



**Forest
Practices
Board**

Forestry Audit: BC Timber Sales and Timber Sale Licence Holders

*Strait of Georgia Business Area
Campbell River District*

FPB/ARC/139

July 2012

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Board Commentary

The findings of this audit are unique and do not represent the standard of forest practices usually identified through Board audits. The Board has conducted well over 100 compliance audits since 1996, including over 20 audits of BCTS operations, and has never previously encountered this level of non-compliance.

This audit, conducted in July 2010, within the Campbell River district on Vancouver Island, examined the practices of BC Timber Sales (BCTS-CR), and 24 timber sale licence holders.

The results show significant and pervasive findings of non-compliance with the *Forest and Range Practices Act* (FRPA) and two instances of non-compliance with the *Wildfire Act* (WA). Overall, BCTS-CR and eight individual timber sale licence holders each had at least one significant non-compliance finding, while several had multiple significant findings. Some of these timber sale licence holders operated on more than one timber sale and significant findings were identified with each timber sale. There were also concerns noted with respect to forest practices that are technically compliant, but are considered by the Board to be unsound.

As well, the majority of those timber sale licence holders not specifically identified in the attached reports had some areas of concern identified and, although they were not enough to report individually, those results add to the overall concerns noted throughout this audit—the end result being that significant and/or pervasive non-compliance concerns were identified with 23 of the 24 timber sale holders audited. The Board would like to acknowledge the holder of TSL A63329 for not having any non-compliances noted during the course of the audit.

The types of problems found include a lack of attention to maintaining natural drainage patterns; not removing temporary stream crossings at completion of harvesting; and not blocking access to deactivated roads, as required by legislation. Two of three active sites visited during the audit did not have an adequate fire suppression system on site during a very dry part of the summer when most operations were shut down because of the extreme fire hazard.

In several instances, auditors noted unsafe practices, such as using a bridge with a known deficiency and constructing excessively large ditches. As well, auditors noted instances where fish habitat was not being adequately protected either from the introduction of sediment to the stream or from constructing a road on top of fish habitat.

While auditors did not find evidence of significant environmental harm at the time, these practices increase the risk of damage to resources and the environment.

One of the key purposes of plans required under FRPA is to provide the public with confidence that work is professionally planned and executed. Subsequent failure to follow the plans could undermine public confidence. Auditors identified several instances where professionally prepared site plans as well as road designs were changed by TSL holders without involvement of a qualified professional. This practice is not a non-compliance with FRPA, but may constitute the practice of professional forestry without the qualifications to do so, a practice prohibited under the *Forester's Act*.

Given the frequency and the severity of non-compliance auditors found, the Board questions why these problems were not identified through routine BCTS-CR quality control activities, by third-party certifiers, or by regulatory agencies – including MFLNRO compliance and enforcement staff.

In accordance with section 131(2) of the *Forest and Range Practices Act*, the Board is making the following recommendation:

- BCTS-CR should assess the potential environmental risk of the activities carried out by the various TSL holders and determine whether a monitoring/remediation strategy is required to minimize impacts which have occurred or to reduce the likelihood of impacts in the future.

The Board requests that BCTS-CR advise the Board of its progress in addressing this recommendation by December 31, 2012.

Subsequent to the audit, the holder of TSL A81964 has told the Board that they have addressed the concerns noted during the audit. As well, BCTS-CR has described its action plan to address some of the audit findings, including:

- Request from professional engineers more specificity in inspection reports regarding the safety of roads/bridges for industrial use, and the inspector's recommended actions to address any deficiencies;
- Improve our liaison with road and bridge inspectors when reviewing inspection reports (i.e., seek clarification regarding the status of roads/bridges relative to their safety, and recommendations to address any deficiencies) so that our follow-up remedial action plans are appropriate and effective;
- Improve our liaison with timber sale licensees that have road use permits to ensure we share information regarding the status of roads/bridges and coordinate our respective plans for remedial action;
- Improve our documentation of BCTS-CR road/bridge assessments and remedial action plans so that our decisions and actions, and their timing, are rationalized relative to inspection reports;
- Improve road barricading practices so they are compliant with FPPR Section 82; and,
- Improve our fish classification assessments, including clarifying the process for assessing barriers to ensure consistency, and ensuring accurate assessments are reflected in operational plans.

Summary Report

As part of the Forest Practices Board's 2010 compliance audit program, BC Timber Sales (BCTS-CR) and timber sale licence (TSL) holders in the Campbell River portion of the Strait of Georgia Business Area were selected for audit. This area includes the communities of Campbell River, Sayward, Gold River, Tahsis, and Zeballos.

The field portion of the audit took place in July 2010, and Board auditors assessed planning and practices of BCTS-CR and 24 TSL holders for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. These activities included operational planning and silviculture activities carried out by BCTS-CR and harvesting activities carried out by the various TSL holders. The road and bridge construction, maintenance, and deactivation activities were split between the various TSL holders and BCTS-CR. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

This report is a summary of all the activities audited as well as a summary of the findings identified during the course of the audit. The nine attached "stand alone" audit reports each represent an individual licensee, along with the BCTS-CR program, and each follows standard audit protocol, such as including an audit opinion statement for each party with a significant finding.

Activities Audited

The following table shows the activities that were conducted during the audit period as well as the number of those activities that were checked on the ground (# conducted / # field checked):

	Harvesting Blocks	Roads Constructed (km)	Roads Maintained (km)	Roads Deactivated (km)	Bridges Constructed	Bridges Maintained	Silviculture Blocks
BCTS- CR	N/A	7 / 7	300 / 158	13 / 13	11 / 11	242 / 80	65 / 49
TSL Holders	44 / 37	77 / 77	41 / 41	36 / 36	8 / 8	8 / 8	N/A
Total	44 / 37	84 / 84	341 / 199	49 / 49	19 / 19	250 / 88	65 / 49

Findings

Of the 25 parties audited (BCTS-CR and 24 TSL holders), only one TSL holder (TSL A63329) had no non-compliances. BCTS-CR and 8 TSL holders had at least one significant non-compliance. For each of those parties, the auditors have prepared a separate audit report describing the findings (see attached reports 1 through 9). For the 15 remaining parties, the auditors found one or more instances of non-compliance but considered them to be minor, not requiring a separate report. However, they are included in the following tables for the purposes of summarizing the full extent of the findings.

Within the 9 separate audit reports, there were 18 significant findings, as well as 6 statements regarding unsound forest practices and 1 area requiring improvement.

In addition to the reported findings noted above, there were several minor non-compliance findings that were not reported, but are included in Figure 1 for comparative purposes.

The following graph, (Figure 1), shows the total number of reported non-compliances¹ (see attached reports 1 through 9) by legislation², as well as the number of related occurrences of non-compliance that were not reported because they were minor in nature.

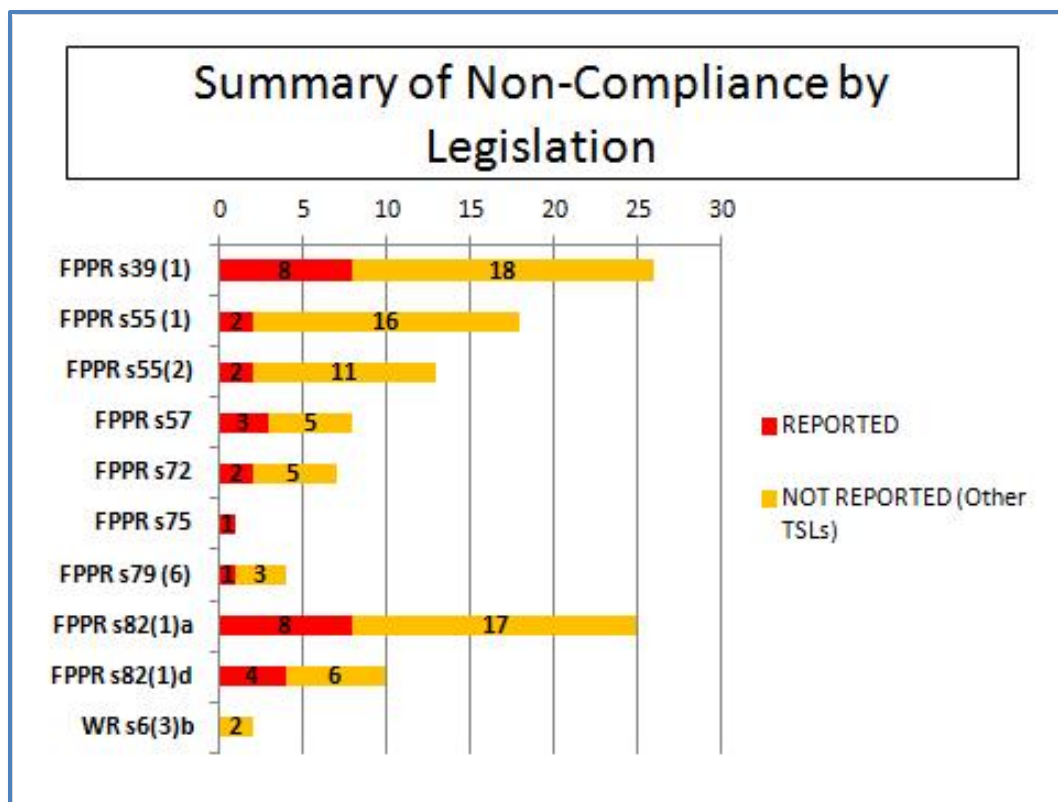


Figure 1 – Number of noted non-compliances related to legislation.

