



Environmental Protection Operations Directorate (EPOD)
Prairie and Northern Region (PNR)
P.O. Box 1870
Iqaluit NU X0A 0H0

February 25, 2014

EC file: 6100 000 010
NWB file: 2AM-DOH1323
NIRB file: 05MN047

Phyllis Beaulieu, Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Via e-mail: Phyllis.Beaulieu@nwb-oen.ca

Attention: Ms. Beaulieu

RE: Licence No. 2AM-DOH1323; Amendment (No. 1) Application by TMAC Resources Inc., for the Doris North Project.

Please find attached Environment Canada's (EC) submission to the Nunavut Water Board (NWB) containing information requests on the Type A Water Licence No. 2AM-DOH1323; Amendment (No. 1) Application by TMAC Resources Inc. (the Proponent), for the Doris North Project, in response to the NWB's call for information requests dated February 7, 2014. EC's specialist advice is provided pursuant to the *Canadian Environmental Protection Act 1999*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Concerning the NWB request that interested parties provide comments to the NWB on the type of Technical Meeting/Pre-Hearing Conference and Public Hearing to be held for the application, EC has no comment and will participate in the format chosen by the NWB.

For further clarification on any aspect of this submission, please contact Michael Mohammed at (867)-975-4637 or michael.mohammed@ec.gc.ca.

Sincerely,

Michael Mohammed
Senior Environmental Assessment Coordinator

Attachment – "Licence No. 2AM-DOH1323; Amendment (No. 1) Application by TMAC Resources Inc., for the Doris North Project Information Request Table"

cc: Carey Ogilvie, Head Environmental Assessment North (NT & NU), PNR-EPOD
EC Internal Distribution

Licence No. 2AM-DOH1323; Amendment (No. 1) Application by TMAC Resources Inc., for the Doris North Project Information Request Table
Information Requests from Environment Canada
(FOR SUBMISSION TO THE NWB)

IR Source (department proposing IR)	IR number	To (Who are you requesting information from)	Subject (General Subject or topic associated with the information request)	Reference (reference any document, section, or page number in the amendment application where relevant information can be found)	Issue / Concern (Provide background and justification for the request)	Information Requested
EC-MPD and EPODES	1	TMAC Resources Inc.	Water Quality Parameters and Discharge Criteria	TMAC Project Proposal (Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323), Subsections 4.3, 4.4; Appendix 4: Roberts Bay Report, Subsection 5.2.3; Appendix 10: Water Quality Model, Subsection 3.1; Subsection 3.2.7; Subsection 3.4, Subsection 4.1, Subsection 5.1.2	A number of significant changes to water management are proposed, including moving to a year-round discharge from the Tailings Impoundment Area (TIA) to the marine environment, co-disposal of cyanide treated tailings with flotation tailings, and extended production and associated increases in water use and wastewater disposal. Table 4-1 of Appendix 10 presents a summary of TIA Discharge Standards and Targets. The standards are taken from the existing Type A water licence discharge criteria (Section G, Clause 26) and the targets are taken from a 2011 evaluation of discharge concentrations back-calculated to maintain the water in Roberts Bay at CCME concentrations for contaminants EC understands that with the change from a seasonal, freshwater effluent discharge to a year-round marine discharge to Roberts Bay there is a need to re-evaluate the discharge criteria and regulated parameters. Metal Mining Effluent Regulations (MMER) limits would not be inappropriate for the marine receiving environment provided protective water quality objectives for a broader range of parameters can be met at the edge of a defined mixing zone in Roberts Bay. It should be noted that the MMER is undergoing review, and the Proponent should be aware of discussions regarding additional regulated parameters and changes to the criteria (lowering allowable discharge concentrations).	Reconsideration of the Project Certificate will be necessary to amend the discharge criteria set for Doris Creek and set appropriate discharge limits for Roberts Bay. Further work is needed on contaminant concentration predictions. EC requests: 1. Further evaluation of ammonia concentrations in the effluent discharge; 2. The Proponent produce a plan to track selenium concentrations closely and identify appropriate treatment options which can be implemented if necessary; 3. Identification of marine-appropriate species for effluent bioassay tests; 4. Nitrate and zinc errata be clarified; and 5. The high groundwater flow scenario be evaluated.

