

Harvesting impacts on soil and understory vegetation: the influence of season of harvest and within-site disturbance patterns on clear-cut aspen stands in Minnesota

Alaina L. Berger, Klaus J. Puettmann, and George E. Host

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Page 002 to/à Page 010

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File: 23060-40/ DPC-31173
00165599 – 09

September 4th, 2013

REGISTERED

Louisiana-Pacific Canada Ltd.
c/o Canadian Forest Products Ltd.
RR1 Site 13 Comp 2
Fort St. John BC V1J 4M6

Dear Wes Neumeier

Re: Notice of Investigation under the *Forest and Range Practices Act* and Fort St John Pilot Project Regulation



I am writing to inform you that we recently conducted an inspection of the following activities carried out under or in relation to Forest Licence A60049:

Harvesting Activities within Cutting Permit 251 block 09104, located at approximately 4 km on the Haystack Forest Service Road.

The inspection indicates that it is possible that these activities may be in contravention of section 42 (3) (a) of the *Fort St. John Pilot Project Regulation* (FSJPPR).

- 42 (3) For each component area, the responsible participant must
(a) achieve the specified targets within the specified range of variance,

Within the Fort St. John Pilot Project Sustainable Forest Management Plan #2, section 6.4 deals with soil disturbance. The Indicator Statement is: "The number of blocks with non conformances to soil disturbance limits reported annually by Managing Participant". The Target Statement is: "Zero blocks will have non-conformances to soil disturbance limits". Within the SFMP document, the "default targets for maximum detrimental soil disturbance will be 5% dispersed disturbance in the Boreal Plains Natural Disturbance Unit (NDU), and 10% in the other NDUs located in the foothills and mountains; and 25% detrimental soil disturbance for all roadside work areas".

Page 1 of 2

Ministry of
Forests, Lands and
Natural Resource
Operations

Peace Field Unit
Northeast Region

Location:
9000-17th Street
Dawson Creek, BC

Mailing Address:
9000 17th Street
Dawson Creek, BC, V1G 4A4

Tel: (250) 784-1200
Fax: (250) 784-0143

Forest Licence A60049 CP 251 block 09104 is located within the Boreal Plains NDU, and is subject to the detrimental soil disturbance limit of 5% dispersed disturbance.

We are currently investigating the matter. The lead investigator is Shaun McAmmond, Natural Resource Officer. Please feel free to contact him at 250-784-1247 if you have any questions about the investigation.

Yours truly,

A handwritten signature in black ink, appearing to read 'Shaun McAmmond', written in a cursive style.

Shaun McAmmond, RPF
Natural Resource Officer
Northeast Region



SURVEY AC 2 FIELD CARD

SURVEYOR <i>K. Kabzens</i>		DATE <i>Y M D</i> <i>2013 03 26</i>		IDENTIFICATION NO. <i>0019</i>	
RANDOM NO.		POC HEARING		GRID SPACING	
ROW	COLUMN	POC		EAST OFFSET SPACING (spacing x 1.41)	
<i>1</i>	<i>1</i>	<i>Aug 2013</i>		<i>m</i>	

GC	
BEARING	Pit I - bench
1	
2	12cm JFR
3	large stone at pit bottom
4	
5	21cm pit - 1cm roots to
6	
7	bottom of pit
8	
9	
10	5cm light brown friable, fine
11	foam subangular block
12	
13	then to coarse granular
14	
15	sol → soil
16	
17	
18	
19	18cm - more grey & mottled
20	
21	friable - soft
22	
23	clay enriched
24	
25	
26	photo - rats with food
27	
28	water this year
29	
30	



SAMPLER <i>R. Kubzans</i>		DATE Y M D 2013 03 20		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			40° OFFSET SPACING (spacing x 1.41)	

GC ROW	GC COLUMN	GC DESCRIPTION
1		Example 100 yds
2		coarse platy siltstone
3		behind roadside cut in
4		dom by <i>Calamagrostis</i>
5		
6		
7		
8		
9		
10		Min Pit #2
11		
12		50m from road
13		base of siltstone
14		
15		
16		
17		All stumps & aspen - protected
18		from machine traffic
19		
20		
21		
22		10 cm FB
23		@ 50m from road, fine siltstone, L 95%
24		@ 20 cm clay, aspen & willow
25		
26		not as much
27		
28		clay in soil
29		soil structure mottled
30		

fine roots



SURVEYOR <i>R. Kubzens</i>		DATE Y M D <i>2.3 / 08 / 20</i>		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
SAMPLING																														
<i>West side</i>																														
<i>coarse blocky structure</i>																														
<i>L @ 10 cm</i>																														
<i>hard aspen roots in place</i>																														
<i>Min D. + in WTP</i>																														
<i>1 cm FR</i>																														
<i>dark brown to black</i>																														
<i>blocky, friable</i>																														
<i>6-8 cm light brown + SL 3..</i>																														
<i>10+ Sil coarse blocky</i>																														
<i>mottled</i>																														

SURVEYOR <i>K. Kabzens</i>		DATE <i>Y M D</i> <i>2013 03 26</i>		IDENTIFICATION NO. <i>0019</i>	
RANDOM NO.		POC HEARING		GRID SPACING	
ROW	COLUMN	POC		EAST OFFSET SPACING (spacing x 1.41)	
<i>1000000</i>		<i>1000000</i>		<i>1000000</i>	

GC	
BEARING	Pit I - bench
1	
2	12cm JFR
3	large stone at pit bottom
4	
5	21cm pit - 1cm roots to
6	
7	bottom of pit
8	
9	
10	5cm light brown friable, fine
11	foam's subangular block
12	
13	then to coarse granular
14	
15	Soil → sand
16	
17	
18	
19	18cm - more grey & mottled
20	
21	friable - soft
22	
23	clay enriched
24	
25	
26	photo - rats with food, pond
27	
28	water this year
29	
30	



SAMPLER <i>R. Kubzans</i>		DATE Y M D 2013 03 20		IDENTIFICATION NO.
RANDOM NO.		POC BEARING		40° OFFSET SPACING (spacing x 1.41)
ROW	COLUMN	GRID SPACING		

GC ROW	GC COLUMN	GC DESCRIPTION
1		Example 100 yds
2		loose platy structure
3		behind roadside cut in
4		dom by <i>Calamagrostis</i>
5		
6		
7		
8		
9		
10		Min Pit #2
11		
12		50m from road
13		base of <i>Calamagrostis</i>
14		
15		
16		
17		all stumps & aspen - protected
18		from machine traffic
19		
20		
21		
22		10 cm FB
23		@ 50m from road, fine roots, L 95%
24		@ 20 cm clay, aspen & willow
25		not as much
26		
27		
28		
29		soil structure mottled
30		

fine roots

SURVEYOR <i>R. K. Brown</i>		DATE <i>2013 053 25</i>		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN				45° OFFSET SPACING (spacing x 1.41)

GC	GC
TEARING	ON slope 100 ft, 5m deep, 30m
1	under 12mm long
2	
3	change in veg. & type of soil
4	the color is brown at base
5	
6	
7	
8	
9	mini pit #3
10	
11	X 33 cm SL over SCL
12	
13	20m from SL to N side
14	
15	
16	
17	Road side - cutting, 1m deep
18	
19	visually over 35% SCL
20	
21	
22	mini pit #1
23	
24	
25	5m FP
26	
27	13 Em clay enriched
28	soil to SCL
29	
30	



SURVEYOR <i>R. Kubzans</i>		DATE Y M D <i>2.3 / 08 / 20</i>		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
SAMPLING																														
<i>West side</i>																														
<i>coarse blocky structure</i>																														
<i>L @ 10 cm</i>																														
<i>hard aspen roots in place</i>																														
<i>Min D. + in WTP</i>																														
<i>1 cm FR</i>																														
<i>dark brown to black</i>																														
<i>blocky, friable</i>																														
<i>6-8 cm light brown + SL 3..</i>																														
<i>10+ Sil coarse blocky</i>																														
<i>mottled</i>																														

Gerry Vanderkwaak

Date August 29, 2013

250 847 6324.

phone him @ ~1555 hrs

- ask him about Road Check safety training
in October

- Not Oct 21-24 - Regional meeting

s.22

- he questioned the value of doing this training
when in near future we may have
different and better tools available to us i.e. SPC
that are safer (Red and Blue)

- he will get a hold of Ken Sadt to see what
his thoughts are, and do the Rader components
concurrently - call Ken next week - and
let me know what they decide
Face to Face vs Live meeting?

