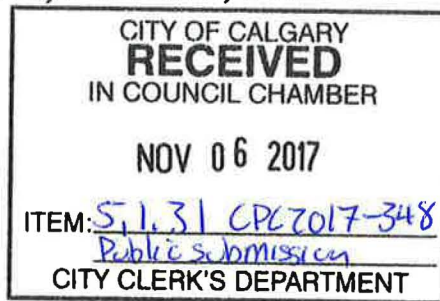


In the matter of: File No. LOC2017 – 0118 Medicine Hill/Canada Olympic Park;
Bylaws 339D2017, 340D2017, 341D2017

Submitted by Linda Nessel
13 Cougar Plateau Point SW
Community of Cougar Ridge
Calgary



The information below is in addition to that submitted in my letter to Council dated October 29, 2017, and has come to my attention in the past seven days

My concern today with respect to the Land Use Amendment Application before you for the community of Medicine Hills, located due east of WinSport, is in regards to the very large amount of toxic anhydrous ammonia stored at WinSport for the luge/bobsled sliding track, and the serious risk it poses to the public and the residents in communities, like Cougar Ridge and Bowness, that exist now and to communities that will exist in the near future around WinSport. I am not alone in my shock that the City Planning department has not received a Hazardous Materials Risk Assessment, as required in the Canada Olympic Park and Adjacent Lands Area Structure Plan (COP ASP), in order to properly address planning issues surrounding future developments on those COP and Adjacent Lands.

A. Background

- As was driven home to all Canadians this month with the three deaths at a Fernie B.C. arena, the refrigerant anhydrous ammonia commonly used in arenas, is an extremely toxic and deadly chemical. Under certain conditions it is flammable and explosive.
- An expert from B.C. recently said exposure can kill a person in 9 seconds.
- There exist very large amounts of anhydrous ammonia (possibly **up to 300 TIMES** the amount used in an arena) at the WinSport luge/bobsled track.
- Some residents in Bowness have been concerned for the past two decades after a minuscule ammonia leak caused fish in the Bowness lagoon to die, and sent two firefighters to hospital.
- With the building of Cougar Ridge to the south of Canada Olympic Park (COP), the approval of Medicine Hills to the east, Greenwood/Greenbriar to the north and other applications to change land use to the west of COP, the risk to human life, should an ammonia leak occur, has increased significantly since the 1988 Calgary Olympics.
- Unlike in an arena or a refrigeration tank where an ammonia leak can be contained, a leak outside from the sliding track (which runs uphill) could be easily blown towards people recreating, living, working and going to school in and around WinSport.
- As you can see on the map attached, some Cougar Ridge residents live mere metres from the top of the sliding track.

IN THE NEWS:

In light of the recent deaths in Fernie, October 2017, many cities and communities in Canada are reviewing their arena refrigeration systems and converting to non-ammonia systems, or systems that have minimal ammonia.

- October 28, 2017: Dawson Creek is concerned about ammonia in rinks because schools are adjacent to the rink. <https://ca.news.yahoo.com/ice-rinks-crossroads-fernie-tragedy-120000607.html>

- October 21, 2017: Toronto is reviewing the use of ammonia in arenas. <https://ca.news.yahoo.com/ammonia-refrigerated-ice-rinks-toronto-221414535.html>

- June 2016: Montreal is changing their arenas: http://claudedumas-nh3.ca/text_pdf/Reducing_ammonia_ref_charge_skating_rink_ref_sys_p36-40.pdf

- October 24, 2017: Ottawa uses ammonia but much less than before. <http://www.cbc.ca/news/canada/ottawa/ammonia-leak-risks-ottawa-arenas-1.4368612>

- October 30, 2017, NDP Kootenay-Columbia MP Wayne Stetski brought forward a motion to the House of Commons to phase out ammonia use in Canadian arenas <http://www.news1130.com/2017/10/31/ndp-mp-ammonia-phase-out/>

<https://www.thefreepress.ca/news/stetski-calls-for-ammonia-phase-out-in-arenas/>

- After the 1992 Winter Olympics at Albertville, France, the ammonia in their luge/bobsled tracks was replaced with less toxic glycol in an indirect cooling system. They had had an ammonia leak during a trial run which affected the health of several onlookers.

http://articles.mcall.com/1994-02-21/features/2961935_1_norwegian-olympic-thin-ice-olympic-officials

<http://www.ibsf.org/en/tracks/track/19/La%20Plagne>

***It is obvious that the use of anhydrous ammonia in public areas is of great concern, yet IT APPEARS THAT NO HAZARDOUS RISK ASSESSMENT FOR THE AMMONIA AT WINSPORT HAS BEEN USED IN THE CONTEXT OF PLANNING PUBLIC DEVELOPMENTS IN THE COP AND ADJACENT LANDS.

