

Yonge Subway Extension Train Storage Facility
Draft Environmental Project Report Addendum - Technical Advisory Committee Review Feedback

Organization	Reviewer	Date	Comment	Response
Regional Municipality of York Transportation Engineering	Steve Mota Program Manager – Transportation Engineering	April 17, 2014	<ul style="list-style-type: none"> I have no further comments on this latest version of the Train Storage Facility EPR Addendum. Thanks for circulating this. 	<ul style="list-style-type: none"> Comment noted. No revisions required.
TRCA	Suzanne Bevan Senior Planner, Environmental Assessment Planning Planning and Development	June 10, 2014	<ul style="list-style-type: none"> Staff understands further geotechnical and hydrogeological site specific investigations will be undertaken, especially at the southern half of the Train Storage Facility due to the thicker water-bearing aquifer units were encountered from the preliminary studies. This follows the recommendations from both the hydrogeology and geotechnical reports circulated with this submission. 	<ul style="list-style-type: none"> Noted.
			<ul style="list-style-type: none"> It is understood that impact assessment and mitigation will be on-going as the project proceeds to detailed design. The main area of ecological concern will be related to erosion and sediment control along with management of groundwater dewatering. The Addendum has identified that consultation with TRCA and other agencies will be on-going and will include a Dewatering Needs Assessment and Environmental Management Plan (EMP). 	<ul style="list-style-type: none"> Noted.
			<ul style="list-style-type: none"> Please note that the EMP will also need to address management and mitigation of dewatering discharges for the protection of surface water resources as well as protection of the groundwater resources as noted in the commitments to future work (section 6.3). 	<ul style="list-style-type: none"> Commitment updated to include dewatering discharges for the protection of surface water resources.
			<ul style="list-style-type: none"> Please note that since the 2009 EPR, TRCA has produced the Stormwater Management Criteria document, provide criteria to meet stormwater management quantity, quality, erosion, and water balance targets for all watersheds. Please consider incorporating the recommendations from this document into the designs for the surface components for all impervious areas being improved, and not only the new impervious surfaces (Section 5.1.5.1). 	<ul style="list-style-type: none"> TRCA's Stormwater Management Criteria were developed subsequent to completion of the 2009 EPR. Consideration will be given to implementing recommendations from TRCA's stormwater management in the development of the stormwater management plan (during the design/construction phase of the project), as appropriate.
MOE (now MOECC)	Lorna Zappone Special Project Officer, Environmental Approvals Branch	June 6, 2014	General Comments	
			<ul style="list-style-type: none"> When referring to locations ensure the associated figures include the referenced features. For example, streets should be illustrated/labeled when discussed specifically (see Section 1.4.2). 	<ul style="list-style-type: none"> Comment noted.
			<ul style="list-style-type: none"> Ensure summaries of technical reports provided as appendices are presented in the main report at a level of detail appropriate to the discussion (see appendices I and F). 	<ul style="list-style-type: none"> Details from Appendix I are reflected in the EPR Addendum. The EPR Addendum has been revised to include references to Appendix I. Please see the response below re: Appendix F. The EPR Addendum has been updated to reflect the findings of the Groundwater Assessment Report (Appendix F).
			<ul style="list-style-type: none"> The paper copy of the EPR Addendum included the appendices on a CD however, not all appendices in the table of contents are on the CD. 	<ul style="list-style-type: none"> Noted. As indicated in the Table of Contents, Appendix F was yet to be circulated and was not available at the time of printing. Appendix F was subsequently distributed to the Technical Advisory Committee through the project Tempo (ftp) site.

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			<ul style="list-style-type: none"> Ensure accuracy when cross-referencing sections, figures and tables. For example, page 4-11 references Sections 5.1.2.2; 5.2.2.2; and 5.3.2.2 as being related to noise and vibration however two of those sections refer to construction impacts related to fish and aquatic habitat and archeological resources. See also Figure 3-5 and cross-references to Figure 5-2. 	<ul style="list-style-type: none"> Noted. Cross-references will be confirmed prior to finalizing the EPR Addendum.