					EC has a number of concerns with the revised effluent quality predictions: 1. Ammonia • Ammonia was modeled taking into account contributions from the groundwater, degradation of cyanide, blasting reagents, and from camp wastewater. Subsection 3.2.7 of Appendix 10 models increases to groundwater concentrations from blasting, but does not appear to carry that forward to the TIA for the first 4-5 years of operations (see Subsection 4.1 of Appendix 10 which states that groundwater doesn't report to the TIA until year 5). • Considerable reliance is placed on natural degradation processes to reduce ammonia concentrations in the TIA during the open water season. Subsection 3.4 of Appendix 10 addresses the cyanide contributions and uses removal rates which are based on enhanced removal using the addition of phosphorus. The enhanced removal was carried through the modeling as the base case in order to meet the 6 mg/L discharge criteria. EC's concern is that enhanced removal has not been demonstrated to occur at high salinity, nor at such high latitudes and cooler temperatures where biological activity is limited by light and temperature. • Under the base case scenario, winter discharge must be stopped for various periods of time to comply with the ammonia discharge limit. As modeled, there was sufficient water retention capacity to accommodate periodically halting discharge, but if concentrations are higher than modeled, the ability to discharge may be further limited, and TIA capacity may become an issue. 2. Selenium • Selenium levels in the proposed mill effluent (Appendix 10, Table 3-7) are as	
--	--	--	--	--	---	--

EC-MPD and EPODES	2	TMAC Resources Inc.	Marine Water Quality Objectives	Appendix 4-2: Roberts Bay Report, Table 5.2-3: Calculated Treated TIA Discharge Water Quality Targets to Ensure that Roberts Bay Water Quality Remains Below Marine CCME Guidelines, Page 5-7.	high as 0.25 mg/L, and range from 0.002 to 0.0051 mg/L in the predicted TIA discharge (Appendix 10, Table 5-1). Selenium concentrations should be closely tracked through monitoring, as these values are approaching levels that could cause reproductive impacts to fish. 3. Toxicity testing - The current water licence requirement for effluent to be non-acutely toxic relies on tests using freshwater organisms; this will need to be re-evaluated and marine-appropriate tests discussed. 4. Zinc - Subsection 4.2 Closure shows a target of 0.50 mg/L rather than the CCME value of 0.03; please confirm that this is in error. 5. Nitrate/nitrite - Please confirm that Appendix 10, Table 3-8 numbers for nitrate and nitrite have been switched. 6. Use of base case water inputs - Section 4 of Appendix 10 introduces three discharge scenarios for water management options. These are base case groundwater inflows, low flow groundwater, and no flow groundwater. It would be prudent to include a high flow (i.e. greater than base case) scenario and evaluate implications for effluent quality.	EC requests that a more comprehensive list of contaminants be evaluated in the receiving environment, and discharge targets identified for a defined area in Roberts Bay.
-------------------	---	---------------------	---------------------------------	---	---	--

EC-MPD and EPOD-ES	3	TMAC Resources Inc.	Marine Discharge Outfall	TMAC Project Proposal, Section 2; Appendix 4: Roberts Bay Report.	specific objectives based on the resident species and literature toxicity data, for example. In the original Environmental Assessment, the receiving environment was evaluated for effects of a wide range of parameters (both with and without CCME guidelines) and acceptable environmental concentrations determined. The change to a marine receiving environment does temper concerns, given the ocean's large assimilative capacity and the opportunity for avoidance. Nonetheless, effluent must be non-deleterious at end of pipe, and the mixing zone around the diffuser must be minimized to reduce the zone where some chronic toxicity might occur. To this end, review of the relevant chemicals of potential concern should be done, and objectives identified. At a minimum, this should include ammonia, BOD5, selenium, zinc, and lead, nickel and copper. The proponent proposes a marine outfall which will be designed to disperse effluent at a depth of 40 m, such that mixing is optimized and effects on the upper productive layer of the water column are minimized. The diffuser will be anchored on the seafloor by counter-buoyancy weights that will hold the diffuser pipe 40 cm above the sediments. Discharge of the effluent is through 20 lateral ports at a rate of approximately 120 L/s. The seafloor sediment composition is predominantly sand but also includes silt and clay. The turbulence caused by the effluent flow will cause scouring of the adjacent sediments, especially if the pipe rests on the floor of Roberts Bay between the ballast weights, and this will result in disturbance to benthic areas and turbidity in the water column for a period of time.	EC requests that mitigation measures be developed to prevent or minimize disturbance of the sediments at the diffuser site.
--------------------	---	---------------------	--------------------------	---	--	---

