

Sundquist, Lance ENV:EX

From: Sundquist, Lance ENV:EX
Sent: Friday, September 21, 2007 11:46 AM
To: Nanaimo ENV Filing ENV:EX
Subject: FW: Bear aversion at Cloudworks Upper Harrison Camp

*Section
Upper Harrison*

31040-30/BEAR

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

From: Doyle, Chris J ENV:EX
Sent: Sunday, July 15, 2007 6:57 AM
To: Tancock, Randy ENV:EX; Hahn, Rick J ENV:EX; Sundquist, Lance ENV:EX
Cc: Jacobi, Steven ENV:EX; Rochetta, Steve J ENV:EX; Jevons, Dave ENV:EX
Subject: FW: Bear aversion at Cloudworks Upper Harrison Camp

Just another bear complaint...yes, however this relates to the multi-river, 10 year power project at the top end of Harrison Lake. This raises a few concerns for me namely:

-this project has just started, one problem bear has been shot, 3 more are causing problems and the camp will see its highest use of bears (black and grizzly) in the fall when salmon are in the rivers.

A-1

-there was no consultation with the COS on the Environmental Assessment, in fact we did not know about the project until it construction started. I think we need to make a contribution ahead of time on these projects on issues such as wildlife conflict. At the very least we should be briefed on the scope of the project, possible compliance issues and opportunities for inspections that we can build into our work plans.

A-1

-compliance issues - the current protocol on these large projects (including this one, non responsive non responsive) is for the environmental monitors to report issues of non-compliance to someone in our ministry. I have been questioned by environmental monitors as to why there is no enforcement action on serious issues of non-compliance reported by them. My answer is that we don't hear about these issues. My point here is who receives this information and what is their protocol for referring issues of non-compliance. We certainly generate numerous CO found files on these projects (including this one).

One final note - a previous e-mail I generated on this matter was forwarded by our ministry to the project proponent. This one is intended for internal communication.

Chris Doyle
Field Supervisor
Conservation Officer Service
(604) 898-3678 ext. 228

Report all Poachers and Polluters 1-877-952-RAPP

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

From: Mac Lowry [mailto:mowry@pggroup.com]
Sent: Friday, July 13, 2007 8:53 AM
To: Doyle, Chris J ENV:EX
Cc: Elyse Hackett
Subject: Bear aversion at Cloudworks Upper Harrison Camp

Chris,

Could you please comment on the procedure of using rubber bullets as an aversion

n/c
non-compliance

Sundquist, Lance ENV:EX

From: Sundquist, Lance ENV:EX
Sent: Thursday, November 29, 2007 5:13 PM
To: McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX
Cc: Hahn, Rick J ENV:EX; Doyle, Chris J ENV:EX
Subject: Re: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

Chris has identified the need to establish a more strategic approach to compliance issues at IPPs.

A-2

As I understand the issue, MOE is receiving environmental monitor reports that identify non-compliance issues. There seems to be a lack of process within MOE in how to address the reports of n/c and who plays what role.

In keeping with our C&E policy/procedure, the recipient of the monitoring report needs to conduct an assessment of the issue, including discussing the issue with the appropriate COS field supervisor to determine an appropriate course of action.

Likely, the first step will be to conduct an on-site to scope out the issue and assess potential impacts. ES and WSD staff are key participants in the on-site.

If a recommendation for investigation is considered appropriate, then the recipient of the report would complete the IRF for consideration. As well, there may be the need for remediation that would occur outside of an investigation.

Perhaps we need to discuss this topic further?

Lance

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

From: Chris Doyle
To: Babakaiff, Scott C ENV:EX
To: Bennett, Timothy A ENV:EX
To: XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX
Cc: Jennifer McGuire
Cc: Julia F ENV:EX Berardinucci
Cc: LoopD@pac.dfo-mpo.gc.ca
Cc: HarrisR@pac.dfo-mpo.gc.ca
Cc: Dave WLAP:EX Jevons
Cc: Rick Hahn
Cc: Lance Sundquist
Sent: Nov 27, 2007 7:39 AM
Subject: RE: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

We are planning a site inspection with DFO (enforcement) and hopefully ecosystems staff. I have also spoken to MoF about potential drainage issues on the FSR's. The inspection may lead to an investigation.

Is ES or WS planning any inspections or compliance related activities?

non responsive

non responsive

Please ensure this e-mail is not forwarded to Kiewit, Cloudworks or the environmental monitor.

Chris Doyle
Field Supervisor
Conservation Officer Service
Fraser River North Zone
(604) 898-3678 ext. 228

Sundquist, Lance ENV:EX

From: Sundquist, Lance ENV:EX
Sent: Friday, November 30, 2007 7:22 AM
To: Berardinucci, Julia F ENV:EX
Subject: Re: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

I am in the Sry office on Dec 11 and available to discuss this topic then.

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

From: Berardinucci, Julia F ENV:EX
To: Sundquist, Lance ENV:EX
Sent: Thu Nov 29 17:43:22 2007
Subject: Re: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

A-3
Thank you for sharing the process. Yes we do need to discuss. With all due respect, the assumption in the process is that the staff are able to keep up with the influx of reports. I would love it if WSD could do its job properly. The best we are doing right now is running after fires. I appreciate your detailing what should happen. Our discussion will need to focus on what we can realistically do to get closer to the ideal. Jennifer is back later December but I think this is mostly an issue you and I need to discuss. I am out sick but will propose a meeting when I am back in the office based on what our calendars show open. if I get a good sleep I might be in tomorrow. Thank you and I look forward to working through this further.
Julia

This message was sent from a Blackberry.

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

From: Sundquist, Lance ENV:EX
To: McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX
Cc: Hahn, Rick J ENV:EX; Doyle, Chris J ENV:EX
Sent: Thu Nov 29 17:12:42 2007
Subject: Re: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

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

From: Chris Doyle
To: Babakaiff, Scott C ENV:EX
To: Bennett, Timothy A ENV:EX
To: XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX
Cc: Jennifer McGuire



CONSERVATION OFFICER SERVICE OFFICER NOTES

Project Name/ Subject(s) of Investigation: Cloudworks/Kiewit	Date: 08/03/30
	Notes Start: 1206

Officer: CO Busink

Observations/ Actions:

08/03/30

A-4
1114 – CO Busink called Cory Bettles at 778-233-3814. CO Busink stated that he had serious concerns regarding the illegal construction of the bridge at Douglas Creek. CO Busink stated that bridge construction would have required permits from MOE Water Stewardship Division. Bettles stated that neither he nor Elyse Macdonald knew that this work was planned or completed until after bridge construction. He also stated that the s.22 claimed that he did not know that this bridge construction was done until after the fact. Bettles had a hard time believing that s.22 did not know of the bridge construction. CO Busink asked whether Bettles thought that Kiewit had employed the practice of "it's easier to ask for forgiveness later than to ask for permission." Bettles stated that "in my professional opinion..." it was likely that Kiewit thought it might be "worth the risk..." to construct the bridge without approvals, get the work done, and possibly "pay a fine as a cost of doing business". CO Busink stated that the stop work order should remain in effect until further notice while he has an opportunity to contact the various stakeholders and determine a course of action.

1138 – End Call.

1201 – CO Busink sent an email to Cory Bettles, Elyse Macdonald, Chris Doyle, and Jo Jenkins re: the discussion with Cory Bettles and the stop work order.

Exhibits:

Officer Signature:	Date: 08/03/30
	Notes End: 1222

Shannon, Barb E CSD:EX

From: Busink, Peter ENV:EX
Sent: Wednesday, April 2, 2008 10:50 AM
To: McGuire, Jennifer ENV:EX
Cc: Berardinucci, Julia F ENV:EX; Doyle, Chris J ENV:EX
Subject: Kiewit IPPs - Douglas Creek unauthorized bridge

Attachments: Stokke-Douglas Wetland.pdf; 2008 - March 27 Douglas Stop Work Order_final.pdf; douglas bridge.doc; Douglas Bridge.pdf

Hi Jennifer,

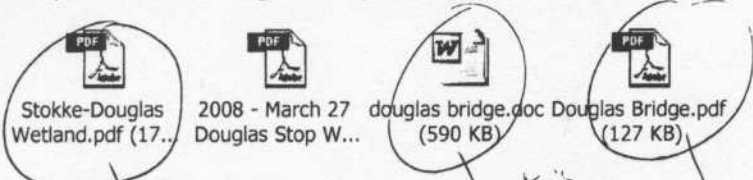
A-5

I'm not sure if you're aware of this yet. The Cloudworks Energy IPP contractor Peter Kiewit (and their subcontractors) have constructed a clearspan bridge over Douglas Creek last week without MOE notifications sent in. This bridge provided access to a wetland that the Kiewit subcontractor Lorwes, illegally went into and harvested wood, trespassed, and cut access within a 50m buffer around a wetland riparian zone that may contain hundreds of egg masses of a blue listed species (red tailed frog). Two separate stop work orders have been issued: one by Elyse MacDonald (Env. Monitor on behalf of MOE, DFO, etc) for the bridge; and one by Mike Champion, the environmental guy for Kiewit for the wetlands. Elyse MacDonald will be issuing another stop work order for the wetlands as well.

Where it stands:

I've instructed Kiewit to submit the notification that they should have submitted prior to installing the bridge. Mike will prepare this notification and give it to me to forward onto you. Once you and your staff determine if you would have had any issue with the notification, this answer will determine whether the bridge stop work order will be lifted or not.

They will also be preparing a notification for the wetland access that they were planning (that was also part of their EMP). However, I've told Cloudworks and Kiewit that the wetland stop work order will remain in place until my investigation is complete, however long that may take.



Peter Busink
Conservation Officer
Field Operations, Maple Ridge, BC
Phone: (604) 582-5366
Cell: s.15 s.15
Fax: (604) 582-5281

Already Printed

*Photo's
Already
printed*

*Already
Printed*

*e-mail
March 28/08 4:34 PM*

@

737-9788

Shannon, Barb E CSD:EX

From: Jenkins, Johanna [Johanna.Jenkins@dfo-mpo.gc.ca]
Sent: Sunday, March 30, 2008 2:37 PM
To: Busink, Peter ENV:EX; Cory Bettles
Cc: Elyse MacDonald; Doyle, Chris J ENV:EX; Busto, Vince; Harris, Rob
Subject: Bridge at Douglas Creek

Hi Cory and Peter-

Just to clarify-

Elyse and I did speak on Friday March 28, re: bridge installation. She explained she had a stop work order in progress for the bridge. My view, from the DFO standpoint, was that this is the correct course of action, a stop work/non-use order.