↳ training not likely to work over a live
meeting

→ field component one day

Evan Hawk called

- left message re 09104

- 787 3697

phone Evan Hawk @ 11:28 hrs

Date Sept 12, 2013

787-3693

I informed him that Richard Kwas not comfortable with having CANFOR on site the day of the survey data collection

I offered up the Thursday Oct 3 for an alternative and Evan was receptive

- He (Evan) did not want to seem to be influencing the process at all, but was willing to get together in the field after the survey is completed
- I said I would call him and let him know ~~about~~ logistics etc when we get closer to the date

DPC 30872

Sept. 12, 2013

Appendix Breakdown

App. 1 Tab 6 - Jurisdiction Map

App 2 T. 7 - Contravention Location map

App 3 T. 8 - Referral fr. R. Barkhouse to CCF

A 4 T 9 - Letters from Canadian Bullmoose to R. Barkhouse, V. Koyanagi

A 5 T 10 - Original Exhibit "A" (this was only ever PROPOSED)

A 6 T 11 - L48783 Occupant License to Cut Document

A 7 T 12 - Coal Tenure # 417759 Coal License Document

A 8 T 13 - E. Hunt email to V. Li

A 9 T 14 - summary map outlining disturbance area

A 10 T 15 - Bullmoose South Drill Site Reclamation Plan

A 11 T 16 - FRPA Section 52(1)

A 12 T 17 - Bullmoose Phase I drilling Plan - August 28, 2011. pdf

A 13 T 18 - email from V. Koyanagi to Brian Clark (Cominco) Swo. 26

phone Sarah Goodrick - M. Energy & Mines

Date September 5, 2013

FCBC should issue the Coal License document
mineral titles online.

→ email to Mineral Titles Branch general
mailbox (Maggie Zhang)

phone Stephane Dubé @ 1108 hrs

September 11, 2013

250 565-4363

leave message re another block to do a soils
survey and I am enquiring about how
to design a survey

- How many plots are required etc.
- left name and number for him
to call back

Evon Hank phoned ~~left~~ 1529 hrs

September 11, 2013

787 3693 he left message

called him back at 1539 hrs

- confirm with him that I don't have a
problem with Carter being on site during the
data collection to get a feel of what is going on, what we're looking
at
- I will confirm with Richard Kahzema to see
if he is okay with it
- I don't have a problem.
- I will get back to him after I discuss this
with Richard

Wednesday August 28, 2013

- send off information from yesterday to Richard Kaliga
- CIMS entry of inspection for A60049 CP 251

blk 9104 after yesterday fieldwork

- phone Wes Neumeier at CANFOR to see if he might have info around this block and the prescription and if it had any rationale regarding soil disturbance limits being relaxed

- may be some justification in portions of the block where the soils are not

- Attempt to phone

Gerry Vanderkwaak and left a message

- work on mapping for yesterday's work

- higher resolution walk through map and a lower resolution Soil Disturbance under FSPPR

- sec 42 - responsible participant must achieve the targets within the specified range of variance

- carry out operations in a manner consistent with specific landscape level strategies

soil disturbance limits
5% Dispersed in Boreal
plains NDU
10% dispersed in other FDU
in Foothills and mountains
25% in Roadside work
areas

- Work on Report to
DPM for APC 30672

Tuesday August 28/13
A60049 CP251 BK 09004
with Richard KABZEMIS

1054 hrs - Arrive at block and check
in at PG Fire center 128

- Walk through of block
- need ^{full} survey in order
- need to confirm that there
is no variance for soil
disturbance limits

- need to confirm with
Stephane Dubé re: random
location of ~~about~~ survey points
or failing that, see if available
locally (FREP - ELIZABETH) or
Bill Chapman in Williams Lake
- perhaps target first 2 weeks
of October to do the survey
fieldwork.

- 1434 hrs leave block
and head back to
D.C.

- Back at office 1708 hrs
- Richard's feeling is that
there is more than
10% soil disturbance



SURVEYOR <i>R. Kobres</i>		DATE Y M D <i>2013 10 01</i>		IDENTIFICATION NO. <i>Kobres</i>	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	

GC	Point	Rating	Remarks
BEARING			
1	67	undist	✓ Yes, into edge
2			
3	3	undist	
4			
5	86	undist	
6			
7	13	undist	
8			
9			
10	83	TS	compact coarse plaster
11			
12	2	undist	in fire pit/dend
13			from
14	53	undist	
15			
16	11	undist	
17			
18	21	TS	
19			
20	16	undist	
21			
22			
23	52	undist	Pile from old
24			undist
25			
26	39	on 1st	in
27			
28			
29	2	undist	
30			



(2)

SHEVEYOR		DATE Y M D		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (6.103m x 1.41)	
1	55		E		cover plates
2					
3	12		undist		
4					
5	24		E		
6					
7	77		E		✓
8					
9					
10	55		E		✓
11					
12	12		E	beam pile	✓
13					
14	92		TIC		
15					
16	46		E	small board	✓
17					
18			undist		
19					
20	24		undist		within flagged area next to road
21					
22					
23					
24					
25	97		undist		✓
26			flattened		
27					
28	60		E		✓
29					
30			end of road		



SURVEYOR <i>JV</i>		DATE Y M D <i>2013 11 10</i>		IDENTIFICATION NO. <i>Kabcs</i>	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	

ROW	COLUMN	POC BEARING	GRID SPACING	45° OFFSET SPACING (spacing x 1.41)
1	10			
2				
3				
4	85	E		
5				
6	28	undist		
7				
8	87	E		
9				
10	72	E		
11				
12	20	E		
13				
14	49	undist		
15				
16	25	undist		
17				
18	61	E		
19				
20				
21				
22	62	E		
23				
24	9	undist		
25				
26				
27				
28	75	undist		
29				
30				



(4)

SURVEYOR <i>R. Kobes</i>		DATE Y M D <i>2-21-10</i>		IDENTIFICATION NO. <i>Kobes</i>	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing 1, 41)	
	Point		Rating	Remarks	
1	70		undist		
2					
3	73		undist	next to	
4				15 feet	
5					
6					
7	45		E	✓	
8					
9					
10	5		TIS	area	
11					
12					
13	36			outside block	
14					
15					
16					
17					
18	X 80		in WTP		
19					
20					
21	X 95		in WTP		
22					
23	8		E	✓	
24					
25					
26					
27	57		E		
28					
29	X 69			outside block	



SURVEYOR <i>R. Kabzems</i>		DATE Y M D <i>2013 10 01</i>		IDENTIFICATION NO. <i>Kobes</i>	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	
<i>Point</i> <i>Red</i> <i>Grasside</i>					
GC	BEARING				
1	<i>10</i>				
2	<i>47</i>				
3					
4	<i>43</i>				
5					
6	<i>45</i>				
7					
8					
9					
10	<i>48</i>				
11					
12					
13					
14					
15					
16					
17	<i>17</i>				
18					
19					
20	<i>63</i>				
21					
22	<i>16</i>				
23					
24	<i>25</i>				
25					
26	<i>74</i>				
27					
28	<i>64</i>				
29					
30					

undist
undist
E
E
FF displacem
40cm on top of post
E
10m wide band soil
material heavy
and compacted
undist
undist
undist
undist
E + 60cm wide V
undist

✓
✓



(6)

ORVLYOH		DATE Y M D		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41) m	
1	58		E		✓
2	32		E		✓
3					
4					
5					
6	101		on road		
7	38		undist		
8					
9	22		undist		
10					
11					
12					
13					
14	18		undist		
15					
16					
17	31		E		✓
18					
19	41		on the		✓
20					
21	37		undist		
22					
23	27		TS		
24					
25					
26	100		undist		
27					
28	12		E		✓
29					
30					



Plot 23 RWA

SURVEYOR L. Kabzens		DATE Y M D 2013 10 01		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	

CC	Point	Bank	Roadside
BEARING			
1	04	E	
2			
3	91	E	FF board ✓
4			
5	23	undist	
6			
7	06	undist	
8			
9	51	undist	
10			
11	94	outside	cutblock
12			
13	35	outside	cutblock
14			
15	89	undist	
16			
17	99	undist	
18			
19	70	undist	cuts in area
20			
21	30	EIS	
22			
23	103	undist	75 cuts nearby
24			
25	81	undist	on steep hummock
26			
27	90	E	
28			
29	40	undist	
30			

108

in WTP



SURVEYOR		DATE Y M D		IDENTIFICATION NO.	
RANDOM NO.		2013 10 20			
ROW	COLUMN	POC BEARING	GRID SPACING	45° OFFSET SPACING (spacing x 1.41)	
Point			Rank		Point

CC	27		in left P		
1	65		undist		
2					
3	34		outside roadblock		
4					
5	01		undist		
6					
7	20		E		
8					
9	59		undist		
10					
11	66		E		
12					
13	79		undist		
14					
15	110		E		
16					
17	118		undist		
18					
19	44		E		
20					
21	42		E		
22					
23	24		undist		
24					
25	50		undist		
26					
27	21		undist		
28					
29	106		E		
30					



(4)

