

AUDIT OF FOREST PLANNING AND PRACTICES

Tolko Industries Ltd.
Timber Licence T0816
Okanagan Shuswap Natural Resource District

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FPB/ARC/265



**Forest
Practices
Board**

BC'S INDEPENDENT
WATCHDOG FOR
SOUND FOREST &
RANGE PRACTICES

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Audit Results

Introduction

The Forest Practices Board (the Board) is the public's watchdog for sound forest and range practices in British Columbia. One of the Board's roles is to audit forest industry practices to ensure compliance with the *Forest and Range Practices Act* (FRPA) and the *Wildfire Act*.

As part of its 2023 compliance audit program, the Board randomly selected the Okanagan Shuswap Natural Resource District as the location for a full scope compliance audit. Within the district, the Board selected Tolko Industries Ltd.'s (Tolko) timber licence (TL) T0816 for audit.

This report explains what the Board audited and the results. Detailed information about the Board's compliance audit process is provided in Appendix 1.



Figure 1. Post-harvest site preparation south of Greenbush Lake in the Shuswap River Valley.

Background

TL T0816 is an area-based forest tenure, 12 605 hectares in size. It is located in the Okanagan Shuswap Natural Resource District in south-central British Columbia. TL T0816 operations are in the north Okanagan/Shuswap area and are managed by Tolko staff from their office in Lumby, where staff prepare operational plans and implement forestry activities including timber harvesting, road work, and silviculture. Activities subject to audit are in the Mabel Lake and Sugar Lake areas, near the communities of Enderby, Sicamous, and Revelstoke (see Figure 2 for a map of the audit area).

This audit took place within the traditional territories of the Adams Lake Indian Band, Little Shuswap Lake Band, Neskonlith Indian Band, Shuswap Indian Band, Splatsin First Nation, and the Okanagan Indian Band. The Board recognizes the importance of Indigenous Peoples historical relationship with the land that continues to this day.

Tolko's operations are located in mid- to high-elevation areas. The audit area has a relatively moist climate with distinct features that contribute to its ecological complexity, with frequent low-intensity stand-initiating events such as fires, wind, and insects. The area's forests consist of a mosaic of primarily uneven-aged stands comprised of

lodgepole pine, western red cedar, spruce, and balsam. Potentially unstable terrain is common in these mountainous areas, requiring terrain stability assessments and cable harvest methods to address terrain stability.

TL T0816 has no assigned allowable annual cut. The tenure gives Tolko the exclusive right to harvest timber in a specified area and once the area is harvested the tenure expires. TL T0816 was issued in 1981 and expires in 2031, unless unharvested area remains and government extends the term. During the two-year audit period, Tolko harvested about 86 000 cubic metres of timber.