EC-MPD and EPOD-ES	4	NWB, TMAC Resources Inc.	Changes to inputs to the TIA and water transfer system	Project Proposal: Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323 Section 4: Description of Proposed Doris North Mine Changes, Subsection 4.4.2, Page 42-43	The proponent states in Subsection 4.1 (Extended Mine Life) that the new project proposal amendment will add an <i>additional</i> 2-4 years of mine life to the project (in addition to Miramar's original 2 year mine-life estimate). The proponent also states their new TIA plan (modelled and detailed in Appendix 14 - Tail Lake Water Design) will allow for approximately 58 months of use of the TIA (which is approximately 4.83 years). EC is concerned about a lack of contingency planning in the event that the TIA reaches capacity within the proposed 4-6 years of mine operation (e.g. the mine runs for 6 years or more yet the TIA only has capacity for 4.83 years). There does not appear to be much leeway built into the capacity predictions from the time of first use to the end of deposition. In Section 2, Page 31, it states that " ...the actual extent of mining in this phase will ultimately be limited by the amount of subaqueous tailings storage that is available based on the current designs for the TIA." EC also notes that the Proponent states the following on Page 41 of the new project proposal: "In the original application for the Type A Water Licence, it was stated that the cyanide destructed slurry would be filtered and trucked to the underground stope for final deposition and the flotation tails would be pumped to the TIA for subaqueous deposition. TMAC now proposes that the cyanide destructed slurry will be pumped to the flotation tailings pump box where it will be blended with flotation tailings prior to discharging in the TIA." This amended practice will increase the requirement for capacity in the TIA.	The proponent states in Subsection 4.1 (Extended Mine Life) that the new project proposal amendment will add an <i>additional</i> 2-4 years of mine life to the project (in addition to Miramar's original 2 year mine-life estimate). The proponent also states their new TIA plan (modelled and detailed in Appendix 14 - Tail Lake Water Design) will allow for approximately 58 months of use of the TIA (which is approximately 4.83 years). EC is concerned about a lack of contingency planning in the event that the TIA reaches capacity within the proposed 4-6 years of mine operation (e.g. the mine runs for 6 years or more yet the TIA only has capacity for 4.83 years). There does not appear to be much leeway built into the capacity predictions from the time of first use to the end of deposition. In Section 2, Page 31, it states that " ...the actual extent of mining in this phase will ultimately be limited by the amount of subaqueous tailings storage that is available based on the current designs for the TIA." EC also notes that the Proponent states the following on Page 41 of the new project proposal: "In the original application for the Type A Water Licence, it was stated that the cyanide destructed slurry would be filtered and trucked to the underground stope for final deposition and the flotation tails would be pumped to the TIA for subaqueous deposition. TMAC now proposes that the cyanide destructed slurry will be pumped to the flotation tailings pump box where it will be blended with flotation tailings prior to discharging in the TIA." This amended practice will increase the requirement for capacity in the TIA.	EC requests that: 1. The NWB add a condition to the Doris North Gold Mine Water Licence, which commits the proponent to developing a contingency plan for alternatives for tailings disposal should the project approach the capacity of the TIA before the end of mine life. - EC also suggests that it be noted under the same section (suggesting Section 4: The Assessment of Alternatives to Tail Lake for Tailings Disposal, Point 5), that the proponent be required to update the NWB on the status of the volume of Tail Lake (versus their projections for tailings storage) on a yearly basis, as part of an update on current, planned and future phases of Hope Bay Belt development. - EC requests that the proponent provide additional information on the increase in tailings volume that is anticipated as a result of the revised proposal to deposit the cyanide destructed slurry in the TIA, and the proportion of total tailings volume from each of flotation tailings and cyanide destructed slurry over life of mine.
EC-MPD and EPOD-ES	5	NWB, TMAC Resources Inc.	Closure TIA Water Cover Depth	TMAC Project Proposal, Subsection 4.5 - Reduction of water cover in tailings impoundment area, Page 45;	1. EC requests to the NWB that the Proponent be required to consider a deeper minimum water cover, and have a contingency plan that helps address variability in weather patterns due to climate change (e.g. extreme cold events resulting in greater ice thickness than the model's most		