SURVEYOR R. Rubens		DATE Y M D 2013 10 14		IDENTIFICATION NO.	
RANDOM NO. ROW COLUMN		POC BEARING		GRID SPACING	
				45° OFFSET SPACING (spacing x 1.41) m	

GC	BEARING	POINT	Row	Roadside
1	117	undist		✓
2	111	undist		
3	52	undist		all to stop
4	96	undist		
5	22	undist		
6				
7				
8				
9	147	on edge of priv road		
10				
11	180	in edge of priv road		
12				
13	109	undist		
14				
15	119	on edge of priv road		
16				
17	120	E		✓
18				
19	154	E		✓
20				
21	140	undist		✓
22				
23				
24	113	E		
25				
26	105	E		
27				
28	176	E & FF burn pile		✓
29				
30	104	undist		burn road

SOIL DISTURBANCE
SURVEYTRANSECT SURVEY
FIELD CARD

SURVEYOR RK		DATE Y M D 10/07		IDENTIFICATION NO.	
RANDOM NO.		POC BEARING		GRID SPACING	
ROW	COLUMN			45° OFFSET SPACING (spacing x 1.41)	
	Point		Rating	Roadside	
1	148		E	edge in burn	
2				edge in burn	
3				edge in burn	
4	107		E	TS - cut	
5					
6	172		E	checked (compacted)	
7				checked	
8					
9					
10	195			cut side of RWA	
11					
12	114		E	coarse plate	
13				structure	
14					
15	102		undist.	- new to	
16				slump, E with a	
17				2m	
18					
19	115			just outside boundary	
20					
21	112		undist.		
22					
23	116		E		
24					
25	184		E	off burn	
26					
27	149		E	cut at pit	
28				TS	
29	184		E		
30					

phone Evan Hawk

Date Sept 3, 2013

250 787 3693

- phone him at 0820 hrs re Blk 09104
- I requested any extra information that may be in the site level plan
 - ↳ he will gather that together and send today
- stating the reason that I was out there
 - ↳ RESULTS Query - block located within the Boreal Plains NBU and the harvest began in summer operations (June 9th)
- I will send a formal inspection report to specify our findings and show where we walked (km/km²)
- once we receive something from him about any information re: the block, I will send a inspection report
- I mentioned that I was on site with Richard Kabzems (soils expert) and our feeling is that there was ~~geo.~~ ^{likely} very ~~probably~~ ^a contravention
 - 5% limit is exceeded
 - 10% limit very likely exceeded
- we need a formal survey to determine the extent of disturbance

The Effect of Harvesting Activities on Soil Compaction, Root Damage, and Suckering in Colorado Aspen

Wayne D. Shepperd, *Rocky Mountain Forest and Range
Experiment Station, 240 W. Prospect St., Fort Collins,
CO 80526.*

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Preventing Soil Compaction and Rutting in the Boreal Forest of Western Canada:

A Practical Guide to Operating Timber-Harvesting Equipment

Brad Sutherland

Forest Engineering Research Institute of Canada

March 2003

Advantage Vol. 4 No. 7

Restricted to FERIC Members and Partners

RECEIVED

MAY 05 2003

**DAWSON CREEK FNR-2016-63459 S1
MINISTRY OF FORESTS**

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File: 23060-40/ DPC-31173
00165599 – 09

September 4th, 2013

REGISTERED

Louisiana-Pacific Canada Ltd.
c/o Canadian Forest Products Ltd.
RR1 Site 13 Comp 2
Fort St. John BC V1J 4M6

Dear Wes Neumeier

Re: Notice of Investigation under the *Forest and Range Practices Act* and Fort St John Pilot Project Regulation



I am writing to inform you that we recently conducted an inspection of the following activities carried out under or in relation to Forest Licence A60049:

Harvesting Activities within Cutting Permit 251 block 09104, located at approximately 4 km on the Haystack Forest Service Road.

The inspection indicates that it is possible that these activities may be in contravention of section 42 (3) (a) of the *Fort St. John Pilot Project Regulation* (FSJPPR).

- 42 (3) For each component area, the responsible participant must
(a) achieve the specified targets within the specified range of variance,

Within the Fort St. John Pilot Project Sustainable Forest Management Plan #2, section 6.4 deals with soil disturbance. The Indicator Statement is: "The number of blocks with non conformances to soil disturbance limits reported annually by Managing Participant". The Target Statement is: "Zero blocks will have non-conformances to soil disturbance limits". Within the SFMP document, the "default targets for maximum detrimental soil disturbance will be 5% dispersed disturbance in the Boreal Plains Natural Disturbance Unit (NDU), and 10% in the other NDUs located in the foothills and mountains; and 25% detrimental soil disturbance for all roadside work areas".

Page 1 of 2

Ministry of
Forests, Lands and
Natural Resource
Operations

Peace Field Unit
Northeast Region

Location:
9000-17th Street
Dawson Creek, BC

Mailing Address:
9000 17th Street
Dawson Creek, BC, V1G 4A4

Tel: (250) 784-1200
Fax: (250) 784-0143

Forest Licence A60049 CP 251 block 09104 is located within the Boreal Plains NDU, and is subject to the detrimental soil disturbance limit of 5% dispersed disturbance.

We are currently investigating the matter. The lead investigator is Shaun McAmmond, Natural Resource Officer. Please feel free to contact him at 250-784-1247 if you have any questions about the investigation.

Yours truly,

A handwritten signature in black ink, appearing to read 'Shaun McAmmond', written in a cursive style.

Shaun McAmmond, RPF
Natural Resource Officer
Northeast Region



Ministry of
Forests, Lands and
Natural Resource Operations

File: 23060-20 - DPC-31173

March 4, 2016

REGISTERED

Louisiana-Pacific Canada Ltd.
116 116 Ave
Dawson Creek BC V1G 3C8

Dear Mark Fonda:

Re: Notice of Investigation under the Forest and Range Practices Act and Fort St John Pilot Project Regulation

I am writing to inform you of our investigation related to an inspection of the following activities carried out under or in relation to Forest Licence A60049:

Harvesting Activities within Cutting Permit 251 block 09104, located at approximately 4 km on the Haystack Forest Service Road.

The inspection indicates that it is possible that these activities may be in contravention of section 42 (3) (a) of the Fort St. John Pilot Project Regulation (FSJPPR).

42 (3) For each component area, the responsible participant must
(a) achieve the specified targets within the specified range of variance,

Within the Fort St. John Pilot Project Sustainable Forest Management Plan #2, section 6.4 deals with soil disturbance. The Indicator Statement is: "The number of blocks with non conformances to soil disturbance limits reported annually by Managing Participant". The Target Statement is: "Zero blocks will have non-conformances to soil disturbance limits". Within the SFMP document, the "default targets for maximum detrimental soil disturbance will be 5% dispersed disturbance in the Boreal Plains Natural Disturbance Unit (NDU), and 10% in the other NDUs located in the foothills and mountains; and 25% detrimental soil disturbance for all roadside work areas".

Forest Licence A60049 CP 251 block 09104 is located within the Boreal Plains NDU, and is subject to the detrimental soil disturbance limit of 5% dispersed disturbance.

Page 1 of 2

Ministry of
Forests, Lands and Natural Resource
Operations

Peace Field Unit
Northeast Region

Location:
9000-17th Street
Dawson Creek, BC

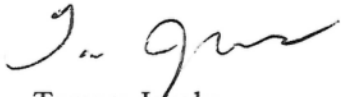
Mailing Address:
9000 17th Street
Dawson Creek, BC, V1G 4A4

Tel: (250) 784-1200
Fax: (250) 784-0143

We are currently investigating the matter. For your reference, please see attached Notice of Investigation sent to Louisiana-Pacific Canada Ltd., c/o Canadian Forest Products Ltd. on September 13, 2013.

The lead investigator is Tamara Jacobs, Natural Resource Officer. Please feel free to contact her at 250-401-1947 if you have any questions about the investigation.

Yours truly,

A handwritten signature in black ink, appearing to read 'T. Jacobs', with a stylized flourish at the end.

Tamara Jacobs
Natural Resource Officer
Northeast Region
Attachments:



File: 23060-40 – DPC 31173
00165599 09

May 18, 2016

Louisiana-Pacific Canada Ltd.
c/o Canadian Forest Products Ltd.
RR1 Site 13 Comp 2
Fort St. John, British Columbia
V1J 4M6

Dear Louisiana-Pacific Canada Ltd:

Re: Opportunity to Be Heard Prior to Determination of Contravention of the
Fort St. John Pilot Project Regulation 42(3) (a)

Ministry staff have completed an investigation, which has produced evidence indicating you may have contravened section 42(3) of *Fort St John Pilot Project Regulations*.

Section 42(3) *For each component area, the responsible participant must,*
(a) achieve the specified targets within the specified range of variance

Briefly, the reasons for believing there may be a contravention are as follows: Louisiana Pacific LTD may not have achieved targets specified in a sustainable forest management plan within the applicable range of variance specified in the plan.

