# TABLE A- PROPONENT RESPONSE TO ELEVATION REQUEST

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| **PROPONENT** | Durham Region and York Region (Regions) |
| **PROJECT TITLE** | Durham York Energy Centre (DYEC) Throughput Increase from 140,000 to 160,000 Tonnes per Year |
| **PROJECT LOCATION** | 1835 Energy Drive, Clarington, Ontario |
| **PREPARED BY** | The DYEC Project Team |
| **DATE SUBMITTED TO MECP** | August 4, 2023 |
| **PHONE # AND E-MAIL** | 905-404-0888 ext. 4130 and info@durhamyorkwaste.ca |

| | Issues and Concerns | Proponent Response | Status |
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| 1 | The AQIA characterizes stack parameters (e.g., exhaust temperature and flow rate) based on previous submissions to the MECP, as well as source testing data. Questions of clarification raised by Dillon relating to the characterization of stack parameters and ultimately the characterization of emissions was brought forward to the Proponents (Municipality of Clarington) | The modelling/methodology was approved by the MECP prior to it being administered by Golder Associates Ltd (WSP). Upon completion of the testing, the MECP conducted a comprehensive review of the results and provided comments which were addressed or clarified prior to the MECPs subsequent approval. | Attach: Correspondences between the MECP and Golder Associates Ltd (WSP). Approved modeling from MECP Outlined in the Appendix D Air Quality Impact Assessment (AQIA). |
| 2 | Human Health Risk Assessment, Review by a toxicologist and the Medical Officer. (Municipality of Clarington, A.J Kehoe IV, Barry and Barbara Bracken, Wayne | The results of the human health risk assessment and the ecological risk assessment (HHERA) undertaken in 2009, indicated that emissions from the DYEC under normal operating conditions would not lead to adverse health or ecological impacts to local residents, farmers, other receptors or species at risk | The proponents committed to completing an update to the HHERA as part of the future expansion to 250,000 tpy per year of capacity. |

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| | Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | under the initial design capacity of 140,000 tpy, and up to the maximum design capacity of 400,000 tpy. Updated emissions modeling confirming no adverse impact for the 160,000 tpy scenario is included in the Screening Report completed December 2021. Air quality standards and emissions limits do consider risk thresholds within the establishment of these limits, and as a result HHERA's are not a typical requirement of environmental permitting processes, including individual Environmental Assessments. The Region adheres to all MECP requirements and regulations in the daily operations of the DYEC and will continue to do so in all future improvements to the facility. The request for inclusion of the entire South Clarington Airshed goes well beyond the limits of the project scope and would need to consider impacts of numerous other emitters beyond the Facility.<br><br>A copy of the screening report was sent to Durham's Medical Officer of Health, and Health Canada. Comments were received by the proponent in 2019 and the proponents responded to them accordingly. There were no additional comments made to the proponent afterwards. | A copy of the correspondence is part of the Appendix H – Record of Consultation (Appendix E, Appendix F, Appendix G, Appendix J). |
| 3 | The Regions completed modelling to predict impacts on Ambient Air, including ambient air exceedance of particulate matter, Benzopyrene, Sulphur Dioxide and especially Dioxins and Furans. (Municipality of Clarington, A.J Kehoe IV, Barry and Barbara Bracken, Wayne Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | The modelling/methodology approach was approved by the MECP prior to it being undertaken by Golder Associates Ltd (WSP). Upon completion of the AQIA, the MECP conducted a comprehensive review of the results and provided comments. All comments were adequately addressed by the Regions and Golder Associates Ltd (WSP). The DYEC as modeled within the AQIA is not a significant contributor of benzo(a)pyrene, and exceedances are attributed to the high background levels which exist across the area. Nitrogen dioxide levels are associated with operation of the emergency generator and will be further assessed during ECA development. Although | Addressed as part of the Environmental Screening Report and the Air Quality Impact Assessment. |

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| | | the generator was considered as a source to be conservative, there are further guidelines on how these systems are addressed within models to reflect the nature and frequency of their operation, which will be further refined during the modelling for the facility ECA application.<br>Nitrogen oxide emissions from DYEC were calculated based on the Ontario A-7 emission limits, which are conservative as source testing data has historically been less. Predicted concentrations were compared to the Canadian Ambient Air quality criteria of 79 µg/m³ on a 1 hour averaging period. The Ontario Ambient Air Quality Criteria is 400 µg/m³ over the same 1 hour averaging period and is still used as an indicator of good air quality. The maximum predicted cumulative concentrations of Nitrogen dioxide are below the relevant Ontario AAQC for all modelled scenarios. Similarly, maximum predicted cumulative concentrations of Sulphur dioxide are below the relevant provincial and federal AAQC. Emissions of these contaminants are measured constantly through CEMS to confirm the emissions are less than the A-7 emission limits and data is published online on the DYEC project website. Courtice and Rundle ambient air monitoring stations also continuously measure concentrations of these contaminants with summary reports published online quarterly.<br><br>As identified in the AQIA, Emissions from DYEC contribute less than 1% to the total ambient benzo(a)pyrene concentration for all assessed scenarios. Levels of benzo(a)pyrene around DYEC have remained steady, suggesting DYEC is not a significant source of benzo(a)pyrene. Typically, benzo(a)pyrene is emitted as a product of incomplete combustion, particularly in car exhaust, therefore initiatives related to local traffic would be more | |