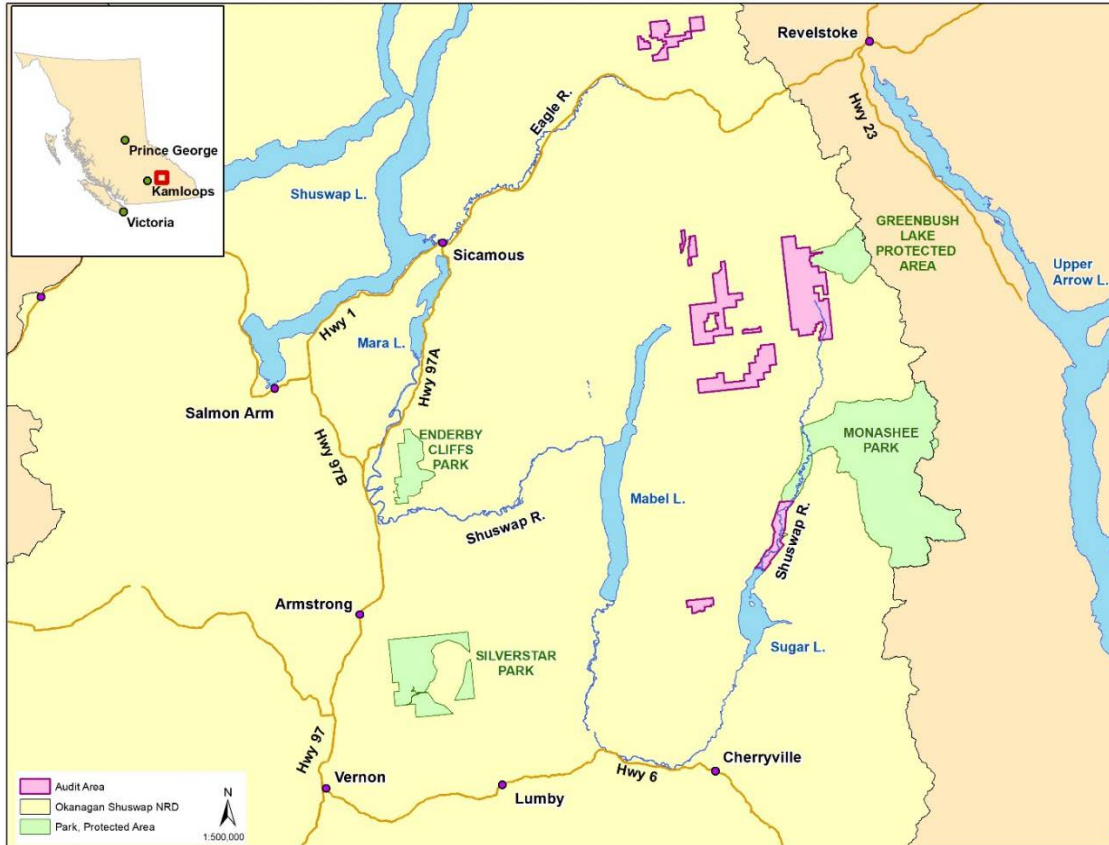


Figure 2. Map of the audit area.

Audit Approach and Scope

This was a full scope compliance audit and all activities carried out between October 1, 2021, and October 26, 2023, were eligible for audit. These activities included operational planning (forest stewardship plan (FSP)¹ and site plans), timber harvesting, wildfire protection, silviculture, and construction and maintenance of roads and major structures.¹

Auditors assessed these activities for compliance with FRPA, the *Wildfire Act*, and applicable regulations. This audit included interviewing Tolko staff, reviewing the FSP and site plans, examining records, and visiting sites to review field practices. The audit team was comprised of forest professionals, agrologists, and a geoscientist, who were in the field with licensee representatives from October 23 to 26, 2023.

The standards and procedures used to carry out this audit are set out in the Board's *Compliance Audit Reference Manual, Version 7.1, July 2016*.

¹ Major structures include bridges and major culverts. Bridge means a temporary or permanent crossing structure with a span length equal to or greater than 6 metres or an abutment height of 4 metres or greater. A major culvert has a pipe diameter of 2 metres or greater or is an open bottom arch with a span greater than 2.13 metres.

Planning and Practices Examined

Operational Planning

The licence was covered by two FSPs during the audit period: FSP #34, and FSP #684, which replaced FSP #34 on January 30, 2019. There were 12 cutblocks in the audit harvest population under FSP #34 and 5 cutblocks under FSP #684. The FSPs cover 5 timber supply areas (TSA): Kamloops, Merritt, Okanagan, Arrow, and Boundary. Operations subject to the audit fall within the Okanagan TSA, identified as Forest Development Unit 3² in the FSPs.

Tolko's operations are within the area covered by the *Okanagan-Shuswap Land and Resource Management Plan* (OSLRMP) and are subject to the Order Establishing Objectives in OSLRMP (2007). Specific objectives that apply to Tolko's operations include enhanced coarse woody debris areas, recreation areas, trail corridors, tourism, and wildlife objectives for elk, marten, fisher, and bighorn sheep. The order also establishes general objectives that apply to Tolko's operations for community/Crown interface areas,³ forest roads, streams, and Williamson's sapsucker. Other legal orders established under the *Government Actions Regulation* that apply to Tolko's operations include moose winter range and a grizzly bear-specified areas. FSPs #684 and #34 link the relevant aspects of the orders to Tolko's operations.

Auditors examined the FSPs and stand-level site plans for consistency with legal requirements. During harvesting, road and silviculture field sampling, auditors also confirmed whether site plans accurately identified conditions on the ground.

The key values associated with activities that took place during the audit period are riparian, visuals, wildlife habitat, terrain stability, cultural sites, and range.

Timber Harvesting

Tolko harvested 17 cutblocks during the audit period and auditors examined 10 of them.

Auditors risk-rated cutblocks and chose a sample that included different forest values and geographic areas within the operating area.

Road and Major Structure Construction, Maintenance, and Deactivation

The population and sample of road and bridge activities are shown in Table 1.

TABLE 1. Population and Sample for Road and Bridge Activities

ACTIVITY	POPULATION	SAMPLE
	(Kilometres)	(Kilometres)
Road Construction	15.2	5.9
Road Maintenance	88.2	33.4
Road Deactivation	7.5	2.9
	(Structures)	(Structures)
Bridge Construction	1 bridge	1 bridge
Bridge Maintenance	1 WBC*/1 major culvert	1 WBC/1 major culvert
Bridge Deactivation	2 bridges/2 WBCs	2 bridges/2 WBCs

*WBC means wood box culvert

² A forest development unit (FDU) means an area identified in a FSP where forest development may occur during the term of the plan, and within which, during the term of the plan, timber to be harvested or roads to be constructed are entirely located. An FDU may have a unique set of situations or circumstances where certain steps or practices are required to meet results, strategies or resource objectives.

