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Prevent Cancer Now
99 Fifth Avenue, No 138
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Attention: Dave Renaud and Linda Gasser

By email only

September 6, 2011

RE: Letter from PCN dated August 29, 2011

Dear Mr Renaud and Ms Gasser

Plasco has received your letter dated August 29, 2011 requesting an elevation from a screening level environmental assessment process to an individual environmental assessment process for the re-permitting of the Plasco Waste Conversion Facility.

The process for the re-permitting of the Plasco Waste Conversion Facility located at Trail Road in Ottawa began in December 2010. As part of the environmental screening assessment process, three publicized public meetings were held in which information on the project and the environmental assessment was provided to participants and feedback was requested from the public. In addition, a public website where project documents could be reviewed and questions submitted was also available and advertised. Plasco has responded to all inquiries in a timely, thorough manner and continues to be engaged with our local community.

We were surprised to receive your letter; given how advanced we are in the environmental assessment process. Although Prevent Cancer Now has not participated in the Screening activities or other public events before sending the letter, we appreciate your contribution and will endeavor to address your concerns.

It is important to understand that the Plasco waste conversion process is not incineration. The Plasco Conversion System takes waste, otherwise destined for a landfill, and uses Plasco proprietary technology to convert it into a synthetic gas. The Plasco Conversion System is sealed and releases no emissions to atmosphere in production of the synthetic fuel gas. This gas can be used to make ethanol or other energy rich fuel source. At the Plasco Trail Road facility (PTR) the gas is used in reciprocating engines to make electricity. Any synthetic gas that is not consumed by the engines is combusted in an enclosed flare. Electricity generated is transferred into the local grid. The technology also returns the water that is trapped in the waste to the community at sewer grade standards (as opposed to having it become leachate in a landfill). The inert fraction of the waste is vitrified into a construction-grade aggregate.

As you are aware, health risks arise from specific pollutants of land, air and water. The role of the Ministry of Environment (the Ministry) includes setting and enforcing standards in order to protect the environment and in turn, its citizens, from harm. In setting these standards, the Ministry takes into consideration multiple factors and scenarios while always putting the health of Ontarians first. The emissions from PTR will not only comply with the air standards set forth by the Ministry, but will also be materially lower than those standards imposed for the Durham Incinerator as part of their environmental assessment approval.

Throughout the demonstration period (2008 – 2010) and the environmental assessment Screening Process, Plasco has worked with the Ministry to improve our process and our emissions and will continue to do so moving forward. To this end, it is the direction of the Ministry that Plasco not undertake the reprocessing of its own hazardous waste nor the direct discharge to atmosphere of the engine exhaust in the undertaking. Plasco understands this position and has confirmed in writing to the Ministry that both of these activities are outside of the scope of this environmental screening assessment process. Further, should Plasco seek to pursue either or both of these two processes in the future, it will do so in consultation with the Ministry to ensure all regulatory and environmental assessment requirements are met.

During three years of operation there were brief and limited exceedances of limits respecting certain emissions monitored by CEMS. All were reported by Plasco to the Ministry and in every case Plasco ceased operation voluntarily until the cause was determined and eliminated to the satisfaction of the Ministry. All information was published both on the Zero Waste Ottawa Website and in monthly reports to the Ministry, which also were published.

Plasco has worked with both the community and the Ministry during both the demonstration phase and in the Screening process. To date, the response from the community has been encouraging and positive.

You will find a detailed response addressing your concerns attached. We trust the factual responses will provide you with the information you seek on the Plasco technology and the facility at Trail Road.

Sincerely,

Andrea Gay Foottit
Manager, Communications and Marketing
Plasco Energy Group Inc.

cc: Agatha Garcia-Wright, MOE Director Environmental Assessment and Approvals Branch
Adam Sanzo, Project Evaluator, MOE, Environmental Assessment and Approvals Branch