However, this stop-work order is NOT a DFO issued one, and I did not direct it. DFO cannot directly make a stop-work order nor advise on any use of the new bridge until we are able to inspect it. In the meantime, any actions the construction or parent proponent companies chooses to take with regards to using this bridge is entirely at their own liability and risk with regards to the Fisheries Act, they have not been exempted from DFO procedures or investigations. I mentioned to Elyse that common sense is the best course of action. She allowed a site safety vehicle, which was stranded on the opposite side of this bridge after they were directed not to use the bridge, to return over the bridge. This is the type of common sense to which I am referring. If the companies involved in it's placement choose to return to using it for non-emergency reasons prior to examination by DFO and MOE, they are now knowingly using a potentially unauthorized structure.

If any documentation can be produced by the construction company or parent proponent (Cloudworks) showing that this bridge placement was authorized, it should be forwarded to DFO (Vince Busto) and MOE immediately. This would be the only action that would reasonably allow authorized use of this new bridge structure.

I am hoping to attend on-site with another Fishery Officer late on Tuesday Morning (April 1), as this is our earliest possible availability.

Regards-

Johanna Jenkins
 Field Supervisor
 Conservation and Protection
 Fisheries and Oceans Canada
 1120 Hunter Place, Squamish, BC V8B 0B6 604-892-5420

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

From: Busink, Peter ENV:EX [mailto:Peter.Busink@gov.bc.ca]
Sent: Sun 3/30/2008 12:01 PM
To: Cory Bettles
Cc: Elyse MacDonald; Doyle, Chris J ENV:EX; Jenkins, Johanna
Subject: RE: Question for Peter B

Hi Cory,

A-6
 As discussed, I have major concerns with this bridge construction. The construction done without proper approvals; potential environmental impact; and the new bridge providing access to, and resulting works completed in the wetlands. Even more disturbing is the apparent corporate mindset that either knowingly completed illegal works; or was not aware that agency approvals were required and notifications to the various environmental monitors given. Either way, the issue is very serious and deserves serious attention. I will meet with our Water Stewardship Division first thing on Monday morning, and will contact Jo Jenkins to discuss the issue. I would like to receive any reports and/or photos and documentation that you and Elyse compile as a result of your site visit on Monday. Until meetings with the appropriate stakeholders and possible

Shannon, Barb E CSD:EX

From: Babakaiff, Scott C ENV:EX
Sent: Wednesday, March 26, 2008 4:46 PM
To: XT:Busto, Vince DFO EAO:IN; Bennett, Timothy A ENV:EX; Willcox, Michael ENV:EX
Cc: Busink, Peter ENV:EX; Jesson, Duane A ENV:EX
Subject: RE: New Land Slide at Stokke

Y'know,

A-8
● We really must organize a 'Kiewit road-construction-induced landslide pool'...throw in a few dollars, pick a date, and see who wins...it'll be more fun than a meat draw, and recent history suggests there will be no shortage of action.

On a more serious note, isn't MOF or ILMB getting upset with the loss of productive land base associated with the multiple landslides that have happened in the last six months? Are there any firm actions expected in the short term? You guys may now have a bit more to inspect during your April 14 flight...

Later, Scott

From: Elyse MacDonald [mailto:eMacDonald@pggroup.com]
Sent: Wednesday, March 26, 2008 4:34 PM
To: XT:Busto, Vince DFO EAO:IN; Bennett, Timothy A ENV:EX
Cc: Willcox, Michael ENV:EX; Babakaiff, Scott C ENV:EX; Cory Bettles; Mike.Champion
Subject: New Land Slide at Stokke
Importance: High

Tim/Vince,

This is to notify you of another land slide at the Stokke Creek project on Harrison Lake. Photos are attached, so you can see the extent of this slide. The other two slides, referred to in the notification email below, happened in the week of February 15th and last week. The first slide is visible just down the hill from this slide. The second slide was much less serious, with rock landing from the spur road onto the main road; none went into the lake.

Kiewit is preparing an incident report for this, which can be forwarded on to you when ready.

I am calling PEP and will follow up with each of you this afternoon and tomorrow. Cory is calling MOF and the CO, Peter B.

Please call either Cory (604.633.9990 (w) or 778.233.3814 (cell)) or me if you have any questions.

Regards,

Elyse MacDonald, B.Sc., R.P.Bio., CPESC
Aquatic Biologist

2009-01-14

A-9

Yet another 'mishap' Harrison way that did not make it down to DFO through the expected channels (PEP, ORR line--we received neither). Have you heard anything on this one?

Vince Busto is flying up there by helicopter this Thursday Feb 21. There may be an extra seat. Loop, Harris and I will be on training that day. If either of you are interested in going up, that would be great--the contact person to ask is Cory Bettles:

Cory Bettles, M.Sc., R.P.Bio., c.bettles@cloudworksenergy.com
Environmental Manager
Cloudworks Energy Inc.
1168 Hamilton Street, Suite 403
Vancouver, BC V6B 2S2
Phone: 604.633.9990
Fax: 604.633.9991
Cell: 778.233.3814

He's the person paying for this helicopter ride. Attached are some photos, this slide went into upper Harrison Lake. I don't know what the "internal" investigation MOF is doing involves.

Thanks-

Johanna Jenkins
Field Supervisor
Fishery Officer
Squamish Unit
Conservation and Protection

Fisheries and Oceans Canada, 1120 Hunter Place,
Box # 2360, Squamish, BC V8B 0B6
(604) 892-5420 (office) (604) 341-0353 (cell) (604) 892-2378 (fax)

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

From: Busto, Vince
Sent: 19-Feb-08 12:20
To: Jenkins, Johanna
Subject: FW: Stokke Project Land Slide

FYI

The slide looks awful. I do not yet seen any more information than what is given in the e-mail below. I will be going up via helicopter, provided by Cloudworks, from Vancouver on Thursday morning.

I will call you later this afternoon to discuss.

Vince Busto, B.A.Sc., P.Eng.
Habitat and Hydrotechnical Engineer | Ingénieur de l'habitat et de l'hydrotechnique
Habitat and Enhancement Branch | Protection et mise en valeur des habitats
Lower Fraser River | Le bas Fraser
Fisheries and Oceans Canada | Pêches et Océans Canada
100 Annacis Parkway, Unit 3 | 100 Annacis Parkway, Unit 3
Delta, BC V3M 6A2 | Delta (C.-B.) V3M 6A2
Government of Canada | Gouvernement du Canada

Telephone/Téléphone 604-666-8281
Facsimile / Télécopieur 604-666-6627

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

Shannon, Barb E CSD:EX

From: Jevons, Dave ENV:EX
Sent: Thursday, March 13, 2008 2:42 PM
To: Busink, Peter ENV:EX
Subject: FW: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

From: Doyle, Chris J ENV:EX
Sent: Fri 07/12/2007 7:53 PM
To: Jevons, Dave ENV:EX
Subject: FW: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

Chris Doyle
Field Supervisor
Conservation Officer Service
Fraser River North Zone
(604) 898-3678 ext. 228

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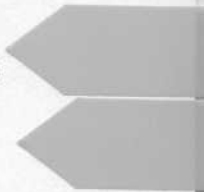
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Perhaps we need to discuss this topic further?

Lance

-----Original Message-----
From: Chris Doyle
To: Babakaiff, Scott C ENV:EX
To: Bennett, Timothy A ENV:EX

A-10





Pottinger Gaherty
Environmental Consultants Ltd.
1200 - 1185 West Georgia St.
Vancouver, BC Canada V6E 4E6
T 604.682.3707
F 604.682.3497
www.pggroup.com

DRAFT

INCIDENT REPORT

Project: 'Crazy Creek', Tipella Creek to Substation Transmission Line, Upper Harrison Lake Group of Projects

Date of Report: September 4, 2008

Date of Incident: Aug 14th and 15th, 2008

PGL Project Number: 2347-01.02

Weather: Sunny and Dry

Prepared By: Mac Lowry

Incident: The placement of cleared timber in a fish bearing stream (Crazy Creek) and the crossing of the creek with a log-loader machine.

Location: Approximately 1.5 km north east of Tipella Creek

Events Leading to, and including Incident:

Clearing for the Tipella Transmission line began on July 18th, 2008. A feller-buncher was used for clearing until reaching the marked riparian area. The process was then switched to hand-felling and completed on Aug 1.

Following tree falling, the riparian area was accessed for stacking and removal of cleared timber. It was during this period that timber was placed in 'Crazy Creek' and the waterway was crossed by a log-loader track machine. PKS documentation reports that the creek was crossed twice, on Aug 14th and 15th.

The Environmental Monitor became aware of the timber placement in the creek and machine crossing during a routine inspection of the area, on Aug 27th. To prevent further environmental impact, PKS' environmental supervisor issued a stop work order for the area immediately after discovery. No work has occurred in this area since Aug 15th. Copies of PKS stop work order and incident report will be forwarded when available.

Based on the request for a mor information by the EM, on September 4th Cloudworks Environmental Manager conducted a preliminary fish habitat assessment of the crossing area. The resulting confirmation of fish presence and suitable fish habitat suggests the placement of timber in-stream has altered and/or disrupted fish habitat. This determination led to the EM issuing this Incident Report, to notify the agencies.

Andres, Byron ENV:EX

From: Andrew.Allan [Andrew.Allan@kiewit.com]
Sent: Wednesday, October 1, 2008 12:58 PM
To: Loop, Dave; Busto, Vince; Andres, Byron ENV:EX
Cc: Chris.Stacey; Don.Delarosbil; Dan.Lever; Paul.Wearmouth; Cory Bettles; Elyse MacDonald
Subject: RE: Crazy Creek

Dave,

3-2
Further to my previous email, due to the current low water conditions and placement of the wood in the creek, an effective fish salvage may not be possible. I will leave it up to the environmental monitors from PGG and Cascade to determine when and wear a biologically sound fish salvage may be possible once the log removal commences.

