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**From:** Joe Minor  
**Sent:** June 30, 2011 4:03 PM  
**To:** clerk@hamilton.ca  
**Subject:** PFOS (again, this is "new", really....)

June 30th, 2011



To: All City Councillors and the Mayor c/o the Clerk, the Airport Operator, the Welland River Keepers, the Niagara Peninsula Conservation Authority, Environment Hamilton, Ontario Ministry of the Environment, Environment Canada, Transport Canada

Please include this correspondence in the official (publicly accessible) correspondence for the next meeting of Council.

I am writing to thank City Council for sending me a copy of the "voluntary short term airport PFOS clean up plan", which is attached. I was unsuccessful in obtaining a copy of this cleanup plan from the two parties that negotiated it, the airport operator and the MOE.

My initial reaction to this plan is that while this voluntary short term plan is a slight improvement over the nothing that has been done to date, by impounding PFOS contaminated water in both the "ditch" and "pond" the potential to contaminate groundwater is being increased.

Comments on the plan:

"Prop. Plug #2" is a good idea, and should be installed immediately. In addition, efforts to plug excavations and to keep precipitation from falling on the pad and mobilizing PFOS out of the pad (mostly to surface water, but also potentially to groundwater) need to be implemented as soon as possible (see June 22nd note below).

"Prop. Plug #1" is actually an interesting science experiment. By impounding PFOS contaminated water in the pond and on the pad, the science question that is being asked is: "If we try really hard, can we drive PFOS into groundwater?" I do not think this is a responsible science experiment to be running, for two reasons. First, it is not a clean science experiment, because the issue of PFOS contamination under the pond and pad before the start of the experiment has not been examined. Second, I think the liability costs if groundwater contamination is increased by this experiment could be enormous. The problem with impounding highly contaminated water on the ground is that the stored contaminated water will "search" for any openings to escape to groundwater.

I have seen no data that indicates that the potential to contaminate groundwater has been evaluated at either the pad or the pond. Or for that matter, the issue of whether the groundwater under the pad or pond has been contaminated with PFOS has also not been evaluated. Of particular concern are the ponds, which have increased potential to contaminate groundwater if there was ever any excavation of the ponds to increase their

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storage capacity.

The "exp" engineer's report states: "Due to summer conditions, overflows from the ditch or pond are not expected to occur." Due to the total lack of supporting data, this is an irresponsible statement to be coming from a professional engineer. First, the retention pond is much smaller in size than the pad itself, and its storage capacity relative to its "watershed" would appear to be quite limited. (There is no evaluation of either storage capacity or storage needs in the engineer's report. There is actually more data on this issue in my last letter to Council than there is in the engineer's report.) Second, there is no evaluation of current weather conditions for this area. In recent years, there have been (according to the City's engineers) multiple "100 year" rain events that have occurred in the summer. Two occurred in the summer of 2009 alone, resulting in serious summer "overflows" that flooded the Red Hill Creek Expressway.

As I said to everyone on April 25th:

"The area where the pad was built is a "sensitive groundwater recharge area", meaning some groundwater contamination is likely. The magnitude of the contamination would be expected to increase greatly with the depth of the gravel pad that was placed on the site. Perhaps the greatest levels of infiltration would be expected if the site was excavated prior to the placement of the gravel pad. The City needs to see if it has any records on the construction of this pad. In particular, I am requesting that I be sent a copy of the building permit(s) for this pad and the associated structures that are on it. Any information that can be found will decrease the amount of money that will need to be paid to consultants in order to reconstruct what happened at the site if the information is "missing"."

As I said to everyone (City, airport operator, and MOE) on May 11th:

"We saw a small retention pond immediately downstream of the partial notch in the berm near the southeast corner of the practice pad (for clarity, I will call it Pond2011). I am unable to locate this pond on the current Google Earth image (imagery date Sept.1, 2009). Does this mean that Pond2011 was excavated after Sept.1, 2009? The Google Earth image shows what appears to be an excavated pond at (43.165919°, -79.939752°), which I will call Pond2009. Pond2009, Pond2011, and any other excavations around the practice pad need to be considered as possible sources of PFOS contamination to groundwater. The reason is simple and straightforward: if the excavations were deep enough to disturb (e.g., thin) the clay layer, an opening to groundwater infiltration could have been created. For example, this does occur in the case of resacas in the lower Rio Grande valley in Texas. Farmers thought they could increase the water storage capacity of the ponds (resacas) by digging them deeper. If the excavation went too deep, then the underlying clay pan was broken and the result was an empty resaca because the water drains through the disturbed clay to groundwater. During our visit, Dr. Lukasik pointed out several blue pipes around the perimeter of the practice pad that would appear to be monitoring well holes. You indicated that they may have been part of a 1996 (?) environmental study that was undertaken as part of the handover from the City operating the airport to Tradeport (?) operating the airport. We would like to see this study, as well as any other studies that have been done describing either the construction, use, or monitoring of the site."