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| | | beneficial to reduce ambient benzo(a)pyrene levels than actions at DYEC. Concentrations of Benzo(a) pyrene are measured at the Courtice and Rundle ambient stations. Summary reports of the ambient data are published online quarterly.<br><br>While increasing the processing capacity by an additional 20,000 tpy may contribute to increased PM2.5 emissions, the 160,000 tpy will allow the facility to run more efficiently and represent no change at the POI because of additional 20,000 tpy.<br>DYEC ECA limits continue to be among the most stringent limits when compared to Ontario A-7 Guideline (A-7) and the European Union (EU) limits at the time of construction and are consistent with the current EU Best available techniques reference documents (BREF) emission limit ranges for existing facilities. | |
| 4 | Long term sampling results of Dioxins and Furans from 2015 - 2019. (A.J Kehoe IV, Barry and Barbara Bracken, Wayne Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | The performance of the long-term sampling system was initially evaluated during the annual Source Testing programs commencing in 2015. However, the correlation of the long-term sampling system results to the Source Test results did not reveal any correlation prior to 2020 due to being considered below the minimum detection limit and not meeting the level of qualification limit of 32pg/TEQ. Between 2015 and 2020, a Workplan Summary was being developed and encompassed the implementation of several workplans that were developed with input from the MECP, Owners, manufacturer, consultants, and Covanta. All long-term sampling system data prior to correlation was not reliable and could not be used for the evaluation of Air Pollution Control equipment performance or D&F emissions trend | As of 2021 and a request of Durham Regional Council, the Regional Municipality of Durham has been posting Quarterly Reports on long-term sampling system results and will continue to be part of the Annual Report. Long-term sampling system results for 2022 have been posted as part of the 2022 Annual Report, which is posted to the DYEC project website. |

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| | | analysis. As a result of limited correlation testing, there is no confidence in the long-term sampling system data prior to 2020, therefore, release of this information will not be useful and may lead to inaccurate conclusions.<br>Long-term sampling system results are not to be used to assess compliance in accordance with Ministry guidance. MECP requires long-term sampling system results to be submitted in the Annual report. Long-term sampling system results are also reported to the public quarterly based on Council direction. | |
| 5 | All three PIC'S (Public Information Centres) events were held very early in the process. None of these events occurred after the release of the draft ESR and the current ESR so the public hasn't had the opportunity to comment on the essential details of the proposal. (A.J Kehoe IV, Barry and Barbara Bracken, Wayne Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | Consultation is set out as described by the MECP guidance documents for preparing environmental assessments. The screening report is not a living document. The screening report serves as a comprehensive assessment at a specific point in time and stands as a static reference which is not intended to evolve or adapt as circumstances change. | All information on the PICs was included as Appendix G of the Environmental Screening Report. The Regions continue to address any comments submitted through the info@durhamyorkwaste.ca e-mail or answer questions from residents who call in. Comments that came in throughout the Notice of Completion continue to be addressed as per guidance from the Ministry. |
| 6 | The Environmental Screening is proponent driven and proponents complete their own checklist for potential impacts of their project.<br>Proponents did not identify all potential negative/adverse effects in Screening checklist | Guidelines on the screening criteria were provided by the MECP which included guidance on the development of the Environmental Screening checklist. Overall, this project is proponent driven and the priority on the checklist was determined by the Proponent through consultation and guidance from the MECP. | The Screening checklist is part of the Environmental Screening Report and has been updated accordingly and as requested by the MECP. |

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| | (Sally Thrulow and Linda Gasser) | The Regions followed the guidance documents supplied by the MECP to prepare the screening report. | |
| 7 | The Regions did not assess the additional mass loading on land, water, and living beings that will occur when 20,000 additional tonnes are burned every year for an unspecified number of years. (Sally Thrulow and Linda Gasser) | Review of the 2009 studies and reports undertaken during the initial Environmental Assessment continue to demonstrate, through the established monitoring program, that there are no anticipated adverse effects or additional impacts to groundwater or surface water that will result from the 20,000 tpy increase. Additionally, a review was completed of the 2009 study undertaken during the initial Environmental Assessment, that shows there are no anticipated potential effects to land. The Environmental Screening Report also addressed concerns surrounding air, noise and odour which determined that there would be no anticipated potential effects to increasing processing by 20,000 tpy. | Section 3.6, 3.7 and 3.8 of the Environmental Screening Report. |
| 8 | This incinerator is located close to prime farmland, a sensitive wetland (Second Marsh) and a highly populated area. For this proposal, the Regions only identified potential impacts to air and did not check off potential impacts to water, land, and public health. This even though this facility is sited next to Lake Ontario, and very close to urban communities with schools, daycare and with major employment centres next door. (Municipality of Clarington, A.J Kehoe IV, Barry and Barbara Bracken, Wayne | The AQIA encompassed receptors situated within the area of influence of the facility. Discrete receptors were located at lands zoned to allow future use, at grade. Without site plans, no information is available on the heights of proposed future uses and/or the location of their future air intakes to accurately represent them in the model in a realistic manner. Additionally, it is understood that future developments located within close proximity to DYEC and any other existing industrial use within Energy Park proposing sensitive uses would be required to submit an air quality study as part of their site plan application to confirm that they will not impact the ability of existing facilities to operate within the conditions of their air/noise approval. However the location of elevated receptors may be reviewed when the ECA amendment application is filed. No changes to the AQIA modelling are required. In addition, the Region | Section 3.7 of the Environmental Screening Report. |

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| | Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | of Durham owns two properties zoned for sensitive uses and understands the above noted requirements. The other properties with zoning permissions for sensitive uses include a new industrial building (East Penn Canada). Lastly, the Municipality of Clarington is currently undergoing an update to the Courtice Waterfront and Clarington Energy Park Secondary Plan with a focus on business and energy related uses. As part of the implementation of the new Plan, the future zoning by-law should reflect the current uses in this area and address incompatible uses which do not comply with the existing facilities in the area. | |
| 9 | Request for sustainable plan to reach Waste Reduction targets. This plan must address that we need to reduce our consumption of resources and recognize the need for clean air, water, and soil. (A.J Kehoe IV, Barry and Barbara Bracken, Wayne Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | The Environmental Screening Report outlines long term waste management planning activities underway by the Regions, which seek to maintain a focus on reducing the quantity of waste requiring disposal at the DYEC. Durham Region Council approved the 2022 – 2040 Long-Term Waste Management Plan and its first five-year action plan on January 26, 2022. The focus of the new Long Term Waste Management Plan is on maximizing the diversion of materials from waste and recovering waste as resources to optimize its existing and planned disposal and processing infrastructure and minimize the need for disposal. York completed an update of its waste management master plan in 2020 (SM4RT Living Plan 2020 Update) setting the stage for waste management as far out as 2059 while outlining actions for the next five years aspiring to ensure nothing goes to waste. The updated plan continues to focus efforts on waste prevention and reuse – expanding and refining successful community programs such as curbside giveaway days, textile recycling, repair cafes, lending libraries, food waste reduction, initiating programs to address single use items and support community | Approved by the Durham Regional Council on January 26, 2022. (Attached report #2022-info-02). |