As the minister's delegate, I am authorized to make a determination respecting these matters under section 55 (1) of the *Fort St John Pilot Project Regulation*.

Before I make a determination, I am offering you an opportunity to be heard scheduled for June 30th, 2016 for 9:30 am at 9000 17th Street, Dawson Creek, British Columbia in the conference room. A copy of the Opportunity to be Heard Evidence Binder from Ministry staff, which sets out their case, is attached.

If you would like to use this opportunity to provide written submissions, please provide those submissions by June 16th, 2016. If you would prefer an oral hearing, I would be happy to accommodate you, as long as this hearing occurs no later June 30th, 2016. I suggest you review the attached bulletin, which outlines the normal process for an opportunity to be heard prior to a determination of contravention.



I am also willing to consider other options, such as a conference call or an informal meeting, if that is your preference. If so, please contact me at 250-784-1200 by June 16th, 2016 to discuss other options.

Finally, if you have any questions about the opportunity to be heard, such as how best to prepare for or make use of the opportunity, please feel free to contact Jenni Martin at 250-784-1202.

Please note that, if you do not respond to this offer of an opportunity to be heard, I will assume you have declined the opportunity. I will then proceed with my determination.

Yours truly,

Greg Van Dolah
District Manager
Peace Natural Resource Office

Attachment: The Opportunity to be Heard Process
Opportunity to be Heard Binder DPC 31173

pc: Jenni Martin, Regional Manager Compliance & Enforcement, Northeast Region

Impacts of Skidding Traffic Intensity on Soil Disturbance, Soil Recovery, and Aspen Regeneration in North Central Minnesota



Eric K. Zenner, Jeremiah T. Fauskee, Alaina L. Berger, and Klaus J. Puettmann

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Page 052 to/à Page 057

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Aspen and white spruce productivity is reduced by organic matter removal and soil compaction

by Richard Kabzems¹

Copyright

Page 059 to/à Page 068

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Hunt, Tony L FLNR:EX

From: Kabzems, Richard FLNR:EX
Sent: Wednesday, March 26, 2014 1:26 PM
To: Hunt, Tony L FLNR:EX
Subject: Soil disturbance results FL A 60049 CP251 Block 09104

Hi Tony; Attached please find a memo which describes the soil survey results, and an appendix with survey data.



Soil Disturbance
at Kobes 0910...



Appendix
Disturbance Sur...

Shaun McAmmond had the GPS files and images for the survey.

Please let me know if I can provide any additional information.

Richard Kabzems, MSc, PAg, RPF
Research Silviculturist, BC Ministry of Forests, Lands and Natural Resource Operations
9000 17th St., Dawson Creek, B.C. V1G 4A4
250 784 1256
Richard.Kabzems@gov.bc.ca

Soil Disturbance at FL:A60049 CP251 Block 09104, Peace Natural Resources District

Summary of Soil Disturbance in the NAR, and RWA

March 25, 2014

Background and Methods

At the request of Shaun McAmmond, Compliance and Enforcement Officer, MFLNRO, Peace Forest District, I conducted a reconnaissance survey of FL:A60049 CP251 Block 09104 on August 27 of 2013. Five soil pits were excavated within the block boundaries to determine soil characteristics (Table 1). The reconnaissance survey identified that the block level soil Compaction Hazard Rating was Very High, and that the amount of soil disturbance observed was sufficient to justify a formal survey using random sampling. With Shaun McAmmond, I completed a soil disturbance survey of FL:A60049 CP251 Block 09104 on October 1 and 2, 2013. This report summarizes the results of soil disturbance in the NAR and RWA.

Table 1. Summary of soil characteristics from August 27 reconnaissance survey.

Soil Pit	Depth LFH (cm)	'Upper' mineral soil texture	Depth 'upper' mineral soil layer (cm)	'Lower' mineral soil texture	Depth "lower" mineral soil layer (cm)	Soil Compaction Hazard Rating
1	12	SiL to SiCL	0 to 18	SiCL	18 to 30	Very High
2	12	L to SiL	0 to 24	SiCL	24 to 30	Very High
3	-	fSL	0 to 33	SiCL	33+	Moderate
4	5	SiL	0 to 13	SiCL	13 to 30	Very High
5	9	L and fSL	0 to 18	SiL	18 to 30	High

Soil disturbance was assessed using the classification criteria outlined in the "Forest and Range Evaluation Program Protocol for Soil Resource Stewardship Monitoring: Cutblock Level" (MOFR 2009). These criteria are the same as outlined in the "Soil Conservation Surveys Guidebook" (MOFR 2001). Each survey point was classified in one or more categories, following the order of precedence outline in the FREP flowchart for soil disturbance classification.

Survey points were located in the field from a list of randomly determined UTM co-ordinates, using a handheld GPS unit, and followed the procedures outlined in FREP Technical Note #5, "A Field Guide for Surveying Soil Disturbance Using Random Sampling" (Chapman et al. 2013). The GIS file of random UTM co-ordinates within Block 09104 was prepared by Stephan Dube, Research Soil Scientist with MFLNRO, Omineca Region. Shaun McAmmond operated the GPS during the survey. At the time of the survey, it was not possible to delineate the

roadside work area (RWA). Random survey points were assigned to categories of NAR, RWA, or outside the survey area (e.g. permanent roads, Wildlife Tree Patches) during the field survey.

Results

Hazard Rating and Prescribed Soil Disturbance

Soil Compaction: Very High
 Soil Displacement: Moderate
 Soil Erosion: Moderate
 Maximum Allowable Soil Disturbance in the NAR: 5%
 Prescribed Soil Disturbance in the RWA: 25%

Soil Disturbance Survey

Table 2 summarizes dispersed soil disturbance in the NAR. It does not include soil disturbance resulting from Temporary Access Structures. There was a high level of Counted Disturbance that exceeded the limit of 5%. Counted Disturbance was 35.6%. A one-sided t-test at the 90% Confidence Level confirmed that the dispersed Counted Disturbance in the NAR exceeded the maximum allowable limit of 5%. The critical value for this test was 29.0%.

Counted Disturbance resulted primarily from Repeated Machine Traffic which had created a coarse platy structure in the mineral soil.

There were 27 random survey points in the RWA (Table 2). There was a high level of Counted Disturbance that exceeded the prescribed limit of 25%. Counted Disturbance was 81.5%. A one-sided t-test at the 90% Confidence Level confirmed that the dispersed Counted Disturbance in the NAR exceeded the prescribed limit of 25%. The critical value for this test was 71.5%.

Table 2. Summary of Dispersed Soil Disturbance in FL:A60049 CP251 Block 09104

Survey Stratum	Surveyed Points	Counted Disturbance	Critical t-test value	Maximum Allowable Soil Disturbance	Counted Disturbance Details		
					Repeated Machine Traffic	Ruts (5 – 15 cm)	Ruts (>15 cm)
NAR	87	35.6%	29.0%	5 %	26.4%	2.3%	6.9%
RWA	27	81.5%	71.5%	25 %	77.8%	3.7%	0.0%

Please contact me if I can provide any additional information.

Richard Kabzems, P.Ag., R.P.F. Research Silviculturist, Northeast Region

Disturbance Survey Block 09104 October 1 and 2 of 2013

Richard Kabzems

GPS point	Stratum	Undisturbed	Dist 1	Dist 2	Comments
67	RWA	Y			2 in to edge of block, general area heavily disturbed
3	NAR	Y			
86	NAR	Y			
13	NAR	Y			
83	NAR		T5		coarse platey structure
7	NAR	Y			2 m from Haystack road right of way
53	NAR	Y			
11	NAR	Y			
54	NAR		T15		
76	NAR	Y			
33	NAR	Y			soil pile from old windthrow, pre logging
39	not app				road surface
2	NAR	Y			
55	NAR		E		coarse plates
15	NAR	Y			
84	NAR		E		
77	RWA		E		
56	RWA		E		
68	RWA		E	V	forest floor burned with piles
98	NAR		T15		
46	RWA		E	V	
73	NAR	Y			
71	NAR	Y			within silviculture flagged area near on block road
97	RWA	Y			ruts nearby
60	RWA		E		end of on block road
19	NAR		T15	C	
85	NAR		E		
28	NAR	Y			
87	NAR		E		
72	NAR		E		
80	NAR		E		
49	NAR	Y			
26	NAR	Y			
61	NAR		E		fine sandy loam, with strong coarse platey structure, on machine trail
62	NAR		E		fine sandy loam, with strong coarse platey structure, on machine trail
9	NAR	Y			ruts nearby, in subhygric Calamagrostis - Betula plant community
75	NAR	Y			fine sandy loam
76	NAR	Y			

