JFSA
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

Project Ref #:P1901(p)
Client: Ottawa D-Squared Asphalt Ltd.

Ottawa. ON
Paris. ON
Gatineau. QB
Montréal. QB
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Appendix A

5455 Boundary Rd SPC
August 2020

From: McWilliams, Cheryl
To: Jocelyn Chandler
Subject: RE: Request for confirmation of zoning compliance for heavy industrial use / Ward 19
Date: Monday, December 02, 2019 11:23:44 AM
Attachments: image002.png

5455 Boundary? An asphalt plant would be permitted in the RH zone. When ready send me a quick sketch of the proposal to determine any site plan and pre-consult requirements. Heads up, that there may be constraints relating to the water servicing. – both with the Carlsbad Trickle System and any private wells.

Cheryl McWilliams **MCIP, RPP**
Planner 3
Rural Planning
Planning, Infrastructure and Economic Development Department
Service de planification, d'Infrastructure et de Développement économique
City of Ottawa | Ville d'Ottawa
110 Laurier Ave W
Ottawa K1P 1J1
613 580-2424 ext./poste 30234
fax 613 580-2576

ABSENCE ALERT – I will be away from December 16 to January 2.

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: November 29, 2019 12:08 PM
To: McWilliams, Cheryl <Cheryl.McWilliams@ottawa.ca>
Subject: Request for confirmation of zoning compliance for heavy industrial use / Ward 19

Hello Cheryl, Hope you are doing well since we haven't seen each other in a while!
I have a client who is proposing to erect a new asphalt plant in Ward 19 (5445 Boundary Road) in an area zoned for Rural Heavy Industrial (RH). Based on my understanding, this is a permitted use within this zone.

Heavy industrial use means:

a. the manufacture or processing of products from raw materials; or
b. the production or use of flammable, explosive or other hazardous materials; and,
c. the storage of these products and materials. (utilisation d'industrie lourde) (By-law 2010-307) (By-law 2010-237)

Could you confirm?
I also expect they will be required to go through Site Plan Process, as well as ECA's will be required. We will submit a pre-consult form and fee once I have further details to provide/discuss. At this time the proposal is CONFIDENTIAL.
At this point, I just want to make sure they do not require a ZBA.
Thanks! Jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

52 Springbrook Drive, Ottawa, ON K2S 1B9
tel: 613.836.3884 ext. 231
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From: McAlpine, Anissa
To: Jocelyn Chandler
Cc: Brown, Adam; McWilliams, Cheryl; Alvey, Harry
Subject: RE: 5455 Boundary Road - precon-notes - servicing
Date: Friday, January 31, 2020 4:16:08 PM

Good afternoon Jocelyn,

I have received the AOK with respect to an asphalt plant being considered under the existing Rural Heavy Industrial zone. There will be no need for a Zoning bylaw amendment. I apologize for having introduced confusion and stress into the mix unnecessarily. I am glad to have the matter resolved. I trust this is good news, but please do not hesitate to be in touch should you have further questions or concerns.

Have a great weekend,

Anissa

From: McAlpine, Anissa
Sent: January 30, 2020 5:18 PM
To: Jocelyn Chandler <jchandler@jfsa.com>
Cc: Brown, Adam <Adam.Brown@ottawa.ca>; McWilliams, Cheryl <Cheryl.McWilliams@ottawa.ca>; Alvey, Harry <Harry.Alvey@ottawa.ca>
Subject: RE: 5455 Boundary Road - precon-notes - servicing

Hi Jocelyn,

- We continue to pursue an answer for the zoning question. We discussed extensively today and are looking for a legal interpretation on the matter. I will get back to you as soon as I have an answer.
- With respect to the drainage matter, perhaps your question can be fleshed out further? I understand the final approvals on the Taggart Capital Region Resource Recovery Centre site have yet to be provided. I trust that your engineering and enviro reports will describe the existing situation and propose a solution to address your needs.

I will be in touch again soon,
Anissa

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: January 30, 2020 2:15 PM
To: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>
Cc: McWilliams, Cheryl <Cheryl.McWilliams@ottawa.ca>; Kearney, Michel <Michel.Kearney@ottawa.ca>; Alvey, Harry <Harry.Alvey@ottawa.ca>; Brown, Adam <Adam.Brown@ottawa.ca>
Subject: RE: 5455 Boundary Road - precon-notes - servicing

From: McAlpine, Anissa
To: Jocelyn Chandler
Subject: RE: 5455 Boundary Road : Asphalt plant height considerations
Date: Wednesday, March 11, 2020 4:22:50 PM
Attachments: image005.png
image006.png
image007.png
image008.png

Good afternoon Jocelyn,

Regarding the quonset hut location, as you know, wherever possible, it is always preferable to meet the zoning by-law rather than seeking relief. I am in favour of it being relocated to meet the setback requirement. You could show the new location on the site plan, and we could provide as a condition that it be relocated and removed from the existing location.
I have reviewed the images and checked with the zoning interpreter. It is our interpretation that the structures imaged would be considered permitted projections above the height limit. Not all of the pictured structures fall easily in the structures listed in section 64 of the zoning by-law but do constitute "similar structures that may require a height in excess of maximum height limits in order to serve their intended purpose". I think that should provide you enough confidence toe omit the MV application.

Hope that helps.

Anissa

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: March 10, 2020 11:17 PM
To: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>
Subject: Re: 5455 Boundary Road : Asphalt plant height considerations

Hi Anissa,
When do you think you can give us feedback on whether we need a minor variance for the height of structures on site? I am trying to get this application ready for submission by the end of March. The owner may just move the Quonset hut if they don't need a variance for height.
Thank you, Jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

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Ottawa-Paris(ON)-Gatineau-Montréal-Québec

From: Jocelyn Chandler
Sent: March 4, 2020 4:29 PM

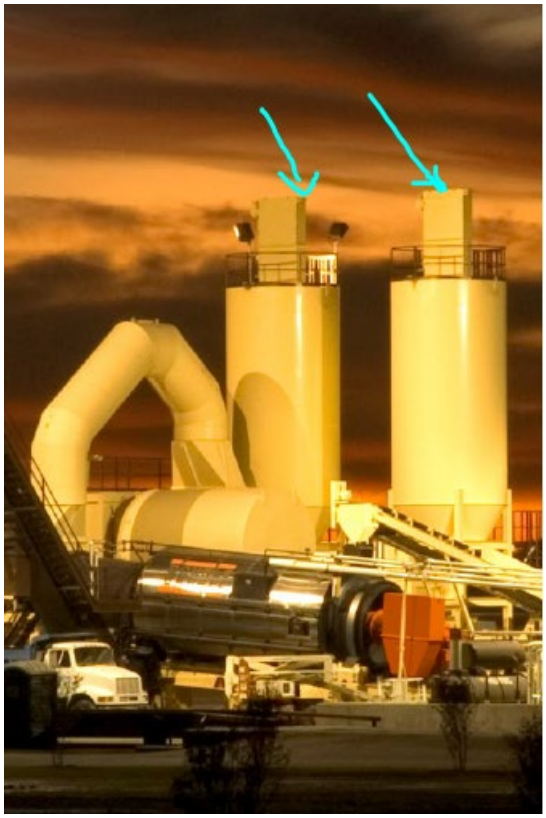
To: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>
Subject: 5455 Boundary Road : Asphalt plant height considerations

Hello Anissa,
Here is information on the structures that would exceed the 15 m height in the ZBL. I have attached and labeled the elevation drawing which also gives the heights. I have also included the plan view to give some context. These plans are not finalized regarding the number of components etc. The relevant photos are pasted below. Finally, I attached a brochure from the manufacturer that give you an idea of the appearance of these facilities…although they seem to come in all sorts of configurations and sizes. I hope this is helpful to you and that we can confer next week. Jocelyn

Batch Tower

Storage Silo's

Dust Additive Silo's



Jocelyn Chandler, M.Pl., RPP, MCIP
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From: McAlpine, Anissa
To: Jocelyn Chandler
Subject: RE: Asphalt Plant SPC_5455 Boundary Rd: Planning items to follow up on.
Date: Friday, February 28, 2020 9:49:51 AM

Hi Jocelyn,
I should at my desk for much of today, feel free to give me a ring when is convenient for you.

For the Quonset hut you will need to get site plan approval before you can get the building permit. I would like to see the MV before being able to approve any site plan involving the Quonset hut. Thanks for addressing that.

As for the projections, I will note that at this time I am not entirely certain what the nature of the structures are that are need for the asphalt processing plant that might exceed the 15 m ZBL limit. I have run it by Cheryl and we are both of the opinion that there is likely enough wiggle room in the list of Permitted projections, between Silos, mechanical and service equipment, chimneys and smokestacks, *and* ***any other similar structures that may require a height in excess of maximum height limits in order to serve their intended purpose*** to accommodate your requirements. It will be up to you in the zoning table to account for all projections above the height limit and justify how they fit.

Best,

Anissa McAlpine
Planner, Development Review, Rural Services
613.580.2424 ext. 26282

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: February 26, 2020 11:54 AM
To: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>
Subject: Asphalt Plant SPC_5455 Boundary Rd: Planning items to follow up on.

The **quonset hut** on-site. We will be pursuing a retroactive building permit from BCS. Does this need to be completed before site plan or can it be a condition in the agreement?
The survey shows the poured concrete base of the quonset hut to be 2.7 m off the property line. My

read is that it needs to be 3 m off. Could you confirm? If so, I presume we will need to get a MV through before site plan approval… correct?

ZBL **max heights**: It appears that some components of the asphalt plant are higher than 15 m which appears to be the max height in the ZBL. Silo's appear to be exempt. Some of these height exceedances are storage silo's, but for aggregate. Can we discuss this too?

Might be we need to get MV applications in ASAP. Please give me call when you have a few minutes to talk. Thanks, j

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

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Appendix B

5455 Boundary Rd SPC
August 2020

GO HUT
TOILET RENTALS

VIP – 1
INFORMATION SHEET

This entirely self-contained restroom trailer includes 1 complete washroom.

The VIP-1 is a private room with a foot operated flushing porcelain toilet, counter space, porcelain sink with automatic faucet and wall mounted porcelain urinal.

Whether used for a seasonal rental or a construction site, your users will appreciate this unit.

Dimensions:

- External 72” X 72”X 108” or 60” X 56” X 108”
- Footprint Required: 110" X 72" or 60" X 92"
- Water capacity 63gal
- Waste capacity 166gal

Power Requirements:

- 2 X 120V 15Amp breakers
- A third 120V 15Amp breaker is needed for winter use
- Client to provide any extension cords that may be required to connect the restroom
- **ALL POWER HOOKUPS ARE THE RESPONSIBILITY OF THE RENTER**

Notes:

- Fully winterized
- Unit must be installed on level, solid ground
- All prices are based on a maximum 1 hour setup (unless stated otherwise)

Included Equipment

Ceramic, low flush toilets
Urinal
Low flow sink with hot & cold running water
Liquid soap dispensers
Paper towel dispensers
Interior lights
Heating

Included in Services:

- Filling with fresh water
- Emptying of waste
- Filling the soap, toilet paper and paper towels
- Washing the toilet, sink, mirror and floor
- Client is responsible for disposal of garbage

Winter

- Must be powered with heat 24 hours a day 7 days a week.
- After delivery the unit must be powered & heated for 24 hours prior to being filled with water.

Tel: 613.247.0607 • Fax: 613.247.0609 • sales@gohut.ca • www.gohut.ca

GO HUT
TOILET RENTALS
Go-Hut Toilet Rentals
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March 24, 2020

JFSA
Attn.: Jocelyn Chandler
By email: jchandler@jfsa.com

Thank you for your interest in using our company's services on your job sites.

Location: 5455 Boundary Rd., Ottawa, ON
Service requirements: Once per week
* = Recurring monthly charges ALL PRICES SUBJECT TO LOCAL TAXES

Equipment	Unit price*	Transp. Charge	Insurance*	Dumping Charge*	Total first month	Total monthly
Single Hard-Walled Toilet (VIP-1) (MOL)	700.00	300.00	10.00	45.00	1055.00	755.00

***MOL means that the units comply with MOL requirements on the job site**

We thank you for the opportunity of providing you with this quotation. Should you have any questions, please do not hesitate to contact the undersigned. When you are ready to go ahead with the order please give us written authorization to go ahead with the order, or you may sign this quote and return it to us.

Sincerely,
Steve Fraser
Sales Manager

***All quotes given are valid for 15 days from the original quote date.**

TERMS AND CONDITIONS OF CONTRACT AND AGREEMENT

This agreement is made between the undersigned customer (hereinafter called "the Lessee") and Go Hut Toilet Rentals (hereinafter called "the Lessor"). In the event that a Management Agent shall order the rental on behalf of a third party, the Management Agent agrees to joint and several responsibility with the third party, and shall be considered to be the "Lessee" according to the following Terms and Conditions:

1.The LESSEE acknowledges having received, or contracting to receive in the future, on rental from the LESSOR the equipment listed on this agreement, and agrees to use said equipment in a careful, prudent and workman-like manner. Any problems in the condition of the equipment must be signaled to the LESSOR on delivery. Cancellation of the contract by the LESSEE prior to delivery of the equipment is subject to an administration fee of 30% of the value of the contract. Additional charges may apply if any labour or material expenses were incurred by the LESSOR to prepare the equipment for delivery. All deposits are non-refundable.

2.The LESSEE understands and agrees that:

2.1) Equipment is rented on a monthly basis, except if specified otherwise, and 4 weeks of rental constitutes a month. 2.2) There will be no credit for part of a month except as expressly agreed from time to time with the LESSOR and subject to confirmation in writing by the LESSOR. 2.3) Where equipment is not rented on a monthly basis, there will be no credit for release of the equipment prior to the agreed upon release date, except as expressly agreed from time to time with the LESSOR and subject to confirmation in writing by the LESSOR. 2.4) The cost of the rental on a monthly basis includes one cleaning per week. 2.5) Cleanings in addition to those noted in this contract are available at additional cost. 2.6) There will be an additional cost over and above the rental price for moving of the equipment from the rental location to new site. 2.7) Units located inside of a building will be subject to an additional charge for installation over and above the monthly rate. 2.8) Prices are subject to change without prior notice. 2.9) Payment is due upon receipt of Invoice and this contract constitutes the first invoice. 2.10) The LESSEE agrees that the Lessor will be the exclusive supplier of portable sanitation equipment on his site, and that the contract may be dissolved by the Lessor if this condition is not respected. 2.11) Interest accumulates against unpaid balances due at the rate of 2% per month.

3.None of this equipment shall be sublet by the LESSEE nor shall it assign or transfer any interest in this agreement without the previous written consent of the LESSOR.

4.The LESSOR shall have the right to suspend service to the equipment at any time and may terminate this agreement without notice and take possession of the equipment as it thinks fit in all cases of: a) non-payment b) breach of contract c) mishandling of equipment.