In the absence and any further communications with DFO, I have instructed the field to start the work as soon as possible. Once I get a firm time and date from the field, I will pass it along to both DFO and MoE. We will also be providing daily updates on the progress of the rehabilitation activities.

Please be sure to contact me should you have any questions or comments.

Regards,
Andrew

J. Andrew Allan, R.P.Bio.
District Environmental Manager
Peter Kiewit Sons Co.
Western Canada District
office: 604.629.5461 cell: 604.317.6886

From: Loop, Dave [mailto:Dave.Loop@dfo-mpo.gc.ca]
Sent: October 1, 2008 8:17 AM
To: Andrew.Allan; Busto, Vince; Andres, Byron ENV:EX
Subject: RE: Crazy Creek

Andrew, if Cascade has completed their assessment and provided a viable reclamation plan please forward a copy of the operational plan to Vince and myself. This plan should be approved and administered by Cloudworks, PKS and PPG environmental staff on-site. I will be attending the site later this week and expect to see significant and appropriate action taken to remediate the Crazy Creek HADD. This doesn't preclude further enforcement action regarding this incident.

This is my understanding of the on-site meeting and agreement reached with Vince. Please Vince if this direction is in error inform Andrew and myself immediately. Therefore, Mr. Allan PKS should proceed on this matter promptly without further delay.

David A. Loop

Fishery Officer
Squamish Field Unit

2009-01-21



PGL

Pottinger Gaherty
Environmental Consultants Ltd.
1200 - 1185 West Georgia St.
Vancouver, BC Canada V6E 4E8
T 604.682 3707
F 604.682 3497
www.pggroup.com

DRAFT

INCIDENT REPORT

Project: 'Crazy Creek', Tipella Creek to Substation Transmission Line, Upper Harrison Lake Group of Projects

Date of Report: September 4, 2008

Date of Incident: Aug 14th and 15th, 2008

PGL Project Number: 2347-01.02

Weather: Sunny and Dry

Prepared By: Mac Lowry — 604-895-7610

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Location: Approximately 1.5 km north east of Tipella Creek

33

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ELyse Macdonald

604-895-7635
785-6726

emacdonald@pggroup.com

Non-Compliance With:

- Project EMP was not followed:
 - Section 4, #3: the EM was not notified and so was not able to confirm if proposed clearing complied with environmental regulations.
 - Section 4.1 (pg. 24): the EM developed a reporting protocol for PKS to follow, dated November 2, 2007. The creek crossing was not mentioned in the Action Registry, the Daily Logs, or via a work plan.
- PKS did not adhere to their own pre-work plan:
 - "Any clearing within fifty meters of a water course requires notification to the Environmental Monitor and Environmental Supervisor"

Environmental Features at Risk/Damaged:

The crossing area will be the focus of detailed habitat assessment and species inventory study by a professional fisheries consultant hired by PKS. Results of this assessment will determine the impact of the creek crossing and timber placement. Preliminary investigation suggests the placement of the logs within Crazy Creek and the disruption of the stream banks have led to a harmful disruption and/or alteration of fish habitat.

Potential Impacts include:

- The creation of a barrier to fish migration, and
- Disruption and/or alteration of fish habitat.

Resolution:

- Immediately cease any activity, other than by the habitat assessment team, within 50m of the creek.
- Implement any orders received from the applicable regulatory agencies or from the fish habitat assessment report.
- Continue to investigate incident and determine best course of action, following receipt of fish habitat assessment report.



Case Summary

Details

Case File #:	200702392	Opened Date:	2007-06-26 03:06 PM
Category:	CO SERVICE	Discovery Date:	2007-06-15
Type:	FOREST PRACTICES CODE (HABITAT)	Closed Date:	2008-10-21 12:42 PM
Status:	Closed	Admin Org Unit:	SQUAMISH DISTRICT
Opened By:	DOYLE, CHRIS : 19431	Source:	MINISTRY OF ENVIRONMENT
Lead Investigator:	DOYLE, CHRIS : 19431	Source Ref #:	
Lead Investigator's Phone:		Other Source Agency:	
Major Case:	No	Transferred to Agency:	BC FOREST SERVICE OR MINISTRY OF FORESTS
Paper File Created:	Yes	Other Transferred Agency:	
Joint Investigation:	No	Transferred Agency Contact:	
Investigation Review Process:	No	Lead Agency:	MINISTRY OF ENVIRONMENT
Investigation Review Date:		Joint Agency:	MINISTRY OF ENVIRONMENT
Investigation Start Date:	2007-06-15	Joint Agency Phone:	
Joint Agency Contact:		Joint Agency Case No:	
Other Joint Agency:		Case Description:	INSPECTION WITH MOF FIND ILLEGAL HARVEST OF TREES WITHIN RIPARIAN AREA OF LILLOOET RIVER. TREES WERE CUT AS PART OF POWER PROJECT TO WIDEN AIRSTRIP

3-4

Members:

Name	Phone Number	Start Date	End Date
DOYLE, CHRIS : 19431		2007-06-26	2017-06-23

Parties Involved:

Name	Role	Nature of Involvement	Phone Number	Address
CLOUDWORKS ENERGY INC	SUSPECT	PROPONENT OF MULTI WATERSHED POWER PROJECT	604-633-9990	403-1168 HAMILTON STREET VANCOUVER VANCOUVER BC V6B 2S2 CAN

Sites:

Site	Site Type	Description
1. 2-11; SQUAMISH DISTRICT		LOWER LILLOOET RIVER AT PORT DOUGLAS AIRSTRIP.

Notes:

Date	Name	Comments
------	------	----------



Case Summary

Details

Case File #:	200706008	Opened Date:	2007-11-27 08:18 AM
Category:	CO SERVICE	Discovery Date:	2007-11-19
Type:	HABITAT	Closed Date:	
Status:	Open	Admin Org Unit:	SQUAMISH DISTRICT
Opened By:	DOYLE, CHRIS : 19431	Source:	
Lead Investigator:	BUSINK, PETER : 22897	Source Ref #:	
Lead Investigator's Phone:		Other Source Agency:	
Major Case:	Yes	Transferred to Agency:	
Paper File Created:	Yes	Other Transferred Agency:	
Joint Investigation:	No		
Investigation Review Process:	No	Transferred Agency Contact:	
Investigation Review Date:		Lead Agency:	MINISTRY OF ENVIRONMENT
Investigation Start Date:	2007-11-19	Joint Agency:	
Joint Agency Contact:		Joint Agency Phone:	
Other Joint Agency:		Joint Agency Case No:	
Case Description:	REPORT OF DAMAGE TO FISH HABITAT FROM CONSTRUCTION OF POWER PROJECTS		

3-5

Members:

Name	Phone Number	Start Date	End Date
JEVONS, DAVE : 125110		2007-11-27	2017-11-24
DOYLE, CHRIS : 19431		2007-11-27	2017-11-24
BUSINK, PETER : 22897		2007-03-01	2018-03-24

Parties Involved:

Name	Role	Nature of Involvement	Phone Number	Address
PETER KIEWIT SO NS CO LTD	SUSPECT	CONTRACTOR FOR CONSTRUCTION OF POWER PROJECTS		2800 666 BARRARD ST VANCOUVER BC V6C2Z7 CAN
CLOUDWORKS ENERGY INC	SUSPECT	PROJECT PROPONENT	604-633-9990	403-1168 HAMILTON STREET VANCOUVER VANCOUVER BC V6B 2S2 CAN

Sites:

Site	Site Type	Description
1. 2-9; SQUAMISH DISTRICT		DOUGLAS, TIPELLA, FIRE CREEKS - LOWER LILLOOET, HARRISON LAKE POWER PROJECTS.

Notes:

Comments

Date	Name	
08-DEC-08	DOYLE, CHRIS : 19431	RECIEVED COPY OF VIOLATION TICKET ISSUED BY MFR FOR CUTTING OF TIMBER. ADDED TO COORS CONTRAVENTIONS
25-NOV-08	BUSINK, PETER : 22897	1121 - CO BUSINK EMAILED TIM BENNETT REQUESTING STATUS UPDATE ON WARNING LETTER TO BE DRAFTED BY WSD.
10-JUL-08	BUSINK, PETER : 22897	1330 HRS - CO BUSINK MET WITH TIM BENNETT OF WSD RE: KIEWIT FILE DOUGLAS CREEK WETLAND ISSUE. HE STATED THAT IT WAS A "GREY AREA" REGARDING A "CHANGES IN AND ABOUT A STREAM" CHARGE. WE AGREED THAT HE WOULD DRAFT A LETTER PROVIDING INFORMATION ON CHANGES IN OR ABOUT A STREAM AND THAT CO BUSINK WOULD ISSUE THIS LETTER WITH A WRITTEN WARNING ALONG WITH A VT FOR FAILING TO COMPLY WITH CONDITIONS OF A PERMIT FOR FAILING TO PROVIDE NOTIFICATION RE: INSTALLATION OF THE BRIDGE OVER DOUGLAS CREEK. CO BUSINK STATED THAT ONCE THE COS RECEIVED THE LETTER DRAFTED BY WSD, THE VT AND WARNING WOULD BE ISSUED, AND THE FILE CONCLUDED.
10-JUN-08	BUSINK, PETER : 22897	1330 HRS - CO BUSINK MET WITH TIM BENNETT RE: KIEWIT DOUGLAS CREEK AREA. IDENTIFIED THAT THERE IS A POSSIBILITY OF "CHANGES IN AND ABOUT A STREAM WITHOUT LAWFUL AUTHORITY" S. 93(2)(Q) WATER ACT. BENNETT TO CONTACT BOB LAWRENCE AND ELYSE MACDONALD TO DETERMINE IF CUT WITHIN 10M OF WETLAND IS UNDER HIGH WATER MARK OR OTHERWISE WOULD CONSTITUTE "IN AND ABOUT A STREAM" OFFENCE. IF SO, ISSUE VT. BENNETT WILL ALSO SEND LETTER TO KIEWIT REQUESTING AN EIA BE CONDUCTED RE: THE RED LEGGED FROG PRIOR TO LIFTING STOP WORK ORDER. IF EIA DETERMINES HABITAT DESTRUCTION, THEN RESTORATIVE MEASURES MAY BE REQUIRED TO LIFT STOP WORK ORDER. BENNETT STATED THAT IRF WILL NOT BE SUBMITTED.
27-MAY-08	BUSINK, PETER : 22897	1410 HRS - CO BUSINK MET WITH SCOTT BARRETT WHO STATED THAT THE RED LEGGED FROG HAD NO LEGISLATION THAT PROTECTS IT'S HABITAT, SO UNLESS A FROG WAS FOUND DEAD AS A DIRECT RESULT OF THE MACHINE, THERE WAS NO OFFENCE UNDER THE WILDLIFE ACT -> DETERMINED NO WILDLIFE ACT CHARGES WOULD BE APPLICABLE, THEREFORE NO ESD INVOLVEMENT. 1000 HRS - BOB CUNNEYWORTH (ILMB) AND BOB LAWRENCE (MOF) ATTEND INTERVIEWS: CAUTIONED, RECORDED INTERVIEW OF s.21, s.15 s.21, s.15 WITH COMPANY LAWYER PAUL CASSIDY.
13-MAY-08	BUSINK, PETER : 22897	1500 HRS - CO BUSINK SENT DIGITAL VOICE RECORDING OF INTERVIEW CD'S VIA HOUSE MAIL TO CUNNEYWORTH AND LAWRENCE. 1200HRS - CO BUSINK SPOKE WITH TIM BENNETT RE: KIEWIT STOKKE & DOUGLAS CREEK. CO BUSINK STATED THAT HE HAD SPOKEN WITH CO DOYLE AND THAT THE COS WOULD WAIT TO HEAR THROUGH THE IRF, WHETHER WS WANTED TO PURSUE AND INVESTIGATION. STATED THAT KIEWIT INTERVIEWS WERE BEING SCHEDULED FOR THE END OF THE MONTH, BUT THAT THE IRF WOULD HAVE TO BE SUBMITTED RE: DOUGLAS CREEK TO PURSUE ADDITIONAL INVESTIGATION BEYOND THE INTERVIEWS.
13-MAY-08	BUSINK, PETER : 22897	CO BUSINK RECEIVED EMAIL FROM MICHEL MARTIN FROM KIEWIT RE: DOUGLAS CREEK INTERVIEWS CONFIRMING MAY 17, 2008 AT 1000HRS. CC. BOB LAWRENCE OF MOF.

