

DGIR 214026 Fire Duncan

From: Brian.Goetz@gov.bc.ca, Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
To: First authority <EPHS.afterhours@fnha.ca>
Sent: January 2, 2022 7:13:01 AM PST

Hi Dan.

I couldn't forward the report.

Here are the details. Fire at Kal complex 6482 Norcross Road in Duncan. Toxic runoff from fire fighting water heading down the ditch and towards Somenos Marsh to the southeast.

Sent from my iPad

Re: DGIR 214026 Fire Duncan

From: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
To: Greg Vos <Greg.Vos@fnha.ca>, Akhil Manne <Akhil.Manne@fnha.ca>, alec.johnnie@cowichantribes.com, EPHS After Hours <ephs.afterhours@fnha.ca>
Cc: Karen Larson <Karen.Larson@fnha.ca>, HPES.Duncan@islandhealth.ca
Sent: January 2, 2022 10:29:34 AM PST
Attachments: image002.jpg, image002.jpg

Thanks Dan:

fire is at ok tire facility. Ok tire and North Cowichan Fire have updated me. Ok tire, Emcon highway maintenance and North cowichan are continuing containment operations. Ok tire rep indicated black runoff appears to be mostly soot from building and roof fire. Fire is mostly out and an excavator is working on breaking up the structure. Some tires appeared to have been consumed in the fire and may be part of the runoff. Still waiting for environmental contractors and vacuum trucks. Ok tire will be developing a cleanup plan and investigating down stream effects today.

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From: EPHS After Hours <ephs.afterhours@fnha.ca>
Sent: Sunday, January 2, 2022 10:11:15 AM
To: Greg Vos <Greg.Vos@fnha.ca>; 'alec.johnnie@cowichantribes.com' <alec.johnnie@cowichantribes.com>; Akhil Manne <Akhil.Manne@fnha.ca>
Cc: 'Goetz, Brian P ENV:EX' <Brian.Goetz@gov.bc.ca>; 'HPES.Duncan@islandhealth.ca' <HPES.Duncan@islandhealth.ca>; Karen Larson <Karen.Larson@fnha.ca>
Subject: RE: DGIR 214026 Fire Duncan

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Greg, Akhil and Alec, I'm passing this email along to you for your information and action as you deem necessary. I conclude from this Google Earth snapshot that Cowichan is likely the closest First Nation Community so I have copied Alec, the Public Works Manager. I'm hoping that the marsh is not a source of drinking water. I have also copied Island Health as a precautionary measure.

The MoE spill line can be contacted for more information at 1-800-663-3456.



Dan Ferguson
Environmental Health Officer
First Nations Health Authority
Suite 770 - 175 2nd Ave
Kamloops, BC V2C5W1
Office: 778-362-8184
Cell: 250-320-9480
Fax: 250-851-4838

-----Original Message-----

From: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
Sent: Sunday, January 2, 2022 7:13 AM
To: EPHS After Hours <ephs.afterhours@fnha.ca>
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Cc: Greg Vos <Greg.Vos@fnha.ca>, alec.johnnie@cowichantribes.com, Akhil Manne <Akhil.Manne@fnha.ca>, HPES.Duncan@islandhealth.ca, Karen Larson <Karen.Larson@fnha.ca>
Sent: January 2, 2022 10:36:16 AM PST
Attachments: image002.jpg

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Thanks Brian, any confirmation on whether or not the Marsh/lake is a source of drinking water?

The other human health risk was the smoke but I'm guessing that has lessened significantly by now.

Dan

Sent from my iPhone

On Jan 2, 2022, at 10:29 AM, Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca> wrote:

Thanks Dan:

fire is at ok tire facility. Ok tire and North Cowichan Fire have updated me. Ok tire, Emcon highway maintenance and North cowichan are continuing containment operations. Ok tire rep indicated black runoff appears to be mostly soot from building and roof fire. Fire is mostly out and an excavator is working on breaking up the structure. Some tires appeared to have been consumed in the fire and may be part of the runoff. Still waiting for environmental contractors and vacuum trucks. Ok tire will be developing a cleanup plan and investigating down stream effects today.

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Cc: 'Goetz, Brian P ENV:EX' <Brian.Goetz@gov.bc.ca>; 'HPES.Duncan@islandhealth.ca' <HPES.Duncan@islandhealth.ca>; Karen Larson <Karen.Larson@fnha.ca>
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the marsh is not a source of drinking water. I have also copied Island Health as a precautionary measure.

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[cid:image002.jpg@01D7FFC1.120F90E0]

Dan Ferguson

Environmental Health Officer

First Nations Health Authority

Suite 770 - 175 2nd Ave

Kamloops, BC V2C5W1

Office: 778-362-8184

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Fax: 250-851-4838

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Sent from my iPad

Untitled (3).msg

From: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
To: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
Sent: January 4, 2022 2:33:13 PM PST
Attachments: Resized_20220102_094021.jpeg

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Untitled.msg

From: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
To: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
Sent: January 4, 2022 2:33:39 PM PST
Attachments: Resized_20220102_093902.jpeg

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Untitled (2).msg

From: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
To: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
Sent: January 4, 2022 2:34:28 PM PST
Attachments: Resized_20220102_093354.jpeg

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Email from North Cowichan re DGIR 214026 Fire at OK Tire in North Cowichan

From: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
To: Pridham, Dave ENV:EX <Dave.Pridham@gov.bc.ca>
Sent: January 5, 2022 10:03:36 AM PST

I'll leave it with you. RP indicated very little if any tires burned.

RP indicated Environment Canada took samples and followed up with RP but this is not confirmed.