Another category of finding is that of an unsound forest practice. Although the auditee was technically in compliance with legislation, the Board does not feel these practices represent sound forest management. Examples of this include not following professionally prepared plans, such as site plans, terrain stability assessments or riparian management plans.

¹ Some of the 17 reported significant findings include multiple legislation references.

² All *Forest Planning and Practices Regulation* (FPPR) sections, and the *Wildfire Regulation* (WR) section listed in Figure 1 are referenced in full in the endnotes. The general topics are: 39(1) – natural surface drainage patterns; 55(1 & 2) – stream crossings; 57 – protection of fish and fish habitat; 72 – roads and associated structures; 75 – structural defects; 79(6) – road maintenance; 82(1) – road deactivation; and WR s6 – high risk activities.

The next graph, (Figure 2), shows the total number of reported unsound forest practices, (see attached reports 1 through 9), identified during the course of the audit, by category, as well as the noted number of unsound practices that were not reported because they were minor in nature.

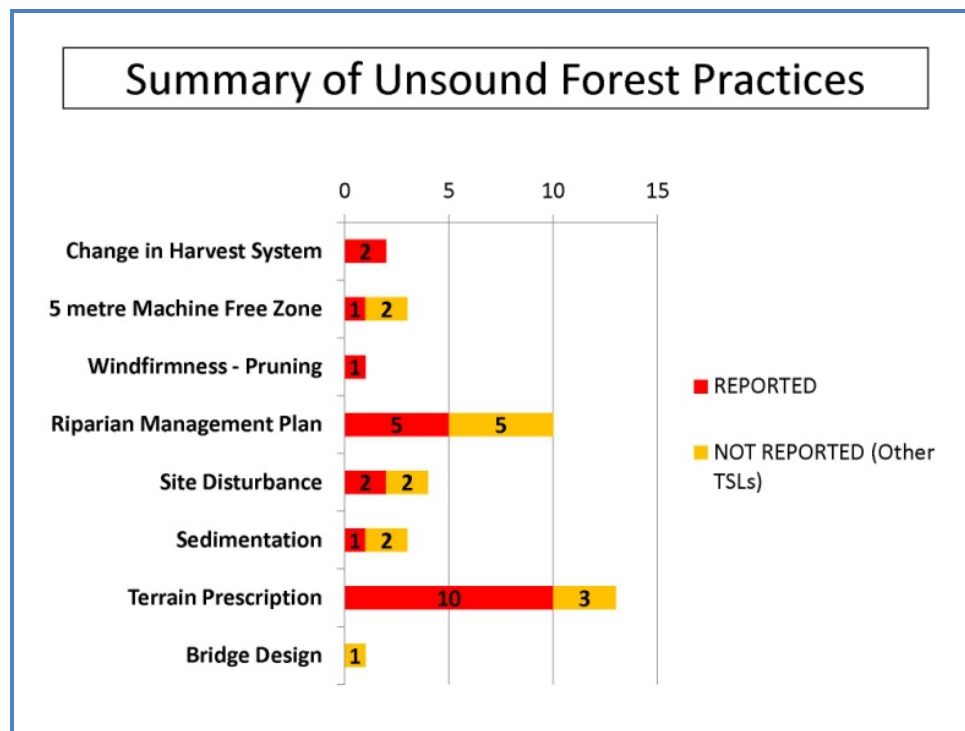


Figure 2 – Number of noted unsound practices identified by category.

Conclusion

The 2010 compliance audit of the BCTS-CR program and 24 TSL holders in the Campbell River portion of the Strait of Georgia Business Area identified an unprecedented number of non-compliance findings and noted numerous unsound forest practices.

Report Format

In a standard Board BCTS audit report, there are usually either no reportable findings, or only one or two reportable findings, so all of the information is reported in one combined audit report, and there is only one audit opinion statement included.

As mentioned previously, this is a unique audit. In this instance, there are several reportable findings, covering BCTS-CR and eight separate TSL holders. Rather than include all of the findings into one long report, we have provided a map and a common background section, and then included a separate audit report for each TSL holder who had reportable findings, as well as BCTS-CR.

Each separate audit report includes an overview of who was audited, what practices were subject to audit, as well as a summary of the findings, and finally a signed audit opinion. This format, although repetitious, is consistent with generally accepted auditing standards.

For those TSL holders not listed in these nine separate audit reports, their practices conducted in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009 and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and the *Wildfire Act* and related regulations as of July 2010.

Audit of BCTS

Campbell River portion of the Strait of Georgia Business Area



Audit Background

As part of the Forest Practices Board's 2010 compliance audit program, the BC Timber Sales (BCTS-CR) program and timber sale licence (TSL) holders in the Campbell River portion of the Strait of Georgia Business Area were selected for audit.

The Campbell River district includes the communities of Campbell River, Sayward, Gold River, Tahsis, and Zeballos. A map of the district appears on page six. On the west coast of Vancouver Island, BCTS-CR operates in Heber River, Burman River, and Jacklah Creek watersheds, located in the vicinity of Gold River, and the Artlish and Tashish watersheds located in the vicinity of Tahsis and Zeballos. Operations in the vicinity of Campbell River are in the Sayward forest on the east coast of Vancouver Island or on the mainland coast (East Thurlow Island, Loughborough Inlet, Port Neville). This area is predominantly second growth timber. Other operations on the east coast of Vancouver Island are north of Sayward and in the Eve, Tsitika, and Naka Creek watersheds.

BCTS-CR has an allocated annual volume of 1.6 million cubic metres of timber from the Strait of Georgia business area. BCTS auctions that timber to registrants in the program. BCTS prepares operational plans and issues timber sale licences and road permits. Successful bidders are awarded timber sale licences and must fulfill licence, permit, and legislated obligations, including timber harvesting and road work within cutblocks. Approximately 495 000 cubic metres of timber was harvested by TSL holders during the one-year audit period.

The BCTS Strait of Georgia business area has achieved certificationⁱ in its operating areas through the ISO 14001 Environmental Management System (EMS)ⁱⁱ and has been certified under the Sustainable Forestry Initiative (SFI) Standardⁱⁱⁱ since December 2008.

The Board's audit fieldwork took place from July 21 to 30, 2010.

Objectives Set by Government

The Vancouver Island Land Use Plan (VILUP) lays out general management direction for values such as water, wildlife, and recreation. It also identifies land use zones to guide the management of resources across the landscape. The VILUP is considered policy advice, except for specific areas addressed under the VILUP Higher Level Plan (HLP) Order, and BCTS-CR's activities should be consistent with it.

The legislative framework provides that operational plans, such as forest stewardship plans (FSPs), must be consistent with objectives established under a higher level plan order for landscape units. In addition, these landscape unit objectives must be consistent with those established under an HLP order for regional plans such as the VILUP.

The Sayward Landscape Unit Plan (Sayward LUP) falls within Resource Management Zone #31 (Sayward) of the VILUP. Under VILUP, this area was described as a General Management Zone, for which there would be no specific HLP direction, and it was anticipated that general FRPA provisions would apply to this area.

This area was described in some detail in the VILUP summary document that emphasised integration of second growth timber values with non-timber values and noted that landscape level planning should identify opportunities for enhanced timber harvesting and second growth management.

The Sayward LUP describes goals and objectives for biodiversity, wildlife, timber, recreation, visual resources, fisheries, and drinking water resources found within the Sayward LUP. It is important to note, however, that legislation directs that only those objectives noted in the plan that are established under the HLP order or that are made known under FRPA shall provide legislated direction to forest management activities on Crown land. Any other information contained in the plan should be considered only as highly recommended advice only.

Orders that have been established are:

- Order to Establish a Landscape Unit and Objectives - Sayward Landscape Unit
- Order to Establish a Recreation Trail Objective
- Making Scenic Areas Known and Establishing Visual Quality Objectives
- Establishing Riparian Reserve Zones and Riparian Management Zones for Lakes

BCTS- CR's 2007- 2012 forest stewardship plan (FSP)^{iv} provides the link between on-the-ground forestry operations, higher level plans, orders, and with FRPA objectives.

Report 1: BCTS-CR

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities for which BCTS-CR was responsible.

BCTS-CR is responsible for operational planning, including preparing FSPs and site plans, silviculture activities, bridge maintenance and construction and most road construction, maintenance and deactivation outside of cutblocks.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009 to July 30, 2010 were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

BCTS-CR Responsibilities

Operational Planning

BCTS-CR planned activities in its 2007 - 2012 Strathcona forest stewardship plan (FSP) – consolidated to amendment #7 – effective November 4, 2009, as well as the 2007 - 2012 Loughborough FSP – consolidated to amendment #3 – effective November 26, 2009. The FSPs were examined to ensure that they are consistent with legislated requirements, including higher level plans and orders. Planning at the stand level was evaluated to ensure consistency with the FSPs and legal requirements during harvesting, road and silviculture assessments in the field.