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| | | groups in developing new circular economy programming. | |
| 10 | There's no technology that can sufficiently filter out the carcinogenic dioxins and furans that are emitted in vast quantities when garbage is burned.<br>To ensure best available control efforts are continually being demonstrated, has the Operator considered and implemented measures to conform with the best available pollution control requirements in leading jurisdictions? (Municipality of Clarington, A.J Kehoe IV, Barry and Barbara Bracken, Wayne Ellis and Kathryn Bracken, Wendy Bracken, Linda Gasser, Sally Thrulow) | The Regions through review of documentation and through expertise from industry representatives do monitor advances in monitoring technology and changes to best practices related to the operation and provided an update to Durham Regional Council during 2020 (#2021-INFO-35). No changes to emission control systems are being proposed currently.<br><br>The increase from 140,000 tpy to 160,000 tpy does not require an expansion or alteration of the current equipment or infrastructure but DYEC staff continue to investigate and ensure the DYEC maintains the 'Maximum Achievable Control Technology' standard.<br><br>The DYEC continued to comply with Dioxin and Furan limits during source testing; all results of the Source Test were in full compliance with the Environmental Compliance Approval limits. | Attached report #2021-info-35. |
| 11 | The proponents also provided no update about the status of their planned physical expansion to 250,000 tpy, as described in the July 2019 Notice of Commencement. Confusing Public Notice of Commencement July 2019 and Completion – Notice of Commencement referenced both 160,000 tpy EA Screening as well as Terms of Reference of Individual EA for physical | The Ministry of the Environment, Conservation and Parks is no longer requiring that a Terms of Reference for an Environmental Assessment to expand the Durham York Energy Centre to process 250,000 tpy be undertaken concurrent with the Environmental Compliance Approval amendment application for increase to 160,000 tpy. The Regions through consultation with MECP staff, are mindful of changes to the EA process including the introduction of expiry timelines for terms of reference and environmental assessments. Based on the proposed developments and contracts within the Regions, it is likely that the Terms of Reference and or EA would | Reported to Council December 17, 2021, in report 2021-INFO-133. (Attached report #2021-INFO-133) |

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| | expansion to 250,000 tpy wasn't clearly explained and confusing for many, as evidenced by questions and comments in Consultation Record. (Linda Gasser) | expire before it is needed, thus it was advised not to undertake the studies at this time for the future expansion to 250,000 tpy. | |
| 12 | 250K expansion was referenced on July 3, 2019, Notice of Commencement but not referenced in Notice of Completion nor posted on DYEC website under ESR 160 Screening Tabs. Long Term Capacity Planning tab no longer visible under Project Approvals tab where it was. Explanation also required because $10 million set aside for 2025 in the 2022 Solid Waste Capital Forecast, for an EA Study for this physical expansion to 250K. (Linda Gasser) | MECP is no longer requiring that a Terms of Reference for an Environmental Assessment to expand the Durham York Energy Centre to process 250,000 tpy be undertaken concurrent with the Environmental Compliance Approval amendment application for increase to 160,000 tpy.<br><br>$10 million is likely to stay in the budget until the Region has evidence to support that this long-term plan funding for 250K expansion is no longer required within the budgeted timelines. Budgets may change based on new information and direction. As is consistent with other large infrastructure projects, the Regions will continue to review existing data such waste generation trends and diversion opportunities alongside housing targets and commitments in assessing the timing of large infrastructure projects. | Reported to Council December 17, 2021, in report 2021-INFO-133. (Attached report #2021-INFO-133) |
| 13 | The 2019 Technical Memorandum states flow rate was adjusted to source testing; however, the temperature was not adjusted. Please confirm whether the temperature was adjusted, and if not why? Was the calculation and procedure to estimate the 160,000 TPA volumetric rate at reference conditions done correctly? Should emission rates increase by a factor of | The flow rate was the same as 2019. Reference flow rates for 160,000 tpy is based on source testing. In terms of data used in the Environmental Screening Report, data was pulled from source test reports whereas the initial EA was using theoretical data based on similarly run facilities. The modelling/methodology was approved by the MECP prior to it being administered by Golder Associates Ltd (WSP). Upon completion of the testing, the MECP conducted a comprehensive review of the results and provided comments which were addressed or clarified prior to the MECP's subsequent approval. | Outlined in the Appendix D (AQIA) |