Points Raised in PCN Letter Dated August 29th

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1	Emissions from incinerators as well as the process residues are highly likely to contain carcinogens and we are therefore concerned about these as they relate to the Plasco project.	1	Incinerators burn waste to create heat, so they can make steam and then electricity. They have a smokestack. The Plasco Trail Road (PTR) facility is not an incinerator. Instead, PTR converts waste into a fuel gas that is cleaned and fed to engine generators to create electricity or to an enclosed flare. PTR does not have a smokestack. Only cleaned synthetic gas is burned, either in the enclosed flare or in the engines. The engines have individual exhausts (like car engines and portable generators). These exhausts are not released to the atmosphere but are directed to the flare. Emissions from the flare have been tested and met or improved upon Ministry emissions standards.
2	Plasco's is an "unproven" technology and predictions about impacts remain untested.	1	PTR has converted approximately 6700 tonnes of the City of Ottawa's curbside municipal solid waste (MSW) over 3 years. Since the facility first began processing post-recycled MSW in January 2008. Operations have successfully demonstrated: → Electricity generation from engine generators powered by syngas → Performance efficiencies at or above design specifications → Superior environmental performance supported by continuous emissions monitoring and source testing → Production of aggregate → Water recovery and treatment that meets Ottawa's standards Investors are also confident that the technology works. The company has raised more than $250 million of equity capital since 2005 from sophisticated investors who employed world leading professional firms to assess the technology, its performance and its position relative to alternative means of processing municipal solid waste
3	They have not demonstrated that there is a "need" for their type of facility to process the proposed waste streams.	1	All waste processed at PTR is originally destined for a landfill. Landfills by their very nature have a bigger environmental effect on air, land and water. In fact, PTR will result in a net reduction in air contaminants compared to depositing the waste in the existing Landfill. Plasco's process recovers value from the waste remaining after recycling programs, reduces contamination of air, water and land arising from landfill and reduces greenhouse gases by elimination of methane otherwise released from landfill.
4	The non-MSW waste streams may not be post	1	The Plasco conversion technology is not incineration. Our solution will complement

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	diversion wastes i.e. not true residuals and therefore should not be disposed of via incineration.		community efforts to reduce waste and maximize recycling programs. We will process only the garbage left over after recycling and diversion programs as these are implemented by the community.
5	The demonstration phase clearly showed that Plasco experienced both operational problems and emissions exceedances even at very low volumes of MSW processed.	2	PTR is regulated by the MOE which has set the limits on the facility so that even in the case of an exceedance of these limits, the limits are such that the environment remains protected. PTR was a demonstration facility from 2008 to the end of 2010, and by definition operational issues were expected to be identified and corrected. PTR had the primary purpose of demonstrating the environmental and technical feasibility of the conversion process which it successfully accomplished. During three years of operation there were brief and limited exceedances of the limits for certain emissions monitored by CEMS. All were reported by Plasco to the Ministry and in every case Plasco ceased operation voluntarily until the cause was determined and the exceedance eliminated to the satisfaction of the Ministry.
6	A review of the monthly engineering reports Plasco submitted between 2008 and 2010 shows that Plasco processed waste approximately 25% of the time and on average, processed approximately 23 tons per day (tpd). Less waste was processed in 2010 than in 2009.	2	The facility was not intended to run on a 24/7 schedule. PTR was operated on a scheduled basis which allowed for maintenance and modifications to be performed economically, while providing a platform to directly demonstrate and improve Plasco's technology on a commercial scale. In 2010, Plasco invested $5 million dollars and 4 months upgrading the gas quality management system to deliver even better environmental performance. During the final 4 months of operation to December 16th, 2010 the plant processed more waste than in any prior 6 month period.
7	Plasco must identify complete operating systems for the proposed permanent commercial facility and assess the impacts of all operations/sources of emissions in the ESR. (addition of 6th engine)	2	The ESR does provide a project description in which the operating system is described, further, an assessment of potential effects of the operating system is also provided. Any future changes made to the operating systems, such as the addition of a sixth engine, must be approved by the Ministry through the regulatory process. Plasco will continue to work with the Ministry to ensure all regulatory and environmental assessment requirements are met. The only emissions to atmosphere proposed in the ESR come from the flare.
8	It appears that much of the waste in the additional categories that Plasco wishes to process in addition	3	A key benefit of the Plasco Conversion System is that it diverts waste from final disposal and coverts the waste to valuable products with very low emissions. T he

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	to MSW could be diverted from final disposal, if not immediately, certainly in the near future. We find no description of the "Waste Service Area" that would show from what geographic area Plasco would source waste other than MSW.		geographic area from which waste may be come will be determined by the Certificate of Approval.
9	25 records of non compliance of emissions	3	PTR is regulated by the MOE, which has set the emission limits on the facility so that even in the case of an exceedance, the limits are such that the environment remains protected. In addition, Plasco's operational limits are set below the current limits for Ontario (see attached table). This means that if the facility does exceed its operational limits, operators are able to mitigate the issue before the exceedance has a chance to reach provincial limits. During three years of the demonstration period there were brief and limited exceedances of the limits for certain emissions monitored by CEMS. All were reported by Plasco to the Ministry and in every case Plasco ceased operation voluntarily until the cause was determined and the exceedance eliminated to the satisfaction of the Ministry. These types of non-compliance aren't anticipated during the next phase of operation due to lessons learned and the operational improvements made.
10	Economic viability should not be the predominant concern. A full assessment of the impact of environmental effects of engine exhaust must be provided so that all sources of emissions could be addressed.	4	Plasco agrees that economically viable should not be a consideration of the Ministry. Plasco will continue to commit to standards that are below the current accepted air emission standards in order to achieve minimal environmental impact. As mentioned previously, should we wish to have our engines exhaust directly to atmosphere Plasco will work with the Ministry in the future to ensure that all environmental regulations and assessment requirements are followed and complied with.
11	Variable waste feedstock results is likely to result in variable emissions profiles.	4	Air emissions arise only from the enclosed flare which burns only propane or Plasco Synthetic Gas. Plasco's patented process takes variable waste streams of solid waste and creates a consistent fuel gas. Adjusting to the variable content of the waste is part of the proprietary technology that Plasco uses. Plasco's gas quality control suite is effective in removing contaminants from the synthetic gas stream to result in consistent emissions when that fuel gas is combusted either in the engines or the flare.
12	With around 50% of ASR being non-combustible – and therefore requiring some other form of disposal	4	PTR is intended to process waste that would otherwise have been disposed of in landfill or incineration. The Plasco process does not combust the waste; it