			<ul style="list-style-type: none"> It is unclear if works associated with the existing and proposed future utilities plans, including the relocations or modifications referred to in Section 4.5, are being proposed as part of the YSE. Review the definition of 'transit project' as described in the Transit Regulation and provide clarification about the EA requirements, revising the text as appropriate. 	<ul style="list-style-type: none"> No changes are proposed. Section 4.5 only discusses the existing utility plant in the study area and does not discuss any work required as a result of the proposed changes to the approved project. Impacts and mitigation measures are addressed in Section 5.4.4.
			<ul style="list-style-type: none"> Provide a definition for the acronym 'USF' (see page 5-6). 	<ul style="list-style-type: none"> Reference revised to TSF.
			EPR Addendum - Introduction	
			<ul style="list-style-type: none"> It is difficult to follow the description of the YSE as outlined in Section 1.2.1. Provide maps and identify the five stations. 	<ul style="list-style-type: none"> Figure 1-1 has been updated to better illustrate the proposed YSE alignment and station locations.
			<ul style="list-style-type: none"> Details about the considerations for siting the train storage facility (TSF) reflected in figure 1-3 are not clearly legible. Provide better quality figure. 	<ul style="list-style-type: none"> The figure has been presented in a larger format to improve the readability.
			<ul style="list-style-type: none"> Recent revisions to the Provincial Policy Statement (PPS) are in effect from April 30, 2014. Review the PPS and the EPR Addendum, ensuring changes are made and discussed in the EPR, as appropriate. 	<ul style="list-style-type: none"> Text has been added to Section 1.3 regarding the PPS, 2014.
			<ul style="list-style-type: none"> Figure 1-4 appears to illustrate two study areas. Provide clarification in the figure, including map orientation, and the description provided in Section 1.4.1. 	<ul style="list-style-type: none"> Figure 1-4 illustrates only the EPR Addendum study area, labelled "Study Area". Figure 1-4 has updated to clarify map orientation.
			<ul style="list-style-type: none"> Reasons for the proposed change have not been provided in Section 1.4 as indicated in Section 1.5.1. Provide details or revise accordingly. 	<ul style="list-style-type: none"> Reference updated to Section 3.0.
			<ul style="list-style-type: none"> It would be appropriate to include <i>evaluation</i> when referring to the assessment of impacts of the changes (see first bullet, page 1-9). 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> The EPR Addendum process and the Minister's authority regarding issuance of notices are not accurately represented in Section 1.5.3. Review Ontario Regulation 231/08 (Transit Regulation), Section 15, and revise accordingly. 	<ul style="list-style-type: none"> Text revised accordingly.
			EPR Addendum - Outline of Study Consultation Process	
			<ul style="list-style-type: none"> Ensure the final EPR Addendum provides clarification/confirmation that consultation and notification were undertaken in accordance with Section 15.(5) of the Transit 	<ul style="list-style-type: none"> Text revised accordingly.

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			Regulation.	
			<ul style="list-style-type: none"> Ensure a summary table of issues raised during the review of the draft EPR Addendum is included in Section 2.3 of the final EPR Addendum, as appropriate. 	<ul style="list-style-type: none"> The full comment-response table will be included in the final EPR Addendum as Appendix K, and a brief summary of the key comments/responses will be included in Section 2 of the main report.