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| | 1.13 for the 160,000 TPA case? What flow rates are correct and which document rules? (Wendy Bracken) | Parameters for the modelling of conditions are based on the observed facility conditions as documented during recent source testing, projected outwards consistent with the increased capacity. Previous modelling, completed during the Environmental Assessment was primarily based on theoretical conditions anticipated at the facility, based on operations at other similar EFW type facilities. | |
| 14 | The DYEC ECA limits the annual tonnage to 140,000 tpy but does not appear to put a limit on the amount that can be burned each day. Please confirm that the ECA does not have a daily limit on the amount the Regions can burn at the facility. There is a nominal throughput defined and an annual limit, but is there a daily maximum? Could there be days when the facility is burning above the nominal and even up to 270 tonnes/day/train?<br>Clarity requested re waste processing limits and waste "attributed to DYEC".<br>Require additional details re nee/rationale for additional processing/burning capacity. For how many years do the proponents expect that 160K annual processing capacity to be sufficient to meet their disposal needs? (Wendy Bracken and Linda Gasser). | The proposed increase to 160,000 tpy will require no changes to existing infrastructure and no changes to existing daily limits on shipping hours or receipt or storage of materials.<br>While the DYEC's permit does not contain a limit for material processed daily, the facilities' two processing trains each have maximum continuous ratings in terms of the amount of steam produced by each unit. As identified within the Environmental Screening Report, the quantity of waste processed to reach this level is dependent on facility availability, as well as the energy content of the incoming waste, which is a function of composition including a significant contribution of the moisture content. The facility was designed and permitted based on the processing of a waste material with a nominal energy content of 13 MJ/kg, and theoretical feed rates to obtain boiler ratings at that energy content. During plant operations, fluctuations in waste quality and observed processing rates have resulted in the permit limit becoming a limiting factor for the facility throughput. This results in periods where the facility is under utilized to comply with the existing ECA limit. The requested 20,000 tonne increase corresponds to a scenario where low-quality material is received throughout the year, and is conservative based on the waste quality received, which fluctuates around the nominal design point. | - Section 3 (Sub-section 3.1) of the Environmental Screening Report.<br>- attached: Regional Response to Clarington's Comments on the Environmental Screening Report. |

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| 15 | How have the Proponents and how has the Operator demonstrated that the existing unit will be able to conform to the design and operation requirements in MECP Guideline A-7? (Wendy Bracken) | The increase from 140,000 tpy to 160,000 tpy does not require an expansion or alteration of the current equipment or operations. In accordance with MECP Guideline A-7, the existing units can meet the design requirements outlined and will continue to comply with the ECA permit limits. | Section 3 (Sub-section 3.1) of the Environmental Screening Report. |
| 16 | Have the Proponents and Operator ensured the operations conform with and ensure on-going compliance with the US federal requirements for air pollution control with respect to waste combustion units, such as 40CFR60 subpart AAAA and/or subpart Eb? (Wendy Bracken) | The DYEC follows and is within compliance of the MECP guidelines for Air Pollution control and the facility's ECA which is equivalent or more restrictive than the emission limits associated with Limits for Municipal Waste Thermal Treatment Facilities found in Guideline A-7. | DYEC ECA and outlined in the Environmental Screening Report. |
| 17 | How, when, and where have process upset and shutdown conditions been assessed for the 160,000 TPA scenario? Have the Proponents assessed air emissions impacts under process upset conditions and shut down scenarios? If not, will they before submission of their application for an amendment? (Wendy Bracken) | The proposed increase in tonnage does not impact the start-up, shut down or upset conditions, therefore these scenarios were not considered in the ESR. Updates to the modelled parameters will be assessed in the ECA amendment application as required. | To be assessed in the ECA amendment application. |
| 18 | How have the Proponents considered the potential impacts of the Project on the emissions of dioxin/furan and | Potential impacts of the expansion to 160,000 tpy, including dioxin/furan and any other pollutants have been considered with the AQIA Report provided by Golder Associates Ltd (WSP) and with guidance of the MECP. | Outlined in the Appendix D (AQIA) |

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| | other pollutants of incomplete combustion into account? (Wendy Bracken) | | |
| 19 | How are Newmarket air concentrations more representative of the Courtice site than the Toronto stations? Please provide a comparison of the Toronto NAPs data and Newmarket data. (Wendy Bracken)<br>Considering the new meteorological modelling shows that both Courtice and Rundle Road may be considered upwind for significant amounts of time, will the Regions revise the AQIA to conservatively represent the background concentrations and select whatever is the maximum background of the Courtice and Rundle Road measurements? (Wendy Bracken)<br><br>What percentage of the meteorological data was taken from Courtice and Rundle Road stations? The concern is that modelled data based on numerous assumptions is being used instead of local data. Is this appropriate and was it peer reviewed? (Wendy Bracken and Linda Gasser) | The modelling/methodology was approved by the MECP prior to it being undertaken by Golder Associates Ltd (WSP). Upon completion of the testing, the MECP conducted a comprehensive review of the results and provided comments which were addressed or clarified prior to the MECPs subsequent approval.<br><br>The modelling plan considered a number of datasets addressing the modelling domain, including local readings. Data inputs were reviewed by the MECP prior to modelling.<br><br>No monitoring station can ever be 100% upwind or downwind of a facility. The two stations were sited in consultation with MECP in 2013, to represent "typical" upwind and downwind location from DYEC, using the prevailing wind direction. Background air quality data used in the AQIA was taken from the Courtice Station where available, as this station was sited to be upwind of DYEC for the prevailing wind direction and would therefore reduce the likelihood of double counting emissions from existing operations. The Rundle station is downwind of DYEC and would be less representative of background conditions in the absence of any impacts from DYEC. It would include a greater amount of monitoring periods that include a contribution from the existing operations of DYEC.<br><br>As a result, the use of the 90$^{th}$ percentile of monitored data from Courtice Station to represent background air quality is representative, while still conservative as the air quality concentrations have historically been lower than these concentrations, 90% of the time. | Outlined in the Appendix D (AQIA) |