(I would like to see the 1996 Transport Canada environmental study that looked at this particular area. I first made the request to see this study more than 50 days ago.)

As I said to everyone (City, airport operator, and MOE) on May 19th:

"There was a 1996 environmental study performed by Transport Canada on the fire fighting practice pad. It is described by the airport operator as: "the 1996 environmental report on Hamilton airport when ownership of the land was transferred from Transport Canada to the municipality. Our records indicate this report was prepared for the City of Hamilton by the federal government". Three parties (the airport operator, the City, and Transport Canada) should have access to this report. All three have been asked for access to this report. None of the parties have provided access. This report was generated at public taxpayer expense and should be publicly available. The bureaucratic secrecy regarding activities at this site has contributed to the amount of PFOS pollution that has occurred. Please publicly release this public document."

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As I said to everyone (City, airport operator, and MOE) on June 22nd:

"The first priority (with respect to cleanup) needs to be plugging any excavations in the area of the airport practice pad. Any of these excavations could be conduits to groundwater contamination. The next priority needs to be preventing more water (mainly precipitation) from falling on the practice pad and washing more PFOS out of the pad."

I have pointed out the problems with the approach taken in the "voluntary" clean up plan on at least three occasions, the first being more than more than 50 days ago. These concerns appear to have been ignored by the professionals in this process.

I would like to know what the drainage area and average annual discharge are for the "ex. storm sewer" shown in Fig.1 of the "exp" report. If these numbers are large, then my estimates for the amount of PFOS that the airport "contributes" annually to the Welland River will need a substantial upward revision.

Please release the requested reports and information that have been generated at public expense. I would much rather spend our time talking about what the data means, as opposed to having to repeatedly point out that information is being withheld from the public.

I still think it would be prudent to install signage warning of the highly contaminated fish in the Chippewa/Welland/Niapenco waterway system.

Sincerely,  
Joe Minor



*The new identity of Trow Associates Inc.*

June 14, 2011  
WSL-00002226-00

Mr. Frank Scremin  
Hamilton International Airport  
2206-9300 Airport Road  
Mount Hope, Ontario  
L0R 1W0

**Re: Hamilton International Airport – Hamilton, ON  
PFC Sampling and Mitigation**

Dear Sir:

During our meeting with you, HIA staff, City staff and the MOE on June 8, 2011, the MOE suggested that short term mitigation measures to control the release of surface runoff from the abandoned fire training centre (the site) should be considered. We understand the rationale for controlling the surface runoff is to prevent the surface water, potentially containing perfluorinated compounds (PFCs), from discharging further downstream. This letter is intended to summarize the results of our initial review of the surface drainage and topography surrounding the site and to provide some short term mitigation measures.

### **Observations**

The site is approximately 1.6 ha in size and consists mainly of a loosely packed gravel pad with some grass vegetation. The gravel pad is gently sloped from to a perimeter ditch that captures sheet flow surface runoff from the site. The ditch appears to convey surface water runoff to a small pond located approximately 27m south of the gravel pad's south edge. The pond discharges water into a ditch, which also carries drainage from approximately 9ha of upstream drainage area. Figure 1 illustrates the site. Please note, a detailed topographic survey of the site will be completed to confirm the ditch connectivity.

### **Recommendations**

The following recommendations are provided for your consideration:

- Plug Culvert #1;
- Plug Culvert #2; and
- Monitor water levels and water quality during and after periods of precipitation.

exp Services Inc.

Hamilton International Airport:  
PFC Sampling and Mitigation:  
WSL-00002226-00:  
June 14, 2011:

The above works will retain the surface water runoff from the fire training pad in the surrounding ditch and pond. The up-gradient plug (Plug #2) will prevent surface water from entering the site, while the down-gradient plug (Plug #1) will prevent surface water from leaving the site. Due to summer conditions, overflows from the ditch or pond are not expected to occur. The monitoring of water levels will also help reduce the potential for water overflow until longer term measures, if required, are implemented.