From: Dave Preikshot <dave.preikshot@northcowichan.ca>
Sent: January 5, 2022 9:31 AM
To: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
Cc: David Conway <david.conway@northcowichan.ca>
Subject: Fire at OK Tire in North Cowichan

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Brian,

Martin Drakely, North Cowichan's Fire Chief indicated that you had been contacted about the Fire at OK Tire on the Trans Canada Highway. I am the Environmental Specialist at North Cowichan and will be visiting the site to see where contaminated runoff may have reached. I can see from our mapping that the North Cowichan storm system carries runoff from the OK Tire site across the highway to the BC Forest Discovery Center, then across their property in a ditch/swale to some wetlands, see map. I have been contacted by a resident with photos taken soon after the event that show the residue in ditches and the stormwater system leading to some wetlands that surround Somenos Lake, see this link: <https://1drv.ms/u/s!AiYJ3OiK5nEbgZ5d9bBXAQFyOYIecQ?e=NNoClz>. Have any of your staff visited the site yet? I would be happy to meet/talk with anyone on your staff that may be doing a site investigation. Please let me know if you are the appropriate person to stay in touch with on this file. Thanks,

Dave

Dave Preikshot, PhD, RPBio (he/him)
Senior Environmental Specialist
Engineering Department

Municipality of North Cowichan
7030 Trans-Canada Highway
Duncan, BC Canada
V9L-3X4

dave.preikshot@northcowichan.ca

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C 250.510.8529
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RE: Fire at OK Tire in North Cowichan

From: Vinden, Alice ENV:EX <Alice.Vinden@gov.bc.ca>
To: Dave Preikshot <dave.preikshot@northcowichan.ca>
Sent: January 5, 2022 10:05:28 AM PST
Good morning Dave.

Response Officer Dave Pridham from Nanaimo will be following up with you. I forwarded your email to him.

From: Dave Preikshot <dave.preikshot@northcowichan.ca>
Sent: January 5, 2022 9:31 AM
To: Goetz, Brian P ENV:EX <Brian.Goetz@gov.bc.ca>
Cc: David Conway <david.conway@northcowichan.ca>
Subject: Fire at OK Tire in North Cowichan

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Hi Brian,

Martin Drakely, North Cowichan's Fire Chief indicated that you had been contacted about the Fire at OK Tire on the Trans Canada Highway. I am the Environmental Specialist at North Cowichan and will be visiting the site to see where contaminated runoff may have reached. I can see from our mapping that the North Cowichan storm system carries runoff from the OK Tire site across the highway to the BC Forest Discovery Center, then across their property in a ditch/swale to some wetlands, see map. I have been contacted by a resident with photos taken soon after the event that show the residue in ditches and the stormwater system leading to some wetlands that surround Somenos Lake, see this link: <https://1drv.ms/u/s!AiYJ3OiK5nEbgZ5d9bBXAQFyOYlecQ?e=NNoClz>. Have any of your staff visited the site yet? I would be happy to meet/talk with anyone on your staff that may be doing a site investigation. Please let me know if you are the appropriate person to stay in touch with on this file. Thanks,

Dave

Dave Preikshot, PhD, RPBio (he/him)
Senior Environmental Specialist
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Nanaimo, BC
V9T 4B7



6482 Norcross Road
Duncan, BC
V9L 5T3

CONFIDENTIAL

January 12, 2022

Attn: Robert Nikirk, *OK Tire*

Re: *SURFACE WATER INSPECTION LETTER* – 6482 Norcross Road, Duncan, BC

TerraWest Environmental Inc. (TerraWest) was retained by Robert Nikirk (the 'Client') to complete an assessment of downgradient impacts to aquatic receiving bodies following a fire at the OK Tire located at 6482 Norcross Road, Duncan, BC, herein referred to as the 'Subject Property' and/or the 'Site'.

TerraWest was contacted by the Client at approximately 8:30AM on January 2, 2022 and was informed a fire had occurred on the Subject Property that morning. A large volume of water was reported to be leaving site from firefighting efforts and entering a series of storm water catch basins: two located at the site entrance along Norcross Road and one located approximately 50 metres south along the Island Highway.

It is understood these catch basins eventually run under the intersection of Drinkwater Road and the Island Highway before discharging into an open ditch along the west side of the Forest Discovery Centre. From there, surface water enters the Forest Discovery Centre's greater drainage system with eventual discharge to the tributaries that feed Somenos Marsh, herein referred to as the 'Aquatic Receiving Bodies', as shown in the enclosed figure.

It is understood that following the event of the fire, the Client received a visit from Mr. Brian Getz of Environment Canada in response to a public complaint of potentially harmful firefighting discharge waters entering sensitive aquatic habitats. Mr. Getz advised

it was the Client's responsibility to ensure potentially contaminated waters did not impact downgradient Aquatic Receiving Bodies.

The following was completed by the Client prior to a visit by TerraWest:

- The Municipality of North Cowichan was contacted and municipality staff installed erosion and sediment control measures. Hay bales were placed in key downgradient locations including all previously described catch basins and the ditch adjacent to the Forest Discovery Centre. Poly plastic sheeting was placed at feasible locations to block drainage from entering the catch basins.
- The Municipality of North Cowichan also provided a street sweeper to Site to clean the roadways of tire residue, silt, gravel, and other debris from firefighting activities.
- Save on Septic was retained to pump out waste and water from the three catch basins described previously.

FIELD ACTIVITIES

TerraWest personnel attended the Site at approximately 11:00AM on January 2, 2022 to view the scene and determine the occurrence of any downgradient impacts to the Aquatic Receiving Bodies.