³ Community/Crown interface (CCI) areas include the land adjacent to settlement areas, extending from private land boundaries to the visual height of land, as mapped in the OSLRMP. The order establishes objectives to maintain resources and values associated with CCI areas and scenic areas when planning and implementing forest health operations.

Silviculture Obligations and Activities

The population and sample of silviculture obligations and activities are shown in Table 2.

Samples were chosen to represent different geographic areas and biogeoclimatic zones within the audit area.

TABLE 2. Population and Sample for Silviculture Obligations and Activities

ACTIVITIES AND OBLIGATIONS	POPULATION (Cutblocks)	SAMPLE (Cutblocks)
Site Preparation	15	4
Planting	10	10 – field 10 – seed transfer*
Regeneration Obligations (due or declared)	2	2
Free-growing Obligations (due or declared)	3	2

*Auditors check planting records to determine whether the seedlings planted conform to the *Chief Forester's Standards for Seed Use*.

Wildfire Protection

Fire hazard assessments were due or completed on 25 cutblocks and hazard abatement was completed or partially completed on 25 cutblocks during the audit period. Auditors examined the fire hazard assessments for 10 cutblocks and abatement practices on 10 cutblocks. There were no active sites during the field portion of the audit so fire preparedness was not examined.

Findings

The audit found that Tolko's planning and practices generally complied with FRPA and the *Wildfire Act* as of October 2023.

Operational Planning

The FSPs were consistent with legal requirements, including government orders. Site plans were consistent with the FSP. Tolko addressed site-specific resource features in the site plans by accurately identifying the resource features and prescribing practices, consistent with FSP results and strategies. Resource features included streams and wetlands, wildlife habitat, coarse woody debris, terrain stability, and visual quality objectives.

Auditors had no concerns with operational planning.

Timber Harvesting

Auditors sampled 10 cutblocks, which provided geographic coverage of the audit area and covered the range of key resource values specific to Tolko's operating area.

The harvesting sample included management strategies for terrain stability, fisheries-sensitive watersheds, scenic areas, and wildlife.

Tolko either excluded areas with potentially unstable terrain from harvest cutblocks or had a terrain stability assessment completed and followed the recommendations.

When operating in fisheries-sensitive watersheds, Tolko calculated potential hydrological impacts and took precautions such as retaining forest cover, maintaining natural drainage patterns, using cable and helicopter harvest systems, and establishing machine-free zones in riparian management areas to minimize soil erosion.

Two sampled cutblocks were located within a designated scenic area where harvesting may be visible but should be small to medium in scale, and natural in appearance. Auditors found that Tolko completed a visual impact assessment for these cutblocks, determined that the cutblocks were not visible from any significant public viewpoints and met these requirements.

Wildlife habitat considerations that related to the audit activities included grizzly bear, moose, and mule deer. Tolko accurately identified the habitat potential associated with the sampled cutblocks and adjusted the operating periods and practices to meet the general wildlife measures and forest cover constraints.

In summary, auditors found that harvesting was conducted in accordance with the requirements of legislation, the FSPs, and site plans.

Road and Major Structure Construction, Maintenance, and Deactivation

Tolko managed its access infrastructure in a reasonable manner. Road construction, maintenance and deactivation were well done and included detailed and accurate records for these activities.

Road Construction

Road construction was well done. Construction techniques ranged from conventional balanced bench to full benching, with three-quarter benching in a few areas. When constructing road in potentially unstable terrain, Tolko completed terrain stability assessments and followed the terrain specialist's recommendations. Tolko maintained natural drainage patterns and installed additional cross-drains to manage water where required.

Road Maintenance

Roads were mostly located on gentle, rolling terrain, with some on steep terrain. Road prisms were stable, culverts were functional and natural drainage patterns were maintained. Road sections used for active hauling were brushed for visibility where needed.

Road Deactivation and Rehabilitation

Both rehabilitation and deactivation work were well done, with Tolko removing drainage structures, cross-ditching, recontouring, and restricting access. No adverse impacts on forest resources were observed.

Bridge Construction

Tolko constructed one bridge during the audit period. The bridge was well constructed and all documentation was complete.

Bridge Maintenance

All three structures reviewed were sound and safe for industrial use.

Bridge Deactivation

Structure removal was well done. No adverse impacts to the stream channel and banks were noted.

Auditors had no concerns with any of the road or structure work carried out by Tolko.

Silviculture

Tolko completed planting within one to two years of harvest and used a mix of species including pine, larch, cedar, spruce, and Douglas-fir. Seed sources were consistent with the chief forester's guidelines.