8-5

Hamdi, Rhiannon CSD:EX

From: Lawrence, Bob T FOR:EX
Sent: Monday, July 21, 2008 7:47 AM
To: Doyle, Chris J ENV:EX; Griffin, Paula J FOR:EX
Cc: Busink, Peter ENV:EX
Subject: RE: Harrison Lake IPP - Kiewit

Ok, how soon can we meet on this?

From: Doyle, Chris J ENV:EX
Sent: Saturday, July 19, 2008 10:31 AM
To: Griffin, Paula J FOR:EX; Lawrence, Bob T FOR:EX
Cc: Busink, Peter ENV:EX
Subject: FW: Harrison Lake IPP - Kiewit

Can you hold off on Kiewit enforcement action until we meet again?

Chris Doyle
Field Supervisor
Conservation Officer Service
Sea to Sky Zone
(604) 898-3678 ext. 228

From: Sundquist, Lance ENV:EX
Sent: Thursday, July 17, 2008 4:57 PM
To: Doyle, Chris J ENV:EX
Subject: RE: Harrison Lake IPP - Kiewit

In light of our discussion today I would hold off on the enforcement actions - not sure if they are significant enough given the corporate history.

From: Doyle, Chris J ENV:EX
Sent: Thursday, July 17, 2008 12:50 PM
To: Sundquist, Lance ENV:EX
Subject: Harrison Lake IPP - Kiewit

Hi Lance,

Here is a quick update:

MFR is preparing to issue a violation ticket related to a trespass
COS and Water Stewardship have discussed issuing a VT under the Water Act, a written warning for another Water Act violation and a letter from Water Stewardship advising of non-compliance issues. Additionally, ILMBC will be issuing a notice advising that these issues of non-compliance are in violation of their tenure agreement which requires them to comply with provincial and federal legislation.

The DFO officer handling the fish kill file is S. 22. I will try to get an update from his supervisor.

Hamdi, Rhiannon CSD:EX

From: Lawrence, Bob T FOR:EX
Sent: Monday, June 9, 2008 12:43 PM
To: Busink, Peter ENV:EX
Cc: Griffin, Paula J FOR:EX
Subject: RE: Wetland Contravention

C-3

Peter I went down an inspected site last Thursday and they do appear to be in contravention of Sec 51 of the Forest Planning and Practices Regulations for cutting within the ten meter reserve zone that would be required around the wetland on the R/W side. There is 2-3 meters left of the reserve for about 250 meters along that side. Supposedly it was Mike Hedberg's intention to maintain a 10 meter reserve here. Not sure what impact it will have on Red Legged Frog however reading Keystone Wildlife Research report it would appear that removal of the reserve zone will likely have a detrimental affect on the species.

Talk to s.22 s.22

16. Did you by any chance get a statement from him? Otherwise I think we should try and get a statement from him as he is possibly one of the best witness about the incident.

Are you coming to the Interagency meeting here in Squamish this Wednesday? Maybe we can get a chance to discuss.

From: Busink, Peter ENV:EX
Sent: Monday, June 9, 2008 11:44 AM
To: Lawrence, Bob T FOR:EX
Subject: RE: Wetland Contravention

Will do, Bob.

From: Lawrence, Bob T FOR:EX
Sent: Thursday, May 29, 2008 7:16 PM
To: Busink, Peter ENV:EX
Subject: RE: Wetland Contravention

Ok, thanks give me a heads up before it is lift if you can.

From: Busink, Peter ENV:EX
Sent: Thursday, May 29, 2008 2:55 PM
To: Lawrence, Bob T FOR:EX
Cc: Bennett, Timothy A ENV:EX
Subject: RE: Wetland Contravention

Hi Bob,

I don't know if or when the stop work order will be rescinded. I am away tomorrow and all next week, so until I have a chance to discuss the outcome of the interview with Tim Bennett, the stop work order will remain in place.

From: Lawrence, Bob T FOR:EX
Sent: Thursday, May 29, 2008 10:09 AM
To: Busink, Peter ENV:EX
Cc: Griffin, Paula J FOR:EX
Subject: Wetland Contravention

Shannon, Barb E CSD:EX

From: Babakaiff, Scott C ENV:EX
Sent: Thursday, May 15, 2008 4:12 PM
To: Eedy, Rachael ENV:EX; Bennett, Timothy A ENV:EX; 'Busto, Vince'; Willcox, Michael ENV:EX
Subject: FW: Kwalsa and Upper Stave Weekly EM report
Attachments: Kwalsa and Upper Stave Weekly Report - May 12 08.pdf

Heads up,

Two items of obvious interest:

1. Another slope failure contributing sediment to a stream channel (slump into a tributary of Tipella Creek), and,
2. As predicted, flows are exceeded diversion channel/pumping capacity. This is a CEMP design issue that has gotta get sorted.

Scott

From: Elyse MacDonald [mailto:eMacDonald@pggroup.com]
Sent: Wednesday, May 14, 2008 7:50 PM
To: p.schincariol@cloudworksenergy.com; michel.martin@kiewit.com; gsteeves@ameresco.com; michael@chlaw.ca; Hedberg, Mike FOR:IN; Eedy, Rachael ENV:EX; XT:Busto, Vince DFO EAO:IN; mike.champion@kiewit.com; c.bettles@cloudworksenergy.com
Cc: Amber Lapshinoff; Mac Lowry; Mark Manning [s.22 s.22] k.muniak@cloudworksenergy.com; Jackie Hamilton [s.22 s.22] Tyler Gray; Mark Toohey; Aasha.Williams@kiewit.com; Babakaiff, Scott C ENV:EX; Swantje.Voelker
Subject: Kwalsa and Upper Stave Weekly EM report

Attached please find our weekly report for the Kwalsa and Upper Stave Hydroelectric Projects.

Please call me if you have any questions or concerns.

Regards,

Elyse MacDonald, B.Sc., R.P.Bio., CPESC

Aquatic Biologist

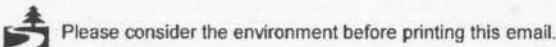
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ENVIRONMENTAL INCIDENT REPORT

(Please print)

Date of Report: **March 27, 2008** Date/Time of Incident: **March 26, 2008**

Project Name: **Kwalsa and Upper Stave Hydroelectric Projects** Name of
Project Mgr.: **Michel Martin**

Report Prepared By (name, position and company): **Mike Champion (ES)**

Witness to Event (name, position and company): **N/A**

Name of company responsible for incident: **PKS**

Address: _____ Phone No: _____

Contact Name: _____ Position: _____

INCIDENT PROFILE

Description of Incident:

The transmission line right of way (ROW), between Douglas Creek and Stokke Creek, crosses a wetland over a beaver dam. In February, it was decided by PKS, Keystone wildlife, the EM, Hedberg and associates, and Cloudworks that a 50 meter buffer would be left surrounding the wetland due to the presence of red legged frogs (*Rana aurora*). No felling was to occur in this area until an amphibian specialist had conducted a study to determine the quality of habitat present, and prepare a report on how PKS was to proceed with construction.

Prior to felling Hedberg and associates flagged the area to be felled and marked a 150 meter buffer line surrounding the road through the wetland. This buffer was considered excessive by PKS staff and advised the subcontractor, Lor Wes, to fall past the marked boundary up to 50 meters from the wetland, however this 50 meter line was never flagged. Felling was conducted with a feller buncher during the early morning of March 26th (~02:00). The operator fell past the boundary to 50 meters of the wetland on the north end, he then walked his machine through the forest (keeping 50 meters from the wetland) until he passed the wetland returning to the ROW. The area that he walked the machine through is on land tenure in Cloudworks name. Once he returned to the ROW he turned north and began cutting towards the wetland. Due to the darkness he did not notice that he was cutting directly next to the wetted area, within the buffer. The environmental supervisor noticed the incident and immediately issued a stop work order and had the operator remove the machine from the buffer zone, to the agreed 50 meter distance. This incident violated the agreement: of hand felling in and around the 50 meter buffer, no felling before the amphibian study and salvage was

D-2

D-2



completed, and the use of a machine within the wetland buffer, with the aforementioned parties.