Road Construction, Maintenance, Deactivation

BCTS-CR constructed 7.2 kilometres of road as well as deactivated 13.6 kilometres of road. In addition, BCTS-CR was responsible for maintaining 300 kilometres of forest service road. It also built 11 bridges and maintained a total of 242 forest service road bridges.

The Board audited all of the road construction and deactivation and 158 kilometres of road maintenance, as well as all 11 bridges constructed and maintenance of 80 bridges.

Silviculture Obligations and Activities

Within the audit period, BCTS-CR brushed 5 cutblocks, and planted 23 cutblocks. Free-growing obligations were due or declared on 19 cutblocks and regeneration obligations were due on 18 cutblocks during the audit period.

The board assessed the 5 brushed cutblocks, and 21 planted cutblocks, 13 cutblocks with regeneration obligations due, and 10 cutblocks with free-growing obligations due.

Findings

The audit found, with three exceptions, the planning and forestry activities undertaken by BCTS-CR complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified significant non-compliance with respect to both road construction and road deactivation as well as bridge and wood box culvert maintenance. The construction non-compliance involved one poorly constructed road, as discussed in the *Road Construction* section below. The deactivation non-compliance involved a pervasive issue relating to not blocking access to deactivated roads as is required by legislation. This is discussed in the *Road Deactivation* section below. The bridge and box culvert maintenance non-compliance relates to several concerns discussed in the *Bridge and Box Culvert Maintenance* section below.

The audit also found some bridge maintenance practices that are not considered sound safety management, and that fish stream classification is an area requiring improvement.

Road Construction

BCTS-CR constructed 1.8 kilometres of road on an extension to the Burman Mainline. The terrain on this road is very steep with several sections that required blasting to complete construction. The audit identified several concerns with the construction of the road. The two most significant deficiencies identified by the audit were a five-metre portion of the rock fill in the road that appeared to be supported by an approximately 50-centimetre diameter log, and a 10-metre long rock slab that was perched on the excavated rock face.

In June 2011, after the audit field work, BCTS-CR had an engineering firm inspect the road. The inspection noted that without a subsurface investigation, it was not clear how much of the running surface was supported by the log. The inspection also concluded that the 10-metre long perched rock slab was very unstable and recommended its removal. The rock slab was removed in March 2012.

In March, 2012, the engineering firm conducted a subsurface investigation of the five-metre section which appeared to be perched on a log. The investigation found bedrock approximately 0.76 metres below the log. Although the road was then assessed by the engineering firm as stable, a rock berm was built to keep vehicles off the outside running surface.

Section 72^v of the *Forest Planning and Practices Regulation* (FPPR) states that a person who constructs or maintains a road must ensure the road is structurally sound and safe for industrial users. An industrial user is one who uses a road for timber harvesting, including transportation of timber, or certain silvicultural uses. At the time this section of road was constructed, and for nearly two years afterwards, this section of road was neither structurally sound nor safe for use by industrial users. Although the road was not used for timber hauling during this time, and is inaccessible to the public, approximately 400 metres of road, as well as a new bridge, was constructed past the portion of the road that had these deficiencies. As there was potential for harm to road construction workers during the overall construction of the road, this is considered to be a significant non compliance.

Road Deactivation

Section 82(1)(a)^{vi} of the FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. On six of eleven road sections deactivated in the audit period, BCTS-CR did not construct a barricade to prevent access by motor vehicles. The absence of barricades poses a risk to industrial and recreational users, and as this is a pervasive issue, the audit considers this to be a significant non-compliance.

Bridge and Box Culvert Maintenance

One of the key aspects of FRPA is to ensure that all utilized roads and bridges are safe for industrial users and that noted deficiencies are corrected in a timely fashion. Section 72 of FPPR states that a person that constructs or maintains a road must ensure the road and the bridges and culverts associated with the road are structurally sound and safe for industrial users. Section 75^{vii} of FPPR states that if a structural defect or deficiency occurs on a bridge, the defect or deficiency must be corrected to protect the industrial users of the bridge. In four separate incidents, BCTS-CR hired professional engineers or consultants to inspect these structures, and in each case significant defects or concerns were noted, and in each case the defects were not corrected and the structures were not safe for industrial use. Auditors noted non-compliance with both sections 72 and 75 of FPPR, therefore this is considered a significant non-compliance.

Unsound Forest Practices

Although bridge guardrails, which are also referred to as bullrails, are attached to bridges to act as visual aids for logging truck drivers and to help ensure that smaller vehicles do not accidentally veer off the bridge, they are not technically considered part of the structural components of a bridge. As such, not addressing known concerns with these components of a bridge, for example replacing guardrails, is not considered to be a non-compliance with section 75 of the FPPR. However, in two cases, both involving structures over 30 metres in length, guardrails identified as being in poor condition were not replaced in a timely manner (one to three years). Not acting promptly on a known safety concern is not considered to be sound safety management.

Fish Stream Classification

The audit also identified some concerns with fish stream classifications. Some noted inconsistencies and deficiencies included:

- where assessments of potential barriers were inconsistent;
- where two versions of a fish assessment were utilized, with each having a different conclusion; and
- where there was a difference in stream class noted between the fish assessment report or riparian management plan and the site plan.

These noted inconsistencies and deficiencies could misclassify potential fish streams and it is possible that these streams would not be provided the same level of care and there is the potential for unintended results. Therefore this issue is considered an area requiring improvement.

Operational Planning

BCTS-CR incorporated FRPA objectives into its FSP and site plans, and forest practices met the strategies set out in the FSP that were measureable. The FSP was consistent with legislated requirements, and planning at the landscape and stand levels was consistent with the FSP and legislated requirements, including higher level plans and orders. BCTS-CR followed the VILUP as well as the Sayward LUP and other established orders.

Silviculture Activities and Obligations

There were no significant issues identified with brushing, planting, and regeneration or free-to-grow obligations during the audit. BCTS-CR maintained accurate silviculture records and conducted timely silviculture activities. BCTS-CR also met government seed transfer requirements as well as free to grow and regeneration obligations within the required time frames.

Fire Protection Activities

BCTS-CR had no active operations during the field portion of the audit therefore the requirements of the *Wildfire Act* could not be assessed.

Audit Opinion

In my opinion, except for the road construction, deactivation and bridge and box culvert maintenance, issues discussed below, the operational planning; road construction, deactivation and maintenance; silviculture; and fire protection activities carried out by BC Timber Sales in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009 and July 30, 2010 complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Road Construction* section of this report, the audit identified a situation of significant non-compliance related to the construction of the extension to the Burman Mainline.

As described in the *Road Deactivation* section of this report, the audit identified a pervasive area of significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

As described in the *Bridge and Box Culvert Maintenance* section of this report, the audit identified a situation of significant non-compliance related to the maintenance of bridge and box culverts.

Without further qualifying my opinion, I draw attention to the *Unsound Forest Practices* section of this report, which describes an area of concern.

Also without further qualifying my opinion, I draw attention to the *Fish Stream Classification* section of the report which describes an area requiring improvement.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



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Director, Audits

Victoria, British Columbia
April 27, 2012

Report 2: TSLs A68274 and A81990

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSLs A68274 and A81990.

The TSL holder is responsible for all harvesting, road construction, maintenance, and deactivation inside of cutblocks C0TF and C1CF on TSL A68274, and cutblock C1CE on TSL A81990. TSL A68274 is located west of Campbell River, in the vicinity of Brewster and Mohun Lakes. TSL A81990 is also west of Campbell River, within the Sayward Forest, and in the Salmon River watershed.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

Harvesting was completed in cutblocks C0TF, C1CF and C1CE. All were audited.

Road Construction, Maintenance, Deactivation

The audit assessed all of the road activities within A68274 and A81990. This included 2.78 kilometres of road construction, 0.74 kilometres of road maintenance and 2.04 kilometres of road deactivation over three sections. Auditors assessed all of the road constructed, maintained and deactivated.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with three exceptions, the forestry activities undertaken on TSL A68274 and A81990 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a significant non-compliance with respect to protecting streams, as discussed in the *Harvesting* section below.

The audit identified a significant non-compliance with respect to maintaining natural surface drainage patterns, as discussed in the *Road Construction* section below.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to a number of deactivated road sections and not providing for a stable road prism as is required by legislation. This is discussed in the *Road Deactivation* section below.

Another area of concern is discussed in the *Unsound Forest Practices* section below.

Harvesting

Section 39(1)^{viii} of the FPPR states that when constructing a temporary access structure, the person must maintain natural surface drainage patterns on the area both during and after construction. The site plan did not identify designated machine crossings on several watercourses; however, during harvesting, ground-based machines crossed these watercourses and structures were not installed at the time of construction. The lack of establishing a designated crossing resulted in natural drainage patterns being disrupted. Overall, crossings on one S6 stream and six non-classified drainages were not installed.