B. Lack of Hazardous Material Risk Assessment submitted for four (4) Land Use Amendment Applications on Canada Olympic Park & Adjacent Lands Area Structure Plan

- LOC2017-0118 is 4th Land Use Amendment application since 2015 that has been submitted to the City for lands falling under the COP ASP.
(The other 3 are outlined in my submitted letter of October 29, 2017, and outlined separately in an attachment below.)
- An HMRA is required in the COP & Adjacent Lands ASP: an excerpt from the attached ASP (see Appendix D in full as an attachment).

**APPENDIX D
PLANNING EVALUATION GUIDELINES**

D.2.1 Purpose

*The purpose of these policies is **to provide for the evaluation of the suitability of the land base from an environmental perspective to accommodate the land uses proposed through a Land Use Amendment application.***

D.2.2. Guidelines

(6) Hazardous Materials Risk Assessment

*(a) In conjunction with a Land Use Amendment Application, a Hazardous Materials Risk Assessment for the ammonia storage facility on the CODA lands **shall** be submitted by CODA.*

-
- the language for the other studies in Appendix D includes wording such as “where required” and “should”. However, only Section D.2.2 (6) uses “shall” which implies it is obligatory.
 - At the very least, is it *morally* acceptable to *not* consider a large amount of hazardous material when a development is planned at the Land Use stage? This is the point when densities and uses are decided upon.
 - What is the *intent* of D.2.2 (6), and should not the Calgary Planning department be paying due attention to the risks of a very large amount of toxic ammonia so close to public recreation facilities, schools, businesses, retail and dwellings?
 - Does the City allow schools, stores and residences in close proximity to industrial plants that have large amounts of highly toxic ammonia?

**In the matter of: File No. LOC2017 – 0118 Medicine Hill/Canada Olympic Park;
Bylaws 339D2017, 340D2017, 341D2017**

- On November 1, 2017, I was informed by Fazeel Elahi, a senior planner in the Planning department, that:

*“An HMRA was **not** submitted as a result of any Land Use Amendment Application on COP & Adjacent Land Areas site. An HMRA is required where the land use application **proposes land uses that involve hazardous materials,**”*

- Where does it say in the ASP that an HRMA must be restricted to lands where there the proposed land use will involve hazardous materials?
- The Canada Olympic Park and Adjacent Lands Area Structure Plan does not limit the requirement of an HMRA to only COP lands. An HMRA is required that applies to *both* COP land and *adjacent* lands.
- Is not simply being in close proximity to the hazardous material dangerous enough? If there is a risk to adjacent lands, then that is exactly what an HMRA is to assess.

“The City has received confirmation from (the) WinSport CEO, that the matter of ammonia management at COP, is governed and regulated by Environment Canada, due to the amount of product required and stored on the site.

*As such WinSport has undertaken a rigorous hazardous materials risk assessment in **full compliance with the Canada Environmental Protection Act.** “*

- All this tells us is that WinSport is in compliance with federal regulations: filing their amounts and risk assessment for their operations, that WinSport has safety measures in place at their facilities.
- Appears that planning for new development adjacent to and, indeed ON, WinSport's Land, was done without an HMRA, without considering the risks due to the increase in people recreating, children attending school, the public visiting retail and businesses, and future residents.
- Is not the point of the HMRA to determine the appropriate types of development, the separation distance from the coolant storage and sliding tracks?
- Standards exist to determine suitable setbacks of developments from such toxic facilities.
- Standards exist as to the density and type of development that is appropriate within given distances of the hazardous materials.
- In light of the recent deaths from ammonia at a Fernie BC arena, how do Calgarians gain confidence that the City has evaluated the developments of Medicine Hill, and any WinSport expansion, in terms of a catastrophic ammonia leak from the luge/bobsled track, let alone from the four WinSport arenas.
- City Planning has admitted to CBC that they have not seen the HMRA submitted to Environment Canada by WinSport, nor do they know the amount of ammonia held at WinSport.
- However, is the City not given jurisdiction to address planning issues by the MGA? And is this not a planning matter?