			EPR Addendum – Alternatives Considered and Features of the Recommended Transit Project	
			<ul style="list-style-type: none"> The third bullet in 3.1 requires clarification about what is meant by ‘...additional YSE...’. 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> It is unclear if the consideration of design criteria (3.1.1) resulted in the alignment configuration alternatives (3.1.2). Provide clarification about the process followed to arrive at the evaluation of alternatives and selection of preferred alignment (3.1.3). 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> Provide additional details about the three alternatives described in 3.1.2 to identify whether all or part of the alignment is above and/or below ground. 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> Additional details are required in Table 3-1 in order to determine the assessment undertaken to identify potential impacts of the alternatives and subsequently the evaluation of the impacts to identify the preferred alignment. 	<ul style="list-style-type: none"> No changes proposed. The table presents the entirety of the analysis undertaken by the proponent to identify the preferred alternative. No further detail is available.
			<ul style="list-style-type: none"> Figure 3-5 is missing from the EPR Addendum (see 3.2.2). 	<ul style="list-style-type: none"> Figure 3-5 was included in the PDF of the draft Addendum and should have been included in the hard copies circulated as well.
			<ul style="list-style-type: none"> The proposed parking lot either does not appear or is not labeled in Figure 3-5B (see 3.2.3). 	<ul style="list-style-type: none"> Noted. An additional Figure 3-5C will be prepared to present the layout of the surface works more clearly.
			EPR Addendum – Study Area Conditions	
			<ul style="list-style-type: none"> Appendix K is cross-referenced under topography (4.1.4.1), yet no such appendix is provided. Review and revise accordingly. 	<ul style="list-style-type: none"> Text revised accordingly.
			EPR Addendum – Detailed Assessment of the Impacts, Proposed Mitigation, and Monitoring of the Transit Project	
			<ul style="list-style-type: none"> An EPR Addendum is prepared under Section 15 of the Transit Regulation. Revise accordingly. 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> The information should be organized in a manner that demonstrates the identification and assessment of potential impacts, including the identification of proposed mitigation and monitoring, has been conducted for all phases of the project 	<ul style="list-style-type: none"> Comment noted.

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			and for all of the proposed project changes: the subway alignment extension, underground train storage facility and surface facilities.	
			<ul style="list-style-type: none"> In accordance with the Transit Regulation, the EPR Addendum is to include a description of proposed measures to mitigate potential impacts the changes may have on the environment. It is not sufficient to identify no change to the mitigation measures proposed in the 2009 EPR. 	<ul style="list-style-type: none"> Noted. Relevant commitments from the 2009 EPR will be re-stated in the EPR Addendum as appropriate, in Section 6.
			<ul style="list-style-type: none"> It is recommended to present in table format the impacts, mitigation and monitoring for each environmental component (natural environment, cultural, etc.), for each project element during each of the three phases of the project (displacement of existing features, construction impacts, and operation and maintenance impacts). 	<ul style="list-style-type: none"> Comment noted. A table will be prepared to summarize the impacts, mitigation measures proposed, and associated monitoring processes.
			EPR Addendum – Commitments to Future Work	
			<ul style="list-style-type: none"> Review the Transit Regulation and revise text in Section 6.9 accordingly. For example, only changes to the EPR proceed through the Addendum process. 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> The EPR Addendum process does not require notices of Commencement or Completion. 	<ul style="list-style-type: none"> Text revised accordingly.
			<ul style="list-style-type: none"> When referring to a process outlined in the Transit Regulation it is prudent to refer back to the Transit Regulation rather than a section within this EPR Addendum. 	<ul style="list-style-type: none"> Text revised accordingly.
MOE (now MOECC)	Rudolf Wan, P. Eng. Supervisor, Approval Services (Team 3) Environmental Approvals Branch (EAB)	May 22, 2014	Construction Air Quality Assessment, Yonge Subway Extension, Train Storage and Maintenance Facility	
			<ul style="list-style-type: none"> EAB air engineers do not review air quality assessments for construction activities 	<ul style="list-style-type: none"> Noted.
			Yonge Street Subway Extension Project, Train Storage and Maintenance Facility, Environmental Noise and Vibration Assessment	
			<ul style="list-style-type: none"> It is not the area of expertise of EAB air engineers. Indeed comments on the document have already been provided by Thomas Shevlin, P. Eng Senior Noise Engineer 	<ul style="list-style-type: none"> Noted.