				Appendix 14: TMAC Tail Lake Water Cover Design;	order to maximize the capacity of the TIA they plan to maintain a final water cover of 2.3 m in the TIA. The proponent states that revised modeling supports a conclusion that the 2.3 m water cover is “adequate to prevent re-suspension of tailings under all conditions”. In the supporting Appendix 14 Tail Lake Water Cover Design (SRK, November 2011), the Proponent has provided the details of their analysis for arriving at the proposed depth of 2.3 m of water cover in the TIA. EC is concerned that the revised model for the depth of the TIA water cover does not allow for variability in weather patterns due to the effects of climate change. Changing climatic patterns may result in more drastic or extreme fluctuations than the averages used in the Proponent’s model (for temperature, wind speed, etc.), even within assumptions the model deemed “conservative”. EC recommends that the Proponent select a larger minimum water cover, and have a contingency plan that addresses variability in weather patterns due to climate change (e.g. extreme cold events resulting in greater ice thickness than the model’s most conservative case (2.05 m thick, which would result in greater risk of ice entrainment of tailings particles), greater wind-speeds than the conservative case, etc.). It is also unclear to EC how the proponent would operate the proposed TIA in the winter if a water cover of 2.3 m is maintained. If there are 2 m of ice cover, this would leave a very small under-ice capacity for tailings disposal through the winter months. The Proponent states they are requesting an expansion of the wastewater treatment plant (servicing the Doris Camp) to meet the increase (doubling) in staff at the camp site. They state that the second Waste Water Treatment Plant (WWTP) the Nunavut Water Board (NWB) approved in 2010 to serve as a backup unit for the camp will, however, meet
EC-MPD and EPOD-ES	6	TMAC Resources Inc. NWB,	Camp Wastewater Treatment	TMAC Project Proposal, Subsection 4.7 - Increased Wastewater Treatment Capacity, Page 46.	conservative case (2.05 m thick), greater wind-speeds than the conservative case, etc). A comprehensive analysis of the far-future predictions for climate change should be provided in support of the Proponent’s recommended cover depth. The requirement for a re-evaluation of the minimum water cover could fall under the Doris North Gold Mine Project Certificate, Section 4: Project Specific Terms. Contingency plans for events that may result in weather patterns outside of the models range/expected values could be added as a requirement under Section 4: Project Specific Terms, Environment, Health and Safety Management System (point 32). 2. EC requests that the proponent provide operational plans for under-ice tailings disposal in the winter months. For example, would the tailings spigot be moved through the winter months, and if so, how? EC requests that the Proponent provide contingency plans which address the event of a wastewater treatment failure or maintenance situation.

					the needs required to treat wastewater for the expanded camp. EC is concerned that there has not been an actual increase in the proponent's wastewater treatment capacity. By utilizing this backup treatment plant for full-time waste treatment, the Proponent now effectively does not have a contingency (backup) unit or plan if one of the systems fails or needs maintenance. In the event of a system failure or required maintenance shutdown, waste will be temporarily disposed of into the tundra and may have adverse effects on the environment. EC recommends that the Proponent have enough wastewater treatment capacity available at the site to treat waste should one of the units either fail or be required to shut down for maintenance.	
EC-MPD and EPOD-ES	7	TMAC Resources Inc.	Accommodation Barges	TMAC Project Proposal, Subsection 4.9 - Roberts Bay: Laydown, Accommodation Barges, and Winter Fuel Barges, Page 48; Appendix 3: Mine Infrastructure Changes, Page 2-7.	The proponent proposes to extend the use of accommodation barges that were "previously on Roberts Bay and operated in fully compliance with applicable laws." The proponent states in the Mine Infrastructure Changes document that they were used in 2010 through 2012 to house extra personnel needed for construction of the Doris North Mine. EC is concerned with the ongoing use and disposal of what were previously "temporary" accommodation barges, so they do not pose a hazard to the marine or terrestrial environment. It is not clear whether modeling of Roberts Bay water quality for nutrients includes barge inputs, or if these would be negligible.	EC requests the proponent evaluate the impacts associated with extended use of the barges (i.e. waste disposal and potential spill risks).
EC-MPD and EPOD-ES	8	NWB	Water Management – Contingency Planning	Appendix 19: Design Brief: Doris North Project Expanded Waste Rock Storage Pad, Subsection 3.5 - Pollution Control Pond, Page 3.	The proponent intends to design a lined Pollution Control Pond to capture subsurface and surface drainage emanating from the proposed Waste Rock Dump Pad U. The pond will be designed for the containment of up to 100-year return duration storm events (2708m ³ or 48.99mm precipitation events). EC questions the potential capacity of the	EC requests that the NWB require contingency planning for all pollution control ponds in the event that a greater volume of precipitation than the ponds are designed for occurs at the Doris North Project site.

