Memo

To	**Jeremy Vink**	File no	**163096**
From	**Tony van der Vooren**	cc	
Date	**February 10, 2009**		

Subject **Review of Responses to the Peer Review: Kuntz Topsoil**

Jeremy,

I have reviewed the responses and updates provided by Kuntz and SENES. They have responded and addressed all of our concerns raised in our original peer review. There are no outstanding technical issues related to air quality.

There is a comment on the revised site plan notes that indicates:

"Licensee shall obtain a MOE Certificate of Approval (if required by MOE) which will include the best management practices.." (underline added)

It is not clear why MOE would refuse a Certificate of Approval application. Should MOE not require a C of A, enforcement of the Best Management Practices (Particulate) requirements would be weakened. The Township should be copied on any discussions with MOE pertaining to the C of A and strongly encourage obtaining a C of A for the site.

I have attached a summary of the issues raised in the original peer review, the Kuntz/SENES response and my final comment. As noted above, all issues have been resolved.

If you have any questions or further clarification please contact me.

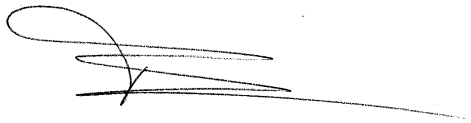

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Table 1: Disposition of Issues: Issues Raised in the Main Report

Statement or Issue in Original AMEC Peer Review (Oct 29, 2009)	Response/Action	Resolution
We would recommend that the site plans specifically reference the BMP. In so doing, the BMP would also be enforceable by the MNR through the site plans.	Site Plan notes now state: "as described in the SENES Dust Assessment – Addendum, February 2010."	Completed, no further action.
The Township should confirm that Kuntz will obtain the Certificate of Approval. The Certificate of Approval will require the detailed Best Management Plan and conditions of operations. This will ensure that MOE will have specific enforcement requirements for the site and operations.	Proposed Site Plan notes indicate: "Licensee shall obtain a MOE Certificate of Approval (if required by MOE) which will include the best management practices.."	It is not clear why MOE would refuse a C of A application. Should MOE not require a C of A, enforcement of BMP requirements would be weakened. Woolwich should be copied on any discussions with MOE pertaining to the C of A and strongly encourage obtaining a C of A for the site.
A key issue that could not be addressed in the study, but must be considered for this approval is the potential cumulative effect of two other pit proposals in the area.	Addressed in Revised Section 2.1. Other pits and operations have been added to the "background" air quality assessment.	Resolved. No further action.

Table 2: Disposition of Issues: Issues Raised in Table 1 of the Peer Review (Specific to Senes Air Quality Report)

Statement or Issue	Location in Air Quality Study (or Planning Study (PR)	Discussion	Significance	SENES Response/Action	Resolution
1. Selecting background air quality	Section 2.1	Report uses the Point Petre background station and then adjusts for agricultural activities in the area. The resulting background estimates seem reasonable, but we would suggest a closer look at other MOE or Environment Canada stations to see if other rural stations may be more appropriate.	Background used seems reasonable. Further confirmation from other stations would strength the assessment.	Further discussion and assessment has been provided supporting the background assessment.	Resolved, no further comment or action.
2. Other sources in the area.	Section 2.1 (not discussed in PR report either)	There are currently at least 2 other pit proposals for the area. This air quality study does not consider this. It is also not clear how this should be addressed in any specific study.	Very significant, but not clear how any specific application should address. These are not existing, but proposed. Township should discuss with various proponents how to address the cumulative impact.	Assessment has considered the impact of other pit operations and activities in background assessment.	Resolved, no further comment or action
3. Operations	Section 3.3 PR Page 29	The report indicates a maximum hourly extraction rate of 66 tonnes per hour. It is not clear if all of the 66 tonnes requires crushing (it	Dust impacts will be greater if there is a significant amount of off-site	SENES addendum clarified that recycling will	Resolved. Since assessment encompasses recycling