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| | | MECP reviewed the monitoring data used in the AQIA and provided comments, which were addressed. | |
| 20 | The AQIA background concentrations are much lower than those documented in the EA. While it is understood air concentrations have improved in Canada for some pollutant, the changes noted above appear to be more dramatic. Have the background concentrations used in the EA been reviewed and by whom and were they determined conservatively? Has the maximum impact of the emissions been assessed properly and conservatively? How do the Proponents propose that their AQIA assessment of PM2.5, which compares modelled concentrations against an air benchmark project criterion, is sufficient to determine the PM2.5 impacts of this Project? (Wendy Bracken) | The modelling/methodology was approved by the MECP prior to it being administered by Golder Associates Ltd (WSP). Upon completion of the testing, the MECP conducted a comprehensive review of the results and provided comments which were addressed or clarified prior to the MECP's subsequent approval. | Attached: Correspondences between the MECP and Golder Associates Ltd (WSP). Approved modeling from MECP |
| 21 | What is the rationale for adding more PM2.5 emissions to an already elevated present situation when PM2.5 is a non-threshold pollutant? | Increasing processing capacity by an additional 20,000 tpy may contribute more PM2.5 emissions. However, the 160,000 tpy will allow the facility to run more efficiently and represent a minimal change in the maximum concentration. The facility will continue to adhere to the existing ECA limits. The results from the AQIA concluded that an annual throughput increase of 20,000 tpy is not expected to significantly impact local air quality. A recently completed update | Outlined in the Appendix D (AQIA)<br>Attached: Overview of Ambient Air Monitoring Programs in Durham Region (MECP, January 2022) |

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| | | to monitoring of local ambient air conditions undertaken by the MECP continues to find local conditions are similar to that of other communities across Southern Ontario. | |
| 22 | Do the particulate emission rates reported in the AQIA for the 140,000 TPA and 160,000 TPA include both filterable and condensable particulates for PM, PM10 and PM2.5? (Wendy Bracken) | Only the filterable PM2.5 values were reported in the AQIA in keeping with standard methodologies. | Outlined in Appendix D (AQIA). Subsection 3.1.1.2. Further information can be found in the 2021 Spring Source Test Report (Section 2.0 Emission Rates). |
| 23 | Why has Durham failed to assess the impact of their plans in this AQIA and how can that be protective of the public? Have the Proponents completed any analysis of the mass loading impacts of burning an additional 20,000 tonnes of waste every year for the next thirty or so years? If so, please provide. (Wendy Bracken) | The Environmental Screening Report outlines the potential impacts of the 20,000 tpy increase and the results from the AQIA concluded that an annual throughput increase of 20,000 tpy is not expected to significantly impact local air quality. | The Environmental Screening Report Section 3 and 4. Also, outlined in Appendix D (AQIA). |
| 24 | The March 2011 ESDM identifies Point 2' as the reference point which would result in the highest concentration possible at the POI and that 2' was selected because it represented the maximum potential ambient impacts. What is the rationale and the supporting information that Point 2' is the point with | The Environmental Screening Report includes an updated Emissions Summary Dispersion Model demonstrating that contaminant concentrations at the maximum point of impingement (POI) will remain within applicable regulatory limits and standards that are protective of human health and the environment. | Included as part of Appendix D (AQIA). |

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| | the maximum possible emissions impact as required by Section 10 of O. Reg. 419/05?<br>(Wendy Bracken) | | |
| 25 | Do the Regions report for compliance using NATO or WHO toxicity factors? (Wendy Bracken) | The MECP 'Summary of Standards and Guidelines to Support Ontario Regulation 419/05 – Air Pollution – local Air Quality,' dated April 2012, provided a new framework for calculating dioxin and furan toxicity equivalent concentrations which includes emissions data for 12-dioxin -like PCBS. This document was replaced by "Air Contaminants Benchmarks list: standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants," with the most recent version being published on April, 2021, however the dioxin and furan toxicity equivalent calculations methodology remains the same. Compliance is assessed using the methodology outlined within the facility's ECA. | Stack Test report prepared by ORTECH. Found on DYEC website – Spring Voluntary Source Test. |
| 26 | Why didn't the Regions 98th percentile (or maximum) data to estimate NO2 for background concentrations (1-hour and 24-hour)? Would the predicted maximum concentration exceed the Project Criteria for 1-hour NO2 if the 98th percentile background concentration was used? (Wendy Bracken) | The impact of DYEC emissions was evaluated individually and cumulatively and compared to the relevant ambient air quality criteria. The cumulative assessment of emissions (i.e. the contribution of multiple sources) has been evaluated. The ultra-conservative scenario assumes that meteorological conditions which result in the greatest ground level concentrations from DYEC occur while the maximum on-site activities take place, and during a period when ambient air quality conditions are at the 90$^{th}$percentile. The likelihood of all these factors occurring concurrently is low. Standard modelling techniques utilized the 90$^{th}$ percentile calculation during development.<br>Nitrogen oxide emissions from DYEC were calculated based on the Ontario A-7 emission limits, which are conservative as source testing data has historically been less. Predicted concentrations were compared | Attached: Correspondences between the MECP and Golder Associates Ltd (WSP). Approved modeling from MECP |

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| | | to the Canadian Ambient Air quality criteria of 79 µg/m³ on a 1 hour averaging period. The Ontario Ambient Air Quality Criteria is 400 µg/m³ over the same 1 hour averaging period and is still used as an indicator of good air quality. The maximum predicted cumulative concentrations of Nitrogen Dioxide are below the relevant Ontario AAQC for all modelled scenarios. Similarly, maximum predicted cumulative concentrations of Sulphur Dioxide are below the relevant provincial and federal AAQC. Emissions of these contaminants are measured constantly through CEMS to confirm the emissions are less than the A-7 emission limits which is published on the DYEC Project website for public access. The Courtice and Rundle stations also continuously measure concentrations of these contaminants with summary reports published online once a quarter. | |
| 27 | Why didn't the Regions 98th percentile (or maximum) data to estimate PM2.5 for background concentrations (1-hour and 24-hour)? Would the predicted maximum concentration exceed the Project Criteria for 1-hour PM2.5 if the 98th percentile background concentration was used? (Wendy Bracken) | The impact of DYEC emissions was evaluated individually and cumulatively and compared to the relevant ambient air quality criteria. The cumulative assessment of emissions (i.e. the contribution of multiple sources) have been evaluated. The ultra-conservative scenario assumes that the meteorological conditions which result in the greatest ground level concentrations from DYEC occur at the same time as the maximum on-site activities take place, and during a period when ambient air quality conditions are at the 90th percentile. The likelihood of all these factors occurring concurrently is low. | Attached: Correspondence between the MECP and Golder Associates Ltd (WSP). Approved modeling from MECP |
| 28 | Did the AQIA follow the CCME guidance procedures when calculating background annual NO2 concentrations? (Wendy Bracken) | The relevant air quality criteria used for screening the air quality effects of DYEC include the Ontario criteria and federal standards and objectives where provincial guidelines are not available. Ontario MECP has set guidelines related to ambient air concentrations and are summarized in Ontario's Ambient Air Quality Criteria (AAQC) document. | Section 1.3.1 Ambient Air Criteria of the AQIA. |