				pollution control pond(s) in light of climate change considerations and potential increased frequency of previously statistically valid "100 year events". EC recommends contingency planning, regardless of pond size, in the event of a precipitation (or other) event that would exceed the pollution control pond(s) design capacity.	
EC-MPD and EPOD-ES	9	TMAC Resources Inc.	Waste Rock Classification and Volumes	Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323 - Subsection 3.2 Geochemistry (Page 38)	The Proponent plans to backfill some waste rock in the slopes of the underground mine and store the remaining in waste rock storage areas located on-land. EC requests the Proponent provide the following information: 1. Breakdown of the total volumes of waste rock from the project expansion that would be classified as mineralized and non-mineralized and how they will be managed; 2. The total volume of mineralized waste rock from the proposed expansions that will be potentially acid generating (PAG) and non-PAG; and 3. The total volume of mineralized waste rock that will end up being stored on-land in the waste rock storage pads and whether there will be any PAG materials in these on-land pads.
EC-MPD and EPOD-ES	10	TMAC Resources Inc.	Waste rock storage clarification	TMAC Project Proposal, Section 7 - Environmental Effects Assessment, Page 60.	The Proponent states that there are no water bodies in the proposed ore storage pads expansion area (Pad T). EC requires further clarification on the proposed expanded waste rock storage pad (U) to better assess the potential effects of the project during the technical review phase. EC requests that the Proponent confirm that there are no water bodies within the proposed waste rock storage pad expansion area (Pad U).
EC-MPD and EPOD-ES	11	TMAC Resources Inc.	Nitrogen Species Degradation	TMAC Project Proposal, Executive Summary, Subsection 4.5; Appendix 10: Water Quality Model, Subsection 3.4 – Natural Degradation Reactions, Page 28.	EC recommends that the proponent clarify: 1. Whether reduced retention time is predicted, given the shallower water cover and the likelihood of increased ore millings rates over the mine life; 2. Whether a reduced retention time has been taken into account in consideration of natural degradation; 3. What are the implications of reduced retention time for the effectiveness of natural degradation of nitrogen species; and 4. If the proponent has not taken reduced retention time into account in consideration of natural degradation, they should clarify why, or reconsider their estimates for natural degradation in light of the potential for reduced retention times and provide these revised estimates to EC/the Board. As stated in the Executive Summary of TMAC's "Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No. 2AM-DOH1323" the proponent anticipates an initial ore milling rate of 800 tonnes per day (tpd) but that this rate may ultimately increase to 1,800 tpd. As described in Subsection 4.5, the proponent is also proposing a shallower water cover in the TIA of 2.3 m. Given the revised shallow water cover and the rate of tailings inflow into the TIA resulting from the increased ore milling rate, EC is concerned that the retention time in the TIA would be reduced. This could result in reduced effectiveness of natural degradation in the TIA concurrent with increased inputs of residual cyanide and blasting residues.