5.The LESSEE agrees to indemnify and save harmless the LESSOR against all loss, damage, expense and penalty arising from any action on account of any injury to persons or property of any character occasioned by handling of the leased property during the rental period or while the property is in the possession or control of the LESSEE.

6.The LESSOR's total liability to the LESSEE with respect to any and all damages arising from this contract shall be limited to the value of the goods and services ordered by the LESSEE under this contract.

7.The LESSEE agrees to locate the equipment in an easily accessible location to assure fast and efficient service and further agrees to keep the said equipment free of any materials, snow, ice or other objects in order to facilitate the cleaning of the equipment by the LESSOR or its agent.

8.Contracts may be dissolved by the LESSEE if the LESSEE is not satisfied that the LESSOR has maintained its standard of quality of product and service, provided that the following conditions are met: the LESSEE registers a complaint immediately upon becoming aware of the development of any product or service problem; the LESSEE registers complaints by phoning the LESSOR, or by faxing the complaint and confirming receipt of the facsimile, in both cases recording the name of the individual confirming receipt of the complaint, and the date & time of confirmation; the LESSOR is given the opportunity to verify the complaint as valid, reasonable, and legitimate; the LESSOR is given a reasonable time to respond to and rectify the problem so communicated; the conditions affecting the standard of quality of product and service being complained about are within the control of the LESSOR.

9.Where insurance is provided by the Lessor, charges arising in accordance with conditions #10 through #16 following are covered up to a value of $400 per contract.

10.The LESSEE hereby assumes full responsibility for any and all damage to the equipment rented from the LESSOR. For a detailed list of the replacement values of all equipment please go to **http://gohut.ca/replacement_value**

11.RESPONSIBILITY SHALL MEAN: fire & lightning, vandalism or malicious acts, theft, windstorm, falling object and any other unforeseen damage that may happen while this equipment is in the possession of the LESSEE.

12.It is understood and agreed that the LESSEE will, at all times, keep this equipment in good operating condition at its own expense and will return the equipment at the end of the rental period in as good condition as when received by the Lessee, normal wear and tear excepted.

13.The LESSEE will be held responsible for, and will pay to the LESSOR, the cost of repairing the equipment if such equipment is defaced inside and/or out by way of graffiti, painted remarks, glued posters, scratches, or any other damage to the surface of the equipment.

14.If the equipment shall be damaged in any way, or for any reason shall not be returned, or shall be returned in a damaged or dismantled state or in need of repair, the LESSEE shall pay to the LESSOR, in addition to the rental herein provided, the full cost of repair or replacement of such equipment.

15.If for any reason the units are not available or accessible for cleaning at the agreed upon time, or cleaning is not possible due to adverse conditions created by the LESSEE, a maximum waiting period of fifteen (15) minutes will be allowed; if, after 15 minutes have elapsed the equipment is still not available or accessible for cleaning, the LESSOR will not be liable for cleaning of the equipment at the agreed upon time. If needed, extra cleaning trips can be arranged through the office at an additional cost to the LESSEE.

16.When the equipment is no longer required, the LESSEE must inform the LESSOR's office and must ensure that the equipment is available at, or is brought to, a location where it can be picked up by the LESSOR, failing which the rental period will be continued at the original rate until the equipment is at a proper site.

17.Any additional cleaning required because of vandalism or malicious act, windstorm or any other action will be at the LESSEE's expense.

18.It will be the responsibility of the LESSEE to replace the equipment in its original location after a windstorm or after a malicious act has been committed.

19.The SIGNATOR hereby acknowledges that (s)he is authorized to execute this agreement on behalf of the LESSEE and will be bound by all the terms, conditions and provisos of this agreement. The LESSEE hereby acknowledges receipt of a true copy of this agreement as of the date of its execution.

20.There are no other understandings or arrangements, verbal or otherwise, outside of this written agreement which shall affect or govern this transaction.

From: Terry Davidson
To: Jocelyn Chandler
Subject: RE: Request regarding permit requirement for trailer portable washroom facility.
Date: Monday, March 30, 2020 9:30:47 AM
Attachments: image001.png

Hi Jocelyn,

Hope all is well with your family during these times.

In regards to this application, it is no different than the others that we've approved under compliance alternatives to a class 5 system. With a flush toilet and hot/cold running water there's no way we can call it a class 1 system.
In the past we've required high level alarms on the waste tanks as well as maintenance contracts.

Regards,

Terry K. Davidson, P.Eng.
Director of Engineering & Regulations

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: Sunday, March 29, 2020 10:30 PM
To: Terry Davidson <terry.davidson@rvca.ca>
Subject: Request regarding permit requirement for trailer portable washroom facility.

Hi Terry, I hope you and your family are doing ok. Really, really strange times.
I am soon to submit a site plan application for the proposed asphalt plant at 5455 Boundary Road that I spoke with you about. It has the servicing constraints related to mineralized ground water and the Carlsbad trickle feed system.
We were trying to determine what type of permit might be required to provide wastewater/washroom facilities based on a long term service and rental of a portable washroom facility (fancy go-hut). I have attached the information for your review. It would be great if you could tell me if an OSSO permit will be required and what class it would fall under.
Take care of yourself and thank you. jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

JFSA

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Ottawa-Paris(ON)-Gatineau-Montréal-Québec

From: Kearney, Michel
To: Jocelyn Chandler
Subject: Re: 5455 Boundary Road - information regarding water and wastewater servicing considerations.
Date: Monday, February 17, 2020 8:53:02 PM
Attachments: Outlook-vtju3oao.png

I had a quick look. I will review it more detail on Tuesday.

Thanks Jocelyn, I appreciate the extra information.

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: February 17, 2020 2:02 PM
To: Kearney, Michel <Michel.Kearney@ottawa.ca>
Subject: Re: 5455 Boundary Road - information regarding water and wastewater servicing considerations.

Hi again Michel, I am not sure if you have had the opportunity to review the information below, but I'd like to follow up with you as we need to continue preparing the site plan application and this is a key aspect to conclude. I'll give you a call this week. Thanks ,j

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

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From: Jocelyn Chandler
Sent: February 10, 2020 4:21 PM
To: Kearney, Michel <Michel.Kearney@ottawa.ca>
Cc: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>; Alvey, Harry <Harry.Alvey@ottawa.ca>; 'dave@dsqconstruction.com' <dave@dsqconstruction.com>; Sean Czaharynski <sczaharynski@rcii.com>
Subject: 5455 Boundary Road - information regarding water and wastewater servicing considerations.

Hello Michel,

As discussed last week, I am providing some additional information on the proposed site plan to

construct and run an Asphalt plant at the above location. I hope it will be helpful in considering servicing strategies. I have cc'd this information to Anissa and Harry to keep them in the loop as well.

The proposed Asphalt Batch Plant is considered 'relocatable.' The components are trucked in from the manufacturer and assembled on-site. It could be taken apart to move it, but that is not the intention. It will be set on a concrete pad or footings.

The site will include a scale and accompanying scale-hut, the asphalt plant components, and perhaps a Quonset hut (that is currently onsite) for storage of equipment.

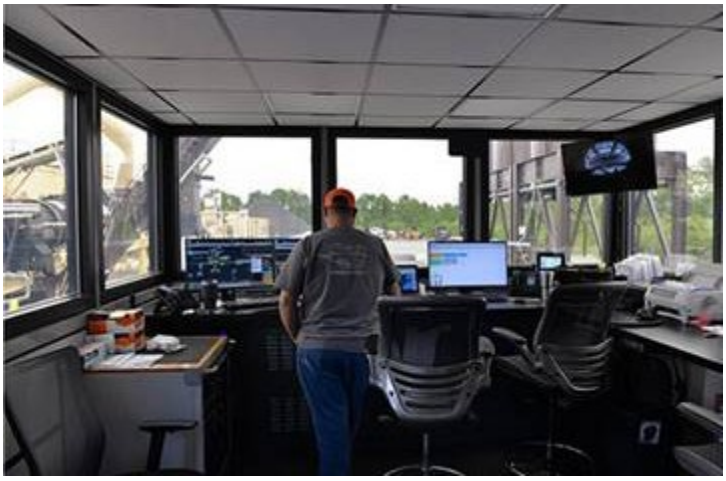
The plant components are primarily machinery for manufacturing the product, conveyor belts, storage silo's and bins. It also has a 'control centre', a large booth from which the plant manager controls and monitors the machinery operation (photos shown at the bottom of this email). The staff generally take breaks in the control centre, however it is not serviced with water or wastewater. Staff on-site are expected to include:

- plant manager, loader operator, grounds person and possible one other scale hut operator/general helper.

The owner expects to provide bottled water and a full service relocatable washroom facility. Theses come equipped with a sink with running hot/cold water, flushable toilet and heating (see below). For example, the RA Centre on Riverside Drive uses these facilities all winter to service the inflatable dome. As you know, quarry sites often only provide porta-potties for their staff. An agreement between the site owner and the water provider/ waste receivers is always required for these types of facilities as part of a long term rental agreement. The owner has not discounted ultimately constructing a building and connecting to the CS trickle system and constructing a private septic system if they successfully find additional uses to add to the site.

TRAILER RESTROOMS:

CONTROL CENTRE:



I do not have a site plan at this time, as they are finalizing the equipment components.
Please give me call to chat once you have had an opportunity to look this ver. I would be interested in hearing your thoughts. Jocelyn 613-371-5242

Jocelyn Chandler, M.Pl., RPP, MCIP
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Appendix C

5455 Boundary Rd SPC
August 2020

CERTARUS set up at Asphalt Plant

Compressed Natural Gas Supply for Industrial Applications

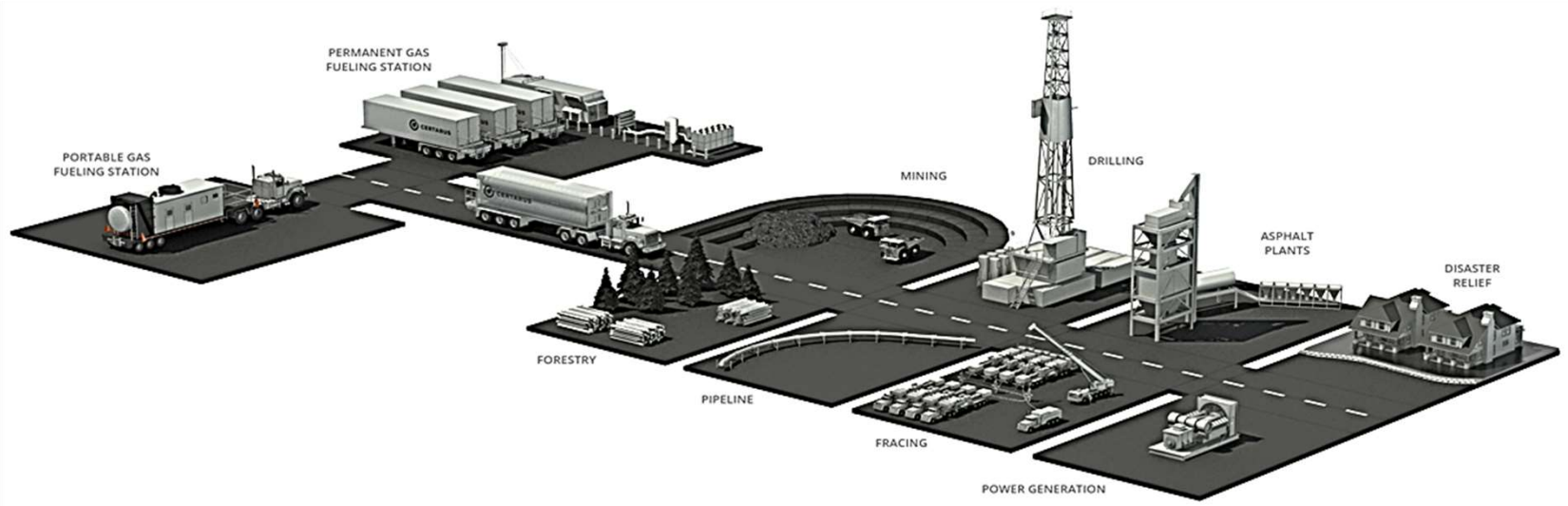
March 2020

January 2020 Snapshot

Certarus is the North American Market Leader in Bulk Compressed Natural Gas (CNG) Delivery

$404 MM of Invested Capital 2019(f)	**92,000+ Loads** of Safely Delivered CNG (1)	**750,000,000 lbs** of CO2 Displaced (2)
+150,000 Mcf of Daily Compression Capacity	**11.5 Bcf** of Delivered CNG 2019(f)	**$500 MM** Market Cap (3)

Certarus Proprietary CNG Distribution Platform



Certarus – Integrated Value Chain

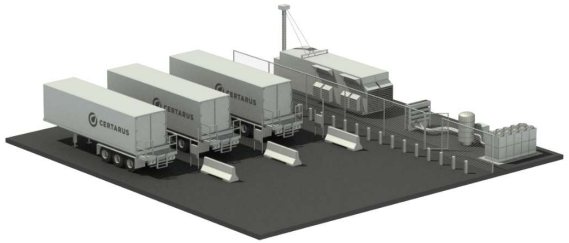
Sourcing & Compression → **Transportation & Distribution** → **Site Delivery & Decompression** → **Monitoring & Logistics**

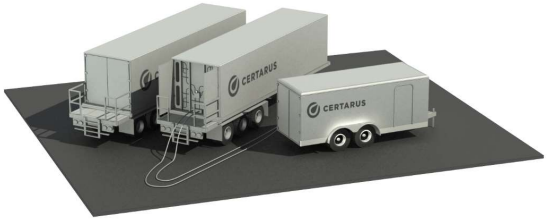
(1) CNG loads safely delivered from 2014 to September 2019
(2) CO2 cumulatively displaced from 2014 to 2019(f)
(3) Certarus implied market cap based on most recent grey market trades @ $7.75/shares. Currently 64.5MM shares outstanding (70.4MM fully diluted)

Proven Fully Integrated CNG Platform

- Certarus' proprietary CNG platform has been specifically designed and engineered for high pressure, high volume remote communities, commercial and industrial based applications

• Source gas at ~1,000 PSI • Compress gas up to 5,000 PSI • Transport CNG at up to 4,600 PSI • CNG Pressure Drop • Deliver gas at ~50 PSI





COMPRESSION

- **17 Fixed Site Compression Hubs**
- **15 Mobile Compressors**
- Capacity up to 16.0 mmcf/d/Hub
- Up to 475,000 DEL/d/Hub or 125,000 DGE
- Rapid fill design (< 1 hour per CNG Trailer)
- Unmanned platform
- Engineered & constructed by Certarus

Proprietary Compression Platform

TRANSPORTATION

- **YE 463 Total CNG Trailers**
- Composite & Steel design
- Capacity of up to 520 mcf per trailer
- Up to 15,000 DEL per load / 4,000 DGE
- Transport capability of up to 4,600 PSI
- Ability to spot fill at multiple CNG Hubs
- Fleet of company owned tractors

Largest CNG Transport Fleet in N.A.