			Yonge Subway Extension, Transit Project Assessment Process, Train Storage Facility, Environmental Project Report Addendum	
			<ul style="list-style-type: none"> This addendum seems on the 14-car Train Storage Facility c/w service facilities (section 3.2.2 and 3.2.3), in section 5.1.6.1 it indicates that “there are no permanent air quality impacts associated with the TSF”. And in section 6.1 (8), it indicates that “Certificates of Approval for noise and air quality related impacts resulting from vent shafts, stations and parking lots from MOE” would be obtained. These 2 sections do 	<ul style="list-style-type: none"> Text revised to read “no <i>notable</i> permanent” impacts.

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			not seem to match.	
MOE (now MOECC)	Thomas Shevlin, P. Eng Senior Noise Review Engineer Environmental Approval Services Section	May 7, 2014	<ul style="list-style-type: none"> I have reviewed the noise and vibration aspects of the document "Yonge Subway Extension, Transit Project Assessment Process, Train Storage Facility, Environmental Project Report Addendum, Draft Technical Advisory Committee Review", dated April 2014 and prepared by MMM Group. This office has no noise or vibration related comments regarding this document at this time. 	<ul style="list-style-type: none"> Noted.
MOE (now MOECC)	Nisha Shirali Environmental Resource Planner & EA Coordinator – Air Pesticides and Environmental Planning	May 23, 2014	Water Quality and Quantity	
			<ul style="list-style-type: none"> No Comments 	<ul style="list-style-type: none"> Noted.
			Air Quality – Exposure Limits	
			<ul style="list-style-type: none"> Section 6.1 of the Air Quality Assessment (AQA) Report stipulates the following: "There are no regulated exposure limits for dust generated due to construction activities within the Province of Ontario. Therefore the evaluation focused on assessing the relative change between pre-mitigation and post-mitigation maximum ground-level concentrations as predicted by the dispersion model". The first sentence in the above quote is partially true; however, there are guidelines recommended by the ministry which can be used in environmental assessments (EAs). These are referred to as Ambient Air Quality Criteria (AAQC). Although construction is not regulated under the local Air Regulation 419/05, the AAQC can be used for comparison purposes. For this reason, the AQA Report should also highlight that there is a daily AAQC for total suspended particulate of 120 µg/m³. 	<ul style="list-style-type: none"> The AAQC can be used for comparison purposes; however, exceeding these limits due to construction activities would not constitute a failure of Ontario regulations. The Air Quality Assessment Report has been revised to highlight the 120 µg/m³ standard, with the caveat that it is only for comparative reasons and an exceedance of this level does not constitute a failure under Ontario Regulation 419/05.
			Air Quality – Emission Rates	
			<ul style="list-style-type: none"> The US EPA AP-42 methodology noted in section 6.2 of the AQA Report follows ministry guidance for estimating emissions from material handling, storage piles and paved roads. However, it is important to note that the conversion of Total Suspended Particulate Matter (TSP) with diameter < 30 µm to a diameter < 44 µm, which corresponds to the TSP diameter stipulated under the AAQC, is not typically done in EAs. Although this conversion is conservative, the ministry cannot comment on the methodology used since it is not typically done in most applications. 	<ul style="list-style-type: none"> Noted.
			Air Quality – Dispersion Modelling	
<ul style="list-style-type: none"> The AQA Report modelled construction activities as sources using AERMOD version 8.0.5 (U.S. EPA version 12060) which is an acceptable model recommended by the ministry. Based on supporting documentation provided, it appears that the emissions and modelling follow the ministry's guidance. However, the ministry cannot comment on the validity of the results without reviewing the input and output modelling files. 	<ul style="list-style-type: none"> The requested sample files were provided to MOE on June 13, 2014. The sample files provided were the files use for the 75% reduction model. On June 28, 2014 the Ministry requested additional supporting documentation. After clarifying the supporting documentation request, the requested files were provided on July 2, 2014. For review feedback and corresponding responses please refer to the July 8, 			

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			Please provide a sample input and output file for our review.	2014 comments tracked below.