For site preparation, Tolko effectively used a back-hoe to re-distribute slash to create plantable spots.

Tolko monitors regenerating cutblocks for seedling establishment and survival by conducting timely silviculture surveys. Tolko regenerated cutblocks and met free-growing requirements within the required time frames. Plantations were healthy and met the stocking standards contained in Tolko's FSPs.

Tolko submitted annual reports to the Ministry of Forests as required.

Auditors had no concerns with Tolko's silviculture practices and obligations.

Wildfire Protection

Fire Hazard Assessment

Tolko completed fire hazard assessments within the required time frames. The assessments met the required content requirements.

Fire Hazard Abatement

Tolko routinely burned roadside slash piles within the required time frames. Tolko conducted hazard assessments to determine whether in-block slash requires abatement and abated accordingly.

The auditor's field inspections revealed that in-block slash loading was below abatement thresholds⁴ and no further treatment was required. Roadside slash was piled in safe locations and was burned within the required period without damaging adjacent timber or other forest resources.

Fire Preparedness

There were no active sites during the field portion of the audit so auditors could not assess Tolko's fire preparedness.

Auditors had no concerns with Tolko's wildfire protection practices.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road and major structure construction and maintenance, and fire protection activities carried out by Tolko Industries Ltd. on Timber Licence T0816 between October 1, 2021, and October 26, 2023, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of October, 2023.

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 are not considered worthy of inclusion in the audit report.

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, including adherence to the auditor independence standards and the ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with the *Forest and Range Practices Act* and the *Wildfire Act*.



Jody Stump, RPF, PAg
Auditor of Record

Malakwa, British Columbia
March 1, 2024

⁴ Abatement thresholds are identified in Tolko's fire hazard assessments and by auditors using the *Wildfire Management Branch Guide to Fuel Hazard Assessment and Abatement in British Columbia*, April 2012

Appendix 1: Forest Practices Board's Compliance Audit Process

Background

The Forest Practices Board conducts audits of government and agreement-holders under section 122 of the *Forest and Range Practices Act* (FRPA) and section 68 of the *Wildfire Act*. Compliance audits examine forest or range planning and practices to determine whether or not they comply with the applicable requirements of FRPA and the *Wildfire Act*. The Board conducts 6-8 compliance audits annually. Most of these are audits of agreement holders. The Board also audits the government's BC Timber Sales Program (BCTS).

Selection of Auditees

To start, auditors randomly select an area of the Province, such as a natural resource 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 the Board's strategic priorities, and the type of audit is determined. At this stage, auditors choose the auditee(s) that best suit(s) the selected risk and priorities.

For example, in 2016, the Board randomly selected the Dawson Creek portion of the Peace Natural Resource District as a location for an audit. After assessing the activities within the area, auditors noted that there were two community forest agreements that had not yet been audited by the Board. As the Board strives to audit an array of licence types and sizes each year, these two community forest agreements were selected for audit.

For BCTS audits, a district or timber supply area within 1 of the 12 BCTS business areas in the province is selected randomly for audit. The audit selections are not based on past performance.

Only those licensees or BCTS operations that have not been audited by the Board in the past five years are eligible for selection.

Audit Standards

The audits are conducted in accordance with auditing standards developed by the Board. These standards include adherence to the auditor independence standards and the ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour and are consistent with Canadian 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, replanting, road construction, road deactivation). Items that make up each forest activity are referred to as a population. For example, all sites harvested form the timber harvesting population and all road sections constructed form the road construction population.

The auditors select a separate sample 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. For smaller audits, the sample will include the full population. Auditors also consider factors such as geographic distribution and values potentially affected by activities to ensure an adequate sample.

Auditors' work includes interviewing licensee staff, reviewing the auditee's applicable plans, reviewing applicable government orders, assessing some features from helicopters and measuring specific features like riparian reserve zone widths using ground procedures. The audit teams generally spend three to five days in the field.

Evaluating the Results

The Board recognizes that compliance with the requirements of FRPA and the *Wildfire Act* 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 legal 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 *Wildfire Act* requirements.

Unsound Practice – where the auditor identifies a significant practice that, although in compliance with FRPA or the *Wildfire Act*, is not considered to be sound management.

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, these events 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 more non-compliance events.

If a significant breach of the legislation has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the responsible minister(s).

Reporting

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

The Board reviews the draft report 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 opportunity to make representations allows parties that may potentially be adversely affected to present their views to the Board.

The Board reviews representations from parties that may potentially be adversely affected, makes any necessary changes to the report, and decides if recommendations are warranted. The report is then finalized and released: first to the auditee and then to the public and government seven days later.

ENDNOTES

i 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 its FSP, the licensee is 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.



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