In addition, we note that the field work for the current groundwater, soil and surface water monitoring program is scheduled to begin Friday, June 17<sup>th</sup>. We expect the lab results and preliminary reporting to be completed by the end of June 2011. At that time, we understand HIA will be submitting the report to the MOE and City of Hamilton for review and comment. Additional scope of work and mitigation measures will be considered that that time.


We trust the above is in order.

Sincerely,



George Berenyi, P.Eng.  
Manager



 Kylie Boyd, B.A., A.Sc.T., CESA  
Project Manager

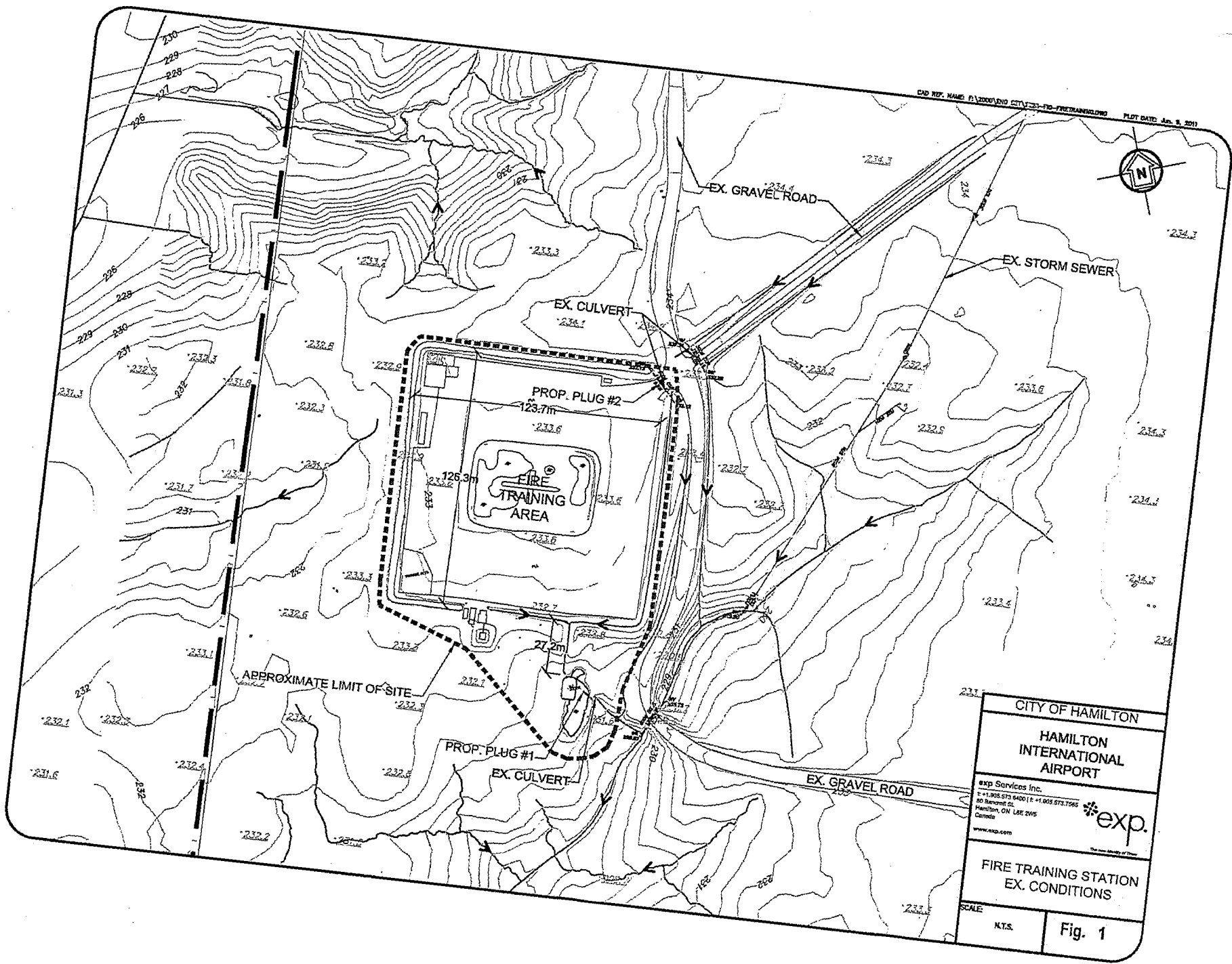
exp Services Inc.

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Cc: Mr. Chris O'Connor – MOE  
Mr. Guy Papparella – City of Hamilton  
Ms. Tish Hennessey - HIA





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FIRE TRAINING STATION EX. CONDITIONS	
SCALE:	Fig. 1
N.T.S.	