GAS DELIVERY & DECANTING

- **YE 339 Pressure Reduction Units (PRS)**
- **6 Field Gas Processing Units**
- Custom gas delivery specification (°C & PSI)
- Unmanned delivery platform
- Engineered & constructed by Certarus

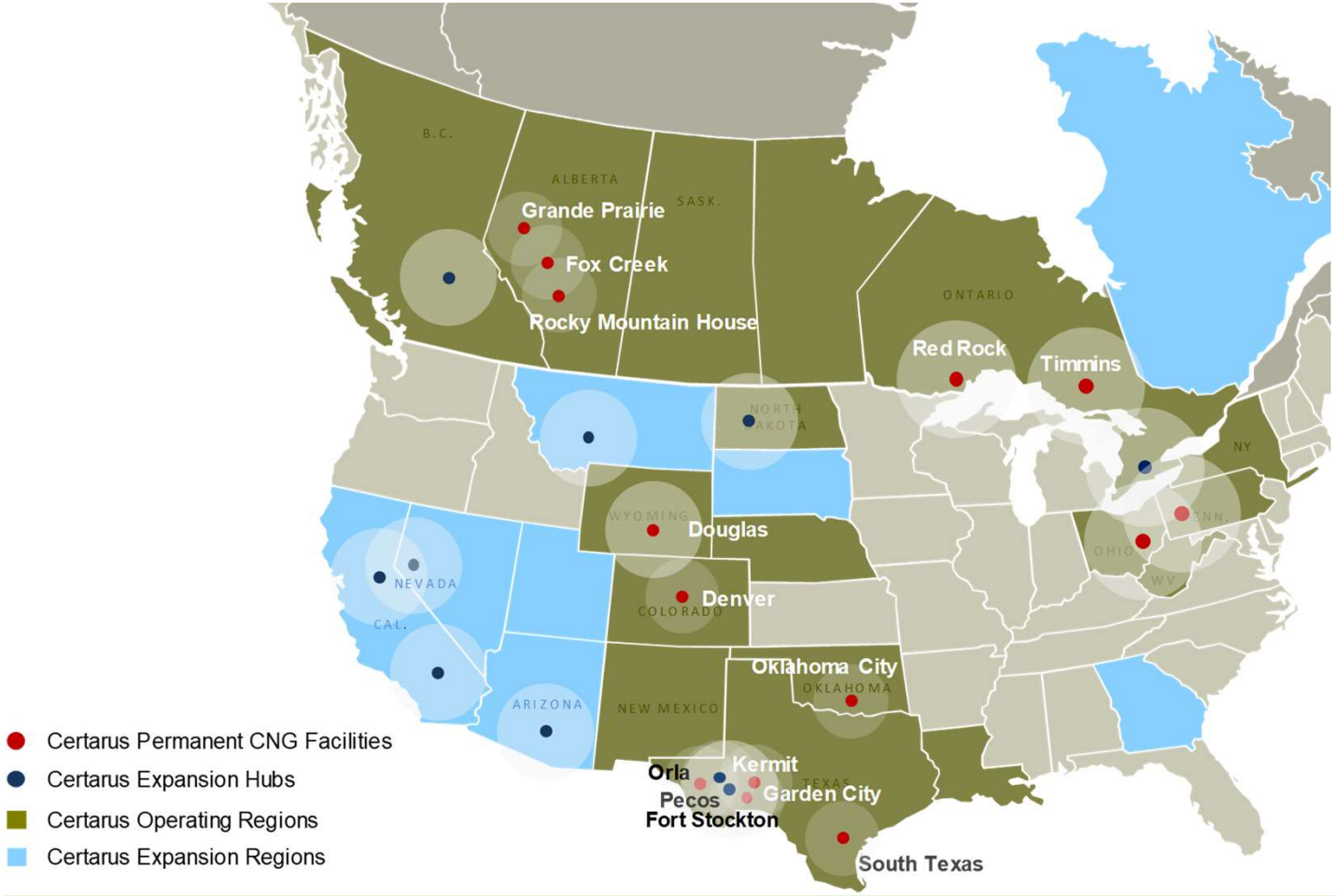
Proprietary Gas Delivery Design

PROPRIETARY REMOTE MONITORING & SUPPLY CHAIN LOGISTICS (SATELLITE CONNECTED)

Expansive Network of Regional Compression Hubs

- Certarus' integrated bulk CNG platform provides consistent, reliable and economic high pressure gas solutions in key regional energy markets across North America

Certarus North American CNG Compression Hubs

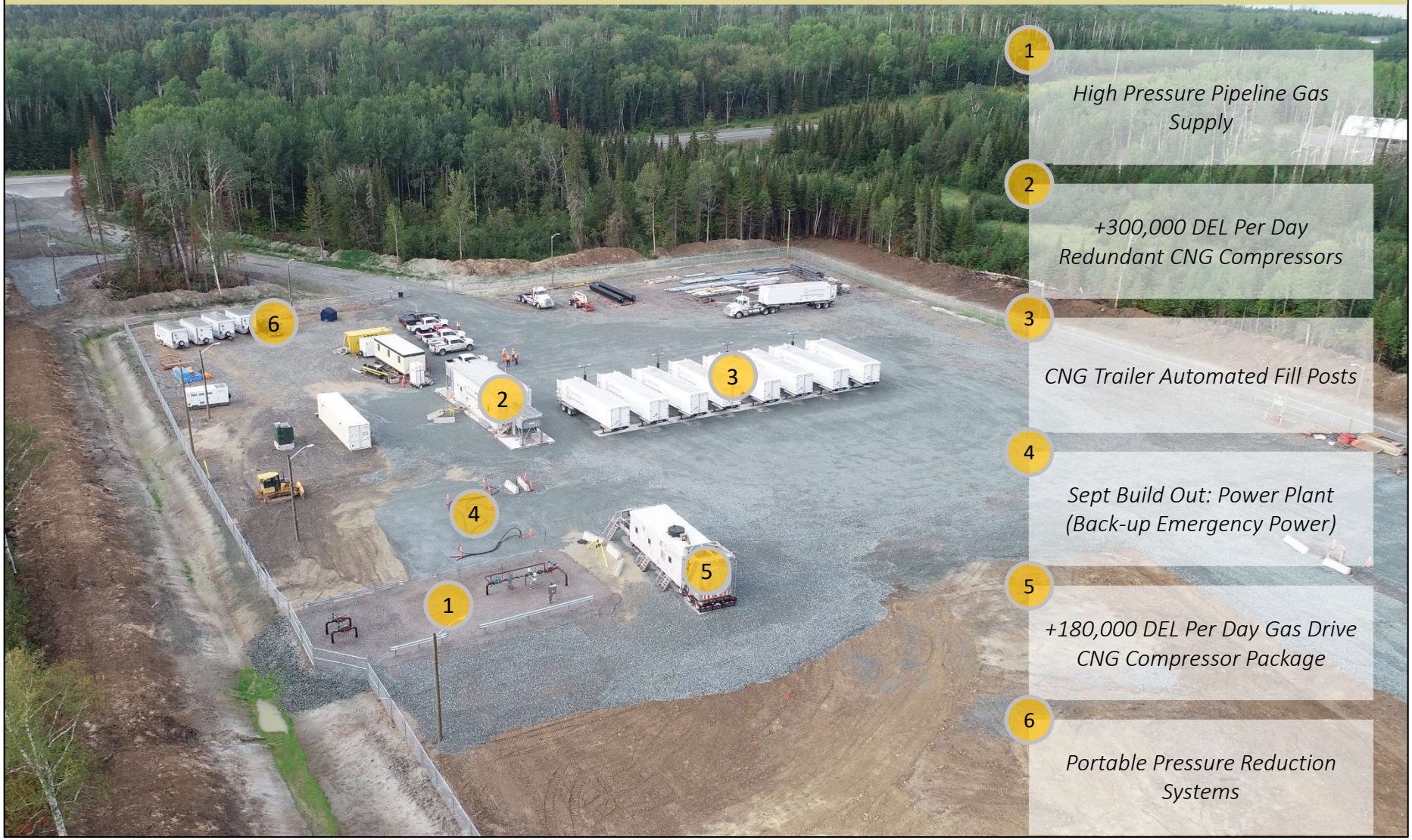


Certarus CNG Hubs:
Sourcing & Operations

1. Certarus partners with regional producers to secure gas connections to producer owned plants & pipelines
2. Certarus constructs CNG hubs that source gas from regional producer plants *(secures gas supply from partner)*
3. Regional Certarus CNG hubs target customers within a ~200 Mile radius of gas connection / supply *(tight delivery radius minimizes transport costs)*
4. Anchor regional CNG customer is typically the regional gas supply partner *(cost benefit to producer to consume their own CNG)*

Large Scale Redundant CNG Terminal - Timmins

Fully Redundant CNG Terminal Capable of Supplying Over 16,000 Mcf Per Day



Large Scale Redundant CNG Terminal - Timmins

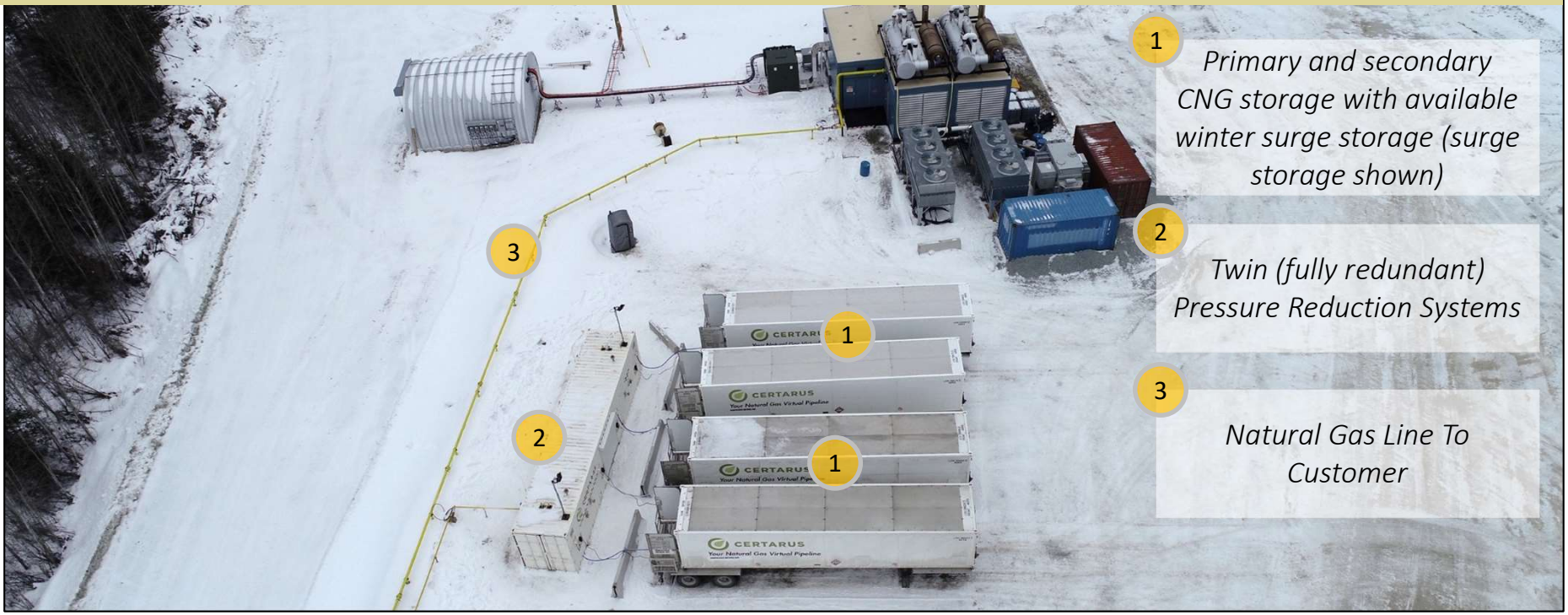
Large Scale Redundant CNG Terminal – Red Rock

CNG Transport, Storage and Decompression

- Certarus transports CNG in some of the highest pressure, highest volume transport trailer systems available

- Certarus has designed a Pressure Reduction System ("PRS") specific for cold and hot weather gas depressurization

Certarus CNG Set-up with Fully Redundant Pressure Reduction System



Certarus CNG Transport & Delivery

- **Certarus transports CNG in some of the highest pressure, highest volume transport trailer systems available**
  - Large volume, composite tubes with an operating pressure of up to 4,200 PSI
  - Capable of transporting up to 365+ mcf per load (11,000 DEL or 3,000 DGE)
- **Certarus has designed a Pressure Reduction System ("PRS") specific for cold and hot weather mobile gas depressurization**
  - Trailer mounted unit capable of delivering gas at specific pressures and temperature to multiple consumers at once
  - Remote monitoring allows for real time information; ability to operate and decant (depressurize) as an unmanned unit
  - Metering and custody transfer happens at the well site with fully automated daily ticketing

Certarus Bulk CNG Vessel (Primary and Standby) with Pressure Reduction System

Redundant Supply and Decompression

CNG Vs. Propane

- ~65% of CNG pricing structure is fixed over the term of the contract. This enables a client to have a very stable and steady fuel pricing agreement with certainty on costs. Diesel, bunker fuels and propane, unlike CNG, trade on a global market with significant pricing fluctuations.
- Carbon tax on propane is roughly 20% higher than on natural gas - $1.82 vs $1.53 per GJ ($.046 vs $.039 per PEL – propane equivalent litre)
- Client is billed upon consumption, not delivery

CNG Vs. Propane

- CNG is not transferred to storage tanks onsite
- CNG is cleaner than propane and reduces emissions by approx. 20-25%
- CNG platform is proven to reliably supply in extremely cold temperatures - dew point is -162 F/-108 C, therefore no gelling or freeze off at -40 C as with propane
- CNG cannot spill or contaminate soil. It does not require emergency clean ups or site evacuations
- Certarus sources gas closer to clients, thus reducing transportation risks

CNG for Mine Air Heating – Macassa Mine

CNG for Mine Air Heating – Holloway Mine

CNG for Mine Air Heating – Newmont Borden Gold

CNG for Asphalt Plants - Pioneer Construction

CNG for Pipeline Outage – Atikokan

CNG for Power Generation – Taylor Mine

NetFlow Remote Monitoring System

- Certarus and client access to gas flow, consumption and storage information
- Critical application for central dispatch and client billing

CRITICAL CONTROL NetFlow™

PRS Summary

Meter	PSI	KPI	Trailer Location	Flow Rate mcfd	Today Total mcf	Yest Total mcf	Trailer 1 Pressure PSI	Trailer 2 Pressure PSI	Trailer 3 Pressure PSI	Trailer 4 Pressure PSI
PRS-6001A			Kirkland Taylor Mine Cogen TIM - Job 2238	219.75	117.661	215.63	1237.5	2783.75	2538.75	5
PRS-6001B			Kirkland Taylor Mine Cogen TIM - Job 2238	233.93	128.288	228.825	1236.25	2783.75	2537.5	6.25
PRS-6002A			Imerys Talc Mine TIM - Job 2187	0	8.385	33.554	2363.75	2733.75	2.5	0
PRS-6002B			Imerys Talc Mine TIM - Job 2187	32.44	7.826	75.879	2366.25	2730	6.25	-1.25
PRS-6003A			GoldCorp Borden Mine TIM - Job 2742	72.11	62.278	202.873	2387.5	2707.5	2582.5	28.75
PRS-6003B			GoldCorp Borden Mine TIM - Job 2742	97.69	69.425	114.294	2381.25	2705	2578.75	27.5
PRS-6004A			KL Gold Macassa Shaft 3 TIM - Job 3106	190.44	103.639	214.132	5	2796.25	2508.75	0
PRS-6004B			KL Gold Macassa Shaft 3 TIM - Job 3106	90.31	57.403	118.016	3.75	2795	2503.75	-1.25
PRS-6005A			KL Gold Holloway Mine TIM - Job 3105	71.67	63.621	123.377	2445	-3.75	416.25	10
PRS-6005B			KL Gold Holloway Mine TIM - Job 3105	92.57	21.617	37.69	2446.25	-2.5	416.25	12.5
PRS-6006A			KL Gold Holt Mine TIM - Job 3104	81.08	18.602	75.567	10	11.25	2725	1468.75
PRS-6006B			KL Gold Holt Mine TIM - Job 3104	125.72	53.485	82.749	11.25	15	2728.75	1472.5

Stéphane Gallant

Manager of Business Development – Ontario

Directeur du développement des affaires - Ontario

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sgallant@certarus.com

JFSA
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

Project Ref #:P1901(p)
Client: Ottawa D-Squared Asphalt Ltd.