78	NAR	Y			next to T 15 rut
95	RWA		E		
5	NAR		T15	C	
36	not app				outside block
88	not app				in WTP
93	not app				in WTP
8	RWA		E	V	burn pile
57	NAR		E		
69	not app				outside block
10	NAR	Y			
47	NAR	Y			
43	NAR		E		
45	RWA		E		displacement of 40 cm of organic material on top of survey point
48	RWA		E		10 m band of soil material heavily trafficked and compacted
17	NAR	Y			
63	NAR	Y			
16	NAR	Y			
25	NAR	Y			
14	RWA		E	V	
64	RWA	Y			
58	RWA		E		
32	RWA		E		compacted berm of material next to road
101	not app				on road
38	NAR	Y			
82	NAR	Y			
92	NAR	Y			
18	NAR	Y			
31	RWA		E		
41	not app				on Haystack road
37	NAR	Y			
29	NAR		T5		no forest floor in rut
100	NAR	Y			
12	RWA		E		
4	NAR		E		
91	RWA		E	V	forest floor burned with piles
23	NAR	Y			
6	NAR	Y			
51	NAR	Y			ruts 1 m away
94	not app				outside cutblock
35	not app				outside cutblock
89	NAR	Y			
99	NAR	Y			
70	NAR	Y			ruts 1 m away

30	NAR		T15	
103	NAR	Y		T5 ruts nearby
81	NAR	Y		on stump hummock
90	NAR		E	
40	NAR	Y		
108	not app			in WTP
27	not app			in WTP
65	NAR	Y		
34	not app			outside cutblock
1	NAR	Y		
20	NAR		E	
59	NAR	Y		
66	NAR		E	
79	NAR	Y		
110	NAR		E	
118	NAR	y		
44	NAR		E	
42	NAR		E	
24	NAR	Y		
50	NAR	Y		
21	NAR	Y		
106	NAR		E	
117	RWA	Y		
111	NAR	Y		
52	NAR	Y		
96	NAR	Y		
22	NAR	Y		
147	not app			on ditch of permanent road
180	not app			in ditch of permanent road
109	NAR	Y		
119	not app			on Haystack Road
120	NAR		E	
154	RWA		E	V burn pile
140	RWA	Y		between burn piles at road corner
113	NAR		E	
105	NAR		E	
176	RWA		E	V burn pile
104	NAR	Y		between stumps
148	RWA		E	edge of burn pile, organic still present
107	NAR		T 15	could use E or T 15 for rut
172	RWA		E	churned and compacted subsoil
195	not app			outside of Roadside Work Area
114	NAR		E	coarse platy structure

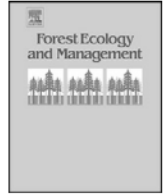
102	NAR	Y			next to stump, E within 2 m
115	not app				just outside boundary
112	NAR	Y			
116	NAR		E		
184	RWA		E	Y	burn pile
149	RWA		T5		rut at pile T5
189	RWA		E		



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Spatial impacts of soil disturbance and residual overstory on density and growth of regenerating aspen

Klaus J. Puettmann^a, Anthony W. D'Amato^{b,*}, Melissa Arikian^c, John C. Zasada^d

^a Department of Forest Science, Oregon State University, Corvallis, OR 97331, USA

^b Department of Forest Resources, University of Minnesota, St. Paul, MN 55108, USA

^c Emmons and Olivier Resources, 651 Hale Avenue. N., Oakdale, MN, 55128, USA

^d Northern Research Station, USDA Forest Service, Forestry Sciences Laboratory, Grand Rapids, MN 55744, USA

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Page 077 to/à Page 086

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March 14, 2016

0715 Left Chetwynd, BC
for Dawson Creek,
BC. -2 °C

Partly cloudy

0900 - 1200 Attended
C & E monthly
meeting

1230 - 1300 Met with NRD
Jeff Cox to go over
high elevation closure
project.

16:00 Arrived back at
Chetwynd, BC
Office.

16:09 left Office 134

March 15, 2016

0800 Arrived at Chetwynd,
BC Office, -6 °C
Worked on DPC
31173.

16:00 Left Office

March 16, 2016

0756 Arrived at Chetwynd,
BC Office

0900 - 1140 QLT Meeting
and research on
pillars for silver
certification.

1150 - 1230 OTBH preparation.

1300 - 14:00 High Elevation
CRV Project. 135

14:16 DPC 31173 Spoke
with Jon GIBBONS on

the phone. He plans on sending written answers to questions. Asked him if interested in participating in an Agreed Statement of Facts. Communicated that he was under no obligation to do so and that if he didn't agree, it should not be looked at unfavourably. He said he would take it under consideration.

14:51 Sent email respond to Mark FONDA that

information is still being gathered for investigation.

15:30 Left Chetwynd, BC Office.

March 17, 2016

0620 Arrived at Chetwynd, BC Office and left for Dawson Creek

0800 Helicopter safety orientation training at Dawson Creek, BC.

1700 Arrived back at Chetwynd, BC Office

March 18, 2016 137

0800 Arrived at Chetwynd, BC Office

0800-1200 DPC 31173

DTBH document

1200-1230 lunch break

1230-1530 DTBH

document.

March 21, 2016

0800 Arrived at Chetwynd,
BC Office.

1000-1230 DPC 31173.

DTBH document.

1300-1530 High elevation

closure project

planning.

March 22, 2016

0800-1530 Worked on

high elevation ¹³⁸

closure project

March 23, 2016

0700 Left Chetwynd, BC

Office for

Charlie Lake, BC

0900-1500 C&E Business

Meeting.

17:00 Arrived back at

Chetwynd, BC Office.

March 24, 2016

0800-1530 Worked on

High Elevation

Closure Project.

Safety Documents.

March 26, 2016

0750 Arrived at Chetwynd,

BC Office, 0°C

Overcast.

0815 - 11:30 DPC 31173.

1130 - 12:00 picked up
wreck truck from
Johnson + Redg
Chetwynd, BC

1300 - 1500 DPC 31173.

OTBH document.

15:00 - 16:00 worked on
ORV High Elevation
Closure Project.

March 9, 2016

0730 Arrived at Chetwynd,
BC office, -3°C,
partly cloudy.

~~0800~~ 1230 DPC 31173.

OTBH document 132

1300 - 1600 OTBH document

March 10, 2016

0800 Arrived at Chetwynd,
BC office, -5°C
Overcast.

0830 - 1200 DPC 31173.

OTBH document.

1230 - 1600 DPC 31173.

OTBH document.

March 11, 2016

0800 - 09:00 Health and
Wellness hour. 3°C

0900 - 1010 Preparation
for OTBH DPC 31173

1010 - 1040 Eye check up

1040 - 1330 DPC 31173 133

preparation for
OTBH.

stated she would
send him inspection
information to
mark.fondale@lpcorp.com

1141 Emailed mark.fondale@
lpcorp.com inspection
info 273420 information

1205 Sent inspection report
to 273420 to
wes.henrmeier@cantor.com
Sent a request to
interview

1230 Left Chetwynd, BC
Office. DOR.

March 7, 2016

0800 Arrived at Chetwynd,
BC Office, -15°C.

0805-0845 De-iced truck
and took it to
Johnson and Rad,
Chetwynd, BC for
repairs.

0900-1200 DPC 31173, worked
on researching planting
data for F2160049
CP 251 Block 09124.

12:00-12:20 Worked on
securing helicopter
booking information.

1300-1530 DPC 31173

March 8, 2016

0800 Arrived at Chetwynd,
BC Office, -8°C.
Overcast

FLNRO.

1250-1450 DPC 31173

Worked on Notice
of Investigation Letter
for Mark FONDA.

Letter sent via Registered
Mail, tracking number
RN 024 624 955 CA.

1500-1600 Drove back to
Chetwynd, BC Office

16:40 Left Chetwynd, BC
Office

March 4, 2016

08:00 Arrived at Chetwynd,
BC Office, -7°C,
Overcast.

08:15 Spoke to Jeff COX,

NRO, regarding OFV
High Elevation project
equipment requirements.

10:32 DPC 31173. Spoke
with Mark FONDA

250.782.3302 x 227

on phone. Informed him
that a Notice of

Investigation was sent via
registered mail. Requested
an opportunity to interview
FONDA/or the person
responsible within LP
for FL A60049. He
stated he needed more
information regarding
the issue. NRO JMacos

answer any questions.
He stated that we
would get back to²
regarding whom within
LP to send the
Notice of Investigation
Letter.

1545 Mark FONPA phoned
250-782-3302 and
stated that the
Notice of Investigation
Letter for LP
should be sent to
his name.

March 2, 2016

0800 Arrived at Chetwynd,
BC Office, -4°C

0815-1230 DPC 31173.

Configured TRDM
access on Desktop.
Worked on Notice
of Investigation
Letter for LP
contact.

1300-1430 Continued working
on DPC 31173

15:00 Left Chetwynd BC
office.