Section 55(1)^{ix} of the FPPR states that when constructing a stream crossing as part of a temporary access structure, one must locate, build and use the crossing in a manner that protects the stream channel and stream bank immediately above and below the stream crossing, and mitigates disturbance to the stream channel and stream bank at the crossing, and section 55(2) states the crossing must be removed when it is no longer required. Machine crossings were not removed or only partially removed at the completion of harvesting. Overall, three crossings on two S6 streams were affected.

Section 57^x of the FPPR states when conducting a primary forest activity one must do so at a time and in a manner that is unlikely to harm fish or destroy, damage or harmfully alter fish habitat. A 5-metre machine free zone was established on several streams to minimize impacts to sensitive soils and downstream impact fish habitat. Overall, one fisheries sensitive zone, five streams, and three non-classified drainages were affected where this prescription was prescribed and not followed. Also, a change to the original harvest plan resulted in construction of several machine trails to access the main haul road. These machine trails caused ground disturbance and increased soil erosion resulting in an increase of sedimentation to a fish bearing stream.

Overall, harvesting did not follow the plan. Auditors noted pervasive non-compliance with sections 39(1), 55(1) & (2), and 57 of the FPPR, therefore this is considered a significant non-compliance.

Road Construction

Section 39(1) of the FPPR states that, when constructing a road, the person must maintain natural surface drainage patterns on the area both during and after construction. During construction, the road layout and design called for several culverts which were not installed at the time of construction. Overall, culverts on one fisheries sensitive zone, one S6 stream and six non-classified drainages were not installed. As well, a road was constructed on top of a non-classified drainage resulting in natural drainage patterns being altered as the non-classified drainage was no longer apparent.

Section 57 of the FPPR states that, when conducting a primary forest activity, one must do so at a time and in a manner that is unlikely to harm fish or destroy, damage or harmfully alter fish

habitat. During road construction, a road was not constructed in the original location and the road was constructed over fish habitat. Overall, three watercourses were affected.

Overall, the roads were not constructed as per the plan. Auditors noted pervasive non-compliance with section 39(1) and 57 of the FPPR, therefore this is considered a significant non-compliance.

Road Deactivation

Section 82(1)(a) of the FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. None of the three road sections deactivated on cutblocks C0TF and C1CF had a barricade in place to prevent access by motor vehicles. During deactivation, structures were removed on one of these road sections; this road section crossed fish habitat and so access would increase the risk of soil erosion and sedimentation directly into fish habitat.

As this is a pervasive issue, the audit considers this to be a significant non-compliance.

Unsound Forest Practices

FRPA is “results based” legislation, relying on the use of professionals to plan and perform the activities that will protect the various values found in the forest – in essence, achieve a satisfactory result on the ground. BCTS develops, and offers up for sale, timber sales that include professionally developed plans and maps, which reference specific assessments where required, that provide guidance to the timber sale licence holder. BCTS documents suggest that the timber sale holder follow the plans as written, and if they wish to deviate from these plans, they should consult a qualified registered professional.

During the course of the audit, it was found that the TSL holder deviated from the professionally prepared plans without consulting a qualified registered professional. Some of these deviations include:

- not pruning boundary edges where the treatment was prescribed;
- not avoiding machine free zones established for areas with sensitive soils as prescribed; and
- utilizing a ground based harvest method where a cable harvest method was prescribed.

Although FRPA allows for deviations from site plans, it is usually not a sound forestry practice to do so without a documented, sound rationale, and without consulting a qualified registered professional.

TSLs A68274 and A81990 Audit Opinion

In my opinion, except for the harvesting, road construction, and road deactivation issues discussed below, the harvesting; road construction, deactivation and maintenance activities carried out on Timber Sale Licences A68274 and A81990 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Harvesting* section of this report, the audit identified a situation of significant non-compliance related to the harvesting within cutblocks.

As described in the *Road Construction* section of this report, the audit identified a situation of significant non-compliance related to the construction of the roads.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

Without further qualifying my opinion, I draw attention to the *Unsound Forest Practices* section of this report, which describes an area of concern.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 3: TSLs A78127 and A78128

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSLs A78127 and A78128.

The TSL holder is responsible for all harvesting, road construction, maintenance, and deactivation inside of cutblocks Z32, Z35 and Z24 on TSLs A78127 and A78128. TSLs A78127 and A78128 are located west of Campbell River within Horseshoe Creek, a tributary of the Gold River.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

Blocks Z32 and Z35 on TSL A78127, and block Z24 on TSL A78128 had been harvested at the time of the audit. All three cutblocks were audited.

Road Construction, Maintenance, Deactivation

The audit assessed all of the road activities within A78127 and A78128. This included 3.76 kilometres of road construction and 3.76 kilometres of road deactivated over five road sections. All of the road was audited.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with two exceptions, the forestry activities undertaken on TSLs A78127 and A78128 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a significant non-compliance with respect to maintaining natural surface drainage patterns as discussed in the *Harvesting* section below.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to deactivated roads and not stabilizing the road prism as is required by legislation. This is discussed in the *Road Deactivation* section below.

Another area of concern is discussed in the *Unsound Forest Practices* section below.

Harvesting

Cutblock Z32 had four S6 streams within the block, and cutblock Z35 had five S6 streams within the block. Section 39(1) of the FPPR states that when constructing a temporary access structure, the person must maintain natural surface drainage patterns on the area both during and after construction. The site plan did not identify designated machine crossings on several watercourses; however, during harvesting, ground-based machines crossed these watercourses and structures were not installed at the time of construction. The lack of establishing a designated crossing resulted in natural drainage patterns being disrupted. Overall, crossings on two S6 streams were not installed.

Section 55(1) of the FPPR states that when constructing a stream crossing as part of a temporary access structure one must locate, build and use the crossing in a manner that protects the stream channel and stream bank immediately above and below the stream crossing, and mitigates disturbance to the stream channel and stream bank at the crossing, and section 55(2) states the crossing must be removed when it is no longer required. Machine crossings were not removed or only partially removed at the completion of harvesting on four separate S6 stream crossings.

Overall, harvesting did not follow the plan. Auditors noted pervasive non-compliance with sections 39(1), and 55(1) & (2) of FPPR, therefore this is considered a significant non-compliance.

Road Deactivation

Section 82(1)(a) of the FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. None of the five road sections deactivated on the three cutblocks had a barricade in place to prevent access by motor vehicles. During deactivation, major structures were removed on one of these road sections.

As well, section 82(1)(d) states that the person who deactivates a road must also stabilize the road prism, and by not providing for natural drainage patterns, the potential for harm from soil erosion and sediment transport to downstream fish habitat is a concern. Overall, natural drainage patterns were not re-established on four non-classified drainages.

Both of these concerns were pervasive issues, therefore the audit considers this to be a significant non-compliance.

Unsound Forest Practices

FRPA is “results based” legislation, relying on the use of professionals to plan and perform the activities that will protect the various values found in the forest – in essence, achieve a satisfactory result on the ground. BCTS develops and offers up for sale, timber sales that include professionally developed plans and maps, which reference specific assessments where required, that provide guidance to the timber sale licence holder. BCTS documents suggest that the timber sale holder follow the plans as written, and if they wish to deviate from these plans, they should consult a qualified registered professional.

During the course of the audit, it was found that the TSL holder deviated from the professionally prepared plans without consulting a qualified registered professional.

Some of these deviations include:

- not cleaning introduced debris from streams concurrent with harvesting, as prescribed;
- not avoiding machine free zones as prescribed;
- yarding across streams that were prescribed as yard away;
- not retaining saplings next to the streams as prescribed;
- sidecasting material where endhaul was prescribed; and
- not endhauling fill from two gullies post harvest as prescribed.

Although FRPA allows for deviations from site plans, it is usually not a sound forestry practice to do so without a documented, sound rationale, and without consulting a qualified registered professional.

TSLs A78127 and A78128 Audit Opinion

In my opinion, except for harvesting and road deactivation issues discussed below, the harvesting; road construction and deactivation activities carried out on Timber Sale Licences A78127 and A78128 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to road maintenance or the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Harvesting* section of this report, the audit identified a situation of significant non-compliance.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

Without further qualifying my opinion, I draw attention to the *Unsound Forest Practices* section of this report, which describes an area of concern.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 4: TSL A80233

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSL A80233.

The TSL holder is responsible for harvesting, and road construction, maintenance, and deactivation inside and between cutblocks 48118 and 48219 on TSL A80233 which is located north of Sayward, within the lower reach of the Naka Creek watershed.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

Blocks 48118 and 48219 were harvested during the audit period and both were audited.

Road Construction, Maintenance, Deactivation

The TSL holder constructed 5.62 kilometres, deactivated 0.32 kilometres and maintained 5.31 kilometres of road. Auditors audited all of these roads. The TSL holder also constructed one bridge which was also assessed.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with two exceptions, the forestry activities undertaken on TSL A80233 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a pervasive concern relating to road and bridge construction. These concerns are discussed in the *Road and Bridge Construction* section below.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to a number of deactivated road sections as is required by legislation. This is discussed in the *Road Deactivation* section below.

Another area of concern is discussed in the *Unsound Forest Practices* section below.