A visual foot search was completed following the flow of water to the catch basins and eventually to the Forest Discovery Centre. It was observed that at the time of the search, run off from heavy rains and significant snow melt had mixed with firefighting waters leaving the Site. Limited tire residue was observed in the ditch bordering the Forest Discovery Centre and no tire residue or evidence of contaminated water was observed in downgradient aquatic receiving bodies (i.e. the pond at the Forest Discovery Centre or its surrounding drainage systems).

A surface water sample was collected south of the Forest Discovery Centre where the bordering ditch enters an underground culvert conveying water to the pond and surrounding drainage systems. This was the last known observable location of firefighting waters. The sample was collected for analysis of petroleum hydrocarbons and routine water parameters. The sample was couriered to Element Laboratories in Richmond, BC, and results were received late on January 7, 2022. Tabulated results are enclosed.

CONCLUSIONS AND RECOMMENDATIONS

From TerraWest's visual inspection, no downstream detrimental impacts were noted to the drainage systems or Aquatic Receiving Bodies. However, laboratory results of the collected surface water sample indicate that select petroleum hydrocarbons exceed the applicable aquatic criteria (i.e. toluene and benzo(a)pyrene).

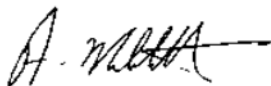
Considering the excessive volume of rain, snow melt water, firefighting water, highway drainage, and residual sediments in the drainage system, the surface water results are considered inconclusive and may not be attributed directly to the fire at this time.

TerraWest recommends the following:

- Complete a follow up visit to visually inspect the drainage systems following the snow melt when all drainage is accessible;
- Collect a second confirmation sample at the culvert south of the Forest Discovery Center. Based on water quality results from analysis of the collected sample, additional recommendations may be warranted.

We trust this meets your requirements, and if there are any questions regarding the above please do not hesitate to contact the undersigned below.

Kind regards,

A handwritten signature in black ink, appearing to read 'A. Mabbott' with a stylized flourish at the end.

Adam Mabbott, *P.Chem, ASCT, EP*
Vice President - Operations
250-616-7781
amabbott@terrawest.ca

Enclosures

Site Plan

Table 1. Summary of Results

OK Tire Drainage
6482 NORCROSS RD, DUNCAN

Legend



Google Earth

Table 1. Summary of Surface Water Analytical Results

Sample ID	Surface Water	CSR Schedule 3.2 ²
Matrix	Surface Water	
Sample Date	2-Jan-22	
Comments	Culvert south of Info Center	Freshwater Aquatic Life
PARAMETERS	Units	Analytical Results ¹
Mono-Aromatic Hydrocarbons		
Benzene	ug/L	5.9
Ethylbenzene	ug/L	2.3
Methyl t-Butyl Ether	ug/L	<0.5
Styrene	ug/L	4.5
Toluene	ug/L	8.5
Total Xylenes (m,p,o)	ug/L	9.8
Volatile Petroleum Hydrocarbons		
VPHw(VHW ₆₋₁₀ minus BTEX)	ug/L	<50
VHW ₆₋₁₀	ug/L	<50
Extractable Hydrocarbons		
EPH _{w10-19}	ug/L	<200
LEPHw	ug/L	<200
EPH _{w19-32}	ug/L	<200
HEPHw	ug/L	<200
Polycyclic Aromatic Hydrocarbons		
Acenaphthene	ug/L	0.4
Acenaphthylene	ug/L	3.7
Acridine	ug/L	0.15
Anthracene	ug/L	0.4
Benzo(a)anthracene	ug/L	0.19
Benzo(a)pyrene	ug/L	0.17
Benzo(b+j)fluoranthenes	ug/L	0.17
Benzo(g,h,i)perylene	ug/L	0.1
Benzo(k)fluoranthene	ug/L	0.07
Chrysene	ug/L	0.2
Dibenz(a,h)anthracene	ug/L	0.02
Fluoranthene	ug/L	0.6
Fluorene	ug/L	0.9
Indeno(1,2,3-c,d)pyrene	ug/L	0.1
1-Methylnaphthalene	ug/L	2.1
2-Methylnaphthalene	ug/L	2.3
Naphthalene	ug/L	9.9
Phenanthrene	ug/L	1.9
Pyrene	ug/L	0.62
Quinoline	ug/L	0.70

Notes:

1 - Data excerpted from Element Materials Technology Canada Inc. analytical report(s); units as indicated

2 - BC Contaminated Sites Regulation (CSR) Schedule 3.2 Generic Numerical Water Standards, site-specific pathways as noted above

n.s. = No applicable standard

< = Less than the laboratory method detection limit

Bold, underlined, and shaded grey indicates concentration exceeds lowest of the applicable standards

Sample ID	Surface Water	CSR Schedule 3.2 ²
Matrix	Surface Water	
Sample Date	2-Jan-22	
Comments	Culvert south of Info Center	Freshwater Aquatic Life
PARAMETERS	Units	Analytical Results ¹
Routine Parameters		
pH	no units	7.21
Electrical Conductivity	uS/cm @ 25C	1,536
Calcium	mg/L	36
Iron	mg/L	0.037
Magnesium	mg/L	4.3
Manganese	mg/L	0.084
Potassium	mg/L	3.6
Sodium	mg/L	260
Bicarbonate	mg/L	38
Carbonate	mg/L	<6
Hydroxide	mg/L	<5
Total Alkalinity as CaCO ₃	mg/L	31
Chloride	mg/L	449
Nitrate as N	mg/L	0.6
Nitrate and Nitrite as N	mg/L	0.6
Nitrite as N	mg/L	<0.1
Sulfate	mg/L	25
Hardness as CaCO ₃	mg/L	108
Total Dissolved Solids	mg/L	800
Ionic Balance	%	95

Notes:

Cl = Standard is chloride dependant and is specific to each sample with the range noted above

H = Standard is hardness dependant and is specific to each sample with the range noted above

Re: OK Tire Fire Duncan - Environmental Response

From: Adam Mabbott <amabbott@terrawest.ca>
To: Cary, Kristina ENV:EX <Kristina.Cary@gov.bc.ca>
Cc: melinda jordan <jordanmelinda@hotmail.com>
Sent: January 25, 2022 2:02:23 PM PST
Attachments: image002.jpg, image003.jpg, Outlook-2wxi4lbe.jpg, image001.jpg

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Kristina - brief update on this file.