March 3, 2016

0600 Left for Dawson
Creek Office.

0830 Winter Survival
Training taught
by Michael Eastwood.

Wes NEUMEIER
of CANFOR"

1439 Phoned 250-263-6600
(number listed on a
Google search "for
Louisiana Pacific,
Fort St John") Spoke
with receptionist and
asked to speak with the
person responsible for
FL A60049. He (the
receptionist) stated he
did not know, but
could transfer the
line to HR.

1457 Phoned 250-782-
3302, x 227, the

number listed on a Google
search for Louisiana
Pacific Dawson Creek,
BC. Spoke with Mark
FOWDA, Area Forest
Manager. Asked him
who would be the
contact to send a Notice
of Investigation Letter
regarding FL A60049
as it relates to a soil
disturbance. Cautioned
him about the
investigation taking
place regarding ¹²⁵
FL A60049 and that
he did not have to

because of their
Management Agreement?
was Jacobson asked for a
copy of the Management
Agreement and
NEUMEIER stated he
will email a copy
to Tamara.jacobsego@bc.ca

1110 Left voicemail for
Wes NEUMEIER
requesting confirmation
of his email address.

1338 Spoke with Wes
NEUMEIER of
CANFOR. He stated
he did a joint
inspection with

the C+E department
on Oct. 6-8, 2013.
He had tried to do
an inspection on
Oct. 13, 2013 via a
consultant, who ~~did~~²
conducted some
testing for a day,
but then got
snowed out.

1404 Sent wesneumeiere
canfor.com a copy of
the original inspection
record CM id 273420.
See email "Inspections
Summary from
August 27 2013 sent to

10:26 DPC 31173

Phoned Wes Neumeier
P 250.787.3600
and left message,
asking for a return
call P 250.401.1947.

1046 DPC 31173 Spoke with
Wes NEMEIER on
the phone. He confirmed
that he had received
Notice of Investigation
letter addressed to
him and dated
September 4, 2013.

^{NEC}
^{Jacob} I asked NEMEIER
had³⁹ it anything
had been done since

that Investigation
letter had been sent.
He stated that he
was waiting for
more information
from the Ministry
~~regard~~³⁹ with survey
results, and no surveys
had been done by
CAWFOR that he was
aware of. I asked
Neumeier who within
LP would be responsible
for the Forest Licence
A60049. He stated
that he thought it
would be CAWFOR

High Elevation Closure Project.

February 26, 2016

07:57 Arrived at
Chetwynd, BC Office,
-2°C, partly

cloudy.

0800-11:00 Worked on
ORV High Elevation
Closure Project Plan.

11:00-12:00 DPC 31173

13:00-14:30 DPC 31173

Reviewed essential
elements

February 29, 2016

0735 Arrived at Chetwynd,
BC Office, -9°C.

partly cloudy.

0745-1230 Worked on
DPC 31173. Confirmed
that LP meets
definition of

"participant" in FSJPP
but CANFOR does not.
Search on ERA
showed no prior soil
disturbance con-
ventions in Peace
District.

13:00-16:00 DPC 31173

Worked on OTBIT

March 1, 2016

0806 Arrived at Chetwynd,
BC Office, -9°C.

February 24, 2016

0745 Arrived at
Chetwynd, BC Office.
-7°C.

08:00 - 12:30 worked on
email requests

14:00 - 15:15 SWP feedback
meeting with NRO
Tony Hunt via
teleconference.

February 25, 2016

0800 Arrived at Chetwynd,
BC Office. Took work
truck to Johnson
Rack & Muffler,
Chetwynd BC, to get
an inspection. -6°C.

9:00 - 11:00 Updated training
documents. Phoned
Mountain View Safety
to see why there has
not been and ATV
certificate mailed yet.
Secretary stated they
would call back with
answer.

11:00 Worked on DPC 33867

11:47 Requested VT status
AH 00110510 via
ask.vtdclicbc.com
for DPC 33867.

13:00 - 15:30 Continued
going through emails
and worked on ORV

08:00 Chetwynd, BC
Office - 16C

10:11-13:00 Met with
Dorci Johnston,
Temp Sup. She
will discuss with
Jenni whether to
proceed with an
OTBH or not.

14:30 Left Chetwynd, BC
Office.

February 11, 2016

07:00 Travel Day to
Victoria, BC

-s.22

February 15-19, 2016

Advanced Investigation
Training, JIBC,
PRTC, Chilliwack,
BC

February 20, 2016
DOR.

February 23, 2016

08:00 Arrived at Chetwynd,
BC Office.

08:00-12:00 Submitted expenses
and went through
emails

13:00-15:30 Continues to
get caught up on
emails and communication

E. William's house.

February 5, 2016

08:00 Arrived at

Chetwynd, BC, 100

08:00-10:30 Worked on

High Elevation

Closure project

10:30 - Worked on DPC

31173, OTRIT

Investigation. Finished

investigation brief

at 14:45

15:00 Left Chetwynd,

BC office.

February 9, 2016

06:45 Arrived at 112

J.H.

Chetwynd, BC Office.

7:30 Left for Dawson

Creek

08:40 Arrived at Dawson

Creek. Chaired

C & E Monthly

meeting.

11:30 Arrived back in

Chetwynd, BC and

took truck to

car wash.

12:00-12:30 lunch break.

12:30- Yearly planning

15:15 Left Chetwynd, BC

Office.

113

February 10, 2016

J.H.

14:30 Drive back to
Chetumal, BC
Office.

16:00 Left Chetumal, BC
Office.

February 4, 2016

08:00 Arrived Chetumal,
BC Office, -9°C.

09:00 CTBIT DPC 31173,
worked on putting
together an
investigative brief.

13:41 ~~15:30~~ DPC 31173, spoke
with Richard Kabzems,
MSc, PA, RPF,
Research Silviculturist,
FLNRO.

FLNRO: Asked him
if the File: DTA-29102
determination would
apply to DPC 31173.
He did not think
so, because since the
2009 survey, the
acceptable survey
standards have changed.
He will send a soil
surveys method
document, and he
will verify his survey
method acceptability
with Bill Chapman,
soil scientist, FLNRO.

20

February 2, 2016

07:50 Arrived at
Chetwynd, BC
Office -13°C

08:00 DPC 31173. Requested
read access to
CIMS Case file #21342,
predecessor to DPC
31173. Requested
access to electronic
TRM file.

14:15 Left voicemail for
Richard Kabzems,
P.A. R.F.P. to ~~be~~^{me}
requesting contact.

February 3, 2016 .108

08:00 Left Chetwynd, BC
Office for Dawson
Creek. Stopped at
Great Canadian
Oil Change to check
why there was a
message on the dashboard
that only 5% of
oil was left.
Great Canadian Oil
Change found nothing
wrong (owner was
there).

10:00 - 12:00 Met with
Tony Hunt regarding
DPC 31173.

to close an ARIS
file.

11:30-15:30 Worked
on DPC 31173,
Soil Disturbance,
OTBH.

15:30-16:00 1/2 Hour
Health and Wellness,
Chetwynd BC

January 27, 2016
07:35 Began working
at Chetwynd BC
Office 30°C. Worked
on GLT Survey
Questions

15:30 Left Chetwynd⁰⁸ BC
Office.

January 28, 2016

08:00 Arrived at
Chetwynd, BC Office
Worked on GLT
Survey and participated
in meeting.

08:00-12:30 Worked
on OTBH DPC 31173
Soil disturbance file

February 1, 2016

07:48 Chetwynd, Office,
-6°C

08:00-15:15
Worked on soil
disturbance file 107
DPC 31173

J.G.

1558 NRS 16645.

Sent inspection
report 017

1640 Left Office.

April 12, 2016

0700 Arrived at Chetwynd,
BC Office. 2°C

overcast.

0730 Left for Dawson
Creek, BC

0900 C & E Monthly
Meeting.

1400 Drove back to
Chetwynd Office

15:45 Left Chetwynd, BC
Office.

146

April 13, 2016

0730 Arrived at Chetwynd,
BC Office.

0800-1430 DPC 31173. Met
with Supervisor Parci
JOHNSTON, and
reviewed DTB1+
draft.

1605 Left Chetwynd, BC
Office.

April 14, 2016

0758 Arrived at Chetwynd,
BC Office, -1°C,
Overcast.

0900-1110 Financial Best
Practices Training.

1130-1530 DPC 31173

OTRH to date.

April 16, 2016

0800 Arrived at Chetwynd,
BC Office. 1°C
Overcast.

0810-1430 Worked on
final preparation
for DPC 31173
OTBH.