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		would appear the emission estimates assume it all is). In the planning report and in Table 3.1 of the air quality report it is noted that asphalt and concrete will be brought to site to be crushed. As well, soil screening and handling will occur on the site. It is not clear if these have been assessed in the emissions. It is also not clear if there is a limit to how much material can be brought to site for processing.	materials brought to the site for crushing, screening and processing. This should be addressed through controlling the amount of offsite materials coming to site and ensuring the air quality assessment includes these materials. (note: this might also impact the estimated truck traffic on site and on nearby roads)	not increase daily maximum crushing and screening and that truck traffic incorporates recycling activities.	activities as part of the maximum scenario assessed, impacts do cover the recycling activity. In so doing, this also caps the maximum recycling activities, as total site activity capped by crusher and truck traffic.
4. Meteorological Data	Section 3.2	The study uses the "central" region meteorological data from MOE. The West Central (London) data set would appear to be more appropriate and in line with MOE requirements. As well, it is not clear if the	Undetermined. Different meteorological sets typically do not give significantly different results for maximum impacts.	Meteorological data was pre-processed to treat calms. Assessment was conservative in that met. Anomalies	Resolved. Appropriate meteorological data was used in the assessment.

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		meteorological data set has been "adjusted" to account for calm conditions as per current MOE requirements. MOE is requiring a very conservative adjustment to treat calm conditions. Though there is some controversy over this, it is being used by MOE to demonstrate compliance with standards.	Calms: Results could be higher if calms have not been adjusted as per MOE guidance.	were not discarded (as allowed by MOE).	
5. Operations	Section 3.3 PR page 29	Winter operations. Modelling was done for the entire year to be conservative. As such, maximums might be modelled when operations are not occurring. It should be noted this is inconsistent with the planning report which indicates the pit only operates for 220 days per year and is closed during the winter.	Not significant. Impacts are shown to be acceptable. This assumption would lead to potential over predicting impacts.	To be conservative a winter emission of 10% was assumed.	Resolved. Impacts are over predicted, since no winter activities will occur.
6. Operations	Section 3.3 PR page 29	There is an inconsistency between the planning report and the air quality report. Air quality report assumes 3 x 22 tonnes loads per hour. Planning report indicates 2 x 30 tonne loads per hour. (as noted previously, it is not clear	Conservative. Emissions are based on both load and number of trucks. But the change in load increases emissions by about 15 %,	Clarified in report that trucking may be variable, but assessment was done with most conservative	Resolved.

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		if the off-site material trucks are accounted for in the assessment)	whereas the extra truck increases emissions by 50%.	number.	
7. Emissions	Section 3	Control on crusher. It would appear that the extracted material is considered to have high moisture. As such, the emission factors for "controlled" (i.e. wet) material were applied. This is appropriate but further confirmation that the crushed material will always be sufficient to be considered controlled. Alternatively, provision should be made to allow for water spraying if materials are dry and dust emissions are noted. (emissions for dry crushing are about 5 times higher than wet crushing) This is also very important for crushing of off-site materials (e.g. concrete) and screening of soils. It is unlikely these will have sufficient moisture.	Could be significant. If dry material is crushed high dust emissions could occur. Water suppression should be included on the crusher to ensure control.	Assessment was done assuming no control. Water sprays will be included to increase moisture if needed.	Resolved. See comments on BMP below.
8. Emissions and control	Off-site roads; Section 3	Kuntz has committed to ensuring the off-site roads are managed to reduce emissions. They have noted that the township applies	Significant. The traffic will increase on the off-site roads due to this	Watering and calcium chloride application will	Resolved. Operator is providing for both on-site and off-site