I visited the site for the follow up inspection yesterday in good weather conditions. All drainage was observable. Here's the short notes:

- all site drainage is captured and no deleterious substance is being introduced to the catchment system at this time
- Rob has the site under security and is working through the insurance process for debris clean up and eventual rebuilding. This will take time.
- Viewing the catch basins and overland drainage south along the Island Hwy., I did observe a small lens of charcoal and fire debris at the "high water mark" along the highway drainage. No material was observed within the catchbasins. Water was flowing nicely.
- This same lens of charcoal was seen in the downgradient ditch next to the Forest Discovery Center and related culvert system. Mostly caught up in the tall grasses and reeds that make up the drainage ditches. Reminder that this is engineered drainage and not aquatic or terrestrial habitat. I've got a few photos that I will include in the summary letter for reference.
- No fire debris or evidence of burned material was observed in the "pond" of the Discovery Center (this is where all the greater area drainage eventually makes it way and then final stream discharge into Somenos Marsh area, including all upland drainage)
- I collected a surface water sample from the same final culvert at the Discovery Center. Water looked clear and great.
- Gut check says everything is OK. The lab received the sample today. Meanwhile we will prepare a short summary and issue once the data is back from the lab.

Please let me know if there are any questions in the interim. Thanks and chat soon,

Adam Mabbott, *P.Chem., ASCT, EP*
VP - Operations
C: (250) 616-7781
amabbott@terrawest.ca



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From: Cary, Kristina ENV:EX <Kristina.Cary@gov.bc.ca>
Sent: Thursday, January 20, 2022 3:43 PM
To: Adam Mabbott <amabbott@terrawest.ca>
Cc: melinda jordan <jordanmelinda@hotmail.com>
Subject: RE: OK Tire Fire Duncan - Environmental Response

Hi Adam,

Thank you for sending this. I agree with your assessment that there is a high potential for contamination from the roadway that could impact the results, and support your recommendation for further follow-up sampling at the culvert at a later date. I would also recommend that during this next visit remaining debris from this incident, if any, is recorded. Can you please keep me in the loop when this work is completed and send results to our spill recovery email spillrecovery@gov.bc.ca. That will send the results out to our team in case I am away.

Thanks,



Kristina Cary, RPBio
Environmental Recovery Biologist

Environmental Emergency Program
Ministry of Environment and Climate Change Strategy
Victoria, BC
Cell: (250) 893-8483
Office: (236) 478-1502
kristina.cary@gov.bc.ca
www.gov.bc.ca/environmental-spill-response
[@SpillsInfoBC](https://twitter.com/SpillsInfoBC)
Report a spill: 1-800-663-3456

From: Adam Mabbott <amabbott@terrawest.ca>
Sent: January 12, 2022 9:11 AM
To: Cary, Kristina ENV:EX <Kristina.Cary@gov.bc.ca>
Cc: melinda jordan <jordanmelinda@hotmail.com>
Subject: OK Tire Fire Duncan - Environmental Response

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Kristina,

Further to our phone call last week, on behalf of Mr. Robert Nikirk, owner of the Duncan OK Tire, please find attached a brief summary of our environmental inspection and water sampling results post-fire.

From our perspective here at TerraWest, Robert and the Municipality of North Cowichan did a great job with respect to minimizing the introduction of deleterious substance into the drainage system. The crews worked in an emergency situation and under extreme weather conditions in the dark. However, it is noted that fire-fighting water did make it's way south downgradient to the Forest Discovery Center and into drainage that eventually feeds the Somenos Marsh. For example, I observed a small amount of burnt tire residue that collected on the edge of the drainage ditch, much like you would see a ring of dirt on the bathtub when the water is drained. I did not observe the same in further downgradient ponds or drainage.

A surface water sample was collected at the furthest downgradient location that any fire-fighting water was observed (i.e. a culvert in west ditch of Forest Discovery Center). The sample results indicate nominal toluene and benzo(a) that slightly exceed the aquatic criteria of the CSR. I am suggesting that the results are inconclusive, considering the tremendous amount of snow melt, rain, highway drainage, and outside sources included with the fire fighting water. The results do not indicate any immediate impacts to human health or the environment.

We have included some recommendations for follow up.

Please let me know if you require any further information. Thanks and chat soon.

Adam Mabbott, *P.Chem., ASCT, EP*

VP - Operations

C: (250) 616-7781

amabbott@terrawest.ca



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Nanaimo, BC
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6482 Norcross Road
Duncan, BC
V9L 5T3

CONFIDENTIAL

January 31, 2022

Attn: Robert Nikirk, *OK Tire*

Re: *FOLLOW UP - SURFACE WATER INSPECTION LETTER* – 6482 Norcross Road, Duncan, BC

TerraWest Environmental Inc. (TerraWest) was retained by Robert Nikirk (the 'Client') to complete an assessment of downgradient impacts to aquatic receiving bodies following a fire at the OK Tire located at 6482 Norcross Road, Duncan, BC, herein referred to as the 'Subject Property' and/or the 'Site'.

