCTIVITY
ASTM D5084

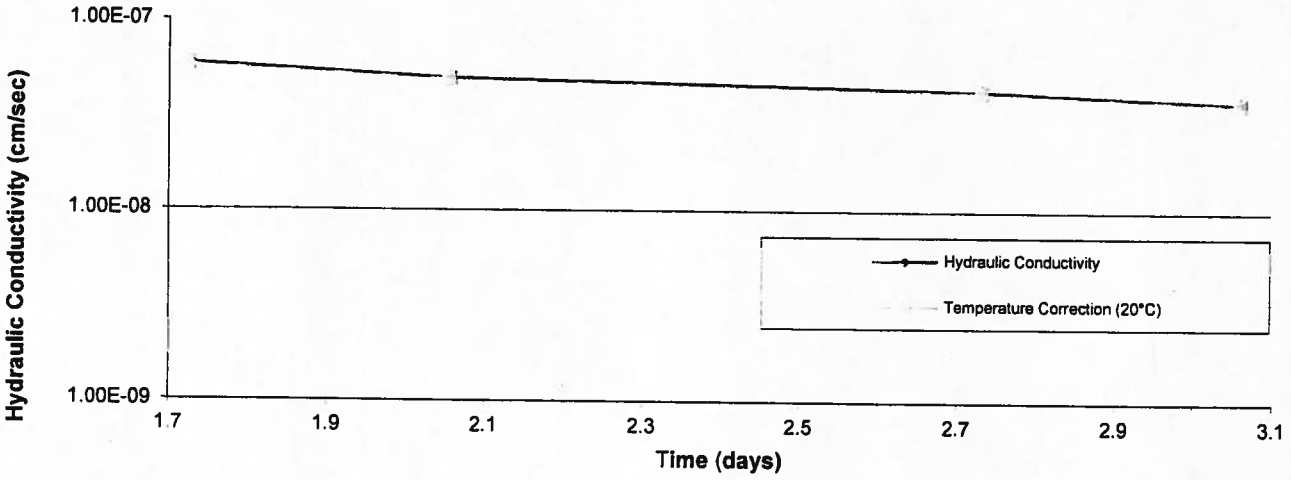
AECOM Canada Ltd.
99 Commerce Dr.
Winnipeg, Manitoba
R3P 0Y7

PROJECT: TMA Expansion 2012
60116437

Attention: Stephen Petsche

SAMPLE I.D.:	**RLGM-TH12-02-T8-10'-12'**
SOIL TYPE:	Brown, firm, moist, high plasticity clay trace silt and trace sand
DATE TESTED:	February 13th to 16th, 2012
CONFINING PRESSURE (kPa):	137.9
EFFECTIVE SATURATION STRESS (kPa):	34.5
HYDRAULIC GRADIENT:	20.5
TYPE OF PERMEANT LIQUID:	De-aired Water
HYDRAULIC CONDUCTIVITY, "k" (cm/s):	4.7E-08
HYDRAULIC CONDUCTIVITY, "k_{20}" (cm/s):	**4.7E-08**

	Height (mm)	Diameter (mm)	Wet Mass (g)	Dry Density (g/cm^3)	Water Content (%)	Saturation (%)
Initial Reading	73.5	71.0	574.1	1.507	30.9	105.1
Final Reading	72.2	70.2	567.7	1.586	28.1	107.5



February 24, 2012

REVIEWED BY: Farouk Fourar-Laidi, EIT

199 Henlow Bay, Winnipeg, Manitoba R3Y 1G4 Phone (204) 488-6999 Fax (204) 488-6947 Email info@nationaltestlabs.com

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

HYDRAULIC CONDUCTIVITY
ASTM D5084

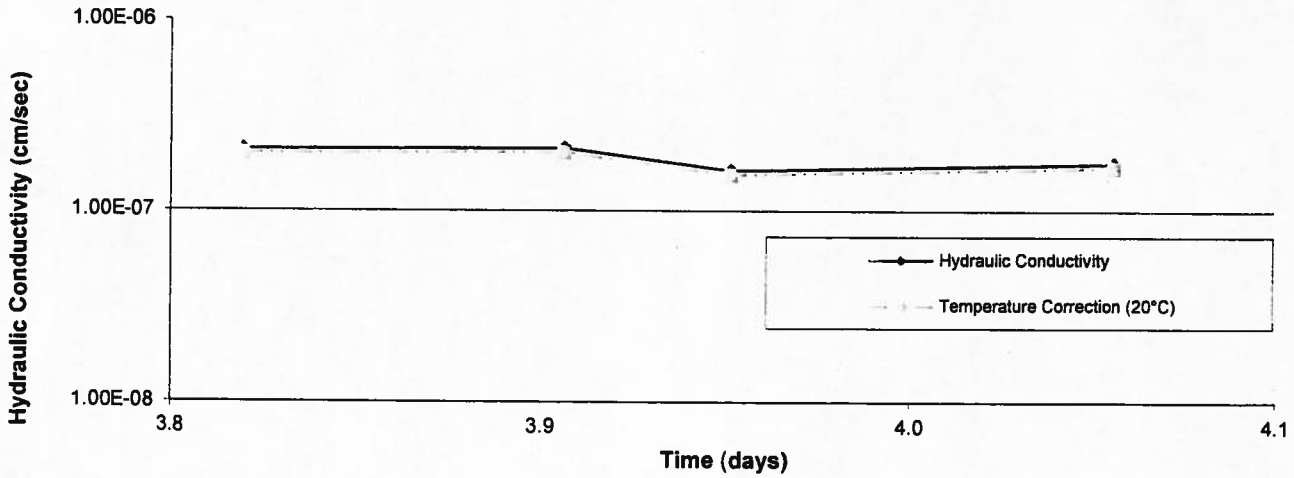
AECOM Canada Ltd.
99 Commerce Dr.
Winnipeg, Manitoba
R3P 0Y7

PROJECT: TMA Expansion 2012
60116437

Attention: Stephen Petsche

SAMPLE I.D.:	**RLGM-TH12-11-T72-10'-12'**
SOIL TYPE:	Brown, firm, moist, high plasticity clay trace silt, trace layers of fine sand
DATE TESTED:	February 13th to 17th
CONFINING PRESSURE (kPa):	137.9
EFFECTIVE SATURATION STRESS (kPa):	34.5
HYDRAULIC GRADIENT:	20.4
TYPE OF PERMEANT LIQUID:	De-aired Water
HYDRAULIC CONDUCTIVITY, "k" (cm/s):	1.9E-07
HYDRAULIC CONDUCTIVITY, "k_{20}" (cm/s):	**1.8E-07**

	Height (mm)	Diameter (mm)	Wet Mass (g)	Dry Density (g/cm^3)	Water Content (%)	Saturation (%)
Initial Reading	73.6	72.2	561.4	1.387	34.2	97.1
Final Reading	72.5	71.7	562.1	1.424	35.0	104.9



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