			Air Quality – Assessment of Results	
			<ul style="list-style-type: none"> The AQA Report for the Yonge Subway Extension Addendum focused primarily on construction activities sources which are typically considered the highest sources of mitigable emissions for transit and transportation applications. However, it is not clear if the vehicle emissions from the construction equipment were also assessed via dispersion modelling since Section 6.2 notes that "...Vehicle emissions were estimated using the emission rates from diesel engines of typical construction vehicles (Road Construction, Caterpillar)." Please clarify if the particulate levels generated from the construction vehicles were also assessed. 	<ul style="list-style-type: none"> The assessment considered particulate matter emissions generated from: material handling and processing, re-suspended particulate from the roadway/construction area (fugitive emissions) and tailpipe emissions from the construction vehicles. Emissions from all three of these sources were included in the air dispersion modelling. Note that when assessing a 75% reduction in emissions due to best practices, tailpipe emissions were not reduced as mitigative measures such as chemical suppressants will have no effect on tailpipe particulate matter emissions.
			<ul style="list-style-type: none"> In addition, the AQA Report should clarify if the traffic vehicular emissions during construction of the subway extension were addressed in the original Yonge Subway Extension submission. 	<ul style="list-style-type: none"> Introductory text for the both the EPR Addendum and the corresponding Air Quality Assessment Report addresses the context of the current scope of assessment.
			<ul style="list-style-type: none"> The assessment was performed with and without mitigation to illustrate the improvements in ground level dust concentrations that can be attained. This approach is acceptable for this specific amendment. However, we recommend that Section 6.3 include the rationale for not conducting the base case (current conditions) versus future scenario analysis which is typically the approach recommended by the ministry when dealing with air quality impacts assessments in support of EAs. 	<ul style="list-style-type: none"> The following has been added to the Air Quality Assessment Report: A comparison between base case and future impacts was not performed, as is typical in an Environmental Assessment, due to the nature of the project. The storage facility will be underground, with little emissions predicted under normal operations. Upon completion, there is not expected to be a significant change in the air quality around the study area due to the maintenance and storage facility. It is Novus' opinion that modelling base case should be typically done when assessing long-term operational improvements and not short-term construction activities.
			<ul style="list-style-type: none"> In Section 8, "Results", of the AQA Report, the maximum predicted TSP concentrations at the worst-case sensitive receptor with and without mitigation are illustrated in Table 4 "Maximum Predicted TSP Concentrations". Please clarify whether the maximum predicted concentrations in Table 4 are hourly or daily TSP concentrations. 	<ul style="list-style-type: none"> The Air Quality Assessment Report has been revised to indicate that the presented concentrations are based on a 24-hour averaging period.
			<ul style="list-style-type: none"> Also, it is recommended that Section 8 specify whether the maximum concentrations are the absolute maximum predictions, the ninth highest if hourly, or second highest if daily concentrations as recommended by the ministry guidance document for reporting predicted concentrations under O.Reg. 419/05. Please note that although construction is exempt under local air regulation, the guidance document can be applied when assessing impacts. 	<ul style="list-style-type: none"> The Air Quality Assessment Report has been revised to reflect that these impacts are the highest predicted daily concentrations without exclusions.
			Air Quality - Conclusions	
			<ul style="list-style-type: none"> The assessment was performed with and without mitigation to illustrate the improvements in ground level dust concentrations that can be attained. This is an acceptable approach for this specific amendment. However, we recommend that 	<ul style="list-style-type: none"> Please see the corresponding previous response above.

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			Section 6.3 include the rationale for not doing the base case (current conditions) versus future scenario which is typically the approach recommended by the ministry when dealing with air quality impacts assessments in support of EAs.	