This enclosed letter is a follow up from the first inspection letter dated January 12, 2022, and closes the environmental works completed at the Site.

FIELD ACTIVITIES

TerraWest personnel attended the Site for a second time on January 24, 2022 to review the drainage and confirm if any downgradient impacts to the Aquatic Receiving Bodies had occurred.

A visual foot search was completed following the flow of water to the catch basins and eventually to the Forest Discovery Centre. Since the time of the first visit all the roadside snow had melted and no limitations were noted in the inspection. Charcoal and granular fire debris was observed along the edge of the highway and along the first "upper" portion of the ditch drainage immediately south of the Subject Property. This drainage enters an underground culvert system that daylights in the northwest corner of the Forest Discovery Center, runs south along the west boundary of the Discovery Center, and then enters the greater drainage system of the Discovery Center.

Environmental Management and Consulting

A foot search of the entire length of drainage was completed. Limited amounts of charcoal and evidence of fire debris was noted in the high-water mark within the tall reeds and grasses that line the drainage ditch system. No fire debris was observed in further downgradient water, including the “pond” at the Discovery Center, which could be considered the first aquatic receiving habitat because of its direct connectivity with the Somenos marsh.

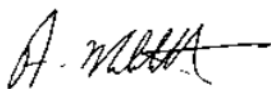
A follow up surface water sample was collected from the Forest Discovery Centre where the ditch enters an underground culvert conveying water to the pond and surrounding drainage systems. This was the last known observable location of firefighting waters and the same location as the sample collected on January 2, 2022. The sample was collected for analysis of petroleum hydrocarbons and routine water parameters. The sample was couriered to Element Laboratories in Richmond, BC. Tabulated results are enclosed.

CONCLUSIONS

From TerraWest’s second visual inspection, no downstream detrimental impacts were noted to the drainage systems or Aquatic Receiving Bodies. Further to this, laboratory results of the collected surface water sample indicate that no contaminants were present. The recommendations from the initial inspection and summary letter have been completed, and no further environmental works are recommended at this time.

We trust this meets your requirements, and if there are any questions regarding the above please do not hesitate to contact the undersigned below.

Kind regards,

A handwritten signature in black ink, appearing to read 'A. Mabbott'.

Adam Mabbott, *P.Chem, ASCT, EP*
Vice President - Operations
250-616-7781
amabbott@terrawest.ca

Enclosures

Table 1. Summary of Results
Site Inspection Photographs

Site Photographs – January 24, 2022

Photo 1 (left): View looking north, standing on west side of Highway, OK Tire in far background. Observable charcoal and fire debris along edge of asphalt.

Photo 2 (right): View looking south, standing on west side of Highway, OK Tire to photographers back. Hay bales placed by North Cowichan staff, drainage water enters underground culvert system.



Photo 3 (left): View looking north, standing at Forest Discovery Center on east side of highway. Observable charcoal and fire debris at high water mark in drainage ditch.

Photo 4 (right): View looking south of ditch drainage. Note tall grass and reeds.



Photo 5 (above): View looking north of entire drainage ditch next to Forest Discovery Center, and where water enters the greater drainage system via underground culvert. Sample location at the culvert, annotated in photo.

Table 1. Summary of Surface Water Analytical Results

Sample ID		Surface Water	Surface Water	CSR Schedule 3.2 ²
Matrix		Surface Water	Surface Water	
Sample Date		2-Jan-22	24-Jan-22	
Comments		Culvert south of Info Center	Follow Up Sample	
PARAMETERS	Units	Analytical Results ¹		Freshwater Aquatic Life
Mono-Aromatic Hydrocarbons				
Benzene	ug/L	5.9	<0.5	400
Ethylbenzene	ug/L	2.3	<0.5	2,000
Methyl t-Butyl Ether	ug/L	<0.5	<0.5	34,000
Styrene	ug/L	4.5	<0.5	720
Toluene	ug/L	8.5	<0.5	5
Total Xylenes (m,p,o)	ug/L	9.8	0.5	300
Volatile Petroleum Hydrocarbons				
VPHw(VHW ₆₋₁₀ minus BTEX)	ug/L	<50	<50	1,500
VHW ₆₋₁₀	ug/L	<50	<50	15,000
Extractable Hydrocarbons				
EPH _{w10-19}	ug/L	<200	<200	5,000
LEPHw	ug/L	<200	<200	500
EPH _{w19-32}	ug/L	<200	<200	n.s.
HEPHw	ug/L	<200	<200	n.s.
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	ug/L	0.4	<0.1	60
Acenaphthylene	ug/L	3.7	<0.1	n.s.
Acridine	ug/L	0.15	<0.05	0.5
Anthracene	ug/L	0.4	<0.1	1
Benzo(a)anthracene	ug/L	0.19	<0.01	1
Benzo(a)pyrene	ug/L	0.17	<0.01	0.1
Benzo(b+j)fluoranthenes	ug/L	0.17	<0.04	n.s.
Benzo(g,h,i)perylene	ug/L	0.1	<0.1	n.s.
Benzo(k)fluoranthene	ug/L	0.07	<0.02	n.s.
Chrysene	ug/L	0.2	<0.1	1
Dibenz(a,h)anthracene	ug/L	0.02	<0.01	n.s.
Fluoranthene	ug/L	0.6	<0.1	2
Fluorene	ug/L	0.9	<0.1	120
Indeno(1,2,3-c,d)pyrene	ug/L	0.1	<0.1	n.s.
1-Methylnaphthalene	ug/L	2.1	<0.1	n.s.
2-Methylnaphthalene	ug/L	2.3	<0.1	n.s.
Naphthalene	ug/L	9.9	<0.1	10
Phenanthrene	ug/L	1.9	<0.1	3
Pyrene	ug/L	0.62	<0.02	0.2
Quinoline	ug/L	0.70	0.01	34