Name of product/substance spilled/released, if relevant: N/A

Location: 2km from Douglas Creek on the Douglas-Stokke transmission line right of way.

Total quantity of product spilled/released, if relevant: N/A

Time incident started/stopped: Start: March 26, 2008 (02:00) Stop: March 26, 2008 (08:30)

Type of ground where spill occurred, if relevant: N/A

What caused the incident: There were three main causes of this incident:

- 1) Lack of supervision during sensitive operations, caused by a lack of communication on the work that was being conducted.
- 2) Working at night with low visibility.
- 3) A miscommunication between the subcontracted machine operator concerning the 50 meter buffer.
 - a. A 50 meter buffer from the shore line (which was meant) and,
 - b. 50 linear meters from the wetland crossing on the road.

D-2

What environmental impacts occurred as a result of the incident (e.g. surface contamination, storm sewers): Felling with a machine within 2 meters of the wetted edge of a wetland without authorization from the environmental supervisor, no amphibian study being conducted, no terrestrial amphibian salvage being conducted, and walking a machine through an area with no licence to cut. Amphibian habitat was disturbed by machinery working in the buffer zone.

IMMEDIATE ACTION TAKEN

Describe measures/actions taken to respond to the incident including a description of the equipment and materials employed. A stop work order was issued when the ES noticed the violation; the machine was moved past the 50 meter buffer. Work is to be halted until all agreed studies and mitigation are in place.

Water Stewardship Division
Ministry of Environment
10470 - 152 Street, Surrey, BC V3R 0Y3
Ph. (604) 582-5227 Fx. (604) 582-5235
Timothy.Bennett@gov.bc.ca

From: Berardinucci, Julia F ENV:EX
Sent: December 6, 2007 10:17 AM
To: Babakaiff, Scott C ENV:EX; Willcox, Michael ENV:EX; Doyle, Chris J ENV:EX; Rochetta, Steve J ENV:EX
Cc: Bennett, Timothy A ENV:EX; McGuire, Jennifer ENV:EX
Subject: RE: Emergency Works at Tipella

Already underway, Tim and the COS were going onsite together but the COS dates were conflicting with what Tim needs to be at so the COS was going to go up first and a joint follow-up visit. The next step will be to get them in the room and fix the problem.

I am in IAMC today and Tim is on a call but will be available by late morning.

jb

From: Babakaiff, Scott C ENV:EX
Sent: Thursday, December 6, 2007 9:54 AM
To: Willcox, Michael ENV:EX; Doyle, Chris J ENV:EX; Rochetta, Steve J ENV:EX
Cc: Bennett, Timothy A ENV:EX; McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX
Subject: RE: Emergency Works at Tipella

OK,

D-3
I think there have been enough incidents during the construction of these facilities in the last month (debris flows, road slumps, flooding of diversion channels, etc.) to justify a meeting with the proponent, and consideration of some standard protocol associated with construction. It may also be appropriate to get BC Hydro folk involved...

3
Many of the issues were identified as agency concerns in pre-construction meetings with the proponent (e.g. sizing of the diversion channels, length of time that diversion would persist for, methods for drainage control on roads, etc.) but these issues were minimized by the proponent since these facilities had to be constructed rapidly in order to meet BC Hydro's COD deadlines. These COD deadlines have been extended from 3 years to 6 years for the next (2008) round of EPAs, but I think we've gotta explore some options to relieve the pressure on the proponents (and their construction firm) to get these things built so quickly for the presently-constructed projects. Environmental values are not benefitting from this accelerated construction process...

Jennifer & Julia: any suggestions?

From: Willcox, Michael ENV:EX
Sent: Wednesday, December 5, 2007 10:07 AM
To: Babakaiff, Scott C ENV:EX; Doyle, Chris J ENV:EX; Rochetta, Steve J ENV:EX
Cc: Bennett, Timothy A ENV:EX
Subject: FW: Emergency Works at Tipella
Importance: High

FYI - let me know if you have any questions to pass along to Elyse or contact her yourself.

Mike

2009-01-21

Shannon, Barb E CSD:EX

From: Babakaiff, Scott C ENV:EX
Sent: Tue, December 4, 2007 1:16 PM
To: Jevons, Dave ENV:EX; Bennett, Timothy A ENV:EX; Doyle, Chris J ENV:EX; XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX; McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX; 'LoopD@pac.dfo-mpo.gc.ca'; 'HarrisR@pac.dfo-mpo.gc.ca'; Hahn, Rick J ENV:EX; Sundquist, Lance ENV:EX; Rochetta, Steve J ENV:EX
Subject: RE: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

FYI:

Today's (Dec 3 2007) EM report indicates that another debris flow occurred along the Douglas Creek penstock route in the last week, apparently depositing sediment & LWD into the mainstem.

From: Jevons, Dave ENV:EX
Sent: Thursday, November 29, 2007 1:30 PM
To: Bennett, Timothy A ENV:EX; Doyle, Chris J ENV:EX; Babakaiff, Scott C ENV:EX; XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX; McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX; 'LoopD@pac.dfo-mpo.gc.ca'; 'HarrisR@pac.dfo-mpo.gc.ca'; Hahn, Rick J ENV:EX; Sundquist, Lance ENV:EX; Rochetta, Steve J ENV:EX
Subject: RE: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

Myself and Steve Rochetta are planning a site visit next Wednesday 5th December - weather dependent. FO Rob Harris had indicated an interest in attending also.

Dave Jevons
Conservation Officer
Field Operations, Squamish

From: Bennett, Timothy A ENV:EX
Sent: Thursday, November 29, 2007 11:43 AM
To: Doyle, Chris J ENV:EX; Babakaiff, Scott C ENV:EX; XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX; McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX; 'LoopD@pac.dfo-mpo.gc.ca'; 'HarrisR@pac.dfo-mpo.gc.ca'; Jevons, Dave ENV:EX; Hahn, Rick J ENV:EX; Sundquist, Lance ENV:EX
Subject: RE: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

Hi all,

While WSD has not initiated any investigations or inspections as of yet, we also intend to follow up on this.

May I ask who from COS, ESD and/or DFO (e.g., chris? ..) has been or will be following up on this?

I'd suggest that we meet to coordinate on our approach and site visit(s)/inspection(s).

Thanks!

Regards,

Timothy Bennett, M.Sc., P.Eng.
Section Head, Water Allocation
Water Stewardship Division
Ministry of Environment

10470 - 152 Street, Surrey BC V3R 0Y3
Ph. (604) 582-5227 Fax. (604) 582-5245
Timothy.Bennett@gov.bc.ca

From: Doyle, Chris J ENV:EX
Sent: November 27, 2007 7:40 AM
To: Babakaiff, Scott C ENV:EX; Bennett, Timothy A ENV:EX; XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX; McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX; LoopD@pac.dfo-mpo.gc.ca; HarrisR@pac.dfo-mpo.gc.ca; Jevons, Dave ENV:EX; Hahn, Rick J ENV:EX; Sundquist, Lance ENV:EX
Subject: RE: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

We are planning a site inspection with DFO (enforcement) and hopefully ecosystems staff. I have also spoken to MoF about potential drainage issues on the FSR's. The inspection may lead to an investigation.

Is ES or WS planning any inspections or compliance related activities?

non responsive

non responsive

Please ensure this e-mail is not forwarded to Kiewit, Cloudworks or the environmental monitor.

Chris Doyle
Field Supervisor
Conservation Officer Service
Fraser River North Zone
(604) 898-3678 ext. 228

From: Babakaiff, Scott C ENV:EX
Sent: Monday, November 26, 2007 12:07 PM
To: Bennett, Timothy A ENV:EX; XT:Busto, Vince DFO EAO:IN
Cc: Willcox, Michael ENV:EX; McGuire, Jennifer ENV:EX; Berardinucci, Julia F ENV:EX; Doyle, Chris J ENV:EX
Subject: Slope failures into fish-bearing stream channels at Cloudworks IPP Projects

All,

Based on the last two weekly IEM reports submitted on behalf of the proponent for the various hydropower projects under construction by Kiewit & Sons (on behalf of Cloudworks Energy), there have been **four separate slope failures** in the past two weeks directly associated with construction sites (road sidecast failures, etc.) leading to **sediment introduction to stream channels**. Please also bear in mind that this proponent has been sought (and received) permission to work within the stream channel outside of the typical instream works window.


The proponents and construction company have been informed previously regarding agency concerns over their sediment control practices, and it seems that we need to revisit this issue. I spoke with Chris Doyle on this issue last week, and a field investigation and onsite meeting with the proponent was mentioned.

As you all know, I've been re-assigned until April 1 2008 onto the Provincial IPP Action Team, so I cannot put the effort into this file that it deserves. Any recommendations?

Scott



1200 - 1185 West Georgia Street
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From: Cory Bettles [mailto:c.bettles@cloudworksenergy.com]
Sent: Wednesday, March 26, 2008 2:29 PM
To: Elyse MacDonald
Subject: FW: 3rd land Slide at Stokke

FYI

From: Dave Knox
Sent: Wednesday, March 26, 2008 2:08 PM
To: Cory Bettles
Subject: FW: 3rd land Slide at Stokke

From: Michel.Martin [mailto:michel.martin@kiewit.com]
Sent: Tue 3/25/2008 6:24 PM
To: Don.Delarosbil; Paul.Wearmouth; mike hedberg; Dave.Clarke; smottram@knightpiesold.com; Egbert (Bert) Scherman
Cc: Dave Knox; Krys Muniak; Paul Schincariol; Fred.Couture; Catherine.Cote; Sebastien.Charron; Patrick.Chartray; Mike.Champion; Merv.Lyne; Pa.Garneau
Subject: 3rd land Slide at Stokke

All,

We had a 3rd land slide along Stokke access road last night. This one was a major. Nobody was hurt and no equipment damage occurred since we were not working in this area. As you can see on the attached pictures, the land slide is so big that it will not be possible to reopen the road.