Ottawa. ON
Paris. ON
Gatineau. QB
Montréal. QB
Québec. QB

Appendix D

5455 Boundary Rd SPC
August 2020

From: Evans, Allan
To: Jocelyn Chandler
Subject: RE: USWG
Date: Tuesday, July 07, 2020 2:50:59 PM
Attachments: image006.png

OFM just responded yesterday and they are interested in learning more – they agree that we may need an RSMP "STYLE" of form but we will have to do some more work on that (this can be done in parallel).

I know in the past I have seen submissions where it is more vague like "subject to OFS review – possible on-site <temporary> water storage may be required. That would at least permit it to start moving forward while we work on determining whether this is needed or not. I can't imagine more than 10000 gallon being needed (if any). If they have a water retention pond that is accessible / deep enough, this is an option too.

Thoughts?

Allan Evans
Fire Protection Engineer / Ingénieur de Protection d'Incendies
Prevention Division / Prévention des Incendies
Ottawa Fire Services / Service des Incendies d'Ottawa
1445 Carling Avenue / 1445 Avenue Carling
Ottawa, ON K1Z 7L9
Allan.Evans@Ottawa.ca
☎ (613) 913-2747 | ☎ (613) 580-2424 x24119 | 🖷 (613) 580-2866 | ✉ Mail Code: 25-102 | @OFSFPE

OTTAWA FIRE SERVICES
SERVICE DES INCENDIES D'OTTAWA
Protecting Our Nation's Capital With Pride
Protéger notre capitale nationale avec fierté

CFAI
An internationally accredited agency 2014-2019

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: July 07, 2020 9:54 AM
To: Evans, Allan <Allan.Evans@ottawa.ca>
Subject: RE: USWG

Hi Al – Unfortunately I have to keep asking about fire services input…just waiting on this to finalize the plan submission.
Hope you are having a good week, jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resources Planner / Project Manager

52 Springbrook Drive, Ottawa ON, K2S 1B9
Tel.: 613-836-3884 x231 | Email: jchandler@jfsa.com | Website: www.jfsa.com
Ottawa-Paris(ON)-Gatineau-Montréal-Québec

From: Stephane Gallant <sgallant@certarus.com>
Sent: July 2, 2020 10:58 AM
To: allan.evans@ottawa.ca
Cc: Jocelyn Chandler <jchandler@jfsa.com>
Subject: USWG

Hi Allan

Each trailer can hold 8991 USWG, so with 4 onsite, that would be 35,964 USWG.

Thanks

Stéphane

Stéphane Gallant

Manager of Business Development - Ontario
Directeur du développement des affaires - Ontario
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unauthorized. Thank you.

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From: Stephane Gallant
To: Jocelyn Chandler
Subject: Certarus - compressed natural gas for asphalt plants
Date: Monday, May 04, 2020 5:31:13 PM
Attachments: image002.png
CSA B108-14_storage spacing.pdf
Certarus - CNG and PRS with Area Class - Ontario_stamped ON.pdf
Standard Permanent PRS Layout.pdf
fire protection system.pdf
Certarus - Overview March 2020.pdf

Hi Jocelyn

It was a pleasure to meet you over the phone earlier today. As mentioned, Certarus compresses, delivers and decompresses natural gas for various industrial applications such as mine air heating, power generation, grain and product drying as well as asphalt plants. In Ontario, we have compression facilities in Timmins, Red Rock (near Thunder Bay) and are in the process of acquiring a facility in Southern Ontario.

Some specifics about our system (see attached as well):

- Only a certified gas fitter can connect our pressure reduction system (PRS) to a client appliance such as an asphalt plant (this would only happen once in this case)
- We require TSSA approval and inspections for installations
- We are the only ones to connect and disconnect the gas from the PRS. D-Squared workers do not connect or disconnect the supply.
- The PRS contains LEL gas detection, which would shut down the PRS if levels were too high
- Onsite and remote emergency shut down for the PRS
- Onsite emergency shut down on the CNG trailer 15 metres from the valves, manifold and connection point
- There is no transfer of fuel onsite
- Gas is lighter than air and therefore dissipates in the event of a leak. No risk of spill
- Each CNG trailer contains 350 GJs of natural gas
- For an asphalt plant, we'd likely have 4 trailers onsite connected to both PRS units (we use two for redundancy)
- The CNG trailer has a fire protection system. In the event of contact with direct flame or heat of over 177 degrees Celsius, the system opens bias actuated valves which allow the trailer to vent the gas to the atmosphere to avoid a pressure build up. The trailer will vent regardless of its position (more in attachment)
- The PRS processes gas (heats and depressurizes it) but does not "hold" gas. for this job, we would use mobile PRS units, which are 8x20 cargo trailers. Gas is vented before it is towed.

Please advise if you require anything further.

Thanks

Stéphane

Stéphane Gallant

Manager of Business Development - Ontario
Directeur du développement des affaires - Ontario
Certarus Ltd.
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sgallant@certarus.com
www.Certarus.com

Asphalt Cements - Performance Graded (PG)

SECTION 1. IDENTIFICATION

Product Identifier	Asphalt Cements - Performance Graded (PG)
Other Means of Identification	PG 46-34, PG 46-37, PG 46-40, PG 52-28, PG 52-34, PG 52-40, PG 58-22, PG 58-28, PG 58-31, PG 58-34, PG 58-37, PG 58-40,PG 64-22, PG 64-28, PG 64-34, PG 64-37, PG 70-22, PG 70-28, PG 70-31, PG 70-37, PG 76-22, PG 76-28, PG 76-34, 82-28; (E)(V)(H)(S), (P)(R)(X)(J)(T)(HRD)(Foam)
Other Identification	Suffix (AS) indicates anti-strip agent added; Suffix (EVO) (WMA) indicates warm mix agent added
Recommended Use	These products are primarily used for paving applications. However, there are a number of other industrial applications.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	McAsphalt Industries Ltd, 8800 Sheppard Ave East, Toronto, Ontario, M1B 5R4
Emergency Phone No.	CANUTEC, (613) 996 - 6666, 24 hours McAsphalt Industries Ltd., 1 - (800) - 268 - 4238, 8AM-5PM Monday to Friday

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

Classification

Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 3; Eye irritation - Category 2B; Carcinogenicity - Category 2

Label Elements

Warning
Harmful if swallowed, in contact with skin or if inhaled.
Avoid breathing dust/fume/gas/mist/vapours/spray.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.

Other Hazards

Dark Black, Semi-solid with characteristic asphaltic odour or "rotten egg" odour if H2S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Can cause thermal burns, exposures require specialized first-aid and medical follow-up.
Prolonged or repeated skin contact can cause drying of the skin which may produce irritation or dermatitis.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Asphalt (Bitumen) fume	8052-42-4	88 - 100		Asphalt

SULFUR	7704-34-9	0 - 1		

Notes

Antistripping additive added in quantities < 1% when indicated. Heated product may evolve vapours irritating to the nose, throat and lungs. See section 8 for further information.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. During storage or transit of hot asphalt, hydrogen sulphide may be generated.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Loosen tight clothing such as collar, tie, belt or waist band. Get medical attention immediately.

Skin Contact

For hot asphalt splash, cool affected body part with water immersion or shower. Do not attempt removal of asphalt but split longitudinally if circumferential to avoid tourniquest effect. No attempt should be made to remove firmly adhering bitumen from the skin. Once the bitumen has cooled, it will do no further harm and in fact provide a sterile covering over a burnt area. As healing takes place, the bitumen plaque, the bitumen plaque will detach itself, usually after a few days. For skin soiling without underlying burn, cleanse with mineral oil followed by soap and water. Use olive oil in vicinity of eyes.

Eye Contact

If a contact lens is present, DO NOT delay flushing or attempt to remove the lens. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting.

First-aid Comments

If exposed or concerned, get medical advice or attention. Some of the first-aid procedures recommended here require advanced first-aid training.

Most Important Symptoms and Effects, Acute and Delayed

Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include' weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe over exposure; coma and death. At higher concentrations (above 10 ppm), hydrogen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

If on skin: repeated or prolonged exposure can irritate the skin.

Can cause thermal burns.

If in eyes: may cause mild irritation. Symptoms include sore, red eyes, and tearing.

Immediate Medical Attention and Special Treatment

Special Instructions

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Medical Conditions Aggravated by Exposure

Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis see toxicological information (Section11).

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agents compatible with product and suitable for surrounding fire.

Unsuitable Extinguishing Media

Do not spray water onto tank, vessel containing liquid asphalt as water reacts violently with product at elevated temperatures; risk of steam explosion!

Specific Hazards Arising from the Product

Flammability of the product: Will burn on prolonged exposure to flame or high temperature.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Low fire hazard. This material must be heated before ignition will occur. Hydrogen sulphide may be released if the product is overheated and may accumulate in the tank headspace or any other confined space.
Carbon oxides (CO, CO2), smoke and irritating vapours as products of incomplete combustion.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters should enter area wearing specialized protective equipment. (Bunker Gear will not provide adequate protection.) chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventillation. Wear apporpriate respirator when ventillation is inadequate. Put on apporpriate personal protective equipment (see Section 8).

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Ventilate the area to prevent the gas from accumulating, especially in confined spaces. Contain and soak up spill with absorbent that does not react with spilled product. Do not use absorbents. Contain spill using noncombustible material such as vermiculite, earth or sand. Do NOT use combustible materials such as sawdust. Cover the spill surface with the appropriate type of foam to reduce the release of vapour. Large spills or leaks: dike spilled product to prevent runoff. Do not direct water at spill or source. Dike and recover contaminated water for appropriate disposal. Let product solidify. Do not return spilled product to its original container. Review Section 13 (Disposal Considerations) of this safety data sheet. Contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

During storage, transit and cooling of asphalt, solvent vapour and hydrgen sulphide may accumulate in enclosed spaces such as tank cars. Open tank car hatches with caution. Maintain same precautions when guaging and sampling. Do not cut or weld near full/empty containers. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Store and use away from heat, sparks, open flames or any other ignition source. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Use non-sparking tools. Avoid breathing vapour or mist. Use only with adequate ventilation. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire of explosion. Use only indirectly heated oil-jacketed equipment. This product is non-combustible. If heated, irritating vapours may be formed. Do not use in

areas without adequate ventilation. Wash hands thoroughly after handling.

Conditions for Safe Storage

Store in an area that is: temperature-controlled, dry, an approved, fire-resistant area, secure and separate from work areas. Engineering controls are usually required in the storage area to protect against the product's hazard(s). Review Section 8 (Exposure Controls/Personal Protection) for information. Avoid bulk storage indoors. Protect product from contact with water, including humidity. Prevent rainwater and ground water from reaching storage area.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Asphalt (Bitumen) fume	0.5 mg/m3 (I) A4 BEI		Not established			
SULFUR	1 ppm	5 ppm				

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit.

Appropriate Engineering Controls

General ventilation is usually adequate. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual Protection Measures

Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots. In case of an emergency (e.g. an uncontrolled release): wear heat resistant, impervious gloves i.e., leather or aluminize.
Chemical-resistant, imperious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Dark black Semi-solid.
Odour	Characteristic asphaltic odour or "rotten egg" odour if H2S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	> 290 ºC (554 ºF) (open cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable

Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Insoluble in water; Soluble in all proportions in common organic solvents.
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic)

Other Information

Physical State	Liquid
Bulk Density	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Stable under normal storage conditions.

Possibility of Hazardous Reactions

Contact between heated Asphalt and water can cause a violent eruption.

Conditions to Avoid

Under normal conditions of storage and use, hazardous polymerisation will not occur.

Incompatible Materials

Reactive with oxidising agents.

Hazardous Decomposition Products

May release COx, NOx, SOx, POx, H2S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

See toxicological information (Section 11).

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen) fume		> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
SULFUR	~ 444 ppm (rat) (4-hour exposure) (gas)		

Skin Corrosion/Irritation

Irritating to skin. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact. Asphalt fumes can increase susceptibility to sunburn.
Slightly irritating to the skin. Contact with hot material can cause thermal burns.

Serious Eye Damage/Irritation

Irritating to eyes. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.Hot liquid product may cause serious thermal burns on direct contact. Hydrogen sulphide may cause eye irritation at 1 - 20 ppm and acute conjunctivitis at higher concentrations. Above 50 ppm H2S, eye irritation may include symptoms of redness, sever swelling, tearing, sensitivity to light and the appearence of 'Halos' around lights.

Slightly irritating to the eyes.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At high concentrations may cause irritation to the respiratory system. Unconsciousness and or death at low concentrations nose and throat irritation.
Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include' weakness, dizziness, slurred speech, drowsiness, unconciosness and in cases of severe overexposure; coma and death. At higher concentrations (above 10 ppm), hydrgen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

Skin Absorption

May cause thermal burns from heat skin to darken.