			<ul style="list-style-type: none"> We recommend that the AQA Report include a statement that depending on the activities and source types, the proposed storage and maintenance facility will require an Environmental Compliance Approval (ECA) or an Environmental Activity and Sector Registry (EASR) submission for air and noise. 	<ul style="list-style-type: none"> The Air Quality Assessment Report has been revised accordingly.
			<ul style="list-style-type: none"> Given the fact that construction will generate high dust levels, construction impacts are highly dependent on the meteorological conditions present at the time and the construction mitigation measures in place. We recommend that the proponent follow the dust mitigation measures as stipulated in the AQA Report. These can minimize offsite dust impacts at the most impacted receptor. 	<ul style="list-style-type: none"> Section 5.1.6.2 of the EPR Addendum includes the following: Environment Canada "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities" document provides guidance for mitigation techniques, not only for dust but for other pollutants such as carbon monoxide and oxides of nitrogen as well (Environment Canada, 2005). Common best practices for these emission sources include reformulated fuels, emulsified fuels, catalysts and filtration technologies, and cleaner engine repowers. Section 5.1.6.2 and Section 6.3 of the EPR Addendum include the following commitment: Prepare a mitigation plan to reduce the dust emissions generated during construction processes with guidance from Environment Canada's "Best Practices for the Reduction of Air Emissions from Construction or Demolition Activities", 2005.
			<ul style="list-style-type: none"> We recommend that the proponent add a commitment in the EA where dust mitigation measures should be implemented by the contractor. These measures should follow the Environment Canada (2005) guidance document entitled "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities." 	<ul style="list-style-type: none"> The specific location of dust suppression requirements will be determined by the constructor at the time of construction. Section 5.1.6.2 of the EPR Addendum includes mitigation linked to Environment Canada's "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities" document. This commitment has been reiterated in Section 6.3 of the EPR Addendum.
			Comments from York Durham District Office	
			<ul style="list-style-type: none"> The Contamination Overview Study dated March 2014 was reviewed. The study has not identified any known groundwater or soil contamination at the site. The APECs (Areas of Potential Environmental Concern) are reasonable and reflect current site uses. They are unlikely to have direct impacts on the proposed project with the exception of the adjacent rail line, soils and ballast, which are unlikely to meet generic soil standards for industrial/commercial use along the 800 m length of the proposed site. 	<ul style="list-style-type: none"> Noted.
			<ul style="list-style-type: none"> There is at least one Record of Site Condition (RSC) along Yonge Street in existence in addition to those identified in the report. However, as the RSC sites along Yonge Street are at the periphery of the study area, they are unlikely to affect the conclusions of the report. 	<ul style="list-style-type: none"> Noted.