Road and Bridge Construction

Section 39(1) of the *Forest Planning and Practices Regulation* (FPPR) states that when constructing a road, the person must maintain natural surface drainage patterns on the area both during and after construction. During construction, the road layout and design called for several culverts which were not installed at the time of construction. Overall, culverts on 11 S6 streams and 6 non-classified drainages were not installed, and culverts smaller than called for in the design were used on an additional 9 S6 road crossings.

Section 57 of the FPPR states, in general terms, that fish habitat must be protected. During the course of the audit, it was determined that prior to bridge construction, and contrary to the road design, an S5 stream was in-filled with rock and gravel material. This high transport stream becomes a S2 fish bearing stream approximately 250 metres below this site. This stream has direct connectivity to Naka Creek. Although much of the material may have been later pulled out of the stream prior to constructing the bridge, at the time of the audit there was still sidecast material perched directly over the stream that was continually encroaching on the stream channel.

In addition, a wooden box culvert was constructed on a stream where the road design called for an armoured swale. The terrain report states that “this stream is an ephemeral, high transport debris flow channel,” and auditors noted that constructing a culvert rather than a swale increases the potential for an impact to the fish stream below the cutblock. This stream was also in-filled with rock and gravel material. Although the potential impact of this material was not quantified, this is a concern.

Overall, the roads and bridge were not constructed as per the plan. Auditors noted repeated non-compliance with both sections 39(1) and 57 of the FPPR, therefore the audit concluded that road and bridge construction is not in compliance with FRPA.

Road Deactivation

Section 82(1)(a) of FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. Neither of the two road sections deactivated on cutblock 48219 had a barricade in place to prevent access by motor vehicles. During deactivation, a major structure was removed on one of these road sections.

As this is a pervasive issue, the audit considers this to be a significant non-compliance.

Unsound Forest Practices

FRPA is “results based” legislation, relying on the use of professionals to plan and perform the activities that will protect the various values found in the forest – in essence, achieve a satisfactory result on the ground. BCTS develops and offers up for sale, timber sales that include professionally developed plans and maps which reference specific assessments where required, that provide guidance to the timber sale licence holder. BCTS documents suggest that the timber sale holder follow the plans as written, and if they wish to deviate from these plans, they should consult a qualified registered professional.

During the course of the audit, it was found that the TSL holder deviated from the professionally prepared plans without consulting a qualified registered professional. Some of these deviations include:

- sidecasting material where endhaul was prescribed;
- locating a spoil site in an area that was not identified as a suitable spoil site;
- not following prescribed riparian management practices, such as machine cleaning debris from streams concurrent with harvesting, no limbing or topping in any stream, unless required for safety, and maintaining a five metre machine free zone;
- constructing, then deactivating, a road within the cutblock that was not planned; and
- not following the engineered design for the construction of a bridge.

Although FRPA allows for deviations from site plans, it is usually not a sound forestry practice to do so without a documented, sound rational, and without consulting a qualified registered professional.

TSL A80233 Audit Opinion

In my opinion, the road and bridge construction carried out on Timber Sale Licence A80233 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, did not comply with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. Please refer to the *Road and Bridge Construction* section of this report.

In my opinion, except for the road deactivation issue discussed below, the harvesting; road deactivation and maintenance activities carried out on Timber Sale Licence A80233 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

Without further qualifying my opinion, I draw attention to the *Unsound Forest Practices* section of this report, which describes an area of concern.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 5: TSL A81964

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSL A81964.

The TSL holder is responsible for harvesting, and road construction, maintenance, and deactivation inside of cutblock C314 on TSL A81964 which is located west of Campbell River, within the Sayward Forest, and in the vicinity of Duckwing Lake.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

The TSL holder had felled a majority of the timber sale but had not yet initiated yarding on block C314 at the time of the audit.

Road Construction, Maintenance, Deactivation

The TSL holder constructed 1.39 kilometres of road and maintained 1.39 kilometres of road. Auditors assess all 1.39 kilometres of road constructed and maintained. No roads were deactivated within this sale during the period of the audit.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with one exception, the forestry activities undertaken on TSL A81964 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a significant non-compliance with respect to road construction as discussed in the *Road Construction* section below.

Road Construction

Section 39(1) of the FPPR states that when constructing a road, the person must maintain natural surface drainage patterns on the area both during and after construction. During construction,

the road layout and design called for several culverts which were not installed at the time of construction. Overall, culverts on four S6 streams and two non-classified drainages were not installed.

The auditors also noted that the constructed roads had not been surfaced with suitable material and that there was deep road surface rutting and ditchline erosion, which is not in compliance with section 79(6)^{xi} of FPPR. As well, the native sandy material is highly erodible and has the potential to contribute sediment into the streams.

Overall, the roads were not constructed as per the plan. Auditors noted pervasive non-compliance with both sections 39(1) and 79(6) of FPPR, therefore this is considered a significant non-compliance.

Subsequent to the audit, the licensee has informed the Board that they have installed all of the required culverts and capped the road surface.


TSL A81964 Audit Opinion

In my opinion, except for the road construction issue discussed below, the harvesting; road construction and maintenance activities carried out on Timber Sale Licence A81964 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to road deactivation or the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Road Construction* section of this report, the audit identified a situation of significant non-compliance related to the construction of the roads in Block C314.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.

A handwritten signature in black ink, reading "C R Mosher". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 6: TSL A82032

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSL A82032.

The TSL holder is responsible for all harvesting, road construction, maintenance, and deactivation inside of cutblock 38501 on TSL A82032. TSLA82032 is north of Sayward, within the Dean Creek, a tributary of the Tsitika River.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

Block 38501 on TSL A82032 had been harvested at the time of the audit. This cutblock was audited.

Road Construction, Maintenance, Deactivation

The audit assessed all of the road activities within A82032. This included 0.96 kilometres of road construction and 0.96 kilometres of road deactivated over two road sections. All of the road was audited.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with one exception, the forestry activities undertaken on TSL A82032 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to deactivated roads and not stabilizing the road prism as is required by legislation. This is discussed in the *Road Deactivation* section below.

Road Deactivation

Section 82(1)(a) of FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. Neither of the two road sections deactivated on the cutblock had a barricade to prevent access by motor vehicles.

As well, section 82(1)(d) states that the person who deactivates a road must also stabilize the road prism, and by not providing for natural drainage patterns, the potential for harm from soil erosion and sediment transport to downstream fish habitat is a concern. Overall, natural drainage patterns were not re-established on seven S6 streams.

Both of these concerns were pervasive issues, therefore the audit considers this to be a significant non-compliance.

TSL A82032 Audit Opinion

In my opinion, except for the road deactivation issue discussed below, the harvesting; road construction and deactivation activities carried out on Timber Sale Licence A82032 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to road maintenance or the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 7: TSL A82034

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSL A82034.

The TSL holder is responsible for harvesting, road construction, maintenance, and deactivation inside cutblock 38254 on TSL A82034 which is located north of Sayward, in the Brooke Creek drainage, within the upper part of the Tsitika watershed.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

Block 38354 had been harvested at the time of the audit and was audited.

Road Construction, Maintenance, Deactivation

The audit assessed all of the road activities within A82034. This included 1.89 kilometres of road construction and 1.89 kilometres of road deactivation over two sections. Auditors assessed all of the road constructed and deactivated.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with two exceptions, the forestry activities undertaken on TSL A82034 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a significant non-compliance with respect to maintaining natural surface drainage patterns as discussed in the *Harvesting and Road Construction* section below.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to a number of deactivated road sections and providing for a stable road prism, as is required by legislation. This is discussed in the *Road Deactivation* section below.

Another area of concern is discussed in the *Unsound Forest Practices* section below.

Harvesting and Road Construction

Section 39(1) of the FPPR states that when constructing a temporary access structure, the person must maintain natural surface drainage patterns on the area both during and after construction. The site plan did not identify designated machine crossings on several watercourses; however, during harvesting, ground-based machines crossed these watercourses and structures were not installed at the time of construction. The lack of establishing a designated crossing resulted in natural drainage patterns being disrupted. Overall, crossings on one S6 stream were not installed. As well, a S6 stream was re-established with an excavator rather than just removing the introduced debris, resulting in natural drainage patterns being altered.

During road construction, the road layout and design called for several culverts which were not installed at the time of construction. As well, a road was constructed on top of a small section of a S6 stream resulting in natural drainage patterns being altered as the stream was no longer apparent. Overall, culverts on three S6 streams were not installed and an S6 stream was not flowing in its original channel.

Overall, harvesting and road construction did not follow the plan. Auditors noted pervasive non-compliance with section 39(1) of FPPR, therefore this is considered a significant non-compliance.

Road Deactivation

Section 82(1)(a) of the FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. Neither of the two road sections deactivated on cutblock 38254 had a barricade in place to prevent access by motor vehicles. During deactivation, major structures were removed on one of these road sections and a road section had been rebuilt.

As this is a pervasive issue, the audit considers this to be a significant non-compliance.