C. 2018 WinSport Upgrade to Sliding Track

- May 2017 AB government announced it will contributed \$10M towards the \$20M upgrade of the WinSport luge/bobsled track (occurring summer of 2018). <https://www.alberta.ca/release.cfm?xID=46910ED40269B-E329-DEA4-89523F7CCC46EDEA>
- Two components:
 - (a) Upgrade of the refrigeration system to an indirect cooling system
 - (b) Track alteration to bring it inline with current Olympic standards.
- Not yet confirmed if the proposed changes will replace ammonia with a safer coolant like glycol.
- In a statement to CBC, WinSport stated *"The modernization of the refrigeration system would result in increased energy efficiencies in the operation of the track and a reduction of the amount of ammonia used in the refrigeration system, with a greater reliance on glycol instead of ammonia."* WinSport would not say what that means for the facility's dependence on ammonia. A glycol based, indirect system still requires some ammonia to cool the glycol. <https://www.athleticbusiness.com/Stadium-Arena/understanding-recreational-ice-refrigeration.html>
- The big question is: **How much ammonia will remain after the upgrades?**
- Will there still be enough ammonia to be injurious to human health, if not actually fatal, in the case of a leak?
- Human life and safety should be considered paramount in city planning.
- These questions need to be answered in an applicable Hazardous Materials Risk Assessment, which should then be used to thoroughly evaluate any Land Use Amendment Application for the Canada Olympic Park and Adjacent Lands, as per the ASP.
- The impact of such a hazardous material on developments on the WinSport's land, and neighbouring lands, is a planning issue and the City has jurisdiction to incorporate the results of an HMRA into its planning considerations.
- It is imperative that any development plans for the Medicine Hill, WinSport, and Greenwood/Greenbriar areas be suspended until such time as the ammonia in the luge/bobsled track has been removed and/or replaced, and properly considered, with an HMRA, during planning.

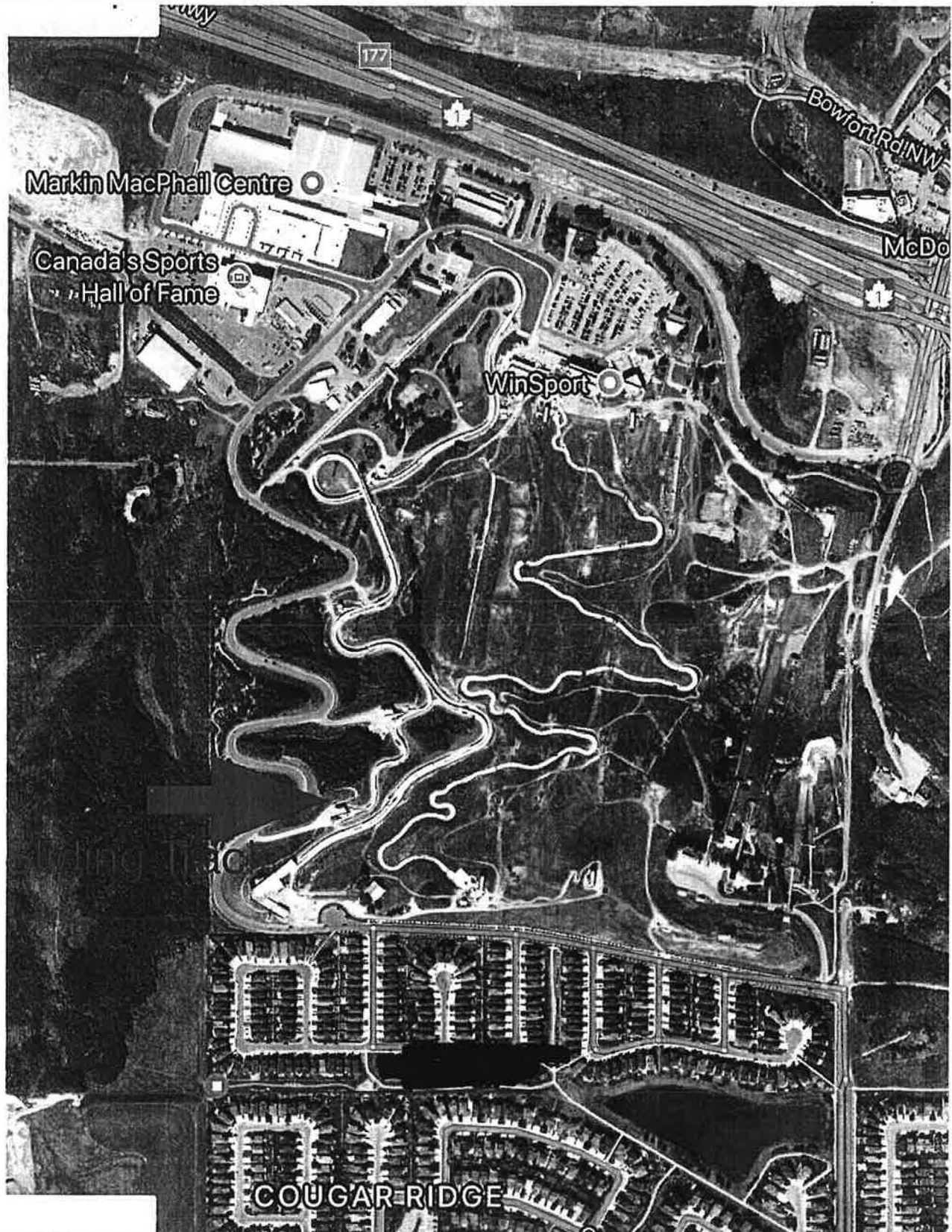
**In the matter of: File No. LOC2017 – 0118 Medicine Hill/Canada Olympic Park;
Bylaws 339D2017, 340D2017, 341D2017**