			<ul style="list-style-type: none"> The Groundwater Assessment Report dated April 2014 has considered groundwater quality in relation to storm and sanitary sewer discharge criteria. While this is an important consideration for the discharge of groundwater for dewatering, 	<ul style="list-style-type: none"> The Groundwater Assessment Report includes the following recommendations: <ul style="list-style-type: none"> Additional hydrogeological/groundwater investigations are required to better

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			<p>groundwater quality at the site and potential impacts on construction activities or long-term use and operation of the facility have not been directly evaluated. The proponent should ensure that site-specific soil and groundwater management plans are developed to provide:</p> <ul style="list-style-type: none"> • Appropriate soil and groundwater quality criteria for construction and post-development use of the site. • Excess soils management measures to control dust and prevent tracking of soil from the UTS property. • On-site management including placement of materials for stockpiling on designated areas, with liners and covers, berming, fencing, runoff and access controls as needed. • Procedures to characterize excess soils and ground water. • Record keeping to document the identification, storage, and on- and off-site management or disposal of these materials. 	<p>understand the hydrogeological conditions present in the Study Area, especially in the southern portion where productive aquifers may potentially be present. These studies should be completed at the detail design stage of the project, when details of the TSF design are confirmed.</p> <p>Conclusions whether permanent dewatering measures are required to be used during operation of the TSF should be provided once hydrogeology of the Study Area is well understood and design of the TSF is confirmed.</p> <p>The EPR Addendum has been updated to reflect the findings of the Groundwater Assessment Report.</p> <ul style="list-style-type: none"> • The following commitments for future mitigation plan development are included in the EPR Addendum: <ul style="list-style-type: none"> ○ Section 5.1.4.2 (Construction Impacts): As outlined in the 2009 EPR, a Soil Management Strategy Plan will be developed for re-use or disposal of excavated soils (i.e. excess soils), consistent with past TTC practice. This plan will require that management of excess soils is conducted in accordance with the applicable MOE recommendations outlined in the documents titled "Protocol for Analytical Methods Used in the Assessment of Properties" (MOE, March 2004, amended in July 2011) and "Management of Excess Soils – A Guide for Best Management Practices" (MOE, January 2014). ○ Section 5.1.4.3 (Operations and Maintenance Impacts); As outlined in the 2009 EPR, a Soil Management Strategy Plan will be developed for disposal of excavated material, consistent with past TTC practice. As no permanent impacts to soil are anticipated after the construction of the facility, no further mitigation measures are recommended. ○ Section 5.1.7.2 (Construction Impacts): An Excess Materials Management Plan will be implemented to provide a mitigation strategy to effectively manage any contaminated excess materials (both soil and groundwater) encountered during construction. ○ Section 5.1.6.2 (Construction Impacts): Prepare a mitigation plan to reduce the dust emissions generated during construction processes with guidance from Environment Canada's "Best Practices for the Reduction of Air Emissions from Construction or Demolition Activities", 2005. <p>Those plans will be prepared in advance of construction. Commitment to preparation of those plans is also noted in Section 6.3 of the EPR Addendum.</p>
MOE	Yuefeng Zhang, P.Eng, Ph.D, PMP Senior Wastewater Engineer Approval Services Section – Team 1 Environmental Approvals Branch (EAB)	May 27, 2014	<p>Section 5.1.4 – Soil and Groundwater</p> <ul style="list-style-type: none"> • Section 5.1.4, it is mentioned that dewatering will be required to temporarily reduce the groundwater levels. Approval might also be required depending on volume of groundwater to be discharged and the requirements of discharge criteria for water quality control. 	<ul style="list-style-type: none"> • Section 5.1.4.2 text regarding the need for a PTTW has been updated to match the Groundwater Assessment Report: <ul style="list-style-type: none"> ○ A Permit to Take Water (PTTW) will be obtained from the MOE for dewatering purposes and groundwater control, prior to the TSF construction. The PTTW will specify the rates and duration of the dewatering program, a monitoring program, and mitigation and contingency measures to be used during

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				dewatering.
			<ul style="list-style-type: none"> Section 5.1.4, the report indicates that potential soil and groundwater contamination may exist with the Study Area. In this case, groundwater shall be investigated for any contamination before being discharged to surface water courses. If the groundwater is contaminated, treatment might be required before it is discharged and approval need be obtained. 	<ul style="list-style-type: none"> Section 5.1.7 (Contaminated Property) addresses the corresponding mitigation. References have been added to Section 5.1.4 (Soil and Groundwater) to direct readers to Section 5.1.7 for mitigation measures related to contaminated property.