					It is not clear to EC if the possibility of reduced retention time has been accounted for in the Proponent's consideration of natural degradation reactions (e.g. cyanide, ammonia) when modeling discharge water quality.				EC requests a list of inputs used in the water quality model that reflects the amended activities, and a discussion on the change of the consequent concentrations.
EC-MPD and EPOD-ES	12	TMAC Resources Inc.	Quality of the water quality modelling result		Appendix 10 Water Quality Model, Hope Bay Project (SRK, November 2011)			In 2011 SRK, engaged by Newmont Resources, used a water and load balance model (GoldSim) to update predicted water quality and tailings over the life of project. The mass load of each potential contaminant source within the project boundary was identified, and the concentrations of contaminants were calculated based on a mass balance while taking into account nutrient degradation reactions. The Proponent concluded that "The model predicts that by using this discharge management strategy, discharges from the TIA would meet both the TIA discharge limits and the proposed TIA marine discharge targets (Rescan 2011). Additionally, the TIA could be operated according to the original design criteria."	EC requests that the proponent: 1. Identify the information source for both of the conversation rates listed in Table 3-12; and 2. Clarify how the Colomac reaction conditions such as temperature, presence of ice cover and pH correlate to the project site conditions.
EC-MPD and EPOD-ES	13	TMAC Resources Inc.	Summary of assumed conversion rates		Appendix 10 Water Quality Model, Hope Bay Project (SRK, November 2011)			In calculating the predicted water quality, the Proponent takes into account the nutrient removal and nutrient gain as a result of a series of degradations. In Table 3-12 Summary of Assumed Conversion rates, two sets of rates (for natural and enhanced reactions) are presented. On Page 28 of Appendix 10, it states "The assumptions related to the degradation of nitrogen species used in the updated model are the same as those used in the original model and are summarized in detail in Appendix A". However, no information on natural or enhanced degradation rates could be found in Appendix A.	EC requests that the proponent: 1. Add a section for TSS prediction in Appendix 10 Water Quality Model, and clarify how TSS was handled for modeling metals; and 2. Make the water treatment commitments made in the Amendment of Project Certificate consistent with the conditions used in the water modeling in order to ensure that
EC-MPD and EPOD-ES	14	TMAC Resources Inc.	Water treatment		Appendix 10 Water Quality Model, Hope Bay Project (SRK, November 2011) Doris North Mine Modifications and Related Amendments to Project Certificate No. 003 and Type A Water Licence No.			The water quality model considers the release of solute contaminants to the TIA including: • Mine waste rock stored above ground; • Ore stockpiled during milling operations; • Quarried rock used as fill, construction material, road base and other infrastructure construction fill;	EC requests that the proponent: 1. Add a section for TSS prediction in Appendix 10 Water Quality Model, and clarify how TSS was handled for modeling metals; and 2. Make the water treatment commitments made in the Amendment of Project Certificate consistent with the conditions used in the water modeling in order to ensure that

			2AM-DOH1323	• Treated mill tailings discharged to the TIA; • Treated sewage effluent discharge to the TIA; • Saline groundwater; • Saline drilling fluids; • Blasting residuals present in waste rock, quarried rock, ore and mine water (groundwater); • Solute and suspended matter released to the TIA from shoreline erosion and re-suspension by wave action; and • Salinity release to the TIA due to thawing where permafrost is present along the shores of the TIA. In Subsection 3.4 Natural Degradation Reactions of Appendix 10, it is stated “To ensure compliance with the TIA discharge limit of 6 mg/L ammonia-N, enhanced biological degradation will be used in the lake and the ‘enhanced case’ is carried through the model as the base case for the TIA.” Actually, the set of conversion rates for enhanced treatment is used to calculate the water quality. However, in Subsection 4.4.3 Water Treatment of the Amendment to Project Certificate, the enhanced treatment for ammonia-N is not mentioned. Further, Appendix 10 only estimates parameters of solute contaminants. TSS, one of the parameters listed in Schedule 4 MMER is not included in this Appendix. Although it is acknowledged on Page 23 of the Amendment to Project Certificate that there will be “a treatment plant that removes suspended solids from the excess TIA water”, it is not clear whether all TIA effluent will be treated for TSS. Table 3.13 of Appendix A in Appendix 10 used a range of TSS values (from 0.7 to 7.6 mg/L), while discharge limits are typically 15 mg/L. It is not clear what TSS level was used as a	the model represents the project scenario.
--	--	--	-------------	---	--

					model input and how the sediment-associated contribution to contaminant concentrations was accounted for.	
--	--	--	--	--	---	--