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| 29 | Did the Regions used NO2 data or NOx data in the AQIA? (Wendy Bracken) | Emissions of Oxides of Nitrogen (NOx) were used as inputs to the CALPUFF model. Ambient NO2 concentrations can be calculated from modeled NOx values using the Ozone Limiting Method (OLM) provided the background ozone concentration is available. | Section 5.6.4 NOx to NO2 conversion of the AQIA. |
| 30 | How can these emission rates be so different? How can their modelled predicted maximum concentrations be remarkably similar?<br>What is the explanation for 24-h PM2.5 and Annual PM2.5 concentrations being lower in the 2021 AQIA than in the EA yet annual total particulate concentrations are much higher in the AQIA? | In terms of data used in the Environmental Screening Report, data was pulled from source test reports whereas the initial EA was using theorical data based on similarly run facilities | Outlined in Appendix D (AQIA). |
| 31 | How were Potentially Interested Parties identified and notified? (Linda Gasser) | Interested stakeholders and rightsholders within other levels of government, NGOs, and Indigenous communities were identified based on MECP guidance including newspaper notifications, social media posts and letter/e-mails. Other interested parties were encouraged to register to receive automatic notifications when new information was posted to the Project website through the 'Contact Us' page on the DYEC website. | Outlined in Appendix H (Record of Consultation) |
| 32 | Potential impacts of Mixed Waste Presort on DYEC Capacity not properly addressed- conflicting and incomplete information, requires updated tonnage projects to include 2020 data. | The screening report is not a living document. In terms of data used in the Environmental Screening Report, data was pulled from source test reports whereas the initial EA was using theoretical data based on similarly run facilities.<br>In June 2022, Regional staff recommended to Regional Council to put the Mixed-Waste Pre-sort | Outlined in Appendix D (AQIA). |

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| | Overreliance on 2009 EA studies, many outdated. Many of these studies were based on pre-operational ESTIMATES of potential impacts whereas the current EA Screening Report should have considered updated up to at least 2020 data in all relevant instances. Proponents should have updated all previously developed ESR sections, several of which are now obviously outdated. (Linda Gasser) | and Anaerobic digestion Project on hold as COVID-19 inflation and global supply chain interruptions had resulted in higher than anticipated building costs. | |
| 33 | DYEC burned more than 140,000 tonnes in 2020 being granted an “emergency temporary amendment”. Therefore, the potential impacts of increased processed tonnage should have included 2020 data. (Linda Gasser) | The screening report was prepared and developed in accordance with MECP guidance documents. As noted, the facility was capable of processing additional tonnage at the energy content received during 2020, factoring in plant availability, while complying with all relevant permitting conditions. | Further information can be found in Section 3.1 of the Environmental Screening Report. |
| 34 | Emissions Inventory – does AQIA adequately consider impacts of changing Waste Composition that have occurred since 2009 AND is expected to occur due to proposed Mixed Waste Pre-sort? (Municipality of Clarington, Linda Gasser) | At this time, there are no changes to the waste composition anticipated. The future development of the Mixed Waste Pre-sort/Anaerobic Digestion facility will remove organics and non-combustibles from the waste, providing a more stable fuel source, and waste materials/composition incoming from York Region will not change. It is important to note that waste composition will change year after year; new packaging materials are being developed, and residents' habits will change. An example of this is the impact of the COVID-19 pandemic; we saw a change in waste composition as the number of single-use plastics (i.e., gloves and masks), packaging materials | Environmental Screening Report section 3.4 (Long-term Waste Management Solutions).<br>Attached June 22, 2022Council Report. |

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| | | (i.e., Amazon boxes and home delivery food kits), and overall volume of waste increased as residents were in lockdown.<br>In June 2022, Regional staff recommended to Regional Council to put the Mixed-Waste Pre-sort and Anaerobic digestion Project on hold as COVID-19 inflation had resulted in higher than anticipated building costs. | |
| 35 | What is the fraction and tonnage of waste that cannot be processed at the DYEC AND has this un-processible at DYEC tonnage been removed from the projected Residual Tonnages, particularly for Durham as York has other disposal options? What percentage/tonnage of Durham's Annual Tonnage has been deemed to be "unprocessible" at the DYEC in each year from 2016-2020 and include 2021 if available.<br>Why was at least a link to the most recent (2020) Durham's and York's Annual Diversion/Waste Management Reports not included in the ESR?<br>(Linda Gasser) | The details on rejected waste can be found in the DYEC Annual reports which are posted on the website. Waste Diversion Program Monitoring Plan & Reports are also posted on the DYEC project website going as far back as 2010. | Annual reports are found on the DYEC website. |
| 36 | Were operational issues that were identified in the early months of DYEC operations e.g., occurrences of temperature below 1000C and other operational issues, as | The Air Quality Impact Assessment to support the screening report indicates there are no adverse impacts because of increasing the processing capacity by an additional 20,000 tpy of waste per year. | Outlined in Appendix D (AQIA). |