Unsound Forest Practices

FRPA is “results based” legislation, relying on the use of professionals to plan and perform the activities that will protect the various values found in the forest – in essence, achieve a satisfactory result on the ground. BCTS develops and offers up for sale, timber sales that include professionally developed plans and maps which reference specific assessments where required, that provide guidance to the timber sale licence holder. BCTS documents suggest that the timber sale holder follow the plans as written, and if they wish to deviate from these plans, they should consult a qualified registered professional.

During the course of the audit, it was found that the TSL holder deviated from the professionally prepared plans without consulting a qualified registered professional or providing a documented and sound rationale. Some of these deviations include:

- sidecasting material where endhaul was prescribed;
- sidecasting material into a gully where endhaul was prescribed;
- an increase to the overall site disturbance from road construction activities; and

- not following prescribed riparian management practices, such as machine cleaning debris from streams concurrent with harvesting, minimize machine crossings, and fall away/yard away.

Although FRPA allows for deviations from site plans, it is usually not a sound forestry practice to do so without a documented, sound rational, and without consulting a qualified registered professional.

TSL A82034 Audit Opinion

In my opinion, except for the harvesting and road construction, and road deactivation issues discussed below, the harvesting; road construction and deactivation activities carried out on Timber Sale Licence A82034 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to road maintenance or the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Harvesting and Road Construction* section of this report, the audit identified a situation of significant non-compliance related to maintaining natural surface drainage patterns.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

Without further qualifying my opinion, I draw attention to the *Unsound Forest Practices* section of this report, which describes an area of concern.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 8: TSL A82035

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSL A82035.

The TSL holder is responsible for all harvesting, road construction, maintenance, and deactivation inside of cutblock C2FA on TSL A82035 which is located east of Campbell River, on Sonora Island, in the vicinity of Greensea Bay.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

Block C2FA had been harvested at the time of the audit and was audited.

Road Construction, Maintenance, Deactivation

The audit assessed all of the road and bridge activities within A82035. This included 3.79 kilometres of road construction/reactivation, 0.93 kilometres of road maintenance and 2.86 kilometres of road deactivation over six road sections, as well as one bridge that had been deactivated. Auditors assessed all of the road constructed, maintained and deactivated, as well as the deactivated bridge.

Protection

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited.

Findings

The audit found, with two exceptions, the forestry activities undertaken on TSL A82035 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a significant non-compliance with respect to maintaining natural surface drainage patterns as discussed in the *Harvesting and Road Construction* section below.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to a number of deactivated road sections and providing for a stable road prism as is required by legislation. This is discussed in the *Road Deactivation* section below.

Harvesting and Road Construction

Section 39(1) of the FPPR states that, when constructing a road or a temporary access structure on an area, the person must maintain natural surface drainage patterns on the area both during and after construction. During harvesting, although the site plan called for a 5 metre machine free zone in order to maintain stream bank and channel integrity, natural drainage patterns on three S6 streams were not maintained. During construction, the natural drainage patterns of multiple S6 streams had also not been maintained.

Overall, on block C2FA, auditors noted pervasive non-compliance with section 39(1) of the FPPR; therefore this is considered a significant non-compliance.

Road Deactivation

Section 82(1)(a) of the FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. Only two of the six road sections deactivated in the audit period had a barricade in place to prevent access by motor vehicles. As well, section 82(1)(d) states that the person who deactivates a road must also stabilize the road prism, and by not providing for natural drainage patterns, the potential for harm from soil erosion and sediment transport to downstream fish habitat is a concern.

Both of these concerns were pervasive issues, therefore the audit considers this to be a significant non-compliance.

TSL A82035 Audit Opinion

In my opinion, except for the natural drainage patterns and road deactivation issues discussed below, the harvesting; road construction, maintenance and deactivation activities carried out on Timber Sale Licence A82035 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and related regulations as of July 2010. No opinion is provided with respect to road maintenance or the *Wildfire Act*.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Harvesting and Road Construction* section of this report, the audit identified a situation of significant non-compliance.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access and not stabilizing the road prism.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Report 9: TSLs A82762 and A83150

Audit Approach and Scope

The audit examined both BCTS-CR's and timber sale licensees' obligations and activities, however this audit report will only refer to those activities relating to TSLs A82762 and A83150.

The TSL holder is responsible for harvesting as well as road construction, maintenance, and deactivation inside of cutblocks C3JZ and C3JY on TSL A82762, and cutblock C3K4 on TSL A83150. TSL A82762 is located north of Sayward, within Akan Creek, a tributary to the Tsitika River. TSL A83150 is also located north of Sayward, within the headwaters of Boulder Creek, a tributary to the Tsitika River.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period July 1, 2009, to July 30, 2010, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2010 audit season, set out the standards and procedures that were used to carry out this audit. Further details about the audit process appear in Appendix 1.

Planning and Practices Examined

Harvesting

The TSL holder completed harvesting in cutblocks C3JZ and C3JY and was actively harvesting in cutblock C3K4. All were audited.

Road Construction, Maintenance, Deactivation

The TSL holder constructed 8.49 kilometres of road and two major structures. The TSL holder maintained 3.32 kilometres of road in cutblock C3K4 and deactivated four sections of road, totaling 5.17 kilometres of road in cutblocks C3JZ and C3JY. Auditors assessed all of these activities.

Protection

The TSL holder had active operations in cutblock C3K4 during the field audit, so the field components of the fire preparedness requirements of the WA were audited.

Findings

The audit found, with two exceptions, the forestry activities undertaken on TSLs A82762 and A83150 complied, in all significant respects, with the requirements of FRPA, WA and related regulations, as of July 2010.

The audit identified a significant non-compliance with respect to maintaining natural surface drainage patterns as discussed in the *Road Construction* section below.

The deactivation non-compliance involved a pervasive issue relating to not blocking access to a number of deactivated road sections and providing for a stable road prism as is required by legislation. This is discussed in the *Road Deactivation* section below.

Another area of concern is discussed in the *Unsound Forest Practices* section below.

Road Construction

Section 39(1) of the FPPR states that, when constructing a road, the person must maintain natural surface drainage patterns on the area both during and after construction. During construction, the road layout and design called for several culverts which were not installed at the time of construction. Overall, culverts on 12 S6 streams and 8 non-classified drainages were not installed.

The auditors also noted that the major culvert constructed was not built to the engineered design and was undersized for the stream. As well, on one road section, the ditchline was excessively deep which will make it difficult to re-establish natural drainage patterns at deactivation.

Overall, the roads were not constructed as per the plan. Auditors noted pervasive non-compliance with section 39(1) of the FPPR, therefore this is considered a significant non-compliance.

Road Deactivation

Section 82(1)(a) of the FPPR states that a person who deactivates a road must barricade the road surface width to prevent access from motor vehicles, other than all-terrain vehicles. None of the four road sections deactivated on cutblocks C3JY and C3JZ had a barricade in place to prevent access by motor vehicles. During deactivation, major structures were removed on one of these road sections.

As well, section 82(1)(d) states that the person who deactivates a road must also stabilize the road prism, and by not providing for natural drainage patterns, the potential for harm from soil erosion and sediment transport to downstream fish habitat is a concern. Overall, natural drainage patterns were not re-established on seven S6 streams and eight non-classified drainages.

Both of these concerns were pervasive issues, therefore the audit considers this to be a significant non-compliance.

Unsound Forest Practices

FRPA is “results based” legislation, relying on the use of professionals to plan and perform the activities that will protect the various values found in the forest – in essence, achieve a satisfactory result on the ground. BCTS develops and offers up for sale, timber sales that include professionally developed plans and maps which reference specific assessments where required, that provide guidance to the timber sale licence holder. BCTS documents suggest that the timber sale holder follow the plans as written, and if they wish to deviate from these plans, they should consult a qualified registered professional.

During the course of the audit, it was found that the TSL holder deviated from the professionally prepared plans without consulting a qualified registered professional. Some of these deviations include:

- sidecasting material where endhaul was prescribed;
- not following prescribed riparian management practices, such as machine cleaning debris from streams concurrent with harvesting, minimize machine crossings, and fall away/yard away;
- not following the engineered design for a major culvert;
- oversized ditch along road;
- not armouring stream outlets as prescribed; and
- using a ground based harvest method where a cable harvest method was prescribed.

Although FRPA allows for deviations from site plans, it is usually not a sound forestry practice to do so without a documented, sound rational, and without consulting a qualified registered professional.

TSLs A82762 and A83150 Audit Opinion

In my opinion, except for the road construction and deactivation issues discussed below, the harvesting; road construction, deactivation and maintenance activities; and protection activities carried out on Timber Sale Licences A82762 and A83150 in the Campbell River district portion of the Strait of Georgia Business Area between July 1, 2009, and July 30, 2010, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations as of July 2010.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

As described in the *Road Construction* section of this report, the audit identified a situation of significant non-compliance related to the construction of the roads.

As described in the *Road Deactivation* section of this report, the audit identified significant non-compliance related to not barricading deactivated roads to prevent motor vehicle access.

Without further qualifying my opinion, I draw attention to the *Unsound Forest Practices* section of this report, which describes an area of concern.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA and WA.