Ingestion

May cause severe irritation or burns to the mouth, throat and stomach.
No known significant effects or critical hazards.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.
No known significant effects or critical hazards.

Respiratory and/or Skin Sensitization

Skin irritation, the symptoms may include redness and itching and swelling it may irritate the respiratory system.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Asphalt (Bitumen) fume	Group 2B	A4		

IARC: 8052-42-4 Group 2B - Possibly carcinogenic to humans. Occupational exposure to hard bitumens and their emissions during mastic asphalt work 8052-42-4 Group 2B - Possibly carcinogenic to humans. Occupational exposure to straight-run bitumens and their fume condensate during road paving.
An IARC working group has concluded that occupational exposures to straight-run bitumens and their emissions during road paving are 'possibly carcinogenic to humans' (Group 2B).

Reproductive Toxicity

Development of Offspring

Not available.
No known significant effects or critical hazards.

Sexual Function and Fertility

Not available.
No known significant effects or critical hazards.

Effects on or via Lactation

Not known to cause effects on or via lactation.

Germ Cell Mutagenicity

Not available.
No known significant effects or critical hazards.

No information was located for: STOT (Specific Target Organ Toxicity) - Single Exposure, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

Environmental affects: No known significant effects or critical hazards. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable under Federal and Provincial regulations. The information given is

based on data available for the material, the components of the material, and similar materials.

Ecotoxicity

Studies were not located.

Persistence and Degradability

Not available.

Bioaccumulative Potential

No information was located.

Mobility in Soil

Studies are not available.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Recycle and reuse product, if possible. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. Treat waste in an approved waste disposal facility. Do not reuse empty containers. Dispose of or recycle empty containers through an approved waste management facility.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	3257	Performance Graded Liquid Asphalt (Elevated Temperature Liquid, n.o.s., at or above 100 c and below its flash point)	9	III

Special Precautions Please note: For US Shipments Only: ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 c and below its flash point, 9, UN3257, PGIII

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

Europe inventory

Not determined

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - Not assigned. Flammability - 1 Instability - 0**

SDS Prepared By EPC & Risk Management Department

Phone No. 1 (416) 281 - 8181

Date of Preparation	January 22, 2018
Date of Last Revision	April 26, 2018
Revision Indicators	April 12 2018 Other Means of Identification adjusted to meet new Provincial nomenclature requirements April 26 2018 PG 82-28 added to Other Means of Identification
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
Disclaimer	To the best of our knowledge, the information herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Polymer Modified Asphalt Cement

SECTION 1. IDENTIFICATION

Product Identifier	Polymer Modified Asphalt Cement
Other Means of Identification	PG 52-34, PG 52-37, PG 52-40, PG 58-22, PG 58-28, PG 58-31, PG 58-34, PG 58-37, PG 58-40, PG 64-22, PG 64-28, PG 64-34, PG 64-37, PG 64-40, PG 70-22, PG 70-28, PG 70-31, PG 70-34, PG 70-37, PG 76-22, PG 76-28, PG 76-34, PG 82-28, EverLife Flex PMA, EverLife LP PMA, Stellarflex FR, STYLINK Concentrates, SMPG; (E)(V)(H)(S)(Jnr), (P)(R)(X)(J)(Foam)
Other Identification	Suffix (AS)(HRD) indicates anti-strip agent added; Suffix (EVO)(WMA)(T) indicates warm mix agent added
Recommended Use	Polymerized Asphalt for recycling asphalt, Polymerized Asphalt for paving purposes.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	McAsphalt Industries Ltd, 8800 Sheppard Ave East, Toronto, Ontario, M1B 5R4, 416-281-8181
Emergency Phone No.	CANUTEC, (613) 996 - 6666, 24 hours McAsphalt Industries Ltd., 1 - (800) - 268 - 4238, 8AM-5PM Monday to Friday

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

Classification

Acute toxicity (Inhalation) - Category 4; Carcinogenicity - Category 2

Label Elements

Warning
Harmful if swallowed, in contact with skin or if inhaled.
Avoid breathing dust/fume/gas/mist/vapours/spray.
IF exposed or concerned: Get medical advice or attention.

Other Hazards

Dark Black, Semi-solid with characteristic asphaltic odour or "rotten egg" odour if H2S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Can cause thermal burns, exposures require specialized first-aid and medical follow-up.
Prolonged or repeated skin contact can cause drying of the skin which may produce irritation or dermatitis.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Asphalt (Bitumen)	8052-42-4	94 - 100		Asphalt
Styrene-butadiene copolymers	9003-55-8	1 - 10		

Sulphur	7704-34-9	0-1		

Notes

Antistripping additive added in quantities < 1% when indicated. Heated product may evolve vapours irritating to the nose, throat and lungs. See section 8 for further information.
During storage or transit of hot asphalt, hydrogen sulphide may be generated. The composition and percentages listed will vary based on the product type. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Loosen tight clothing such as collar, tie, belt or waist band. Get medical attention immediately.

Skin Contact

For hot asphalt splash, cool affected body part with water immersion or shower. Do not attempt to remove asphalt from the skin. Once the bitumen has cooled, it will do no further harm and in fact provide a sterile covering over a burnt area. As healing takes place, the bitumen plaque, the bitumen plaque will detach itself, usually after a few days. For skin soiling without underlying burn, cleanse with mineral oil followed by soap and water. Use olive oil in vicinity of eyes.

Eye Contact

If a contact lens is present, DO NOT delay flushing or attempt to remove the lens. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting.

Most Important Symptoms and Effects, Acute and Delayed

Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include' weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe over exposure; coma and death. At higher concentrations (above 10 ppm), hydrogen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

Repeated or prolonged exposure can irritate the skin.

The vapour also irritates the eyes. Symptoms include sore, red eyes, and tearing.

Immediate Medical Attention and Special Treatment

Special Instructions

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Medical Conditions Aggravated by Exposure

Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis see toxicological information (Section11).

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known. Do not spray water onto tank, vessel containing liquid asphalt as water reacts violently with product at elevated temperatures; risk of steam explosion.

Specific Hazards Arising from the Product

Flammability of the product: Will burn on prolonged exposure to flame or high temperature.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Low fire hazard. This material must be heated before ignition will occur. Hydrogen sulphide may be released if the product is overheated and may accumulate in the tank headspace or any other confined space.
Carbon oxides (CO, CO2), smoke and irritating vapours as products of incomplete combustion.

Special Protective Equipment and Precautions for Fire-fighters

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.
Fire-fighters should enter area wearing specialized protective equipment. (Bunker Gear will not provide adequate protection.) chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventillation. Wear apporpriate respirator when ventillation is inadequate. Put on apporpriate personal protective equipment (see Section 8).

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Ventilate the area to prevent the gas from accumulating, especially in confined spaces. Contain and soak up spill with absorbent that does not react with spilled product. Do NOT use combustible materials such as sawdust. Cover the spill surface with the appropriate type of foam to reduce the release of vapour. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff. Knock down gas with fog or fine water spray. Do not direct water at spill or source. Dike and recover contaminated water for appropriate disposal. Let product solidify. Do not return spilled product to its original container. Store recovered product in suitable containers that are: review Section 13 (Disposal Considerations) of this safety data sheet. Contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

During storage, transit and cooling of asphalt, solvent vapour and hydrogen sulphide may accumulate in enclosed spaces such as tank cars. Open tank car hatches with caution. Maintain same precautions when guaging and sampling. Do not cut or weld near full/empty containers. Put on appropriate personal protective equipment (see Section 8). Bond and ground containers during product transfer to reduce the possibility of static-initiated fire of explosion. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. This product is non-combustible. If heated, irritating vapours may be formed. Do not use in areas without adequate ventilation. Wash hands thoroughly after handling. Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapours. Use only with adequate ventilation. Wash thoroughly after handling and wear appropriate personal protective equipment. Harmful concentrations of hydrogen sulfide (H2S) gas can accumulate in low-lying areas as well as the vapour space of storage and bulk transport compartments. Stay upwind and vent open hatches before unloading.

Conditions for Safe Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental

contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Asphalt (Bitumen)	0.5 mg/m3 (I) A4 BEI		Not established			
Sulphur	1 ppm	5 ppm				
Styrene-butadiene copolymers	3 mg/m3 (R)					

ACGIH® = American Conference of Governmental Industrial Hygienists. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. R = Respirable particulate matter.

Appropriate Engineering Controls

General ventilation is usually adequate. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual Protection Measures

Eye/Face Protection

If a risk assessment indicates that it is necessary to avoid exposure to liquid splashes, mists or dusts, then safety eyewear complying with an approved standard should be used.

Skin Protection

Wear chemical protective clothing e.g. gloves, long sleeves, boots.
If a risk assessment indicates it is necessary, chemical-resistant, imperious gloves complying with an approved standard should be worn at all times when handling chemical products. Suitable materials are: nitrile rubber nitrile rubber. Leather or Aluminize Gloves.

Respiratory Protection

If a risk assessment indicates that it is necessary (i.e. H2S concentration is above 10ppm exposure limit), use a properly fitted, air-purifying or air-fed respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Dark black Semi-solid.
Odour	Characteristic asphaltic odour or "rotten egg" odour if H2S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	> 300 ºC (572 ºF)
Flash Point	> 290 ºC (554 ºF) (open cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available

Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.027 at 15 ºC
Solubility	Insoluble in water; Soluble in all proportions in common organic solvents.
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	> 400 ºC (752 ºF)
Decomposition Temperature	Not available
Viscosity	Not available (kinematic)

Other Information

Physical State	Liquid
Bulk Density	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Contact between heated Asphalt and water can cause a violent eruption.

Conditions to Avoid

Water, moisture or humidity.

Incompatible Materials

Reactive with oxidizing agents
Water.

Hazardous Decomposition Products

May release COx, NOx, SOx, POx, H2S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

See toxicological information (Section 11).

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen)	> 94.4 mg/m3 (rat)	> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
Sulphur	~ 444 ppm (rat) (4-hour exposure) (gas)		

Skin Corrosion/Irritation

May cause mild irritation to skin. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact. Asphalt fumes can increase susceptibility to sunburn.

Serious Eye Damage/Irritation

May cause mild irritation to eyes. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.Hot liquid product may cause serious thermal burns on direct contact. Hydrogen sulphide may cause eye irritation at 1 - 20 ppm and acute conjunctivitis at higher concentrations. Above 50 ppm H2S, eye irritation may include symptoms of redness, sever swelling, tearing, sensitivity to light and the appearence of 'Halos' around lights.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At higher concentrations of H2S (above 10 ppm), hydrogen sulphide is extremely toxic by inhalation, may cause

respiratory-tract irritation, nose and throat irritation, depression of the central nervous system, respiratory failure, unconsciousness and/or death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

Ingestion

May cause severe irritation or burns to the mouth, throat and stomach.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged or repeated contact may dry skin and cause irritation. This product contains small quantities of Polycyclic aromatic hydrocarbons. Prolonged contact with these compounds has been associated with the induction of skin and lung turmours, anemia, disorders of the liver, bone marrow and lymphoid tissues. Long term inhalation of Benzene or Xylene vapours can result in bone marrow abnormalities with damage to blood forming tissues and may cause anemia and other blood cell abnormalities. Immunodepressive effects have also been reported. Hydrogen sulphide may reduce lung function; cause neurological effects such as headaches, nausea, depression and personality changes; eye amd mucos membrane irritation: damage to cardiovascular system.
Effect(s) from long-term exposure are similar to effects described for short-term exposure.

Respiratory and/or Skin Sensitization

Not available.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Asphalt (Bitumen)	Group 2B	A4		

IARC: The International Agency for Research on Canacer (IARC) has determined that occupational exposures to oxide asphalt amd their emissions during roofing operations are "probably carcinogenic to humans" (Group A). IARC concluded that occupational exposures to hard asphalts and their emissions during mastic asphalt work are "possibly carcinogenic to humans" (Group 2B). IARC concluded that occupational exposure to straight-run asphalts and their emissions during paving operations are "possibly carcinogenic to humans" (Group 2B).
An IARC working group has concluded that occupational exposures to straight-run bitumens and their emissions during road paving are 'possibly carcinogenic to humans' (Group 2B).

Reproductive Toxicity

Development of Offspring

Not available.
No known significant effects or critical hazards.

Sexual Function and Fertility

Not available.
No known significant effects or critical hazards.

Effects on or via Lactation

Not known to cause effects on or via lactation.

Germ Cell Mutagenicity

Not available.
No known significant effects or critical hazards.

No information was located for: STOT (Specific Target Organ Toxicity) - Single Exposure, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

No known significant effects or critical hazards.

Ecotoxicity

Not available.

Persistence and Degradability

Not available.

Bioaccumulative Potential

No information was located.

Mobility in Soil

Studies are not available.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The generation of waste should be avoided or minimized where ever possible. Significant quantities of waste product residue should not be disposed of via the foul sewer but processed in a suitable effluent treatment plan. Dispose of surplus and non-recyclable and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and sections *: EXPOSURE CONTROL/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	3257	Elevated Temperature Liquid n.o.s (Polymer Modified Asphalt)	9	III

Special Precautions Please note: For US Shipments Only: ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 c and below its flash point, 9, UN3257, PGIII PG* : Packing group

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

Additional USA Regulatory Lists

HCS Classification : Not regulated.