We are looking for alternate new access from the spur road (access to communication tower) to connect to the existing road on top. It will take some time to design, survey, clear and build this new access, and will probably impact the schedule for the bulk excavation work on going at Stokke. Also, we still have 2 to 3 days of clearing work to be done around the intake area and want to complete it before the bird season (before March 31st). We will bring the fallers by helicopter on daily basis to complete the falling.

We will prepare the Environmental report and also, notify CEI about this event.

Mike H: We will call you tomorrow to discuss the option for the new road. We will probably need your service soon on site to survey the new road and look into the design of it.

We will keep you informed of any other development.

2009-01-21

Shannon, Barb E CSD:EX

From: Elyse MacDonald [eMacDonald@pggroup.com]
Sent: Wed, April 2, 2008 12:23 PM
To: p.schincariol@cloudworksenenergy.com; Michel.Martin; gsteeves@ameresco.com; michael@chlaw.ca; Hedberg, Mike FOR:IN; Bennett, Timothy A ENV:EX; XT:Busto, Vince DFO EAO:IN; Mike.Champion; Cory Bettles
Cc: Amber Lapshinoff; Mac Lowry; Mark Manning s.22 s.22
k.muniak@cloudworksenenergy.com; Jackie Hamilton; Andrea.Dorge; Aasha.Williams; Babakaiff, Scott C ENV:EX
Subject: FW: Kwalsa and Upper Stave Weekly EM report

Please note the following correction, my apologies.
Elyse

From: Catherine.Cote [mailto:Catherine.Cote@kiewit.com]
Sent: Wednesday, April 02, 2008 11:39 AM
To: Elyse MacDonald
Subject: FW: Kwalsa and Upper Stave Weekly EM report

Elyse,
FYI, #5 is not over the Stave River but over a tributary which I don't have the name...
Catherine

From: Elyse MacDonald [mailto:eMacDonald@pggroup.com]
Sent: April 2, 2008 10:46 AM
To:
Cc:
Subject: Kwalsa and Upper Stave Weekly EM report

Attached please find our weekly report for the Kwalsa and Upper Stave Hydroelectric Projects.

Please note there were 5 reportable incidents last week:

1. Unauthorized bridge installation over Douglas Creek (for Stokke - Douglas transmission line)
2. Felling near a wetland and outside of Licence to Cut (Stokke - Douglas transmission line)
3. Rock slide at Stokke
4. Completion of camp at Stokke without proper land tenure
5. Installation of forestry road bridge over Stave River without EM/ES notifications

There is currently a stop work order for #1 and #2. The remaining items are being internally investigated but do not require formal stop work orders <<Kwalsa and Upper Stave Weekly Report -

was timing habitat assessment and species inventory work to potential amphibian breeding, which is governed in part by water temperature. Upon the approach to the wetland area, the ES noticed felled trees up to and past a 50m buffer and observed the machine to be working along a former road, now greened up, and within 2 – 3m of the wetland area. The ES noted egg masses in the perimeter of the wetland and in close proximity to the working machine.

The ES immediately halted work and escorted the machine outside of 50m from the wetland area. The ES's incident report was received on March 27th and no work has occurred in this area since the ES's shut down order.

On April 1, 2008, the ES, EM and CEI representatives met with the Conservation officer and Fisheries Officers onsite. It was decided that MoE or the EM could issue an additional Stop Work Order to support the ES's stop work order and provide conditions suggested by MoE and DFO representative.

Non-Compliance With:

- Project EMP was not followed:
 - Section 4, #2: the EM was not contacted to confirm permitting requirements.
 - Section 4, #3: the EM was not notified and so was not able to confirm if clearing was conducted properly.
 - Section 4.1 (pg. 24): the EM developed a reporting protocol for PKS to follow, dated November 2, 2007. The wetland cutting was not mentioned in the Action Registry, the Daily Logs, or via a work plan.
 - 6.5.1 Clearing and Grubbing boundaries laid out by Hedberg and Associates were not adhered to. Management plans for mitigation and justification of clearing near the wetland was not provided.
- Violation of Licence to Cut (L47648) from Ministry of Forests by exceeding the footprint area.

The cutting in the wetland violated PKS's verbal agreement, presented at a February 2008 meeting with PGL, Keystone, Hedberg and Associates, and CEI.

- to hand fall the areas near the wetland,
- to leave a 50m buffer around the wetland until instructed otherwise,
- to complete amphibian salvages prior to construction clearing or work,
- to delay cutting until the wetland amphibian studies were complete, and
- to notify the ES, who would then notify the EM, that work was occurring.

Environmental Features at Risk/Damaged:

The wetland area is the focus of an ongoing habitat assessment and species inventory study. Amphibian studies are underway as of April 2, 2008, which is timed to the life cycles and observed egg masses in the wetland. The wetland is suitable habitat for red legged frogs (*Rana aurora*), which are a federally red-listed species. In addition, the surficial hydrology of the area was not yet mapped and alternatives to this road were still under assessment.

Specific Potential Impacts include:

- Infringement on a red-listed species habitat
- Depletion of riparian vegetation prior to final assessment of area i.e. excess vegetation may have been cut if the road alignment changes.
- Potential interruption of surficial hydrology in/out of the wetland.

Shannon, Barb E CSD:EX

From: George, Greg ENV:EX
Sent: Thursday, September 18, 2008 3:24 PM
To: Malt, Joshua ENV:EX
Subject: RE: IPP Strike Team Checklist: UPDATE

Hi Josh,

I phoned Victoria (Jen Psyllakis) and she got back to me today about applicability of FRPA wrt IPP tenures. This is not the first time anyone has thought of this and there are examples of conflicts between FRPA UWR or WHAs and IPP Land Act tenures.

In response, government has approved a FRPA Bulletin (not yet distributed, but I'm getting a copy soon) to explain how FRPA applies. Basically, when it comes to a cutting permit or road permit issued by MOFR then FRPA applies. Much of the problem has come in regards to consultation between us and them and including Front Counter BC. To put it politely more work is required on consulting on all fronts.

When a FRPA designation precedes an IPP Land Act then FRPA definitely applies (and MOFR C&E have experience in writing tickets already). When the IPP Land Act precedes the FRPA designation then the Land act tenure is grandparented and FRPA does not apply.

At the end of the day it will be in our best interest to begin to engage with IPPs on FRPA, and for FCBC to also provide FRPA information to them when it exists.

I'll forward the FRPA Bulletin as soon as I get it.

Hope this helps. Pass on as you see fit.

Cheers.

Greg George, RP Bio
Senior Ecosystems Biologist
Lower Mainland Region, MOE
10470 - 152 Street
Surrey, BC V3R 0Y3
Telephone: 604-582-5212
Fax: 604-930-7119
Satellite Office: 604-824-2304
Satellite Office Fax: 604-858-4905
e-mail: greg.george@gov.bc.ca

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

From: Malt, Joshua ENV:EX
Sent: Friday, September 12, 2008 4:17 PM
To: McGuire, Jennifer ENV:EX; Neuman, Ross ENV:EX; Babakaiff, Scott C ENV:EX; Feldes, Leonard FOR:EX; Davies, James W ENV:EX
Cc: Barrett, Scott ENV:EX; George, Greg ENV:EX
Subject: IPP Strike Team Checklist: UPDATE

Hi Folks,

I've attached my most recent draft of the checklist. This new version includes a "pre-field assessment", which I have filled out regarding issues specific to the Upper Harrison Project, and an expanded checklists including commitments in the CEMP. I have also added a column which specifies the BMP/legislative requirement for each item, and incorporated WSD concerns from Jim.

Still to do:

- incorporate MOFR issues received from Leonard
- add sections where the inspector can fill out specific locations and details of noncompliance/non-adherence to BMPs
- Browse the EM reports for additional issues to highlight

EM, bird nest surveys were conducted in all cases prior to construction. According to the EM, blasting mats were often not used, particularly in steep terrain, contrary to the CEMP. MOE recommends that blasting mats be used in all cases, excluding exceptional circumstances where their use is not possible. (Malt)

4.2 Stave & Lamont: According to the EM, Harlequin Duck surveys were not conducted prior to construction in riparian areas (i.e. within 50m of the stream), contrary to the CEMP. Professional consultant felt that these areas were unsuitable habitat because of existing impacts from high levels of activity. (Malt)

5.0 License to Cut

5.1 Lamont: Clearing of Lamont penstock/road ROW occurred immediately adjacent to the river. The Forest and Range Practices Act (FRPA) does not apply in this case because the Occupant Licence to Cut (OLTC) is exempt from Section 51 and 52 (restrictions in riparian reserve and management zones respectively) of the Forest Planning Practices Regulation (FPPR) (Feldes). However, MOE strongly discourages cutting this close to the river, as riparian areas provide high quality habitat for many wildlife and plant species, including species at risk (Figure 4; Malt).

6.0 Use of Forest Service Roads

6.1 Stave/Lamont: Works Permit pending for works on forest service road. (Feldes)

7.0 Land Clearing and Terrestrial Construction

7.1 Lamont: Clearing of ROWs was not limited to 15 m in old-growth forest and 30 m otherwise, as committed to in the CEMP. Clearing of the Lamont penstock ROW was at least 60 m in some areas, and included old-growth forest. MOE recommends that clearing of old-growth should be avoided wherever possible, and the widths of the penstock and road ROWs should be minimized. (Malt)

8.0 Waste Management

8.1 Stave camp: Waste management permit not required because less than a 100 people in camp. Application in progress for permit for next summer, when more than 100 workers are expected. (McFadden)

8.2 Stave camp: Plastic-coated wire was found in incinerator ash. This is not an acceptable item for burning in the incinerator, and this should be avoided in the future. (McFadden)

Shannon, Barb E CSD:EX

From: Hoyt, Jeff S ENV:EX
Sent: Wednesday, December 3, 2008 10:49 AM
To: Malt, Joshua ENV:EX
Subject: RE: IPPs and OGMA's

Spoke with contacts in MFR and ILMB and answer is as follows. There may be some misunderstandings in ILMB region specifically WRT to your thuird point in the e-mail below. My info below clarifies this. In my discussions with ILMB HQ I flagged that they need to ensure the understanding is correct in regions. I believe they will be following up on this.

Issue with OGMA's is that the management is through objectives, which are only addressed by those persons required to prepare and FSP. IPP are minor tenures and do not prepare FSPs and as such they are only required to follow the practice requirements in FRPA that apply to minor tenures. See section "Why do holders of OLTC have to follow FRPA" in the bulletin.