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	- is the Plasco process the appropriate technology to process ASR? Would this compete with existing and/or planned auto recycling initiatives?		dissociates the molecular structures in a conversion process. Non-recyclable ASR may prove to be beneficially processed by the Plasco process.
13	Reprocessing of own waste including hazardous waste	4	As mentioned previously, Plasco will not consider processing its own hazardous waste as part of this environmental assessment screening process.
14	What are the percentages of material that are sent off site after the waste is processed in the Plasco Conversion System at PTR?	5	Incoming Feed Waste: 3542 kg/hr (average) (85 tonnes per day) Solid byproduct - Slag = 250 kg/hr (7.06% feed) Treated Water: 4521 kg/hr Treated water from incoming MSW moisture content: 1240 kg/hr (35% of feed) Treated water from other plant inputs: 3281 kg/hr (water used for pump seals, cooling tower makeup, dry quench, and GQCS blowdown). GQCS Residuals - Filter press cake = 100 kg/hr (2.82% feed) - Fines = 100 kg/hr (2.82% feed) - Baghouse ash = 4.5 kg/hr (0.13% feed)
15	What percentage of the material leaving site is hazardous waste?	5	<u>Solids:</u> Approximately 5.77% of incoming waste will require final disposal as hazardous waste. This includes filter press cake fines and baghouse ash. Note: The GQCS has residuals that need replacing on scheduled maintenance basis. Items such as baghouse filters, waste water treatment plant filters, spent activated carbon, spent filter media etc. will require proper disposal as hazardous materials.
16	A complete emissions inventory based on processing all the waste streams that Plasco wish to process must be provided	5	Compliance source testing was completed during the demonstration period witnessed by the Ministry. PTR was required to conduct Source Testing to determine the rates of emission of carbon monoxide, oxygen, nitrogen oxides, hydrogen chloride, sulphur dioxide, organic matter and the Test Contaminants (particulate matter, lead, cadmium, mercury, dioxins and furans, polyaromatic hydrocarbons (PAH) and volatile organic compounds (VOC)).

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			Source testing data collected in December 2010 indicate that emission concentrations of particulate matter, metals, and dioxins and furans are significantly below the Ontario standards and in some cases below the standard level of quantification. Source testing has also shown very low levels of all measured VOC, aldehyde and PAH compounds. The source test data has been validated by the Ministry. That data indicated that POI ground level concentrations were very small. The ESR focused on the eight air contaminants found in the Ontario MOE A-7 guideline (particulate matter, cadmium, lead, mercury, dioxins and furans, hydrochloric acid, sulphur dioxide, and nitrogen oxides), as well as carbon monoxide to illustrate the results of the source testing. As illustrated in the ESR (Section 4.2.2), the source test results are well below all MOE A-7 regulatory contaminant limits. Based on the operation experience gained during the demonstration period, Plasco is confident it can meet even more stringent emission rates and has proposed maximum limits in Table 4.3 of the ESR. The dispersion modeling undertaken as part of the environmental assessment for the permanent conversion facility show that contaminant concentrations at the closest residential receptor, the Barrhaven South development, are much lower than the regulatory limits in Ontario Regulation 419/05. These standards will be met for all waste streams that are processed by the Plasco facility as described in the ESR.
17	Human Health and Ecological Risk Assessment (HHERA) should be produced to assess human health and ecological risks for various operating scenarios.	5	In considering your request for a Human Health and Ecological Risk Assessment, we believe that given these results of the source testing and dispersion modeling, Plasco's commitment to meet the standards set out in Table 4.3 of the ESR and our commitment to continue to monitor our emissions, such an assessment is not warranted at this time. Further, upon review of the results of the Durham Incinerator Human Health and Ecological Risk Assessment (June 2009), which concludes that the facility would not lead to any adverse health or ecological risks to