Europe inventory

Not determined

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 2** **Flammability - 1** **Instability - 0**

SDS Prepared By EPC & Risk Management Department

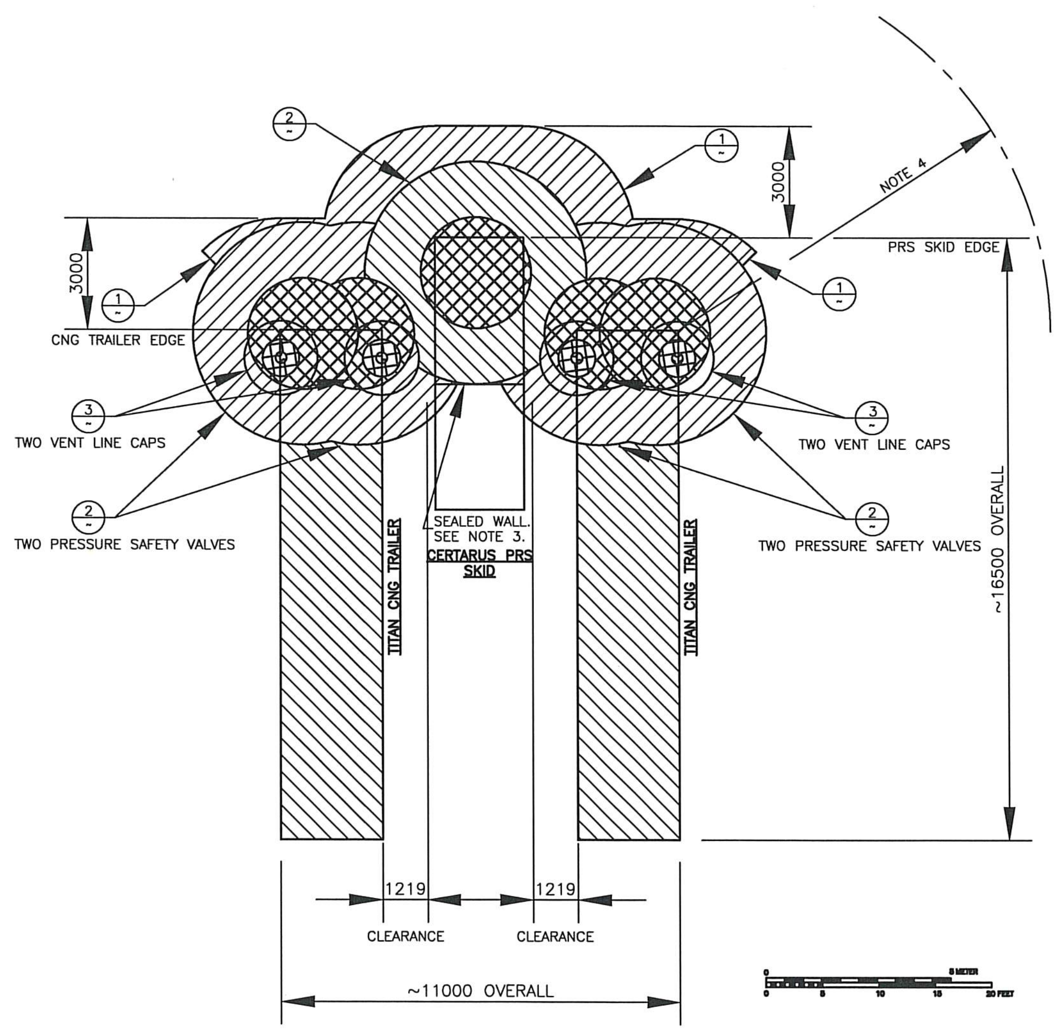
Phone No.	1 (416) 281 - 8181
Date of Preparation	January 22, 2018
Date of Last Revision	May 24, 2019
Revision Indicators	August 7 2018 Addition of EverLife LP PMA April 12 2019 Other Means of Identification updated May 24 2019 SMPG added to Product Identifiers
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
Disclaimer	To the best of our knowledge, the information herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

AREA CLASSIFICATION LEGEND:

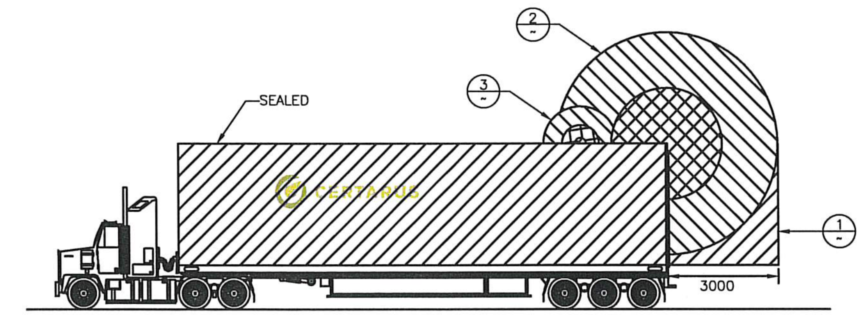
- CLASS I, ZONE 0 (CLASS I, DIVISION 1) GROUP IIA AND IIB, TEMPERATURE CODE T3 (200°C)
- CLASS I, ZONE 1 (CLASS I, DIVISION 1) GROUP IIA AND IIB, TEMPERATURE CODE T3 (200°C)
- CLASS I, ZONE 2 (CLASS I, DIVISION 2) GROUP IIA AND IIB, TEMPERATURE CODE T3 (200°C)
- CLASS I, ZONE 2 (CLASS I, DIVISION 2) GROUP IIA AND IIB, TEMPERATURE CODE T3 TRANSIENT LEVEL 600mm ABOVE GRADE (FLAMMABLE LIQUIDS OR FLAMMABLE HEAVIER-THAN-AIR GASES AND VAPOURS)

GENERAL NOTES:

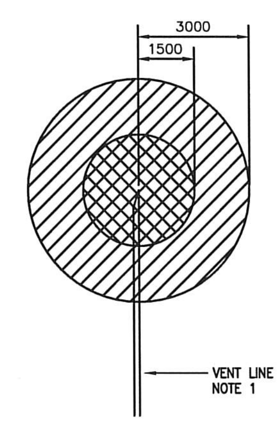
1. AREA CLASSIFICATION BASED ON CSA STANDARDS CAN/CSA-B108-99 (REAFFIRMED 2012) CODE FOR 'NATURAL GAS FUELLING STATIONS INSTALLATIONS', WITH SPECIFIC REFERENCE TO CHAPTER 4, 'COMPRESSORS', TABLE 4.1 (ELECTRICAL CLASSIFICATION OF SPACE SURROUNDING THE COMPRESSOR PACKAGE).
2. THE INTERIOR OF THIS TRAILER HAS BEEN DE-CLASSIFIED TO CLASS I, ZONE 2 AS IT HAS BEEN DETERMINED VIA FUGITIVE EMISIONS STUDY TO HAVE ADEQUATE VENTILATION WITH THE USE OF LOUVERS AND EXHAUST FANS. THESE EXHAUST FANS ARE INTERLOCKED WITH LEL GAS DETECTORS TO ACTIVATE THE EXHAUST FANS WHEN THE CONCENTRATION OF GAS REACHES 10% OF THE LOWER EXPLOSIVE LIMIT (LEL). IN THE EVENT WHERE THE CONCENTRATION OF GAS REACHES 20% LEL, A STATION SHUTDOWN SHALL OCCUR AND THE POWER TO THE TRAILER SHALL BE ISOLATED.
3. THE INTERIOR WALL BETWEEN THE COMPRESSOR AND BOILER ROOM MUST BE COMPLETELY SEALED AND VAPOUR-TIGHT TO DESIGNATE THE BOILER ROOM AS UN-CLASSIFIED. THE BOILER ROOM MANDOOR MUST BE GASKETTED WITH WEATHER STRIPPING. NO OPENNINGS ALONG THE EXTERIOR OF THE ZONE 2 AREA SHALL BE WITHIN 3000mm OF THE BOILER ROOM VENT.
4. SEE TABLE 2 IN CSA B108 FOR SPACING TO UNCLASIFIED ELECTRICAL EQUIPMENT. TSSA CLASSIFIES CNG TRAILERS AS STORAGE REQUIRING 10.1M FOR CERTARUS LTD.



4 ~ SITE PLAN
SCALE: 1:100

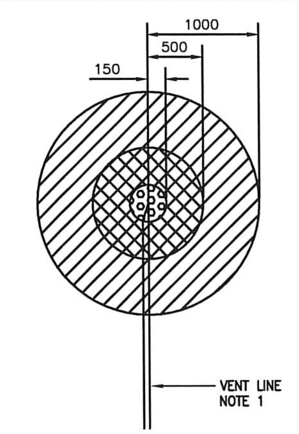


1 ~ CLASS I ZONE 2 CNG TRAILER
ADEQUATELY VENTILATED CONTAINER



NOTES:
1. THE INTERIOR OF VENT PIPING IS ZONE 1. CROSS HATCHING IS OMITTED FOR DRAWING CLARITY.
2. RELIEF VALVE DISCHARGE IS ABOVE THE TRAILER AND THE CLASSIFIED AREA EXTENDS 3M AT AN ANGLE OF 15 DEGREES FROM THE OPENING.

2 ~ PROCESS EQUIPMENT VENT
(NOT SUBJECT TO CONTINUOUS DISCHARGE)



NOTES:
1. THE INTERIOR OF VENT PIPING IS ZONE 0. CROSS HATCHING IS OMITTED FOR DRAWING CLARITY.
2. INSTRUMENT VENT ZONE 2 CLASSIFIED AREA EXTENDS 1M AT AN ANGLE OF 15 DEGREES FROM THE OPENING.

3 ~ INSTRUMENT AND CONTROL DEVICE VENT
(SUBJECT TO CONTINUOUS DISCHARGE)

NOTES:

NO.	REVISION	PROJ. No.	BY	DATE	CHK.	DATE
A	ISSUED FOR INFORMATION	-	FA	2020.03.03	-	-

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER R. A. S[illegible] 100538[illegible] PROVINCE OF ONTARIO

Mar 3/2020

PROFESSIONAL STAMP AXFFIED ABOVE SHALL ONLY APPLY TO REV(S):

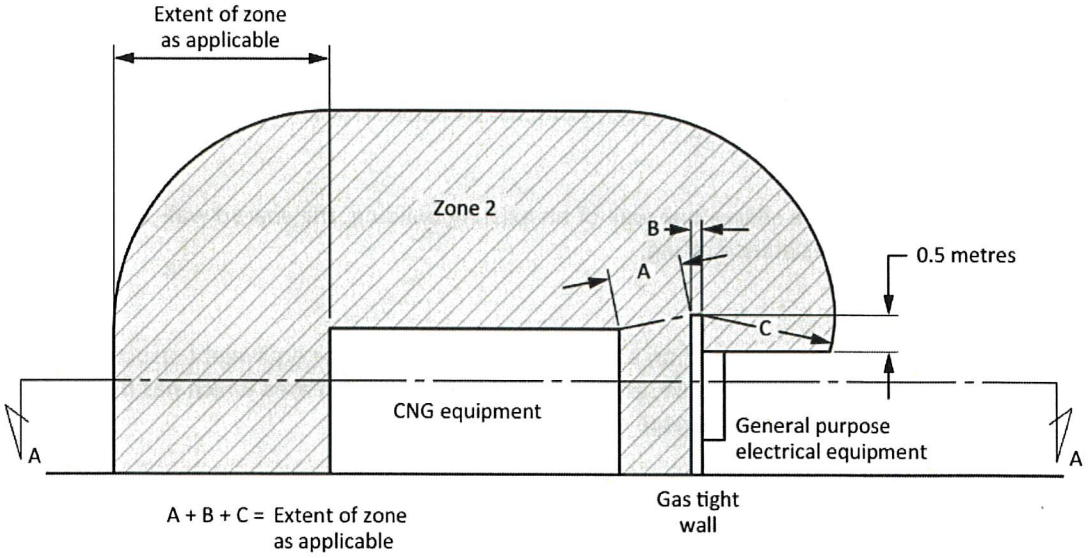
CERTARUS

CERTARUS LTD
EQUIPMENT LOCATION
AREA CLASSIFICATION AND
OVERALL FOOTPRINT – ONTARIO

SCALE	DRAWING NUMBER	REV
1:100	EQUIPMENT LAYOUT TYPICAL– ONTARIO	A

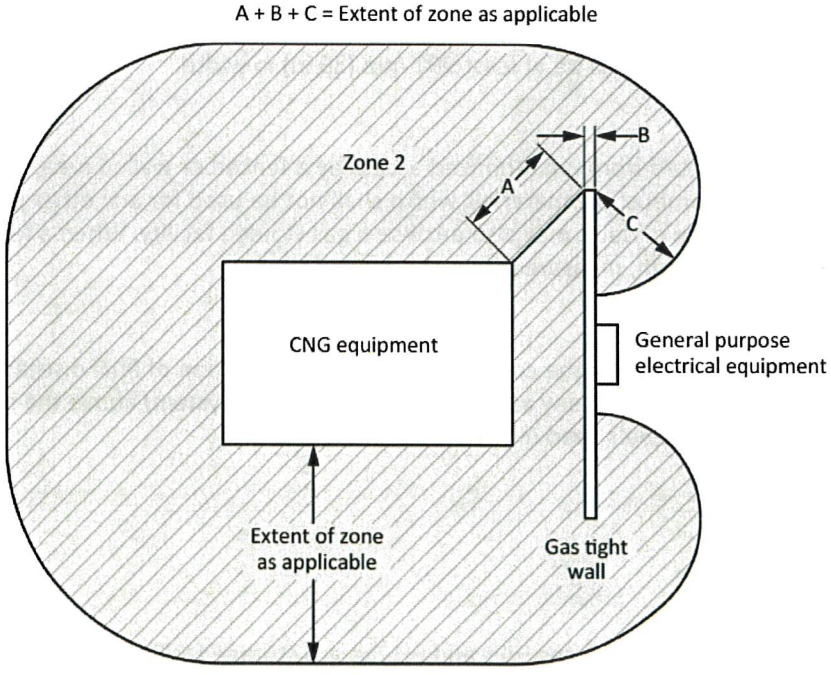
①

Figure 1
Hazardous area zone over a gastight barrier wall
(See Clause 5.2 and Table 1.)



①

Figure 2
Hazardous area zone around the end of a gastight barrier wall
(See Clauses 5.2 and 6.11 and Tables 1 and 2.)



11.1 Gas Venting System Operation

Previous Next

The Gas Venting System works by utilizing 4 bias-actuating valves (BAV). In "Normal" mode of operation there is constant high pressure holding a piston in place which does not allow gas to escape through the vent port. This is done by initially pressurizing the pilot line which pressurized the port holding the piston in place. It is critical to pressurize the pilot of the bias-actuated valves for proper function of the fire protection system. In the event of a fire, the shape memory wire in the Emcara system will shrink which retracts a piston to release the pressure in the Emcara. Once the pressure is released in the Emcara, it then allows the piston in the BAV to be pushed to the left which opens the vent port and allows venting.

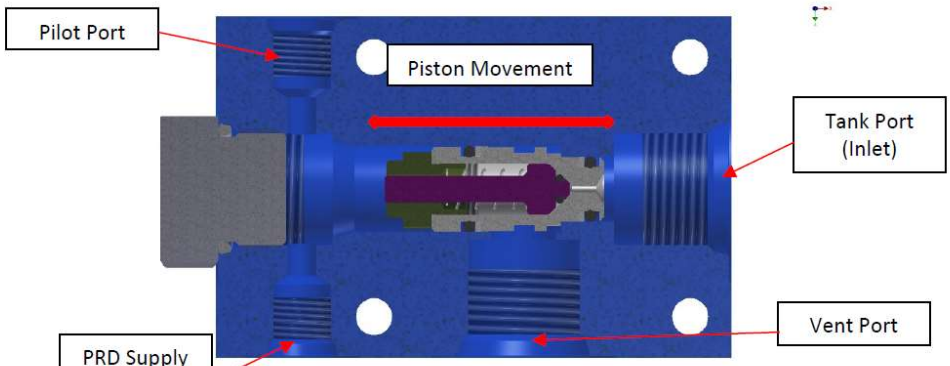


Figure 26: Bias-actuated Valve (Cross Section View)

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From the Transport Canada equivalency certificate:

(p) despite Clause 4.3.1 of CSA B340-08, the container is equipped with a pressure-relief device system designed to vent all tubes in the event of a fire. The system consists of a thermally activated sensing device at several locations within the container running continuously along the full length of the framework which actuates when exposed to direct flame or a constant heat of 177°C or greater. Upon actuation of the pressure-relief device system, the contents of the tubes shall be vented. The vent ports are arranged to discharge upward and unobstructed to the open air in such a manner as to prevent any impingement of escaping gas upon the tubes and are located such that they will not be blocked in the event of a rollover of the container;

5.3
A compressor shall be installed such that the area electrically classified in accordance with Table 1 does not extend beyond a property line.