Notes:

1 - Data excerpted from Element Materials Technology Canada Inc. analytical report(s); units as indicated

2 - BC Contaminated Sites Regulation (CSR) Schedule 3.2 Generic Numerical Water Standards, site-specific pathways as noted above

n.s. = No applicable standard

< = Less than the laboratory method detection limit

Bold, underlined, and shaded grey indicates concentration exceeds lowest of the applicable standards

Sample ID		Surface Water	Surface Water	CSR Schedule 3.2 ²
Matrix		Surface Water	Surface Water	
Sample Date		2-Jan-22	2-Jan-22	
Comments		Culvert south of Info Center	Follow Up Sample	Freshwater Aquatic Life
PARAMETERS	Units	Analytical Results ¹		
Routine Parameters				
pH	no units	7.21	7.19	n.s.
Electrical Conductivity	uS/cm @ 25C	1,536	574	n.s.
Calcium	mg/L	36	39.0	n.s.
Iron	mg/L	0.037	0.05	n.s.
Magnesium	mg/L	4.3	11.4	n.s.
Manganese	mg/L	0.084	0.058	n.s.
Potassium	mg/L	3.6	1.4	n.s.
Sodium	mg/L	260	53.7	n.s.
Bicarbonate	mg/L	38	84	n.s.
Carbonate	mg/L	<6	<6	n.s.
Hydroxide	mg/L	<5	<5	n.s.
Total Alkalinity as Cat	mg/L	31	69	n.s.
Chloride	mg/L	449	116	1,500
Nitrate as N	mg/L	0.6	0.65	400
Nitrate and Nitrite as	mg/L	0.6	0.65	400
Nitrite as N	mg/L	<0.1	<0.005	200 to 2,000 ^{Cl}
Sulfate	mg/L	25	22	1,280 to 4,290 ^H
Hardness as CaCO ₃	mg/L	108	144.0	n.s.
Total Dissolved Solids	mg/L	800	284	n.s.
Ionic Balance	%	95	102	n.s.

Notes:

Cl = Standard is chloride dependant and is specific to each sample with the range noted above

H = Standard is hardness dependant and is specific to each sample with the range noted above



Emergency Coordination Center

Phone 1-800-663-3456

Fax (250) 952-4872

Notification Code

Code 1

Jurisdiction

Federal | Provincial

Total Allocated (\$)

\$800.00

INITIAL DETAILS

Updates

4

Type

DGIR

Number

214026

Subject

Inland

ISC

ROC #

Report Compiled By

Ciara - Ops 1

Position

ECC Operations Officer

Date/Time Logged

01/02/2022 05:51:48

Responsible Person - As Reported

OK Tire

Incident Date/Time

01/02/2022 03:46:00

DGIR Location Address

6482 Norcross Rd, Duncan, BC

DGIR Location Description

Area

DUNCAN

EMCR Region

Vancouver Island Coastal

MOE Region

Vancouver Island

CALLER DETAILS

Caller A Name

Jason Dejonge

Caller A Agency

Assistant Fire Chief

Caller A Contact #

Business - 250-714-9449

Caller A Alt Contact #

-

Caller A Date/Time

Caller A Present Location

Caller B Name

Caller B Agency

Caller B Contact #

Caller B Alt Contact #

-

-

Caller B Date/Time

Caller B Present Location

Material

Quantity

fire water

6000L per minute for multiple hours L

ADDITIONAL DETAILS

Description of spill site and surrounding area

Description of spill source, circumstances, cause and adverse effects of the spill

Advises that the Fire Department responded to a fire at OK Tire, they are an 11 bay tire shop. The caller is worried about the run off and the many hazardous chemicals inside the building. The run off is heading towards Somenos marsh.

Details of action taken or proposed

Names of agencies on scene, names of agencies advised

Motor Vehicle

Notification Details

Date/Time	Type	Stakeholder(s)	Details	Notified By
01/02/2022 06:02:41	Email	ENV Canada	Notification sent.	Ciara - Ops 1
01/02/2022 06:02:35	Email	CCG-ROC		Ciara - Ops 1
01/02/2022 05:58:49	Verbal Briefing	Paul Brandson PDM		Ciara - Ops 1
01/02/2022 05:58:42	Verbal Briefing	NEEC		Ciara - Ops 1
01/02/2022 05:57:59	Verbal Briefing	Brian Goetz MOE RO	Code 1/Fed/Prov	Ciara - Ops 1

Activity Log - DGIR #214026

Total Duration
9.00

Log Details			
Name	Position	Date/Time	Duration
Dave Pridham	Response Officer	03/28/2023 09:57:07	0.00
Description			
March 28th, 2023			
RO spoke with Roshelle Williams regarding the need for a after action spill report. Volumes adjusted to reflect fire water application as per RO Goetz activity log.			

Log Details			
Name	Position	Date/Time	Duration
Kristina Cary	Recovery	02/14/2022 12:03:00	1.00
Description			
Reviewed final report from Adam with TerraWest. Sampling results were under CSR guidelines. No further actions are recommended from the QP. Some debris remains on the side of the road in the ditch but from photos looks to be pretty limited, and no debris has moved out of the ditch into the marsh. No further actions anticipated			

Log Details			
Name	Position	Date/Time	Duration
Kristina Cary	Recovery	01/27/2022 16:26:50	0.00
Description			
Added some emails from Adam Mabbott/correspondence in the attachments. Another round of sampling is awaiting results.			