The only hook around objectives is if either Lands or Forests identifies the objectives and associated values and includes conditions in their respective permitting that reflects the management intent of the objective, in this case the OGMA. See section in bulletin titled "Are there values....in an OLTC".

Best thing to do is to determine with MFR and Lands whether the OGMA values were addressed as permit conditions. If not there unfortunately is very little recourse.

The fix to this problem in the future is to ensure that Lands are aware and looking to determine what objectives exist on the land base and ensuring that that conditions are included with the License of Occupation to address the value. Still need to determine exactly what authority and conditions they can included here as I am not clear. If this doesn't get picked up by Lands MFR has the opportunity to do so, but it is more problematic as it is at the back end of the process often after the proponent has invested significant \$\$.

Any questions let me know.

jeff

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

From: Malt, Joshua ENV:EX
Sent: Friday, November 28, 2008 10:29 AM
To: Hoyt, Jeff S ENV:EX
Subject: IPPs and OGMA's

Hi Jeff,

I'm currently working on a file regarding harvesting within an OGMA during construction of a hydroelectric project (see message below for details). I'm under the impression that under a license to cut, the licensee is required to follow FRPA regulations. Does this include OGMA's?

The understanding of legislation around this doesn't seem to be well understood. Any clarification would be helpful.

Thanks,

Josh

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

From: Malt, Joshua ENV:EX
Sent: Friday, November 21, 2008 2:37 PM
To: Verschoor, Peter ILMB:EX; George, Greg ENV:EX; Feldes, Leonard FOR:EX

Shannon, Barb E CSD:EX

From: Karmona, Jennifer ILMB:EX
Sent: Tuesday, January 6, 2009 9:17 AM
To: Malt, Joshua ENV:EX
Cc: Verschoor, Peter ILMB:EX; Kreye, Ross A ILMB:EX
Subject: RE: IPPs and OGMAs

Hi Josh,

It is definitely possible for conditions to be included in licenses of occupation - and I think this would be a good approach to use, especially in the case of non-amendable OGMAs. In reviewing IPP proposals I am now using fairly assertive language directing the proponents not to impact non-amendable OGMAs and to avoid impacting amendable ones. We are also communicating with the crown land adjudication division around this issue so I am confident that the issue will be better dealt with than in the past. We will keep you in the loop on any future advancements on the OGMA-IPP front.

D-12

Thanks,
Jennifer

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

From: Malt, Joshua ENV:EX
Sent: Monday, January 5, 2009 1:39 PM
To: Karmona, Jennifer ILMB:EX
Subject: RE: IPPs and OGMAs

Hi Jennifer,

Thank you very much for clarifying this. You have confirmed what I gathered from a discussion with Jeff Hoyt, Identified Wildlife Biologist at MOE in Victoria, who also stated that minor licensees are not obligated to follow FRPA objectives.

It seems to me that a efficient and effective way to address this issue is to include a condition within the license of occupation to follow OGMA objectives. As you say, this will flag the issue at the earliest possible stage, and avoid conflicts down the road. Is this reasonable? Feasible?

Thanks again for your help. If I can offer any assistance in this process, please let me know.

Best,

Josh Malt

Josh Malt, M.Sc., R.P.Bio.
Ecosystem Biologist
Environmental Stewardship Division
Ministry of Environment, Lower Mainland Region
10470-152 Street, Surrey, BC, V3R 0Y3

Tel: (604) 582-5282
Cell: (604) 992-7164
Fax: (604) 930-7119

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

From: Karmona, Jennifer ILMB:EX
Sent: Friday, December 19, 2008 3:52 PM
To: Malt, Joshua ENV:EX
Cc: Verschoor, Peter ILMB:EX; Kreye, Ross A ILMB:EX
Subject: RE: IPPs and OGMAs

D-13 Hi Josh,

We have reviewed the FRPA #16 bulletin and have spoken with ILMB's strategic land policy branch and MoFR to discuss the issue of IPPs and OGMAs. Under current legislation neither ILMB nor MoFR is legally obliged to consider OGMAs in issuing a licence of occupation (ILMB) or an occupant licence to cut (MoFR). Both parties can consider OGMAs in their decisions - but it remains at the discretion of the managers. OLTCs are minor licences under FRPA (as you point out below) and as such do not have to follow FRPA objectives; they only have to abide by the FPPR part 4 practice requirements.

We are still working on determining the best way forward to ensure that OGMAs do not slip through the cracks in IPP developments. OGMA conflicts need to be flagged early on in the process, before the licence of occupation is issued, because MoFR does not want to be a position where they do not issue an OLTC later in the IPP development process due to OGMAs. Earlier this year Peter Verschoor requested that the LU planner receive IPP referrals, so now we are given the opportunity to comment on proposals and highlight any OGMA conflicts before a licence of occupation is issued by ILMB. The Cloudworks situation occurred before we were receiving referrals.

In terms of the OGMA area harvested under the Cloudworks project, we will be recalculating the OGMA targets for a number of LUs (including Big Silver) early in the new year in light of LU boundary changes and new TSR information. At that time we will evaluate if we should find replacement OGMA for the area impacted by the IPP project.

Please feel free to call if you have any questions or would like to discuss this further.

Best,
Jennifer Karmona
A/Land and Resource Coordinator
Integrated Land Management Bureau
Ministry of Agriculture and Lands
#200 - 10428 153 Street, Surrey BC V3R 1E1
Phone: 604-586-4417 Fax: 604-586-4434

OLTC = occupant licence to cut

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

From: Verschoor, Peter ILMB:EX
Sent: Monday, November 24, 2008 10:07 AM
To: Malt, Joshua ENV:EX
Cc: Karmona, Jennifer ILMB:EX; Neuman, Ross ENV:EX; George, Greg ENV:EX; Feldes, Leonard FOR:EX; Kreye, Ross A ILMB:EX; Douglas, Ross T ILMB:EX; Blacquiere, Kelly ILMB:EX; Fettes, Lesley ILMB:EX
Subject: RE: IPPs and OGMAs

Hi Josh,

ILMB will be reviewing this Bulletin in detail to determine how it impacts our approval processes moving forward both on the Land Act tenuring side and the OGMA monitoring and maintenance side.

As I mentioned over the phone, this issue is complicated by the fact that IPP development translates into a permanent removal from the Crown Forested Landbase. This means that any OGMA area impacted by an IPP will not necessarily need to be replaced on a 1:1 ratio because OGMA targets are based on a percentage of the Crown Forested Landbase (i.e. OGMAs are a relative measure, not an absolute one).

3+

Thanks again for making us aware of the MOFR bulletin and the OGMA impacts by Cloudworks in the Stokke Creek drainage. Jennifer Karmona will be in contact with you from our office to start working through this particular issue.