- I respectfully request, for the safety of the public and especially the thousands of children that currently use the WinSport facilities, that the use of the sliding track be suspended until the upgrades have been completed in the summer of 2018. This should ensure that there will not be any ammonia in the track itself over the winter. If the track is considered unsafe to the point that the system is being upgraded for safety reasons, it follows that this 30 year old track is currently posing a hazard to the public.

In conclusion, Mayor Nenshi and Members of Council, I respectfully request that you refuse this Land Use Amendment Application, or at a minimum, refer it back for review in order to determine the amount of ammonia that will remain after the 2018 WinSport Sliding track upgrades, and to undertake a proper Hazardous Materials Risk Assessment that demonstrates and assesses the risk, the appropriate risk separation distance, and appropriate development in type, density and location at COP and adjacent lands according to the risk presented.

Thank you for this opportunity to present to Council.
Linda Nessel

Public Hearing November 6
In the matter of: File No. LOC2017 – 0118 Medicine Hill/Canada Olympic Park;
Bylaws 339D2017, 340D2017, 341D2017



Public Hearing November 6
In the matter of: File No. LOC2017 – 0118 Medicine Hill/Canada Olympic
Park;
Bylaws 339D2017, 340D2017, 341D2017

FOUR LAND USE AMENDMENT APPLICATIONS on COP & ADJACENT LANDS (2015- PRESENT) do NOT have a Hazardous Materials Risk Assessment.

Since the 2015 revised COP & Adjacent Lands ASP, four (4) land Use amendment applications for which this required HMRA's has NOT been submitted, besides the current file before you today.

Two of these Land Use Amendment applications have been PASSED by Council, in effect, without knowing neither the amounts of ammonia, nor considering the risks to public health of the ammonia, and if the proposed land uses are appropriate considering this risk.

- 1) LOC2014-0080 application submitted for the Trinity Hills development, *passed* by City Council in July, 2015.
- 2) LOC2014-0072 application submitted by Ridley Development Services. Still in the review process at City Planning.
- 3) LOC2016-0146 application submitted by WinSport and *passed* by City Council on July 31, 2017.
- 4) LOC2017-0118 before you today, submitted by B&A Planning Group, for the Medicine Hill Development.

APPENDIX D

PLANNING EVALUATION GUIDELINES

D.1 APPLICATION

These guidelines identify the specific studies and analysis that will need to be undertaken at the Land Use Amendment stage to assist in the evaluation of the proposal. The studies identified are not considered to be all-inclusive and additional studies may be required. As well, the form and content of the studies may be readdressed in any manner determined necessary through the review process.