Log Details			
Name	Position	Date/Time	Duration
Kristina Cary	Recovery	01/06/2022 15:04:57	0.50
Description			
15:00 - email to Dave Preikshot Municipality of north cowichan about TerraWest sampling plan			

Log Details			
Name	Position	Date/Time	Duration
Kristina Cary	Recovery	01/05/2022 13:33:27	0.00
Description			
12:30 - File referred to recovery from Dave Pridham. Reviewed details			
13:00 - spoke to RP. Contact is Adam with TerraWest 250-616-7781			
13:30 - Spoke with Adam from TerraWest, is being retained by the RP. He walked drainage, they put hay bales to catch sediment and block everything. The only evidence of the fire is from the roadside draiange ditch had some residual tire fibers, no debris after the water drains into the larger system. At the point where water enters the culvert before it reaches the forest centre, they took a sample. Next couple days sampling should come back and he'll send me the results. Will follow up on future sampling after results come back			

Log Details

Name	Position	Date/Time	Duration
Dave Pridham	Response Officer	01/05/2022 11:13:11	0.00
Description			
Email received from Brian Goetz regarding potential runoff concerns. DGIR flagged for Recovery review and email forwarded to Recovery.			

Log Details

Name	Position	Date/Time	Duration
Brian Goetz	Response Officer	01/02/2022 11:23:34	7.50
Description			
0556 hrs. Recieved call of fire and coded it			
0600-0630 hrs. Review of file, locations and VIR contacts			
0630 hrs. Call to asst fire chief no answer			
0639 hrs.			
0640 hrs. Call from ECC fire contact new 250 252-3421			
0642 hrs. Call from ECC CVRD Rob Shouder 250 715-5700 evacuations planned			
0643 - 0646 hrs. Call to asst fire chief			
0647 hrs. Missed call from fire			
0649 hrs. Call from Asst fire chief Jason Dejonce 250-252-3421 update- tire complex ,runoff into public works system, concern about toxic runoff to Somenos marsh			
0657 hrs. Call to HEMBC			
0659 hrs. Call to fnha			
0713 hrs. Emailed details to HEMBC			
0713 hrs. Call to Robert Nikirk OK Tire Rep 250-709-5560			
0725 hrs. Text ER contacts to Robert			
0726 hrs. Confirmed that Robert recieved texted ER contacts			
0746 hrs. Call to hembc			
0752- 0756 hrs. Call to DM Darcy Sego			
0802 hrs. Call to dispatch for Duncan PW after hours no contact as could not confirm municipality			
0805 hrs.message to fire			
0811 hrs. Call from hembc Miles Steyn off call as fire calling			
0811 hrs. Highway closures and detours described (fire), mutual aid from other departments, water in ditches, bldg has collapsed, fire will be on scene for a while longer			
0819 hrs. Called Miles hembc back with road closure details			
0830-0835 hrs call from Emcon Dillon Thornton 250-896-3141, okay to divert water? We discussed, RP installing hay bales, fire suppression since 0400 hrs. Estimated current volume 6000 l per minute			
0905 hrs. Call to Robert Nikirk, did he speak with public works director as fire said he was on the way. He will call back.			
1011 hrs. Call to Robert response companies contacted and staff are trying to mobilize staff one vac truck is on the way- save on septic, fire is at momup stage, spoke to env canada Adam as he is stopping by to pick up samples, fire/ police have asked him to step off the property, hay bales and poly have been layer down, Brian from CN public works has been around, I recommended that OK tire have someone assess the spill downstream towards the marsh area. He said it is raining heavily now and he will be returning to the site.			
1029 hrs. Email update from HEMBC			
1034-1043 hrs. Update to DM Darcy Sego			
1039 hrs. Email from HEMBC to staff			
1102 hrs recieved email from Miles S HEMBC			
1105 hrs. Emailed update 3 to HEMBC			
1116 hrs. Call from ECC PDM wants to know l'f any evacuations happened			
1118 hrs. Call to Cowichan Valley RD and spoke to Rob Shouldar no callback from fire chief re evacuations			
1120 hrs. Call to Jason Dejonce regarding evacuations			
1134 hrs. Call from EMBC PDM I am waiting for an update from NC fire if evacuations are still required, RD not informed and fire is knocked down. Waiting for call back from FD. Will call ECC with update			
1134-1234 hrs. Logging in activities.			
1259 hrs. Texted Emcon Dillon Thornton RP Robert Nikirk cell number.			
1314-1344 hrs. Logging in notes			
1420 hrs. Call to Robert Nikirk . He indicated that someone from Environment Canada (Andrew or Adam) sampled the furthest extent of			

the fire affected water and told Robert that he is satisfied with the containment measures that he has taken to contain particulate from fire suppression water. Two vac trucks pumped out water from water system. He has not heard back from any of the Environmental Consultants that he contacted. Approximately 25% of the facility was affected by the fire.

1451-1455 hrs. I called Darcy and briefed him about the response.

UPDATE DETAILS

Update #

1

Type

DGIR

Number

214026

Subject

Inland Update

ROC #
Originally Logged

01/02/2022 05:51:48

Report Compiled By

Tieg - OPS 4

Position

ECC Operations Officer

Update Date/Time

01/02/2022 06:34:22

Caller Name

Rob Shoular

Caller Agency

Cowichan Valley Regional District

Contact #

250-715-5700

Alt Contact #1
Alt Contact #2
Incident Location

6482 Norcross Rd, Duncan, BC

Area

DUNCAN

EMCR Region

Vancouver Island Coastal

MOE Region

Vancouver Island

MOE Sub Region
Details

Caller advising of a potential evacuation due to a commercial structure fire at the above noted location. The evacuation could effect 100-200 residents in a neighboring apartment building as well as an adjacent hotel due to air quality and shifting winds.