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	PR page 29, 30	chemical suppression once per year and has committed to applying a second application. This is appropriate but may require an agreement with the Township to allow for the application. As well, the off-site roads should be included in the BMP and if dust is noticed, further control should be applied (e.g. water).	operation. Since the road is unpaved, dust generation can be significant. The Kuntz commitment to controlling these emissions is very proactive. Key will be to ensure this is agreed to with the Township and that the BMP includes appropriate actions and triggers.	be undertaken on both on-site and off-site roads.	dust control of dust emissions from roadways in the BMP.
9. Emission control – watering	On-site operations Section 3 PR page 30	It is not clear in the air quality study or the Planning report if the on-site operations will include a watering truck or if this will be contracted out (i.e. as needed). We would recommend that an onsite truck be available and this be part of the BMP.	Significant. Dust has to be well managed. Once dust starts to be emitted (i.e. visual dust), control needs to be applied quickly and cannot wait for an off-site contractor to be		Resolved. Frequency and level of watering would required in BMP would indicate that an on-site truck will be needed.

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			available.		
10. Modelling	Section 3.5	Impacts can vary due to elevation differences. It is not clear why the report considers a flat terrain. Terrain data is readily available through MOE websites.	Recommend including terrain in the modelling assessment.	Sensitivity assessment was done and the dust concentrations were the same for both cases.	Resolved. No notable differences when assessment done with terrain variations.
11. Mitigation	AQ Section 4.4 PRT page 40	Recommendation of trees along north berm to provide more control. The report indicates that trees/vegetation are barriers to dust dispersion. Though this is not easy to quantify, studies have shown this can be significant in reducing ground level dispersion. We agree with the recommendation to include trees on the north and east berms. The PR actually indicates the vegetation will be cut (i.e grasses). This will significantly reduce the effectiveness of dust control.	Important. This is a recommendation in the air quality report. The planning report does not indicate trees, but only grasses on the berms.	Peel Street berm will include trees and shrubs to provide better dust control.	Resolved. Trees and shrubs have been added to reduce dust impacts.
12. BMP Plan.	Attachment D.	The plan provides an excellent framework for control of dust emissions. The plan does require the following	Significant. Dust can be well controlled, but requires a detailed plan for control	Specific issues noted in review have been	Resolved. The updated BMP is more specific w.r.t.

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		additional details: • A minimum daily inspection to observe dust emissions from traffic and operations. Visible dust from any operation needs to trigger mitigation. Using visual triggers allows both the operator and other agencies to determine if dust control is adequate. • Record keeping of these observations and actions needs to be included. • Some actions are required based on temperature and wind speed. No details provided on how this will be managed? Record keeping should be included as well. • BMP should also include off-site roads. Commitment has been made to control emissions on these roads. This should be part of the BMP. • Complaint form should include description of met.	triggers, initiation of mitigation and record keeping.	addressed.	reporting and actions. Daily inspections reports will be maintained. Visible emissions are triggers for further mitigation on roads, stockpiles, crushing and screening. This will be easy to track and enforce (both for operator and as confirmation BMP is being followed for Township and others) The conditions for watering and control have been clarified (i.e. extent under different weather conditions), and then supported by visible dust cloud observations. Off-site road mitigation is now included in BMP. Complaint form has been updated to cover relevant information and actions.

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		conditions and operations at time of complaint. • Complaint form has a "none" for actions taken. If none is checked, explanation should be required as to why not. Too often these show complaint, and no action taken.			The current plan is acceptable.
13. Monitoring	Not discussed	We would not recommend actual air quality monitoring for this site. Real time monitoring is very expensive and siting of the monitors to ensure maximum impacts are captured is always difficult. Integrating (i.e. standard hi-volume) monitors are not appropriate. They require days to obtain results and only provide a retrospective look at impacts and mitigation. Visual "monitoring' on an ongoing basis to ensure no visible plumes of dust come from operations and traffic is the most appropriate monitoring to ensure appropriate mitigation and minimize off-site impacts.	Visual "monitoring" and reporting must be included in the BMP. This is the most appropriate mechanism to ensure appropriate mitigation. See comments RE: BMP concerning record keeping.	Visual monitoring and recording is now part of the BMP.	Resolved. Visual monitoring and recording are now part of the BMP.