5.4
A compressor enclosure shall be of a design that will not accumulate leaked natural gas and shall not be modified such as to reduce the ventilation allowed by the designer of the compressor enclosure.

5.5
Where a compressor enclosure shares one wall of an existing building, the shared wall shall be gas tight and have at least a 2 h fire resistance rating.

5.6
A compressor package shall be mounted on a reinforced concrete slab or equivalent structure, which may be integral to a compressor enclosure, and placed directly above an area which has been prepared using good engineering practice for drainage and support.

5.7
A compressor enclosure large enough to admit service personnel to the compressor enclosure shall have an access door that opens outwards and, if equipped with a latch, shall be equipped on the inside with fast-release hardware that can be operated without a key.

① **5.8**
Equipment shall be installed in such a manner so as to provide adequate access for operation, inspection, and maintenance.

① **5.9**
Passageways required for egress shall be at least 991 mm (39 in) in width.

① **5.10**
A compressor shall be protected from unauthorized access by a fenced or walled area, vault, building, or enclosure made of non-combustible materials which shall not be used for any other purpose, except that the fenced or walled area or vault may also enclose a gas storage facility. When a fence or wall is used, it shall be 1.83 m (6 ft) high, measured from the ground level.

① **5.11**
Means shall be provided to shutdown the compressor upon the detection of final discharge gas temperature from the compressor (or any associate auxiliary cooling system) above the maximum design temperature of the materials used in the system.

6 Storage

① **6.1**
In addition to the requirements of Clauses 6.11 and 6.12, a gas storage facility shall be located not less than 3.05 m (10 ft) inside the property line of a fuelling station. This distance may be reduced to a minimum of 0.914 m (3 ft) for a storage volume up to and including 10 000 L (2 640 gal) (water capacity) and to a minimum of 1.52 m (5 ft) for a storage volume greater than 10 000 L (2 640 gal)

(water capacity), by the use of a 4 h fire resistance rated wall. The wall shall be located between the storage facility and the property line, and shall be

a) a minimum of 1.83 m (6 ft) in height or the height of the gas storage facility, measured from grade level; and
b) not less than the overall length of the portion of the gas storage facility exposed to the wall.

6.2

CNG storage containers shall be located not less than 15.2 m (50 ft) from a railroad main track.

① 6.3

CNG storage equipment shall not be located directly beneath electrical power distribution lines or high voltage power lines and shall be located at a minimum distance of 3.05 m (10 ft) horizontal direction from the vertical projection of the closest overhead power line. For CNG equipment and piping runs located near and/or running parallel to electrical power transmission lines, the impact of induced voltages and currents shall be studied and appropriate setbacks shall be determined in agreement with the electrical utility and the authority having jurisdiction.

6.4

CNG storage equipment shall not be installed closer than 1.52 m (5 ft) measured horizontally from the vertical projection of any underground high voltage power line.

① 6.5

A gas storage facility shall be either:

a) located outdoors at ground level, except that it may be located on the roof of a noncombustible compressor enclosure designed to support containers, provided that the roof and containers are readily accessible to authorized personnel; or
b) sheltered, provided that the shelter:
   i) has the equivalent of at least 25% of the total area of its perimeter walls at the lowest point practicable open to the outdoors; and
   ii) it has a roof designed so that it will not accumulate gas; or
   iii) located in a vault with drainage and adequate ventilation. See Clause 11.

6.6

A gas storage container or assembly shall be supported on a reinforced concrete slab or equivalent structure, which may be integral to the storage container assembly, and placed directly above an area which has been prepared using good engineering practice for drainage and support. The gas container shall be installed in accordance with the requirements of this Code and the manufacturer's instructions, and shall be protected from physical damage. No combustible material shall be stored within a radius of 3 .05 m (10 ft) of the container.

6.7

When a fuel container is located adjacent to a storage area for either flammable or combustible liquids, protection such as diking, diversion curbs, or grading shall be provided to prevent any accumulation of these liquids under the container.

6.8

Sufficient space shall be provided for visual observation of each container in the storage facility.

6.9
An unobstructed space shall be provided for each group of fuel containers such that individual container valves and fittings are accessible within a distance of 0.914 m (3 ft).

6.10
Where doors, windows, or other openings in an adjacent building are within the boundaries of the classified areas listed in Table 2, the building shall be classified as Class I, Zone 1 or Class I, Zone 2 as applicable in Table 2.

6.11
The space surrounding a gas storage facility shall be electrically classified to the distances specified in Table 2.

Table 2
Electrical classification of space surrounding gas storage facilities
(See Clauses 6.10, 6.11, 6.12, and 6.13.)

	Distance*
	Measured from opening in container, m (ft)
Storage volume water capacity L (gal)	Class I Zone 2, Group IIA (Div. 2, Group D)
Up to and including 4 000 (1 056 gal) From 4 001 to 10 000 (1 057 to 2640) Over 10 000 (2 640)	2.44 (8) 3.96 (13) 10.1 (33)

** When a wall with a 4 h fire resistance rating is located within these distances, the distances shall be measured either around the end of (see Figure 2), or over the wall, or to a minimum of 0.5 m (19.7 in) below the top of the wall (see Figure 1), but not through it. This wall shall not be located closer than 1 m (3 ft) from a fuel container with up to 10 000 L (2 640 gal) in storage volume, and 1.52 m (5 ft) from a fuel container with a storage volume greater than 10 000 L (2 640 gal).*

Note: *The space surrounding containers with openings smaller than 1.0 cm (394 in) diameter and storage volume water capacity less than 454 L (120 gal) shall be electrically classified according to Table 2.*

6.12
A gas storage facility shall be installed such that the space surrounding it, which is electrically classified in accordance with Table 2, does not extend beyond a property line.

6.13
Where a building other than a compressor enclosure is within the distances specified in Table 2 of a gas storage facility, the building face exposed to the gas storage facility shall

a) have a 4 h fire resistance rating;
b) have gas-tight walls and no doors, windows, or other openings within the distances specified in Table 2 unless the building is electrically classified as Class I, Zone 1, Group IIA (Division 1, Group D), or Class I, Zone 2, Group IIA (Division 2, Group D) as applicable in Table 2; and
c) be not closer than 1.52 m (5 ft) to the nearest container when the storage volume is greater than 10 000 L (2 640 gal) (water capacity).

6.14

A gas storage facility shall be located not less than 4.88 m (16 ft) from a liquid fuel dispensing point or receiving point, unless a 4 h fire resistance rated wall is located between the gas storage facility and either the dispensing point or receiving point.

6.15

A fence, wall, or combination thereof shall be made of noncombustible materials and shall completely surround a gas storage facility to restrict physical damage and unauthorized access, and shall have

a) a height of 1.83 m (6 ft) or more measured from grade level; and
b) two gates, where needed, to ensure that egress will not be obstructed by fire and/or the discharge of gas.

6.16

At a private station, a fence, wall, or combination thereof that completely encloses the property may be used in lieu of the fence, wall, or combination thereof specified in Clause 6.15, provided it has a height of 1.83 m (6 ft) or more measured from grade level.

6.17

Subject to the authority having jurisdiction, a gas storage facility consisting of a skid-mounted assembly does not require an additional enclosing fence or wall where the skid design has provisions to restrict damage and unauthorized access to the valves and tubing.

6.18

Each side of a gas storage facility that is exposed to potential impact by vehicles shall be protected

a) by protective barriers designed by an engineer as being equivalent to those specified in Items b), c), or d);
b) where the vehicles may be expected to travel at 8.05 km/h (5 mph) or less, by means of a chain link fence, or equally resistant wall, which meets the following requirements:
   i) the fence or wall shall not be closer than 0.610 m (2 ft) to the gas storage facility.
   ii) the chain link fence shall be constructed from 9-gauge wire hot dip galvanized with a mesh size of 50.8 mm (2 in).
   iii) the post shall be 8.89 cm (3.5 in) diameter, hot dip galvanized with a spacing not exceeding 3.05 m (10 ft), and posts shall be 0.914 m (3 ft) from grade to top, or an approved equivalent;
c) where the vehicles may be expected to travel between 8.05 km/h (5 mph) and 48.3 km/h (30 mph), by means of concrete-filled steel pipe posts 102 mm (4 in) or more in diameter located at least 0.914 m (3 ft) or more from the container, measuring at least 0.914 m (3 ft) from grade to the top and to the bottom of the post and set in concrete on 0.762 m (2.5 ft) centres; and
d) where the vehicles may be expected to travel in excess of 48.3 km/h (31 mph), by means of
   i) a steel beam guard rail measuring 305 mm (1 ft) wide located at least 0.914 m (3 ft) or more from a container, and supported by pressure-treated square wooden posts having a minimum dimension of 190 mm (7.5 in), which are set on centres not more than 1.91 m (6.25 ft) apart and buried not less than 0.914 m (3 ft) below grade; or
   ii) a guard rail of the reinforced concrete type, commonly referred to as the "New Jersey Turnpike barrier", having a height not less than 0.762 m (2.5 ft) when measured to the top of the rail from grade level and located 0.914 m (3 ft) or more from a container.

6.19

Particular attention shall be given to the need to protect nonmetallic fuel storage containers, valves, and fittings from off-road vehicles such as forklift trucks.

Δ① **6.20**

Signs with the words "AUTHORIZED PERSONNEL ONLY" (French: «PERSONNEL AUTORISÉ SEULEMENT») and "NO SMOKING — FLAMMABLE GAS" (French: «DÉFENSE DE FUMER - GAZ INFLAMMABLE») in letters not less than 45.7 mm (1.8 in) high shall be posted at every gas storage facility in conspicuous places where readily visible, and at least one of each sign shall be placed near the gate(s) referred to in Clause 6.15(b).

6.21

Where other than all-steel containers that are not protected by a fire proof barrier are used for storage of natural gas at a fuelling facility, the use of open flames shall be prohibited within 3.05 m (10 ft) of the containers, and signs with the words "NO OPEN FLAMES" («FLAMMES NUES INTERDITES») in letters not less than 45.7 mm (1.8 in) high shall be posted at the gas storage facility in conspicuous places where readily visible.

7 Dispensing

Note: *This section is not applicable to VRAs without storage. (These are covered in CSA B149.1.)*

7.1

An NG dispensing point shall

a) be located outdoors, unless otherwise specified within this Code;
b) be protected from vehicular damage; and
c) have minimum clearances as specified in Table 3.

Table 3
Clearances from an NG dispensing point
(See Clause 7.1.)

Object, L (gal)	Distance, m (ft)	
	Public fuelling station	**Private fuelling station**
Liquid fuel dispenser	1.52 (5)	1.52 (5)
Property line	3.05 (10)	3.05 (10)†
Opening into a building	2.13 (7)	2. 13 (7)
Gas storage*		
– up to and including 4 000 (1 056)	2.44 (8)	0.610 (2)

(Continued)

JFSA
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

Project Ref #:P1901(p)
Client: Ottawa D-Squared Asphalt Ltd.

Ottawa. ON
Paris. ON
Gatineau. QB
Montréal. QB
Québec. QB

Appendix E

5455 Boundary Rd SPC
August 2020

From: Jocelyn Chandler
To: "David.Ryan@ottawa.ca"
Cc: Sean Czaharynski
Subject: Request for advice re Municipal Drain Act re 5455 Boundary Rd redevelopment
Date: Friday, July 10, 2020 1:26:00 PM

Hello Dave, I hope you have been keeping well.
I wanted to check in with you about a site I am working on.
The yellow 'X' below is 5455 Boundary Rd. The property has generally had drainage outletting through the rear property 'T' (the future site of the CRRRC Taggart Miller Dump). These drainage channels (red) will be closed by the CRRRC development.
The receiver (tributary to the Regimbald Municipal Drain) has been realigned as part of the Amazon Warehouse development 'A'.
5455 Boundary Rd is about be the subject of a site plan application, and plans to reconnect their drainage outlet to the Amazon site tributary along the pink line. Ultimately this means drainage from 5455 Boundary Road will continue to drain to the same receiver, but the connection will be 250 m upstream of the previous connection point. The quantity will be controlled to predevelopment conditions.
Please advise if this will trigger any requirements under the Drainage Act.
Jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

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52 Springbrook Drive, Ottawa ON, K2S 1B9
Tel.: 613-836-3884 x231 | Email: jchandler@jfsa.com | Website: www.jfsa.com
Ottawa-Paris(ON)-Gatineau-Montréal-Québec

From: Jeff Parkes
To: Jocelyn Chandler; Tim Chadder RPP
Cc: Dave Meikle; Sean Czaharynski
Subject: Re: 5455 Boundary Road - D-Squared development drainage solution
Date: Wednesday, August 05, 2020 7:55:36 PM
Attachments: Outlook-l3fnd20y.png

Hi Jocelyn. We will get you some feedback. To whom have you been sending your design concepts to at Golder ? Paul Smolkin?

Jeff

Jeff Parkes | VP Planning & Dev.
Taggart Realty Management
T | 613-234-7000 Ext: 535
A | 225 Metcalfe Street, Suite 708 Ottawa, ON. K2P 1P9
E | jparkes@taggart.ca
W | www.taggart.ca

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From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: Wednesday, August 5, 2020 4:56:00 PM
To: Tim Chadder RPP <tchadder@jlrichards.ca>
Cc: Dave Meikle <dave@dsqconstruction.com>; Jeff Parkes <jparkes@taggart.ca>; Sean Czaharynski <sczaharynski@rcii.com>
Subject: 5455 Boundary Road - D-Squared development drainage solution

Hello Tim, I hope all is well with you.
We are submitting the SPC application for 5455 Boundary Road this week. As we previously discussed with Golder and yourself, we have pursued a solution to the drainage issue that we expect will be satisfactory for the CRRRC site and provide the required outlet for 5455 Boundary Road. In a nutshell, we are proposing to squeeze a small channel up along the north property line of the CRRRC site until we can connect it to the Amazon realigned channel at the pink circle in the drawing below. This will require a minor tightening of the grading around the CRRRC recycling area bulge out, and it is our understanding this can be accommodated in the next iteration. We are having some difficulty getting a final confirmation of this solution from the Golder engineers so that we can ask Taggart to indicate their acceptance of the channel on the CRRRC land. As you can imagine, city staff want all the i's dotted and t's crossed. They might ask for an easement but I am not going to start by offering one. For your information, I have provided the paragraph below to the City in the SPC summary report. Would you be able to help get this design information to the appropriate CRRRC consultant to review and confirm? I will send the plans and report for their information when requested. Thanks for your help, j
.