April 18, 2016

0800 Arrived at Chetwynd,
BC Office. 5°C
Overcast.

1045 Received voicemail
from ^{s.22}

regarding unauthorized
cabins along the
Pike River and

wanting a status
update. ^{s.22}

Forwarded information
to NRO John Cotes,
who now has
ownership of NRIS
file #16406

1144 Phoned ^{s.22}

NRIS #16406. ^{s.22}

answered. Let him
know that file is
being dealt with
by another NRO
who will be in contact

1200-1645 Worked on

250.787.3285, requesting
callback.

1045 Searched my LTSA
for PIP title results
on properties with
Waki Creek running
through that are
in the Bedell Drive,
west end.

1118-1214 G 80108.
Reviewed legislation.

12:30 Left Chetwind,
BC Office

June 6, 2016

0757 Arrived at Chetwind,
BC Office. 12°C¹⁹⁸
overcast. Worked

on DPC 31173
requests

1238-1305 Lunch break

1330-1530 Review of
policy and procedure
documents.

~~0757~~ 2x
N

June 7, 2016

0753 Arrived at Chetwind,
BC Office, 15°C.
a few clouds.

0938 DPC 31173 - spoke
with Richard Kabzems,
FNRD. He would be
willing to attend
OTBIT on June 30, 2016

if needed.

1000-~~1050~~ Researched
Forest Practices Code
Guidebook, DPC 31173

1104 DPC 31173. Spoke with
Kabzens on the
phone - 250.784.1256.
Ask him to send
NRD JACOBS survey
information on how
the soil disturbance
survey met the
guidelines outlined
in the Forest Practices
Code Guidebook, Soil
Conservation Guidebook,
including Section 6.0

BULLETIN BOARD

ATTACH NEEDED REFERENCE INFORMATION TO THIS PAGE
GLUE, STAPLE OR TAPE THEM ON

Survey methods for
soil disturbance.

1300-1500 DPC 31173 file
updates.

1500-1530 Policy and procedure
work.

June 8, 2014

0758 Arrived at Chetwynd,
BC Office 11°C,
Overcast.

0800-0900 DPC 31173. Researched
statistics used for
FPC guides.

1000-1200 NRIS #17433

1300-1500 NRIS #17433

1540 Left Chetwynd BC
Office.

0750 Arrived at Chetwynd,
BC Office, 10°C light rain

June 9, 2016

0758 Arrived at Chetwynd
BC Office. 11°C

Light rain

0830-0930 DPC 31173.

Researched OTBIL

Addendums.

0930-1200 NRIS 17433

Reviewed Noxious
Weed Legislation

(Weed Control Act
and Regulation).

1251 NRIS 17433

Received call from

s.22

s.22

s.22

cell

s.22

s.22

s.22

'is

Putting together a
plan to get rid of
weeds for this year.

NRD JACOBS stated
she would email
inspection report for
105 km SPD.

1347 NRD JACOBS sent email
to s.22 NRIS

17433 regarding
inspection report

"inspection report 017433"

1530 Left Office

June 10, 2016

0750 Arrived at Chetwynd,
BC Office, 10°C light rain

week of June 13,
2016.

1530 Left Chetwynd, BC
Office.

June 11, 2016

0750 Arrived at Chetwynd,
BC Office, 10 °C,
light rain.

0800-1000 DPC 31173.
Addendum to OTRIT
draft.

1027 Spoke with Brent
KELLY 680108.
604 240. 2525.
NRO JACOBS to give
KELLY call on
July 12, 2016 to

arrange a time to
meet at Dawson
Creek office to go
over the results of
the fire investigation.

1100-1200 DFN 34512
File Administration.

1230-1400 DPC 31173.
Legislation Research

1413 NRIS 31904. Left
voicemail for complainant

s.22

s.22

s.22

Requested call back.

1415-1530 NRIS 33551.

Backland Research and

1535 Left: Chetwood, BC
Office.

June 12, 2016

0755 Arrived at Chetwood,
BC Office. 10°C,
Overcast

0800-1000 DPC 31173
background research

1000-1200 Computer crashed.

1245-1330 FGP-34515.

Reviewed recorded
statements and
verified that original
fire was lit on
November 28, 2015.

1330 NRTS 33551. Spoke
with complainant's

s.22

s.22

WRO JACOBS to send
email with questions
to ~~2~~ s.22

s.22

1340 NRTS 31904. Sent
follow-up email to
Chris ADDISON,
FLKNRO
Christopher. Addison@
gov.bc.ca. requesting
to speak on phone.

1449 NRTS 3351. Received
call from s.22

s.22

the flood in 2011
created soil debris
on properties including
along Pioneer Drive.
The property in
question was sold
and the new owner
modified the property
and pushed the
dirt down to the
beach. ^{s.22}

Will
send exact property
location in an email.

^{s.22}

1500-1530 NRTS 23272,
Subject may live at
18658 Swanson, B.C.

Farrell Creek, BC
tbl, verified later

1530 Left Office

June 13, 2016

0730 Left for Dawson
Creek Office. 10°C
clear.

0910 DPC 31173. Met
with Richard KAPZLINS
and asked him for
more information
regarding the survey
methods used for
soil disturbance.

1500 Left DC Office. 11

1630 Left Chetwynd, BC
(DPR).

June 14, 2016

0745 Left for Dawson
Creek Office,
10°C Overcast

0900 C&E Monthly
meeting

1210 End meeting

June 15, 2016

0700 Left for Dawson
Creek Office.

0900 i map Training

1500 Left for Chetwynd,
BC Office.

1700 Arrived at Chetwynd,
BC Office. Left
Office.

12

June 22, 2016

0800 Arrived Chetwynd, BC
Office. 13°C Sunny.

0830 Left for Dawson
Creek Office

1000 DPC 31173 soil
inspection research

1000-1023 NRIS 31904
Spoke with complainant,

s.22

See

file continuation
notes.

1030-1500 DPC 31173
Soil inspection research.

1500 Left Dawson Creek
Office for Chetwynd
on a field

Office.

June 27, 2016

0730 Left Chetwynd, BC

Office for Dawson
Creek Office, 10°C

partly cloudy

0910 met with KAZBEMS,
DPC 31173 to discuss
soil disturbance inspection

1230 Left Dawson Creek
Office.

1345 Arrived at Chetwynd,
BC Office

1530 Left Chetwynd, BC
Office.

June 27, 2016

14

0758 Arrived at Chetwynd,

BC Office. 13°C,
Sunny.

0800 - 1200 Worked on
email responses.

1200 - 1230 lunch break.

1235 - 1600 Reviewed
policy and procedure
documents. Updated
Fire investigation
G70091.

1605 Left Chetwynd, BC
Office.

June 28, 2016

0800 Arrived at Chetwynd,
BC Office.

15

0940 - 1000

Note taking tips.

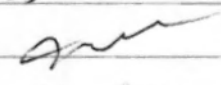
CO BOOTH recommends signing at the bottom of each day. Notes should be treated like a legal document.

1000-1200 Reviewed duty bag and evidence collection kit. Created a list of deficiencies for supervisor's review.

1200-1230 lunch break.

1230-1430 Review of emails

1430-1530 Health and Wellness Hour¹⁶

J- 

June 29, 2016

0800 Arrived at Chetwind, BC Office, 14°C

Partly cloudy.

0815 Request to Paris regarding investigation kits

1000-1200 DPC 31173.
Reviewed June 23, 2016 memo by Richard KABZEMIS. Asked him to provide more details about how survey method was conducted.

1200-1300 lunch break⁷.

1300-1500 off - close in

0830-1200 Worked on
email admin, post
Recreation site patrol
reporting and BC
COS Detective Recruit
test forms. Submitted
signed conditional
offer.

1200-1230 lb

1230-1830 Email admin
and presence
number reporting.

2.5 hour break

@ 1530 to go to
seamstress and get
uniform measurements

1830 Left Chetwynd, BC

Office

In June

July 11, 2016

0800 Arrived at Chetwynd,
BC Office, 13°C,
partly cloudy.

0805-0855 Reviewed emails.

0900-1205 Teleconferenced
monthly Northeast C&E
meeting.

1330-1530 Preparation for
walk through follow-up
inspection for DPC 31173.

1600 Left Chetwynd, BC
Office.

In June

July 12, 2016

BC Office. 14°C

Overcast

0825 NRO JACOBS, NRO
COX and Richard
KABZEMs leave
Chetwynd, BC for 4 km
Hagstack Forest Service
Road. NRO JACOBS &
NRO COX travelled
in truck VE 7665.

KABZEMs travelled in
VE 7666, DPC 31173

1036 Arrived at 4 km
Hagstack Forest
Service Road. Conducted
a walk through
inspection of lower

half of block re
DPC 31173, Took
pictures.

1230 Lunch break.

1244 Conducted a walk
through inspection of
the upper half of
09104, FL A60049,
with KABZEMs and
NRO COX.

1315 Left Area

1540 Arrived Chetwynd,
BC office.

1630 Left Chetwynd, BC
Office.

For Jim 39
Jul 13, 2016

No campers present.
Took pictures of general
condition of area. Took
pictures of a fishing-
type dock boat.