ECC Logging - OTHER 211023 XREF

Updated contact info for Assistant Fire Chief 250-252-3421

Update Notification Details

Date/Time	Type	Stakeholder(s)	Details	Notified By
01/02/2022 06:50:15	Email	ENV Canada	Notification sent.	Tieg - OPS 4
01/02/2022 06:49:59	Verbal Briefing	RDM David Schadt		Tieg - OPS 4
01/02/2022 06:49:51	Email	CCG-ROC		Tieg - OPS 4
01/02/2022 06:49:26	Email	OFC Distribution		Tieg - OPS 4
01/02/2022 06:48:43	Verbal Briefing	OFC Steve Wright	Provided A/C DeJong contact info	Tieg - OPS 4
01/02/2022 06:43:29	Verbal Briefing	PDM Janet Adams		Tieg - OPS 4
01/02/2022 06:39:22	Verbal Briefing	Brian Goetz MOE RO	Provided updated contact info for A/C DeJong	Tieg - OPS 4



UPDATE DETAILS

Update #

2

Type

DGIR

Number

214026

Subject

Inland Update

ROC #**Originally Logged**

01/02/2022 05:51:48

Report Compiled By

Laura - Ops 7

Position

ECC Operations Officer

Update Date/Time

01/02/2022 08:50:56

Caller Name

Dylan (Road Supervisor)

Caller Agency

EMCON

Contact #

250-896-3141

Alt Contact #1**Alt Contact #2****Incident Location**

6482 Norcross Rd, Duncan, BC

Area

DUNCAN

EMCR Region

Vancouver Island Coastal

MOE Region

Vancouver Island

MOE Sub Region**Details**

Caller advising that someone instructed him to divert water into highway ditches and is looking to confirm these directions as it close to the Somenos Marsh. Caller stated that he believes someone with the surname 'Goetz' gave that direction to Fire.

X - Ref OTHER 211023 Update 1

Update Notification Details

Date/Time	Type	Stakeholder(s)	Details	Notified By
01/02/2022 08:56:45	Email	CCG-ROC		Laura - Ops 7
01/02/2022 08:56:11	Email	ENV Canada	Notification sent.	Laura - Ops 7
01/02/2022 08:55:35	Email	PDM Janet Adams		Laura - Ops 7
01/02/2022 08:52:36	Verbal Briefing	MOE RO Brian Goetz	Stated he would call Dylan back directly to confirm that this is the current plan.	Laura - Ops 7

UPDATE DETAILS

Update #

3

Type

DGIR

Number

214026

Subject

Inland Update

ROC #
Originally Logged

01/02/2022 05:51:48

Report Compiled By

Laura - Ops 7

Position

ECC Operations Officer

Update Date/Time

01/02/2022 11:06:44

Caller Name

Brian Goetz

Caller Agency

MOE

Contact #

250-612-1561

Alt Contact #1
Alt Contact #2
Incident Location

6482 Norcross Rd, Duncan, BC

Area

DUNCAN

EMCR Region

Vancouver Island Coastal

MOE Region

Vancouver Island

MOE Sub Region
Details

Fire was at an 11 bay OK tire facility. North Cowichan Fire Department responded. Plans to evacuate residents from a nearby apartment building and a hotel were put into place. HEMBC and First Nations Health Authorities were informed. Highway 1 was closed with detours set up. Ok tire facility representative has been working with North Cowichan Public Works staff to evaluate the spill and to engage an Environmental Contractor and vacuum trucks.

Spilled material is expected to enter Somenos Marsh/Lake to the southeast of the fire area. Material from runoff is expected to be soot from the facility and roof fire with possibly some outside tires consumed in the fire.

The fire has been mostly extinguished and an excavator is breaking apart the building. Fire department remains on scene to extinguish any hotspots

Update Notification Details

Date/Time	Type	Stakeholder(s)	Details	Notified By
01/02/2022 11:36:38	Verbal Briefing	PDM David Schadt briefed	Requested to be transferred through to MOE RO Brian Goetz. Transferred through.	Laura - Ops 7
01/02/2022 11:12:05	Email	OFC Distribution List		Laura - Ops 7
01/02/2022 11:09:58	Email	CCG-ROC		Laura - Ops 7
01/02/2022 11:09:12	Email	ENV Canada	Notification sent.	Laura - Ops 7
01/02/2022 11:08:13	Verbal Briefing	PDM Janet Adams	Requesting confirmation in regards to if evacuation occurred or not. MOE RO Brian Goetz called - will check with the district and follow up.	Laura - Ops 7

UPDATE DETAILS

Update #

4

Type

DGIR

Number

214026

Subject

Inland Update

ROC #
Originally Logged

01/02/2022 05:51:48

Report Compiled By

Donna - Ops 1

Position

ECC Operations Officer

Update Date/Time

01/02/2022 13:41:03

Caller Name

by email/Brian Goetz

Caller Agency
Contact #
Alt Contact #1
Alt Contact #2
Incident Location

6482 Norcross Rd, Duncan, BC

Area

DUNCAN

EMCR Region

Vancouver Island Coastal

MOE Region

Vancouver Island

MOE Sub Region
Details

Please add a task for \$100 for Duncan Fire.

Update Notification Details

Date/Time	Type	Stakeholder(s)	Details	Notified By
01/02/2022 13:45:31	Email	ENV Canada	Notification sent.	Donna - Ops 1
01/02/2022 13:45:02	Email	David Schadt, RDM		Donna - Ops 1
01/02/2022 13:44:52	Email	OFC dist list		Donna - Ops 1
01/02/2022 13:42:36	Verbal Briefing	PDM Colin Mathie		Donna - Ops 1