Drainage: Stormwater from the site will be captured in a swale along the rear of the property and conveyed through the CRRRC site, connecting to the channel relocated around the Amazon Warehouse site. This is consistent with the existing drainage pattern and receiver. Enhanced quality and post to pre 5-year and 100-year quantity controls are designed into the system as required.

The circulated CRRRC site plan did inadvertently cut off the drainage from 5445 Boundary Road and they have been cooperative in addressing this moving forwards. The outlet from the subject site is proposed to be conveyed through a relocated channel through the CRRRC site. Robinson Consultants has had this discussion with the CRRRC engineering staff at Golder. We have spoken with the CRRRC application agent, Tim Chadder at JL Richards, and communicated with Taggart directly. It is our understanding that the new channel designed by Robinson will be accommodated in the next round of CRRRC plans. Capacity calculations for the outlet ditch are contained in the stormwater management report. This drainage channel coming from the 5455 Boundary Road site will be aligned up the north property boundary of the CRRRC site and connect to the remnant upstream stub of the Amazon site channel. No works are proposed on the Amazon site.

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resource Planner / Project Manager

52 Springbrook Drive, Ottawa ON, K2S 1B9
Tel.: 613-836-3884 x231 | Email: jchandler@jfsa.com | Website: www.jfsa.com

From: Tim F. Chadder
To: Jocelyn Chandler
Subject: Re: Drainage Boundary Road
Date: Friday, June 19, 2020 2:32:59 PM
Attachments: image002.png
120061914325501103.png

As long as you do the design work and handle any approvals then our clients will be fine. Jeff wants to spend nothing.
Golder appears to be on side as it didn't affect their plans to any great degree.
Will you need an easement? I assume that the city will require it. We can connect if that is necessary as there may be costs for that.
Tim

Sent from my iPhone

Tim F. Chadder, MCIP, RPP
Associate
Chief Planner

J.L. Richards & Associates Limited
700 - 1565 Carling Avenue, Ottawa, ON K1Z 8R1
Tel: 613-728-3571 Cell: 613-614-4075 Fax: 613-728-6012

 On Jun 19, 2020, at 2:01 PM, Jocelyn Chandler <jchandler@jfsa.com> wrote:

Hi Tim, thanks for following up.
Well…not much solid progress so far. I do know that Sean at Robinson ran our plan by the CRRRC site engineers at Golder and they thought they could accommodate it…but he was under the impression that things were not really moving along with finalizing the site plan there. Not sure if that is the case.
We have gone ahead with assuming it will work out and prepared our plans for submission accordingly. But the application has not gone in yet. Anything at your end?
j

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resources Planner / Project Manager

<image001.jpg>

52 Springbrook Drive, Ottawa ON, K2S 1B9
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Ottawa-Paris(ON)-Gatineau-Montréal-Québec

From: Tim F. Chadder <tchadder@jlrichards.ca>
Sent: June 19, 2020 12:46 PM
To: Jocelyn Chandler <jchandler@jfsa.com>
Subject: Drainage Boundary Road

Jocelyn,
Have you made any headway completing your request for an easement or similar from CRRRC?
Tim

Tim F. Chadder, MCIP, RPP
Associate
Chief Planner

J.L. Richards & Associates Limited
700 - 1565 Carling Avenue, Ottawa, ON K1Z 8R1
Tel: 613-728-3571 Cell: 613-614-4075 Fax: 613-728-6012

J.L. Richards & Associates Limited is proactively doing our part to protect the wellbeing of our staff and communities at large. Our staff members are working remotely and we remain fully operational, delivering quality services to you through value and commitment, as always. Please reach out to us if you have any questions about your project.

**** Caution : External Email /// Attention : Courriel externe ****

JFSA
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

Project Ref #:P1901(p)
Client: Ottawa D-Squared Asphalt Ltd.

Ottawa. ON
Paris. ON
Gatineau. QB
Montréal. QB
Québec. QB

Appendix F

5455 Boundary Rd SPC
August 2020

From:	Darouze, George
To:	Jocelyn Chandler; Powell, Jane
Cc:	Soares, Celeste; Dave Meikle; Domenic Franco Madonna
Subject:	RE: Request for consultation regarding development application in Cumberland Ward - D-Squared Construction
Date:	Friday, June 12, 2020 11:14:51 AM
Attachments:	image006.png image007.png image009.png
Importance:	High

Hi Jocelyn,

We've reviewed the file and see no need for a meeting. I'm happy to provide any support you may need with the application.

Kindest regards,

George

GEORGE
DAROUZE
DEPUTY MAYOR & OSGOODE WARD COUNCILLOR
613.580.2490 www.GeorgeDarouze.ca
@GeorgeDarouze Councillor George Darouze

From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: June 04, 2020 5:20 PM
To: Powell, Jane <Jane.Powell@ottawa.ca>; Darouze, George <George.Darouze@ottawa.ca>
Cc: Soares, Celeste <Celeste.Soares@ottawa.ca>; Dave Meikle <dave@dsqconstruction.com>; Domenic Franco Madonna <dmadonna@dsqconstruction.com>
Subject: Request for consultation regarding development application in Cumberland Ward - D-Squared Construction

Hello Jane, Thank you.
I have provided a link below that will allow you to download a selection of draft documents prepared in support of the site plan. I have included those that will be most useful to understanding the proposal. I have not included detailed technical reports at this time, however a brief summary of their content is provided in the project description document.
I have also included a brochure "Meet the Neighbours' from the manufacturer (ASTEC) of the asphalt plant machinery as it provides good general information about asphalt plant production. Let me know if anything further would be helpful.
https://wetransfer.com/downloads/6fc6bb1713c321f441dc98a297cc5da220200604211531/ddcbe6b1809ecc29255fc8cf5d4215a620200604211556/f54cad

We look forwards to connecting and introducing our project for your comments.
Jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resources Planner / Project Manager

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From: Powell, Jane <Jane.Powell@ottawa.ca>
Sent: June 3, 2020 10:06 AM
To: Jocelyn Chandler <jchandler@jfsa.com>; Darouze, George <George.Darouze@ottawa.ca>
Cc: Soares, Celeste <Celeste.Soares@ottawa.ca>; Dave Meikle <dave@dsqconstruction.com>; Domenic Franco Madonna <dmadonna@dsqconstruction.com>
Subject: RE: Request for consultation regarding development application in Cumberland Ward - D-Squared Construction

Good morning Jocelyn,

Thank you for reaching out to Councillor Darouze and letting him know about the upcoming development application. I would be happy to set up a time for everyone to connect and review the file.

It would be best if we could review some files prior to meeting. If you could please forward the application and plans we will review the documents and then look at a time to meet virtually.

Thanks again for emailing and we look forward to hearing from you soon.

Kindest regards,

Jane Powell
Executive Assistant
OFFICE OF GEORGE
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From: Jocelyn Chandler <jchandler@jfsa.com>
Sent: June 02, 2020 12:02 PM
To: Darouze, George <George.Darouze@ottawa.ca>
Cc: Soares, Celeste <Celeste.Soares@ottawa.ca>; Dave Meikle <dave@dsqconstruction.com>; Domenic Franco Madonna <dmadonna@dsqconstruction.com>
Subject: Request for consultation regarding development application in Cumberland Ward - D-Squared Construction

Hello Councillor Darouze,
I hope you are keeping well. I have been waiting for the Planning and ARAC committee work to get past the urban expansion meetings before contacting you, I am sure that was enough on your plate.
D-Squared Construction is preparing a site plan control application for a property located at 5455 Boundary Road (adjacent the Amazon Warehouse and Taggart Miller CRRRC site at Boundary Road and HWY 417). D-Squared intends to developed an asphalt plant, complimentary to their construction and aggregate business, and to provide a product that is currently underserviced in the south-east rural area of Ottawa. In advance of submission, we would like to discuss this project with you (by video conference perhaps?), as it is our understanding you are currently acting for the Cumberland Ward in this capacity. I will provide you with some documents before we meet to help explain the project clearly.
Please let me know what would suit you and any specific information that would be helpful in advance.
Thank you for your consideration, Jocelyn

Jocelyn Chandler, M.Pl., RPP, MCIP
Land and Water Resources Planner / Project Manager

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From: Ward 19 Cumberland /Quartier 19 Cumberland <ward19co@ottawa.ca>
Sent: May 20, 2020 10:20 AM
To: Jocelyn Chandler <jchandler@jfsa.com>
Cc: Soares, Celeste <Celeste.Soares@ottawa.ca>; Darouze, George <George.Darouze@ottawa.ca>
Subject: Re: Request for consultation regarding development application in Cumberland Ward

Hi Jocelyn!

Councillor George Darouze is the interim Council representative on rural planning authority matters for Cumberland (and incidentally he's been an equal partner on anything concerning Amazon/area, due to the proximity of his ward.)

I've copied his office on this message! Could you kindly ensure Celeste from the Cumberland office is included on all email exchanges as well just so we have the same information!

Please let me know if there's anything else we can do to assist. Our office remains open for any service requests.
Cheers

Stephanie Brown Bellefeuille
Executive Assistant / Adjointe principale
Cumberland Ward / Quartier Cumberland

Sent from my iPhone

> On May 15, 2020, at 4:50 PM, Jocelyn Chandler <jchandler@jfsa.com> wrote:
>
> **CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.**
>
> **ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.**
>
> Hello,
> I have a client who is moving forwards with a development application for site plan control to build an industrial facility near the new Amazon Warehouse (Boundary Road and HWY 417). In advance of submission, we would like to discuss this project (by video conference perhaps?) with whoever is currently representing/or acting for the Cumberland Ward in this capacity.
> Thank you for your attention, Jocelyn
>
> **Jocelyn Chandler, M.Pl., RPP, MCIP**
> Land and Water Resource Planner / Project Manager
>
> 52 Springbrook Drive, Ottawa ON, K2S 1B9
> Tel.: 613-836-3884 x231 | Email: jchandler@jfsa.com | Website: www.jfsa.com
> Ottawa-Paris(ON)-Gatineau-Montréal-Québec

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'

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JFSA
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

Project Ref #:P1901(p)
Client: Ottawa D-Squared Asphalt Ltd.

Ottawa. ON
Paris. ON
Gatineau. QB
Montréal. QB
Québec. QB

Appendix G

5455 Boundary Rd SPC
August 2020

Ministry of the Environment, Conservation and Parks
Client Services and Permissions Branch
1st Floor
135 St Clair Ave W
Toronto ON M4V 1P5
Fax: (416) 314-8452
Telephone: (416) 314-1792

Ministère de l'Environnement, de la Protection de la nature et des Parcs
Direction des services à la clientèle et des permissions
135 av St Clair O
Toronto ON M4V 1P5
Télécopieur : (416) 314-8452
Téléphone : (416) 314-1792

June 8, 2020

David Meikle, Vice President of Business Development and Quarry Operations
Ottawa D-Squared Asphalt Limited
6811 Hiram Road
Greely, Ontario
K4P 1A2

Dear Sir/Madam:

Re: Application for Approval of Air
Emissions from a Hot-Mix Asphalt Plant and Aggregate Depot
City of Ottawa, Ontario
Reference Number 8946-BPJQDD

We acknowledge receipt of your application for approval dated March 30, 2020 and received on April 30, 2020 for the following:

Approval Type:	Air
Project Description:	This proposal is for an Environmental Compliance Approval with Limited Operational Flexibility (Air) which replaces all the current Environmental Compliance Approvals for Air at this facility and includes the addition of new or historically unapproved sources for all emissions from Ottawa D-Squared Asphalt Limited, a hot-mix asphalt plant and aggregate depot located at 5455 Boundary Road in Navan, Ontario. The application includes all sources at the facility, including the receiving, storage, processing, and shipping of aggregate, the receiving and shipping of asphalt cement, aggregate drying, hot-mix asphalt production storage, and shipping, and all other supporting equipment and processes at the site. Emissions to the air from this facility include particulate matter, respirable crystalline silica, nitrogen oxides, sulphur dioxide, carbon monoxide, and noise.
Site Location:	5455 Boundary Road City of Ottawa, Ontario

The Ministry's reference number for your application is 8946-BPJQDD. Please quote this number in any correspondence or enquiries regarding this application.

We have screened your submission for completeness and find that the following additional information/documentation is necessary for us to process your application:

1. Please provide an electronic copy of the input/output files for dispersion modelling;

2. Please ensure the Acoustic Assessment Checklist is signed and dated by the applicant and technical contact;

As you are aware, the Minister has established and requires the payment of fees in respect of ECA Applications pursuant to section 179.1 of the *Environmental Protection Act* . The Minister's current fee requirement (https://www.ontario.ca/page/ministers-requirement-fees-ecas) requires that your application be accompanied by an application fee of $6,700.

If you have not yet done so, please send a hard copy of your application and all supporting information, including your fee payment, to the Client Services and Permissions Branch of the Ministry at 135 St. Clair Avenue West, 1st Floor, Toronto, Ontario M4V 1P5. Once this is done, please send an email confirming that you have submitted the hard copy of the application package, including fee payment.

In consideration of the challenges facing organizations and all Ontarians during the current COVID-19 outbreak, the Ministry may delay the processing of the payment of your application fee at this time. You have 60 days following the end of the emergency declared under the *Emergency Management and Civil Protection Act* to mail the required application fees to the Client Services and Permissions Branch.

Please note that a failure to pay a required fee is an offence under subsection 186 (3.1) of the *Environmental Protection Act* and may result in the Ministry taking enforcement action.

Please be advised that should we not receive the above information/documentation or a response with explanations within two weeks of the date of this letter, we will consider your application withdrawn, and close your file accordingly.

Please note that your submission has only been screened with respect to the presence of the supporting documentation normally required for this type of application, and did not include any technical analysis of the documentation, and therefore you may still be requested to provide some additional information during our detailed technical review of the application. In such a case, the Reviewer will contact you and/or your identified Project Technical Information Contact at that time.

Also, please note that a duplicate copy of the application and all supporting information should have been sent to the local District Office of the Ministry. If this has not been done, please do so as soon as possible including the missing information/documentation identified above.

Should you have any questions related to your application, please contact me at the above phone number.

Sincerely,

Shannon Williams
Application Assessment Officer

c: District Manager, MECP Ottawa District Office
Megan Ostronic, BCX Environmental Consulting (mostronic@bcxenvironmental.com)
Swetha Kulandaivelan, Howe Gastmeier Chapnik Limited
(skulandaivelan@hgcengineering.com)