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| | described by HDR, the proponents' long-time consultant, in their report from April 2016 post acceptance Testing, been reviewed as concerns additional processing throughput? (Linda Gasser)<br><br>What report have the proponents commissioned to confirm that capacity could be increased and be within the plant's capabilities on an ongoing basis, without adverse impacts to public health and the natural environment? Where is that found in the ESR? (Linda Gasser) | | |
| 37 | Where would such data be found for Durham so that reviewers would be aware of all the disposal sites Durham is currently using, has contracts with, for what capacity and until what date(s)?<br>Why was this information not included for all reviewers to evaluate so they could determine what alternate disposal options each Region had? (Linda Gasser) | The Screening report is not a report to evaluate options for disposal, but rather evaluate the potential impacts of operating an existing facility, which is one of our options for safely and responsibly managing waste, in the most efficient manner possible. The Regions possess various contracts to appropriately manage the materials as required in accordance with regulations. Information provided in the ESR was based on the ESR MECP preparation guidance documents. | Annual reports are found on the DYEC website |
| 38 | Outdated ESR Content in parts. Some content was developed in early stages of Screening Process in 2019. Given TWO years elapsed | The screening report is not a living document. In terms of data used in the Environmental Screening Report, data was pulled from source test reports whereas the initial EA used theorical data based on similarly run facilities. The time between the draft | Environmental Screening Report (section 3), Environmental Screening Checklist. |

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| | between draft ESR and current ESR which was posted on December 20, 2021, the proponents had plenty of opportunities to update ESR and revised as required to include at least 2020 data. (Linda Gasser) | Environmental Screening Reports was time used to run the approved modelling for the AQIA and address any concerns that were brought to our attention. | |
| 39 | The potential air emissions and cumulative effects to the local air shed from the Proposal was a key area of concern for the Municipality from the outset. The Environmental Screening Process was initiated in 2019. At the same time, the St. Mary's Cement – Bowmanville Site was concluding a demonstration project and seeking environmental permissions for the expanded use of ALCF at their cement. manufacturing facility. The assessment in the AQIA of the change in cumulative concentrations use background data that does not reflect the expanded ALCF use, now approved at the St. Mary's Cement – Bowmanville Site. | In March of 2022, St. Marys Cement (Bowmanville location) released an Emission Summary and Dispersion Modelling Report - Alternative Low-Carbon Fuel Application under Ontario Regulation 79/15 to Amend an Environmental Compliance Approval (Air) report that utilizes the AQIA produced by the Region as a background model for their study. Additionally, in December 2022, the MECP completed an Air Quality assessment on the Clarington Air Shed, which addresses the concerns of cumulative effects on all industries in Clarington. Additional studies have also been completed, and an in-depth analysis of air quality assessment is underway led by a Professor from the University of Toronto; this ongoing scientific research study aims to showcase the impact of DYEC on air quality through comprehensive assessment. | Attached: Emission Summary and Dispersion Modelling Report Public Version. Alternative Low-Carbon Fuel Application under Ontario Regulation 79/15 to Amend an Environmental Compliance Approval (Air) with Limited Operational Flexibility St. Marys Cement Inc. |
| 40 | The Region of Durham is currently in the procurement process for the future. establishment of a waste pre-sort and anaerobic digestion facility. Staff understand that. | In June 2022, Regional staff recommended to Regional Council to put the Mixed-Waste Pre-sort and Anaerobic digestion Project on hold as COVID-19 inflation had resulted in higher than anticipated building costs. | Attached Council Report |

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| | commissioning of the facility is targeted for 2026. Pre-sorting post-diversion waste collected by the Region of Durham is intended to remove organic waste and nondiverted. recyclables from the waste stream, prior to final disposal at the DYEC. | Embracing the prospect of the construction of a significant amount of housing in keeping with Provincial direction leading to an anticipated population increase within Durham Region to 1.3 million by the year 2051, coupled with a corresponding significant increase in waste generation, the Region is looking to enhance its waste management infrastructure to proactively accommodate this growth. While simultaneously looking for other options to increase diversion. | |
| 41 | What has been characterized as the 140,000 TPA scenario in the 2021 AQIA is a mix and match of data and does not correspond to any measured scenario nor any permitted scenario. The AQIA presents a 140,000 TPA scenario that does not exist and has never existed – neither theoretically nor in operation. The conclusions of the AQIA are flawed as they are based on a false comparison (Wendy Bracken) | MECP approved the modelling methodology before it was administered by Golder Associates Ltd (now WSP). Upon completing the AQIA, the MECP conducted a comprehensive review of the results and provided comments; the Regions and WSP staff addressed all comments. The methodology ensures that appropriate conditions based on the observed operating conditions of the facility while applying an appropriate amount of conservatism in the model (such as the use of emission concentrations at the facilities permit limit, as opposed to current source testing results), and is consistent with normal industry practice. The DYEC, as modelled within the AQIA, demonstrates that the predicted concentrations at receptors are well below the criteria, even with the applied conservatism. Furthermore, Source testing has historically been completed twice annually and the measured concentrations are modelled for comparison against relevant air quality criteria. The modelled concentrations of source test emissions data have consistently been below the relevant air quality criteria. Any adjustments to the modelling inputs would therefore pose a minimal impact. Should any additional scenarios be required by the MECP during the ECA application, they will be prepared at that time. | Outlined in Appendix D (AQIA).<br>Attached: 2022 Fall Compliance Source Test Results. |