Cheers,


~~~~~  
Peter Verschoor, RPF



## Bennett, Timothy A ENV:EX

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**From:** Berardinucci, Julia F ENV:EX  
**Sent:** March 31, 2008 3:08 PM  
**To:** Bennett, Timothy A ENV:EX; Ullah, Aman ENV:EX; Mohammed Alam (Mkalam@telus.net); Davies, James W ENV:EX; Baldwin, John ENV:EX; Balachandran, Bala G ENV:EX  
**Subject:** FYI: Permitting Road re-construction and new construction related to IPP Processing


The issue of oversight of road construction for IPPs has been underway in different contexts for quite awhile with questions regarding workload and responsibility. I recently advised Cloudworks to stop work on a road on Friday after their 3rd slide into water. Luckily with no injuries. MFR has since recently made a decision to be become more directly involved. 


Julia

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**From:** Grozier, Kerry FOR:EX  
**Sent:** Monday, March 31, 2008 2:26 PM  
**To:** Berardinucci, Julia F ENV:EX; Drysdale, Alec M ILMB:EX  
**Cc:** Edwards, Neil D FOR:EX; Johnsrude, Allan N FOR:EX; MacInnes, Gene FOR:EX; Leroux, Len FOR:EX; Feldes, Leonard FOR:EX; Ladd, Jeff R FOR:EX  
**Subject:** Permitting Road re-construction and new construction related to IPP Processing

### SUGGESTED CHANGE TO ROAD USE / ROAD CONSTRUCTION ACTIVITIES RELATED TO IPP DEVELOPMENT

In our review of the Harrison Lake slides we have concluded that the road that Cloudworks was reconstructing took place on a Wilderness Forest Service Road accessing Stokke Creek. As a consequence it would appear that for the works being undertaken that a Road Use Permit should have been issued by this office. 

As I am sure all will agree the roads are one of the higher risk elements of IPP projects. A Road Use Permit would require plans and profiles and any other constraints deemed necessary for re-construction activity as opposed to just routine maintenance. In the event of a failure / oversight that resulted in damage to the environment our C and E staff would be able to conduct an investigation. We could also revoke the permit in the event of non-compliance. 

 So on Wilderness FSR's a Road Use Permit should be the preferred option for IPP proponents.

I will be asking our regional staff to help prepare a decision tree for agencies and proponents that address 1) existing non-status roads requiring upgrade 2) wilderness FSR's 3) FSR's 4) new road construction. It is apparent that MOE, ILMB and MFR have the ability to approve some road works under their respective tenures. Which agency is best suited to do this? Which agency holds the liability in the event of worksafe infractions? Which agency is considered the obvious landlord for these forested areas? We concluded the MFR may be the best answer.

So Julia, I would advise Cloudworks that any work on the current FSR heading requires that they contact this office for a permit.

We are researching the best approach for new construction as indicated (decision tree).

Neil Edwards: I assume you still hold the IPP file, do you have any advice? Any previous work done on this front? Was this going to be included in the manual?

**Johnson, Kym L ENV:EX**

**From:** Berardinucci, Julia F ENV:EX  
**Sent:** March 27, 2008 12:01 PM  
**To:** Anderson, Keith ILMB:EX; Grozier, Kerry FOR:EX; Drysdale, Alec M ILMB:EX  
**Cc:** MacKnight, Heather ILMB:EX; Cowgill, Andrea N ILMB:EX; Bennett, Timothy A ENV:EX; Davies, James W ENV:EX; Johnson, Kym L ENV:EX; Hahn, Rick J ENV:EX; Babakaiff, Scott C ENV:EX; Busink, Peter ENV:EX  
**Subject:** Stop Work Instruction Issued Re: 3rd land Slide at Stokke Cloudworks, Lands file 2408406 Water licence 122346

Hello

I would just like to confirm with you that I have called (11:30 March 27th) and spoken with Cory Bettles, Environmental Manager, Cloudworks, to confirm that all work has stopped and to let them know that the provincial agencies do not want any work commencing until plans have been developed for next steps and discussed with federal and provincial agencies. We have agreement. I provided a heads up that a follow-up letter to our conversation would be coming later this week. Cory let me know who all has been advised on this event and I believe they have covered the provincial and federal bases satisfactorily to this point.

Next steps:

- Cory will provide me with a list of cc names within Cloudworks, Kiewit etc. on the to help expedite communication to the parties involved of written correspondence.
- Keith and Julia will discuss how best to compose the letter and the content and work with staff to get the letter done asap.
- Further to my advice to Cory, the key contacts for the provincial agencies can expect, at a minimum, a conference call to be called by Cloudworks to discuss next steps before any works commence.

Regards,  
 Julia

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

**From:** Anderson, Keith ILMB:EX  
**Sent:** Thursday, March 27, 2008 10:58 AM  
**To:** Berardinucci, Julia F ENV:EX; MacKnight, Heather ILMB:EX  
**Cc:** Grozier, Kerry FOR:EX; Drysdale, Alec M ILMB:EX; Cowgill, Andrea N ILMB:EX  
**Subject:** FW: 3rd land Slide at Stokke Cloudworks, Lands file 2408406 Water licence 122346  
**Importance:** High

Julia, See the e-mail chain below, regarding slides resulting from Cloudworks road construction for their IPP project.

MOFR wants to have a cease and desist issued on the road until Cloudworks have confirmed that they have a proper engineering plan for the road under FIRPA (this is a requirement of the WATER LICENCE that was issued but was not included in the LAND ACT GENERAL AREA LICENCE OF OCCUPATION).

Unfortunately there is no specific requirements in the Lands tenure regarding the road construction.

I have asked MOFR to send Heather a request for a Cease and Desist on the road construction. I believe ILMB can issue this regardless of the lack of specific wording in the Land tenure but I also think that given the wording under the Water Licence MOE can as well. It would likely be good to have both agencies issue one.

I note that Cloudworks feels that this road cannot be constructed in this area as a result of the slide and another location will be needed. As far as I am aware no such location has been provided to ILMB.

**From:** Armour, Christine A FOR:EX  
**Sent:** June 13, 2008 10:12 AM  
**To:** Lawrence, Bob T FOR:EX  
**Cc:** Griffin, Paula J FOR:EX  
**Subject:** RE: L47848 - Wetland Area

**Attachments:** Picture (Metafile); Picture (Metafile); Picture (Metafile); Picture (Metafile);  
Picture (Metafile); Picture (Metafile); Picture (Metafile); Picture (Metafile);  
Picture (Metafile)

Hi Bob,

Species at Risk is a bit hit and miss at the moment - there is a list of species that are supposed to be addressed but there is a lack of either supporting legislation (GARs, WHAs) or just general information on location of potential wildlife habitat areas and general wildlife measures.

The section 7 notice for Squamish only mentions 4 species to be managed. That is marbled murrelet and grizzly bears (under GAR orders) and spotted owl and coastal tailed frog (general acceptance of draft areas and measures). The red-legged frog isn't included in the notice even though it is part of the identified wildlife list. The section 7 notices were intended to be place holders by MOE until they got GAR's established. Based on this info it doesn't seem like MOE is placing a high priority on protection of red-legged frogs in our district since they don't have any protection under a notice or a GAR. (the frogs are mentioned in other notices for the island)

However, the IPP knew that the species was in the area and didn't meet their plan recommendations to protect the species. I think this is the main contravention - they didn't follow what was recommended - but I don't know if it would be us or lands that follows this up?

Let me know if you want me to send you any of the background legal notices - great bedtime reading if you need help sleeping!

Christine

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**From:** Lawrence, Bob T FOR:EX  
**Sent:** Friday, June 13, 2008 8:37 AM  
**To:** Armour, Christine A FOR:EX  
**Cc:** Griffin, Paula J FOR:EX  
**Subject:** FW: L47848 - Wetland Area

Christine and Paula from the exhibit A location for the wetland it would appear that no reserve was intended originally. I know that the Forestry consultant had intended to relocate the line leaving 10 meter reserve pending the frog study. The frog study by Keystone Wildlife Research Ltd April 2008 recommends a 30 meter buffer around wetland.

It would appear that the area is a W2 wetland not the W1 as I originally thought however a W2 would still require a 30 RMZ with a 10 meter RRZ for our typical tenures.

However this does not apply to Occupant Licence to Cut as discussed with you on Wednesday, so it would appear a contravention of Sec 51(1) of the FPPR does not apply here.

So we need to determine if Sec 69 or Sec 70(2) can be applied here. Does the Habitat of the Red Legged Frog a blue listed species apply to any of these sections?

#### General wildlife measures

69. An authorized person who carries out primary forest activities on an area must comply with each general wildlife measure that applies to the area.

[en. B.C.Reg. 580/2004.]

E-3

!!

CBC  
Fox

**Resource features and wildlife  
habitat features**

E-3

70. (1) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a resource feature.
- (2) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a wildlife habitat feature.

**wildlife habitat area**" means a wildlife habitat area

- (a) continued under section 180 (b) [*grandparenting specified designations*] of the Act, or  
(b) established under the Government Actions Regulation;

**"wildlife habitat area objective"** means an objective for a wildlife habitat area

- (a) continued under section 181 [*grandparenting objectives*] of the Act, or  
(b) established under the Government Actions Regulation;

**"wildlife habitat feature"** means a wildlife habitat feature identified under the Government Actions Regulation;

I Quickscribe does not appear to have a copy of the Government Action Regulations. Do you know where I can find them? Would any of this be covered under LMRP.

It would probably be a good exercise to determine just what sec 69 and 70 covers for future reference. At this point in time I find them vague. They may be a one point for discussion at our block of the month.

---

**From:** Filippelli, Paul FOR:EX  
**Sent:** June 12, 2008 9:02 AM  
**To:** Lawrence, Bob T FOR:EX  
**Subject:** L47848 - Wetland Area

Bob,

Couldn't find the wetland shape that is showing on the map you gave me. It says 'TRIM' on the map, but the shape doesn't show up in any of the TRIM layers.

See the attached map, I used the swamp shape from the forest cover data. You will probably be able to tell if it matches which area is really on the ground.

Paul.

Paul Filippelli, RFT  
Geomatics Technician

Squamish Forest District  
Ministry of Forests and Range  
Tel: (604) 898-2136

<< File: L47648\_Swamp.pdf >>

**Distribution List:**

| Name             | Organization                 |
|------------------|------------------------------|
| Vince Busto      | DFO                          |
| Cory Bettles     | Cloudworks Energy Ltd. (CEL) |
| Michel Martin    | Peter Kiewit Sons (Kiewit)   |
| Michael Champion | Peter Kiewit Sons (Kiewit)   |

Pottinger Gaherty Environmental Consultants is providing this Incident Report based on our site visit conducted on November 13, 2007. The purpose of this report is to document two incidents at the Douglas Creek construction site, where it has been determined after preliminary investigations that two separate slopes have failed, depositing a significant amount of sediment and debris into Douglas Creek.

A heavy rain event occurred during the days of November 11<sup>th</sup> and 12<sup>th</sup>, with PKS recording 80mm of rain in a 24hr period. At station 1+900, a section of the access road failed causing a debris torrent, where road substrate, native soils and vegetation eroded and were deposited in Douglas Creek. A second slope at station 2+900 along the penstock route, eroded and deposited a significant amount of sediment into Douglas Creek. This erosion resulted from the failure of a ditch which did not adequately handle the high volume of water resulting from the rain event. The overflow of the water from the ditch failure, eroded an area of approximately 5 meters by 25 metres, where the material was deposited in Douglas Creek, and the adjacent riparian area.

The Independent Environmental Monitor, Mac Lowry, became aware of the two incidents during a site visit on November 13. PKS had recorded the erosion event along the penstock route in their November 12th daily Environmental Log, however they did not document that any material was deposited into the creek.

**General Observations**

The EM was onsite on November 13 at approximately 1:00pm to inspect the Douglas Creek construction site. General observations included:

Station 1+900

- A section of the Douglas Access road had failed causing a debris torrent which flowed over a cliff and deposited sediment and wood debris directly in the Douglas Creek channel. (Please see attached Photo 1 and 2)
- The failure of the road caused the gully below it to fail as well, eroding the native soil and trees, which were deposited in the creek below.
- There appeared to be a constructed 'french drain' at the location of the road failure. (Please see attached Photo 3)

Station 2+900

- A cross ditch along a cleared portion of the penstock route failed, resulting in water channeling down the penstock route and eroding the exposed slope into Douglas Creek. (Please see attached Photo 4)
- Deposited material from the erosion event was evident in the riparian area and in the Douglas Creek channel. Scars on the trees, likely from large boulders, and material deposited on the stems of the trees suggest that the erosion event had significant force. (Please see attached Photo 5)
- Anecdotal reports from onsite laborers present during the erosion event, observed a large plume of turbid water in Little Harrison Lake at the outlet of Douglas Creek, immediately following the erosion event.

**Recommended Mitigation Measures**

Both of these events were one time occurrences, however there is potential for similar events to occur in the future. The following recommendations will help prevent another slope failure:

- Have existing cleared areas inspected by a Geotechnical Engineer for slope stability, and implement any recommendation he or she may have;
- Ensure drainage ditches are maintained and sited correctly for peak rainfall events;
- When altering site characteristics, including changing the slope angle, removing vegetation, and/or altering the hydrology, develop a plan to ensure slope stability is protected. This may include installing erosion controls such as rip-rap or cocoa matting. The project Geotechnical Engineer should comment on this plan;
- Replacement of French drains with culverts; and
- Curtail works on slopes during rain events.
- \*\* PGL is not recommending any remediation or rehabilitation on either location due to the lack of access to these areas and the fact that the fine materials have already washed down the creek.