Christopher R. Mosher CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
April 10, 2012

Appendix 1:

Forest Practices Board Compliance Audit Process

Background

The Forest Practices Board conducts audits of government and agreement-holders under the *Forest and Range Practices Act* (FRPA), section 122, and the *Wildfire Act* (WA). Compliance audits examine forest or range planning and practices to determine whether or not they meet FRPA and / or WA requirements.

Selection of auditees

The Board conducts about 8 or 9 compliance audits annually. Most of these are audits of agreement holders. The Board also audits the government's BC Timber Sales Program (BCTS). This section describes the process for selecting agreement holders to audit.

To begin with, auditors randomly select an area of the Province, such as a district. Then the auditors review the forest resources, geographic features, operating conditions and other factors in the area selected. These are considered in conjunction with Board strategic priorities (updated annually), and the type of audit is determined. At this stage, we choose the auditee(s) that best suits the selected risk and priorities. The audit selections are not based on past performance.

For example, in 2007, the Board randomly selected the Robson Valley Timber Supply Area as a location for an audit. After assessing the activities within that area, we discovered that two licensees had recently closed operations due to financial problems. As the Board has expressed concern in the past about financially strapped companies failing to meet outstanding obligations, such as reforestation and road maintenance, the audit focused on the status of the outstanding obligations of these two licences.

For BCTS audits, a district within one of the 12 business areas within the province is selected randomly for audit.

Audit Standards

Audits by the Board are conducted in accordance with the auditing standards developed by the Board. These standards are consistent with generally accepted auditing standards. The standards for compliance audits are described in the Board's *Compliance Audit Reference Manual*.

Audit Process

Conducting the Audit

Once the Board randomly selects an area or district and determines the scope of audit to be conducted and the licensee(s) to be audited, all activities carried out during the period subject to audit are identified (such as harvesting or replanting, and road construction or deactivation activities). Items that make up each forest activity are referred to as a population. For example,

all sites harvested from the timber harvesting population and all road sections constructed from the road construction population.

A separate sample is then selected for each population (e.g., the cutblocks selected for auditing timber harvesting). Within each population, more audit effort (i.e., more audit sampling) is allocated to areas where the risk of non-compliance is greater.

Audit fieldwork includes assessments of features using helicopters and ground procedures, such as measuring specific features like riparian reserve zone width. The audit teams generally spend one to two weeks in the field.

Evaluating the Results

The Board recognizes that compliance with the many requirements of FRPA and WA, is more a matter of degree than absolute adherence. Determining compliance, and assessing the significance of non-compliance, requires the exercise of professional judgment within the direction provided by the Board.

The audit team, composed of professionals and technical experts, first determines whether forest practices comply with legislated requirements. For those practices considered to not be in compliance, the audit team then evaluates the significance of the non-compliance, based on a number of criteria, including the magnitude of the event, the frequency of its occurrence and the severity of the consequences.

Auditors categorize their findings into the following levels of compliance:

Compliance – where the auditor finds that practices meet FRPA and WA requirements.

Not significant non-compliance – where the auditor, upon reaching a non-compliance conclusion, determines that one or more non-compliance event(s) is not significant and not generally worthy of reporting. However, in certain circumstances, events that are considered not significant non-compliance may be reported as an area requiring improvement.

Significant non-compliance – where the auditor determines a non-compliance event(s) or condition(s) is or has the potential to be significant, and is considered worthy of reporting.

Significant breach – where the auditor finds that significant harm has occurred, or is beginning to occur, to persons or the environment as a result of one or many non-compliance events.

If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Minister of Forests, Lands and Natural Resource Operations.

Reporting

Based on the above evaluation, the auditor then prepares a draft audit report. The party being audited is given a draft of the report for review and comment before it is submitted to the Board.

Once the auditor submits the draft report, the Board reviews it and determines if the audit findings may adversely affect any party or person. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final

report. The representations allow parties that may potentially be adversely affected to present their views to the Board.

The Board then reviews the draft report from the auditor and the representations from parties that may potentially be adversely affected before preparing its final report. Once the representations have been completed, the report is finalized and released: first to the auditee and then to the public and government.

ⁱ A number of international organizations have established unique programs, including standards of practice, to certify and monitor forest industry performance in the area of forest sustainability and environmental protection. These organizations include the Canadian Standards Association (CSA), the Forest Stewardship Council (FSC), the International Organization for Standardization (ISO 14001), and the Sustainable Forestry Initiative (SFI).

ⁱⁱ The International Organization for Standardization (ISO) is a non-governmental worldwide federation of national standards bodies. ISO 14001 is the international standard defining the organizational structure, responsibilities, procedures, processes and resources required in implementing environmental management systems. It does not specify environmental performance criteria, but provides a framework for an organization to set the criteria together with objectives and targets plus auditing and reporting systems. Undertaking independent certification under ISO 14001 is voluntary.

ⁱⁱⁱ The Sustainable Forestry Initiative program (SFI) is a comprehensive system of principles, objectives, and performance measures that integrates the perpetual growing and harvesting of trees with the protection of wildlife, plants, soil and water quality. Through a voluntary verification process, member companies and licensees may choose to apply a verification approach to document and communicate their conformance to the SFI standard.

^{iv} A forest stewardship plan (FSP) is a key planning element in the FRPA framework and the only plan subject to public review and comment and government approval. In FSPs licensees are required to identify results and/or strategies consistent with government objectives for values such as water, wildlife and soils. These results and strategies must be measurable and once approved are subject to government enforcement. FSPs identify areas within which road construction and harvesting will occur but are not required to show the specific locations of future roads and cutblocks. FSPs can have a term of up to five years.

^v ***Section 72 of the Forest Planning and Practices Regulation:***
Roads and associated structures

72 A person who constructs or maintains a road must ensure that the road and the bridges, culverts, fords and other structures associated with the road are structurally sound and safe for use by industrial users.

^{vi} ***Section 82(1) of the Forest Planning and Practices Regulation:***
Road deactivation

82 (1) A person who deactivates a road must do the following:

- (a) barricade the road surface width in a clearly visible manner to prevent access by motor vehicles, other than all-terrain vehicles;
- (b) remove bridge and log culvert superstructures and stream pipe culverts;
- (c) remove bridge and log culvert substructures, if the failure of these substructures would have a material adverse effect on downstream property, improvements or forest resources;
- (d) stabilize the road prism or the clearing width of the road if the stabilization is necessary to reduce the likelihood of a material adverse effect in relation to one or more of the subjects listed in section 149 (1) of the Act.

^{vii} ***Section 75 of the Forest Planning and Practices Regulation:***
Structural defects

75 A person who maintains a road must do one or more of the following if a structural defect or deficiency occurs on a bridge that is part of that road:

- (a) correct the defect or deficiency to the extent necessary to protect
 - (i) industrial users of the bridge, and
 - (ii) downstream property, improvements or forest resources that could be affected if the bridge fails;
- (b) close, remove or replace the bridge;
- (c) restrict traffic loads to a safe level;

-
- (d) place a sign, on each bridge approach, stating the maximum load capacity of the bridge.

*viii Section 39 of the Forest Planning and Practices Regulation:
Natural surface drainage patterns*

- 39** (1) If an authorized person constructs a road, a temporary access structure or a permanent access structure on an area, the person must maintain natural surface drainage patterns on the area both during and after construction.
- (2) Despite subsection (1), if it is not practicable for an authorized person to maintain natural surface drainage patterns during the construction of a road, a temporary access structure or permanent access structure, the person must ensure that the altered surface drainage pattern is compatible with the original natural surface drainage pattern by the earlier of
- (a) the end of the construction, and
 - (b) the next freshet.

*ix Section 55 of the Forest Planning and Practices Regulation:
Stream crossings*

- 55** (1) An authorized person who builds a stream crossing as part of a road, a temporary access structure or permanent access structure must locate, build and use the crossing in a manner that
- (a) protects the stream channel and stream bank immediately above and below the stream crossing, and
 - (b) mitigates disturbance to the stream channel and stream bank at the crossing.
- (2) An authorized person who builds a stream crossing as part of a temporary access structure must remove the crossing when it is no longer required by the person.

*x Section 57 of the Forest Planning and Practices Regulation:
Protection of fish and fish habitat*

- 57** An authorized person who carries out a primary forest activity must conduct the primary forest activity at a time and in a manner that is unlikely to harm fish or destroy, damage or harmfully alter fish habitat.

*xi Section 79 of the Forest Planning and Practices Regulation:
Road maintenance*

- 79** (1) A person may maintain a road only if authorized or required to do so under the Act or this regulation.
- (2) A person who is authorized in respect of a road must maintain the road, including bridges, culverts, fords and other structures associated with the road, until
- (a) the road is deactivated,
 - (b) the district manager notifies the person that the road should not be deactivated due to use or potential use of the road by others,
 - (c) a road permit or special use permit for the road is issued to another person, or
 - (d) the road is declared a forest service road under the *Forest Act*.
- (3) Subject to subsection (4), the government must maintain a forest service road, including bridges, culverts, fords and other structures associated with the road, until the road is deactivated.
- (4) The district manager may order the holder of a road use permit that authorizes the use of a forest service road to assume all or part of the responsibility to maintain the road, including bridges, culverts, fords and other structures associated with the road.
- (5) Repealed. [B.C. Reg. 580/2004, s. 48 (b).]
- (6) A person required to maintain a road must ensure all of the following:
- (a) the structural integrity of the road prism and clearing width are protected;
 - (b) the drainage systems of the road are functional;
 - (c) the road can be used safely by industrial users.
- (7) A holder of a road use permit required to maintain a forest service road under subsection (4), on giving the district manager at least 30 days notice, may do one or more of the following in respect of the forest service road:
- (a) build a bridge;
 - (b) install a major culvert;

(c) install a culvert in a fish stream.