			Section 5.1.5 – Stormwater Management	
			<ul style="list-style-type: none"> Section 5.1.5, the collection, treatment and disposal of stormwater run-off from all surface facilities listed in 3.2.3 (such as utility building, staff parking lot etc.) shall be included into the engineering design. If it is intended to use the municipality's existing storm sewer and stormwater management facilities for servicing all the new surface facilities, pre-consultation with the municipality is recommended on the feasibility of this approach. The municipality might require lot level and conveyance controls (referred to as low impact development including bioswales, oil and grit separators etc.) before draining stormwater to the municipal sewer system. Approval will be required to install any such new stormwater management works (e.g. storm sewer, swales, infiltration galleries, underground storage tanks, oil and grit separators etc.) 	<ul style="list-style-type: none"> The 2009 EPR included a commitment to develop a detailed stormwater management plan during the design/construction phase of the assignment, in consultation with (among others) the Town of Richmond Hill and the TRCA. This commitment will be reiterated in the EPR Addendum as it applies to the drainage resulting from the TSF and associated facilities.
			<ul style="list-style-type: none"> Section 5.1.5, temporary erosion and sedimentation control measures shall be installed and maintained during construction. 	<ul style="list-style-type: none"> A commitment to develop a construction erosion and sediment control plan prior to construction was included in Section 5.1.5.1, and has been moved to Section 5.1.5.2, and was already committed to in Section 6.3 of the EPR Addendum.
			Section 6.1 – Permit and Approval	
			<ul style="list-style-type: none"> Section 6.1, Approvals might be required for groundwater discharged by the dewatering system and any new stormwater management works. 	<ul style="list-style-type: none"> Section 6.1 identifies that a Permit to Take Water will be required from the MOE, and that approvals will be required from Richmond Hill and York Region for sewer works, as appropriate.
			General Comment	
			<ul style="list-style-type: none"> It is expected that more details will be provided in the final EA and during the ECA application period and all the above issues will be addressed as part of the detailed pre-application consultation with the Ministry. 	<ul style="list-style-type: none"> Noted. Please see corresponding response above.
MOECC	Nisha Shirali Environmental Resource Planner & EA Coordinator - Central Region, Technical Support Section	July 8, 2014	Air Quality Assessment	
			<ul style="list-style-type: none"> We have reviewed the AERMOD input and output file for the 75 reduction scenario provided for the Yonge Subway Extension Transit EA. Based on the supporting documentation provided, the model inputs followed the ministry's guidance documents (ADMGO guideline). However, the particle densities used for PM2.5, 	<ul style="list-style-type: none"> The rationale for using one density was based on estimates of when worst-case emission would occur. The highest emission rates were predicted to be due to pavement removal. During pavement removal, the majority of particulate would be asphalt dust. Therefore the assessment applied the density for asphalt to represent

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Organization	Reviewer	Date	Comment	Response
			<p>PM10 and TSP were all set to 2.3 g/cm³. Typically, the densities vary among materials. Please provide a rationale as to why all particle sizes were set to the same particle density.</p>	<p>all of the particle sizes as it was assumed that all emissions would be homogeneous.</p>
			<ul style="list-style-type: none"> In addition, please note that the proponent must commit to implement dust mitigation measures as stated in our initial comments on the EA. The dust control measures should follow the Best Practices for the Reduction of Air Emission from Construction and Demolition Activities (Cheminfo, 2005 - Environment Canada Report) as recommended in the Construction Air Quality Assessment prepared by Novus Environmental and dated March 2014. Implementation of such dust control measures will serve to minimize off-site dust impacts at the worst impacted sensitive receptors. 	<ul style="list-style-type: none"> Section 5.1.6.2 of the EPR Addendum includes the following: Environment Canada "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities" document provides guidance for mitigation techniques, not only for dust but for other pollutants such as carbon monoxide and oxides of nitrogen as well (Environment Canada, 2005). Common best practices for these emission sources include reformulated fuels, emulsified fuels, catalysts and filtration technologies, and cleaner engine repowers. Section 5.1.6.2 and Section 6.3 of the EPR Addendum include the following commitment: Prepare a mitigation plan to reduce the dust emissions generated during construction processes with guidance from Environment Canada's "Best Practices for the Reduction of Air Emissions from Construction or Demolition Activities", 2005.