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			local residents, receptors or species at risk, we note that our self-proposed air emission limits as set out in Table 4.3 of the ESR are more stringent than those approved for the incinerator.
18	Does particulate matter emissions modeling include both the filterable and condensable PM fractions? Does the proposed limit apply to Total PM i.e., include both PM fractions?	5	Yes
19	Has Plasco considered continuous sampling for Dioxins and Furans via an AMESA cartridge, and an AMESA M-for mercury. The latter should be used to demonstrate compliance in addition to periodic stack testing.	6	The emissions monitoring program, including which parameters to monitor and whether the parameter is continuously monitored or source tested, was derived in consultation with the Ministry. Plasco continues to work with the Ministry to ensure the best proven available technologies will be used in the future to monitor emissions and will implement such tests as the Ministry may require in the Certificate of Approval. Plasco's mercury and dioxin/furan concentrations as measured by source testing are right on the lowest level detectable by these two mentioned continuous emissions monitors.
20	Source testing – Plasco must be required to test all relevant contaminants as per Appendix 1 in Guideline A-7	6	Plasco will complete compliance source testing as deemed appropriate by the MOE, and as defined in the Certificate of Approval.
21	As a minimum, Plasco should be required to meet the limits for all applicable contaminants described in A-7 and meet POI ground level concentrations as per 419/05 for all contaminants where there is a standard	6	Plasco will meet all limits dictated in the Certificate of Approval, as determined through consultation with the Ministry. The limits proposed by Plasco in Table 4.3 of the ESR are materially more stringent than limits described in A-7 (see attached table). Source test results for all tested parameters were modeled and compliance with O.Reg 419/05 POI ground level concentrations was verified by the Ministry.
22	Where are the detailed monitoring plans, including Ambient Air Monitoring Plan and an Air Emissions Monitoring Plan, as well as Noise, Odour, Ground/surface water, similar to what was required for the Durham-York incinerator?	6	The Odour Plan was developed prior to the commencement of the demonstration phase at PTR, and is being reviewed and updated to reflect the commercial demonstration phase of operations. The Stormwater Management Operating & Maintenance Manual was developed & implemented prior to the commencement of the demonstration phase, and is

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			currently being updated. Air emissions at the facility will be monitored by both continuous emissions monitoring and compliance source testing, as defined in PTR's Certificate of Approval issued by the Ministry. Any additional monitoring (ambient air, noise, ground/surface water) will be developed in consultation with the Ministry. Plasco will prepare and implement comprehensive monitoring plans to ensure the maintenance o f compliance with the Certificate of Approval. In all cases noted in response to this question requirements will be equal to or more stringent than those required for the Durham-York incinerator.
23	Where is the data to support the assertion that the slag is "inert" and that leaching of contaminants would not occur over the long term	7	Table 2.5 shows the leachability tests for slag. The test protocol used was industry standard and the results are set against the Ontario limits. All the results are significantly below the limits indicating that the slag is not toxic now or in the future.
24	What percentage of waste processed remains as "slag", requiring ultimate disposal?	7	See answer 14.
25	Where has, and where does Plasco plan to send the slag, if different than during demonstration phase?	7	During the demonstration period the slag was sent to the Trail Road Landfill. The plan is to send the slag to the landfill until Plasco is able to invest marketing resources into selling the slag. The slag tests indicate that the slag is suitable for Aggregates, A, B, Type 1 and M in the Ontario market.
26	Have a Spill Contingency Emergency Response Plan, a Community Complaints Protocol and Compliance Monitoring Plans been developed?	7	The Spill Prevention & Contingency Plan and the Emergency Response Plan are being updated to reflect the commercial demonstration phase of operations. A Community Complaints Protocol was developed and implemented prior to the commencement of the demonstration phase at PTR. It is anticipated that a similar protocol will be implemented during the operation period. Compliance Monitoring Plans will be discussed with the MOE, as applicable, and will be defined in the Certificate of Approval.

A Comparison of Emissions Limits

Parameter	Units	Ontario A7 Guideline	Durham-York Limits	Proposed PTR Limits
Particulate Matter	mg/Rm^3	14	9	**7**
Organic Matter (as CH_4)	mg/Rm^3	33	33	**20**
Hydrogen Chloride (HCl)	mg/Rm^3	27	9	**5**
Sulphur dioxide (SO_2)	mg/Rm^3	56	35	**35**
NOx expressed as NO_2	mg/Rm^3	198	121	**120**
Carbon monoxide (CO)	mg/Rm^3	40	40	**30**
Mercury (Hg)	$\mu g/Rm^3$	20	15	**10**
Cadmium (Cd)	$\mu g/Rm^3$	7	7	**3**
Lead	$\mu g/Rm^3$	60	50	**20**
Dioxins and furans	ng/Rm^3	0.08	0.06	**0.032**

All values are expressed at 11%O_2 and reference conditions (101.3 kPa, 25^oC)

PlascoEnergy GROUP