D.2 ENVIRONMENTAL ANALYSIS

D.2.1 Purpose

The purpose of these policies is to provide for the evaluation of the suitability of the land base from an environmental perspective to accommodate the land uses proposed through a Land Use Amendment application. This evaluation will involve circulation of a proposal to the appropriate external agencies for review and comment; and, the submission of the appropriate environmental, biophysical, historical resources, hydrological, geotechnical and grading information necessary to undertake this review.

D.2.2 Guidelines

(1) Environmental Site Assessment (ESA)

- (a) Prior to Land Use approval, a developer
 - (i) should submit a Phase 1 Environmental Site Assessment (ESA) for the subject site that
 - (A) identifies any actual or potential soil and groundwater contamination, and
 - (B) determines if the site is suitable for the intended use, and
 - (ii) may be required to submit a Phase 2 ESA and a Remedial Action Plan/ Risk Management Plan for the subject site that documents how the site will be remediated or risk managed to the extent necessary for the intended land use.
- (b) An ESA should be
 - (i) prepared by a qualified professional, and
 - (ii) reviewed to the satisfaction of The City.
- (c) Where required, a developer should undertake those mitigative measures identified by the ESA report for the subject site.
- (d) Additional information or monitoring at later stages of site development or as outlined in the ESA report may be required.

(2) Biophysical Impact Assessment (BIA)

- (a) Prior to Land Use approval, where the proposal may impact an environmentally significant area, the developer should submit a Biophysical Impact Assessment (BIA) report prepared by a qualified professional to evaluate the impact of development on the environmentally significant area and identify any mitigative measures to be introduced.
- (b) Where required, the developer should undertake those mitigative measures identified in the BIA report for the subject site.

(3) Historical Resources Impact Assessment (HRIA)

- (a) Prior to Land Use approval, a Historical Resources Impact Assessment (HRIA) report may be required for the subject site.
- (b) Where required, the developer shall, to the satisfaction of Alberta Community Development, undertake those protective or mitigative measures identified in the HRIA report for the subject site.
- (c) Trail systems, buildings and other forms of development shall be located to avoid historical sites within the plan area as identified on Map D, Part 2, Background Information.

(4) Geotechnical Analysis

- (a) Prior to Land Use approval, a Geotechnical Analysis may be required for the subject site to identify any unstable slopes and correspondingly the limits of slope stability within the site.
- (b) Where required, development restrictions shall be applied to unstable slopes.
- (c) Lands with slopes greater than 33 percent should be considered to be undevelopable unless a Geotechnical Analysis is submitted that
 - (i) includes a site assessment and sub-soil testing,
 - (ii) takes into consideration the cumulative impact of development,
 - (iii) demonstrates that the site development will not pose unacceptable risks, and
 - (iv) satisfies the Approving Authority that development will not pose unacceptable risks with regard to soil stability.

(5) Hydrological Analysis

- (a) Prior to Land Use approval, a Hydrological Analysis may be required for the subject site to identify natural springs and related water courses and correspondingly the measures to be introduced to protect the springs and water courses.
- (b) Where required, development restrictions shall be applied to lands containing natural springs and water courses.
- (c) To maintain the ecological quality of this part of the Paskapoo Slopes, any changes to the drainage pattern or ground water levels within the plan area should minimize the impact on the ecological quality of the remaining natural areas within the Conservation Study Area (Map 3) or any other natural areas in the vicinity.
- (d) Site specific geotechnical and hydrological studies shall consider this requirement and shall be reviewed by the Approving Authority when land use and development proposals are considered.

(6) Hazardous Materials Risk Assessment

- (a) In conjunction with a Land Use Amendment application, a Hazardous Materials Risk Assessment for the ammonia storage facility on the CODA lands shall be submitted by CODA.
- (b) The Hazardous Materials Risk Assessment should
 - (i) identify the hazardous materials and their quantities,
 - (ii) estimate the expected frequency of occurrence of a hazardous event,
 - (iii) assess the consequences of such an event,
 - (iv) determine annual individual risk and compare it to MIACC's risk acceptability criteria,
 - (v) demonstrate how the facility and operations address the following risk management objectives:
 - (A) risk reduction at source,
 - (B) emergency preparation,
 - (C) emergency response,
 - (D) risk communication,
 - (vi) identify and recommend any risk-based separation distances and other mitigative measures needed to reduce risk, and
 - (vii) contain such other matters as determined necessary.