(8) Within 30 days of receiving a notice referred to in subsection (7), the district manager may impose requirements respecting a bridge or culvert referred to in that subsection, and the holder of the road use permit must comply with those requirements.

(9) If the district manager does not impose requirements under subsection (8), the holder of the road use permit may proceed in accordance with the notice given under subsection (7).



**Forest
Practices
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For more information on the Board, please visit our website at: www.fpb.gov.bc.ca



For Immediate Release
July 5, 2012

Campbell River audit finds compliance problems with timber sales program

VICTORIA – An audit of BC Timber Sales' (BCTS) Strait of Georgia Business Area has found several instances of non-compliance with provincial forestry legislation by timber sale licence holders and BCTS operating within the Campbell River area. Only one of 24 timber sale licensees had no problems noted with its operations.

"While the auditors did not find evidence of significant environmental harm at the time, these practices increase the risk of damage to resources and the environment occurring," said board chair Al Gorley.

Auditors found instances where fish habitat was not being adequately protected because of sediment introduced into fish streams as well as a failure to maintain the natural drainage patterns of several small streams. Other problems noted include not adhering to professionally developed plans, and not having an adequate fire suppression system on site during extreme fire hazard conditions.

"Individually, each of these instances might not be considered serious; but taken together, and given the number in total, the board considers them to be significant," Gorley said. "The board has conducted well over 100 compliance audits since 1996, including more than 20 audits of BCTS operations, and typically finds very few problems —this is an exception."

The report notes that BCTS has committed to taking action to address the board's concerns.

The BCTS operating areas audited include Gold River on the west coast of Vancouver Island, Sayward on the east, and Mainland areas across from Campbell River.

The Forest Practices Board is B.C.'s independent watchdog for sound forest and range practices, reporting its findings and recommendations directly to the public and government. The board audits forest and range practices on public lands and appropriateness of government enforcement. It can also make recommendations for improvement to practices and legislation.

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More information can be obtained by contacting:
Helen Davies, Communications
Forest Practices Board
Phone: 250 213-4708 / 1 800 994-5899



The Best Place on Earth

File: 9710-20/2010-11

December 18, 2012

Forest Practices Board
PO Box 9905
Stn Prov Gov't
Victoria, BC V8W 9R1

Attn: Al Gorley, Chair

Dear Sir:

Re: BCTS response to Forest Practices Board recommendation in July 2012 audit report, *Forestry Audit: BC Timber Sales and Timber Sale Licence Holders, Strait of Georgia Business Area, Campbell River District*

In response to the Forest Practices Board's (Board) request of July 2012, please accept this letter as our follow-up report that describes our assessment of the potential environmental risk and our determination of remediation/ monitoring requirements to manage environmental risks resulting from timber sale operations that were field audited by the Board in 2010. Please note, we have focussed our review on the blocks that were identified by the Board as having significant findings.

Of the fifteen blocks identified with significant findings, we have concluded that five of the blocks have very low residual risk and therefore requires no remediation or monitoring. Ten blocks require remediation work or monitoring. We have complete remediation work (deactivation) on six of the ten blocks. These works were primarily focussed on improving water control and road prism stability. We are continuing to monitor/assess five TSLs. The following table outlines the blocks where work has been completed and where monitoring and/or further assessment is required.



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TSL – Block	Field Team – TSL Location	Works Completed	Comments - residual risk, planned work
A68274 - C1CF	FT 1 - Mohun	Cross ditched and barricaded	Low risk, work complete
A78127 – Z32	FT 1 - Horseshoe	Road fill slope pulled back and barricaded	Low risk, work complete
A78128 – Z24	FT 1 - Horseshoe	Cross ditched and barricaded	Low risk, work complete
A80233-48118	FT 1 - Naka		High risk, connector road and bridge crossing is location of concern, site is currently stable, full assessment of long term risk/required remediation is planned for spring 2013.
A80233 - 48219	FT 1 - Naka		Low risk - pull back perched material, install barricade at same time as work on A80233 - 48118
A82032 - 38501	FT 2 - Dean	Pulled back unstable fill and install cross ditches and barricaded	Low risk, work complete
A82034 - 38254	FT 2 - Elliot	Pulled back fill slope, lined ditch with rock to control erosion, re-established barricade.	Moderate risk - Monitor steep cut slope and deactivation measures near switchback for erosion and maintenance of natural drainage patterns.
A82035 – C2FA	FT 2 - Greensea	None required	Low risk – monitor water control measures and consider upgrading deactivation if required when machinery back in this isolated Sonora Island location.
A82150 – C3K4	FT 2 - Boulder		Low risk – area currently blocked by two natural slides, access to be restored in 2013, outstanding work includes removal of a large metal pipe,

TSL – Block	Field Team – TSL Location	Works Completed	Comments - residual risk, planned work
			pull back of unstable fill and installation of cross ditches and a barricade
A82762 – C3JZ	FT 2 - Akan	Pulled back unstable fill, installed cross ditches and barricaded	Low risk – work complete

In total, the actual cost to do the above work and the estimated cost to complete the final assessments and monitoring is approximately \$17, 200.

There are two aspects of the legislation that Strait of Georgia (SoG) appears to have a significantly different interpretation than the Board – we will be seeking clarification of this through our ministry channels. The Board determined that seven of the 24 TSLs audited were not maintaining natural drainage patterns as required under Section 39(1) of the Forest Planning and Practises Regulation (FPPR). Our assessment determined that one of the TSLs was not maintaining natural drainage patterns. It appeared to SoG that some of the audit opinions were based on speculation that culverts had not been installed by the Licensees. However, this was not the case. At the time of the audit, most of the roads had been deactivated and culverts removed. We acknowledge that some of the cross ditches were not dug as deeply as they should have been but they were installed and they were handling the water that was flowing. We could not see evidence that water was actually being diverted from one water course or drainage area to another neighbouring water course or drainage area. We certainly acknowledge the critical need to avoid diverting water onto unconditioned slopes or into drainage paths other than the natural path. With one exception, we could not see evidence of this type of diversion happening.

The other aspect of the legislation that we will be seeking interpretation of is Section 55(1) and (2) of the FPPR. Section 55(1) requires a person who builds a temporary access structure (TAS) to protection the stream channel and bank. It appeared to SoG that the Board was applying this aspect of the regulation to machine crossings of a stream where a TAS was not constructed or installed. In our view, the crossings in question did not warrant construction of a TAS, so in our opinion this aspect of the regulation did not apply. The impact to the stream channels and banks was immaterial in our observation. With respect to Section 55(2), we observed crossings where the licensee walked equipment over streams that had naturally occurring debris at the point of the crossing. It appeared that the Board felt this material formed a TAS and should be removed. Our opinion is that the natural debris does not need to be removed in this case, unless the material was moved in such a manner that the natural drainage pattern would be affected. We did not observe this to be the case in any of the examples we saw.

I recognise that these examples are difficult to assess without looking at the specific examples in the field. Had our two-way communication and working relationship been more effective

Al Gorely, Chair, Forest Practices Board

during the field audit, we could potentially have clarified these aspects at that time. We will seek clarification with these pieces of regulation and will make the right decisions going forward.

I trust this letter adequately addresses the Board's recommendation. If the Board has any questions or requires more information, please contact me at 250-286-9337.

Yours truly,

A handwritten signature in blue ink, consisting of several overlapping loops and a trailing line, positioned above the printed name.

Don Hudson, RPF
Timber Sales Manager

pc: Mike Falkiner, Executive Director, BC Timber Sales



File: 97150-20/2010-11

January 22, 2013

VIA EMAIL

Don Hudson
Timber Sales Manager
Strait of Georgia Business Area
370 South Dogwood Street
Campbell River, B.C. V9W 6Y7

Dear Don Hudson:

Re: BCTS-CR Response to Recommendation

Thank you for your letter dated December 18, 2012 in response to the Board's recommendation from our July 2012 publicly released audit report.

The Board is encouraged to hear that BCTS-CR has completed the assessment of the fifteen blocks identified with significant findings and that BCTS-CR has completed remediation work on six blocks and are continuing to monitor/assess five TSL's.

Board staff have reviewed your submission and find that it has addressed the Board's recommendation.

I accept this response as having addressed the Board's recommendation and now consider this file to be closed.

Thank you and your staff for your co-operation throughout the audit.

Yours sincerely,

A handwritten signature in black ink, appearing to read "R.A. Gorley", with a long, sweeping horizontal line extending to the right.

R.A. (Al) Gorley, RPF
Chair