1333 Arrived at Johnson
Creek FSR (old
mushroom camp)

Took pictures of
abandoned vehicles
and garbage. Camper
was burnt down.

Hazardous out house.

1500 Arrived back at
Chetwynd, BC Office.

1530 10-42 42

July 15, 2016

0758 Arrived at Chetwynd, BC
Office, 12°C, cloudy

0800 Worked on Samituan
First Nations field
day report; admin
and email.

1210-1250 Lunch break.

1300-1530 DPC 31173. Pratt
Addendum work.

1534 10-42

July 18, 2016

0630 10-41, 12°C Left
Chetwynd, BC Office.

0800 Arrived at Flnro
Dawson Creek Office
Attended Trailers
Training course at

1630 Left Dawson Creek,
BC.

1730 Arrived at Chetwynd,
BC office. 10-42.

July 19, 2016

0700 10-41, 12°C,
partly cloudy.

0740-1200 Worked on
QLT and Policy &
Procedure Document

1230-1300 lunch break

1300-1530 DPC 31173
Addendum. 10-42

July 20, 2016

0730 10-41, 16°C,
cloudy. 44

0745 expense trouble shooting
with IT. Submitted

expense claim.

1000 DPC 31173. Worked
on OTB/H Addendum.

1500 10-42

July 21, 2016

0800 10-41, Chetwynd, BC
office 12°C, partly
cloudy.

0830 DPC 31173. OTB/H
Addendum Research

1215-1245 lunch break.

1300 Calendar updates and
vacation request
updates

1345 10-42. 45

July 22, 2016

0750 10-41 Chetwynd, BC
Office

office, 15°C, partly cloudy.

0800-1200 FPG 34515

1300-1530 DPC 31173

Addendum research

1535 10-42

July 28, 2016

0758 10-41, Chetwynd,
BC Office, 16°C,
partly cloudy

0900 Left for Dawson
Creek Office.

1010 Arrived Dawson
Creek Office

1050 DPC 31173

Addendum finalization
and registered mail
preparation

1430 Left Dawson Creek,
BC Office.

1500 Arrived Chetwynd, BC
Office.

1530 10-42.

August 09, 2016

0800 10-41 Chetwynd,
BC Office, 16°C.

0800-1200 Email catch-up

1200-1230 lunch break.

1230-1530 Email catch-
up.

1530- 10-42.

August 10, 2016 Chetwynd
Office

0800 10-41, 13°C, sunny.

1200-1230 lunch break

1300-1530 File clean-up

August 14, 2016

0758 10-41, Chetwynd, BC
Office, 14°C, Sunny.
1300 DPC 31173, File
Updates.

1530 10-42

August 15, 2016

0715 10-41, Arrived at
Chetwynd, BC Office,
13°C, overcast.

0730-1445 Relocation
administration and
file clean-up.

14-145 10-42.

August 16, 2016.

0800 10-41, Arrived ⁵⁴⁰at
Chetwynd, BC Office,
14°C, Sunny.

0830 Left for Dawson
Creek BC Office.

0945 Arrived Dawson
Creek, BC Office.

Discussed OTB1+

DPC 31173 file

transition possibilities

with Jenni MARZEN

and Darci JOHNSON.

ELNRO CNE Northeast

1125 Fire file 16G-80108'

Worked with NRO

Jeff Cox to

transfer file to

Cox's work ⁵⁵

portfolio. Prepared

VT A1400134099

cc'd NRO COX.

1030 - 1530 Worked with
NRO Cox and other
NROs in Dawson
Creek Office to
transfer files.

1530 Left Dawson Creek
Office for Chetwynd
Office.

1230 Arrived at Chetwynd,
BC Office. 10-42.

August 18, 2016.

0800 10-41, 13°C

partly cloudy,
Chetwynd, BC Office.

0810 - 1530 Worked on
packing and

organizing office
space.

1931 DPC 31173. Sent ^{NRO JACOBS, J.}
email to Jon GIBBONS,
cc'd Dale SUPERMAN,
Jenni MARTIN, PAUL
JOHNSTON and Greg
VAN DOLAN. Email
stated confirmation of
two additional
expert witnesses:
Peter OTT, Senior
Biometrician, FLNRO
and Bill CHAPMAN,
Research Soil Scientist,
FLNRO.

2000 10-42.

11:00 Aug 28, 2013

FSJ Pilot Project

D blocks will have non-conformances to soil disturbance limits

5% dispersed in Boreal Plains NDU

10% dispersed in other FDCs in foothills and mountains

25% RWA

Gerry Vanderkwaak

August 28, 2013

250 847 6324

Sept 30 Oct 4

Oct 7 → 11

Oct 14 → 18

Oct 28 → Nov 1

Oct 21 - 25 our meeting

phone 0845 hrs

leave message

phone Wes Neumeier 1121 hrs

Aug 28, 2013

250 787 3645

- phone him and leave a message
- looking to see if he may have some information if the prescripion may have "bypass" soil disturbance targets within the SFMP #2 - A60049 CP251 BIK 9104
- please call back

Monday April 22, 2013

- Monday Focus Meeting
- BCTS wildlife retention for 2011-2012

- encounter issues with the report in RESULTS
- cannot locate WTR reports

Tuesday April 23, 2013

- RESULTS reporting for WTR

- ↳ discuss with Elizabeth

- Look at soil disturbance in FST Pilot Project Section Sustainable Forest management plan

Wednesday April 24, 2013

- Review Hack's OTRM binder and hand off to Susan

-s22

- Continue looking at Soil Disturbance within the FST Pilot Area

Thursday April 25, 2013

- identify blocks to look at in the field within the FST Pilot project area to look at soil disturbance

- use HBS to determine loosely if there were any blocks harvested in summer months

- No BCTS bks

- CP 251 - Cantor

Monday April 29, 2013

- Monday morning meeting
- Work with the spreadsheet provided by Scott Achery and Mei-Ching Tsai
- Create BCTS WTR report and LP WTR report

Tuesday April 30, 2013

- BCTS WTR inspection entered into ~~System~~ ^{CMS}
- prep for tomorrow

Wednesday May 1, 2013

- 1100 hrs - Arrive at
- 18154 CPES1 BIR @ 9104
- still snow from 2 days ago approx 3-4 cm deep ⁷⁰
- too much to make a definitive call on any soil disturbance
- was hoping that being in the open and moderate elevation, snow would not be a factor
- walk beginning of block southeastern corner, where road enters block (Haystack Fire)
- walk East of Road
- too much snow to make a proper assessment of the disturbance on this site
- likely need 2 weeks for snow to leave and frost free
- 1145 hrs leave block and head back to Dawson Creek
- 1500 hrs - Back in Dawson Creek

Thursday May 2, 2013

1032 hrs Arrive near
Subject block - SE-58

- PDR does not extend to
the block

- must proceed on foot

- hit black boundary
proceed to main part of
block

- proceed north near
route of in-block road

- immediately to left (west)
is internal WTP

- some dispersed retention
appeared through as well

- second internal WTP 72
to NW of first

- both contain Ait in complex
boundary (mostly SW)

- both underlying and above

Strong

- appears to be representative
of the block overall

- continue adjacent to road

- loops around and

- some small CWD piles

scattered throughout

- lots of things appear more
prevalent in the southwesterly
portion of the block

- What is the target for
CWD Piles?

- What is the target for
the Dispersed standing
retention? 73

- along BP road, 4 debris
piles, 2 were burned, 2 not

- likely these belonged to

Thursday May 16, 2008

Field day to CFP A18154

CP 250 4104

1107 hrs. Arrive on site

3.5 km on Haystack FSR

Weather: sun, cloud

and slight breeze

temp. in mid teens

degree Celsius

walkthrough talus

looking walking initially

along base of "hill" along

the flat adjacent to the

road

Soils ^{are} ~~appear~~ fine textured clay

79

loam to SCL

Texture gets coarser as you

get up the hill. However

appears that the majority

of the block is clayey, even
if clay is a very minor
component

- western portion of the block
appears to mimic where
I started my walkthrough
(is finer textured soil,
disturbance may be more
prevalent due to proximity
to the roadside work area)

- more obviously wet, with
ruts quite evident

- amount of disturbance is
likely significant, although
I wouldn't ~~have~~ guess how
much disturbance

80

- surveying the block will
be the way to quantify
the amount of disturbance

- ~~enclosure unit / Exposed~~
calls for 5% in Boreal
Reclaim

need to confirm in the office
if there are any variances
that Carter may have applied
for

- maybe approach Richard
Kalyens to see if he
might be interested in
surveying the block

- still need to confirm the
remainder of the blocks

- how is the value worded
in the Sustainable Forest
Management plan

81

1326 hrs - arrive back
at the truck and head
back to D.C.