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| 42 | The Municipality is concerned that this greater dispersion will potentially impact these future developments and the Municipality's ability to meet Provincial and Regional land use policy requirements for transit-oriented development in the Courtice MTSA. … the elevated sensitive receptors that would be a component of the intensification being planned for the Courtice MTSA "may represent worst-case locations for air quality impacts when considering the nature of dispersion in the area." (Municipality of Clarington) | The Host Community Agreement between the Regional Municipality of Durham and the Municipality of Clarington outlines specific terms that both parties have agreed to. As part of this agreement, it is understood that Clarington would not oppose future increase limits, development and operations of the DYEC. Other developments located within proximity to DYEC and any other existing industrial use within Energy Park proposing sensitive uses would be required to submit an air quality study as part of their site plan application to confirm that they will not impact the ability of existing facilities to operate within the conditions of their air/noise approval. The location of elevated receptors will be reviewed when the ECA amendment application is filed. No changes to the AQIA modelling are required. In addition, the Region of Durham owns two properties zoned for sensitive uses and understands the above-noted requirements. The other properties with zoning permissions for sensitive uses include a new industrial building (East Penn Canada). Lastly, the Municipality is currently undergoing an update to the Courtice Waterfront and Clarington Energy Park Secondary Plan with a focus on business and energy-related uses. As part of implementing the new Plan, the future zoning by-law should reflect the current uses in this area.<br>In a meeting with Clarington on February 24, 2022, the Region did acknowledge that they would be open to conducting additional above-grade modelling as part of the ECA process. | Reference the Host-Community Agreement with Clarington.<br>. |
| 43 | The Municipality of Clarington has a longstanding vision for the Energy Park that focuses on the development of prestige, energy-related | It is understood that future developments located within proximity to DYEC and any other existing industrial use within Energy Park proposing sensitive uses would be required to submit an air quality study as part of their site plan application to confirm that | Reference the Host-Community Agreement with Clarington. |

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| | employment uses, and ancillary uses to support the businesses in the Energy Park and their employees. As noted above, this vision was approved by Durham Region and implemented prior to the planning, permitting and construction of the DYEC. The Proponents did not adequately consider surrounding permitted sensitive land uses. The Municipality does not consider the proposed resolution as satisfactory. (Municipality of Clarington). | they will not impact the ability of existing facilities to operate within the conditions of their air/noise approval. The location of elevated receptors will be reviewed when the ECA amendment application is filed. No changes to the AQIA modelling are required. In addition, the Region of Durham owns two properties zoned for sensitive uses and understands the above noted requirements. The other properties with zoning permissions for sensitive uses include a new industrial building (East Penn Canada). Lastly, the Municipality is currently undergoing an update to the Courtice Waterfront and Clarington Energy Park Secondary Plan with a focus on business and energy related uses. As part of the implementation of the new Plan, the future zoning by-law should reflect the current uses in this area. | |
| 44 | Timing of EA Screening process relative to other Durham Projects that would have informed the EA Screening process (Linda Gasser) | Out of Scope - Consultation is set out as described by the MECP guidance documents for preparing environmental assessments. | Out of Scope. |
| 45 | Will the same experts who provided input into developing the earlier monitoring plans be invited to provide input to this EA capacity increase and how this might affect their monitoring plan recommendations? (Linda Gasser) | Out of Scope - No changes to monitoring plans are proposed as part of the screening process. | Out of Scope. |
| 46 | WHY would the proponents seek a capacity increase that requires them to either operate in EXCESS of Covanta's availability guarantee, OR, to | Out of Scope - Covanta's availability guarantee is a minimum contractual requirement. Operation above minimum guarantees is considered within the agreement. The project is seeking to optimize the use of an existing Regional asset while continuing to | Out of Scope. |

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| | burn more waste on individual days (increased DAILY throughput) to as to process 160,000 tpy within less than 328.5 days -which is what Covanta guarantees as availability? (Linda Gasser) | operate within the approved limits of the facility's ECA. | |
| 47 | Has a review of the Covanta project agreement and all other agreements related to DYEC operations been undertaken, to determine potential impacts on future operations? (Linda Gasser) | Out of Scope – No changes to Project Agreement are proposed as part of the screening process and the Project Agreement does not have relevance to the Screening Process. | Out of Scope. |
| 48 | Are the long-term sampling system concentrations in the new Quarterly reports monthly concentrations or are they the latest rolling average? (Wendy Bracken) | Out of Scope - The results of the AMESA data are an average for the time the cartridge is in place. Long-term sampling system results are not to be used to assess compliance in accordance with ministry guidance. MECP requires long-term sampling system results to be submitted in the Annual report. As per Regional Councils direction, DYEC Project Staff report quarterly on Long-term sampling system results and post the report to the DYEC Project website | Out of Scope. |
| 49 | Will the public be getting all individual monthly long-term sampling system concentrations in the Annual Reports moving forward, or will the public be getting the "rolling averages"? (Wendy Bracken). | Out of Scope - The results of the AMESA data are an average for the time the cartridge is in place. As per Regional Councils' direction, DYEC Project Staff report quarterly on rolling averages for long-term sampling and report on them annually in 12 month rolling data point averages - per MECP compliance. Both reports are posted on the DYEC Project website. | Out of Scope. |
| 50 | Have the requests from Ms. Thomas of MECP (see my attached delegation) been | Out of Scope – Ms. Thomas letter pre-dates the finalized AMESA Workplan (2020). The considerations and concerns brought forward were | Out of Scope. |

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| | implemented by the Regions? (Wendy Bracken). | addressed during the development of the AMESA Workplan. | |
| 51 | Why do the Regions continue to withhold all underlying reports signed by appropriate authorities? (Wendy Bracken). | Out of Scope – All reports outlined as required by the ECA, MECP and Regional Council are made available for public viewing on the DYEC project website. | Out of Scope. |
| 52 | What were the changes made to the sampling procedures and analysis? (Wendy Bracken). | Out of Scope – No changes to sampling procedures and analysis are proposed as part of the screening process. | Out of Scope. |
| 53 | For source testing of dioxins/furans/PCBs, are all parts of the sampling train recovered and reported for dioxins, furans, and dioxin-like PCBs? (Wendy Bracken). | Out of Scope – No changes to monitoring plans are proposed as part of the screening process. Source Testing Protocol and Procedure can be found on the DYEC Project Website. Operation of other sampling equipment within the plant is based on manufacturer's recommendations. | Out of Scope. |
| 54 | What are the Regions' comments on these statements regarding the uncertainty of the dioxin/furan source test results? (Wendy Bracken). | Out of Scope – Source Test Results are submitted to the MECP for review once completed and are conducted in accordance with the approved testing procedures. The Regions are not aware of any outstanding concerns from the MECP in relation to the results of the Source testing program. | Out of Scope. |