



**Forest
Practices
Board**

Audit of Forest Planning and Practices

Pacific Bioenergy Timber Corp.

– Non-Replaceable Forest Licence A76553

RPP Holdings Inc.

– Non-Replaceable Forest Licence A76729

FPB/ARC/181

September 2015

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Introduction

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

As part of the Forest Practices Board's 2015 compliance audit program, the Board randomly selected the Quesnel District as the location for a full scope compliance audit. Within the district, the Board selected non-replaceable forest licence (NRFL) A76553 held by Pacific Bioenergy Timber Corp. (PBE) and NRFL A76729 held by RPP Holdings Inc. (RPP).

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

Background

The Quesnel timber supply area (TSA) has an annual allowable harvest of 4 million cubic metres, of which 1 880 880 is allocated to non-replaceable forest licensees.

PBE and RPP operations are located about 100 kilometres west of Quesnel near the village of Nazko. A map of the audit area appears on page 2. PBE's NRFL A76553 has an annual allocated timber harvest volume of 350 000 cubic metres and expires in 2025. During the two-year audit period, PBE harvested approximately 94 479 cubic metres, of which 92 percent was beetle killed lodgepole pine. These stands were targeted for use as wood pellets. RPP's NRFL A76729 has an annual allocated timber harvest volume of 300 000 cubic metres and expires in 2018. During the two-year audit period, RPP harvested approximately 540 828 cubic metres, of which 94 percent was beetle killed lodgepole pine, primarily for sawlogs. Three professional foresters and a chartered professional accountant made up the audit team. Field work was carried out on June 22 and June 23, 2015.



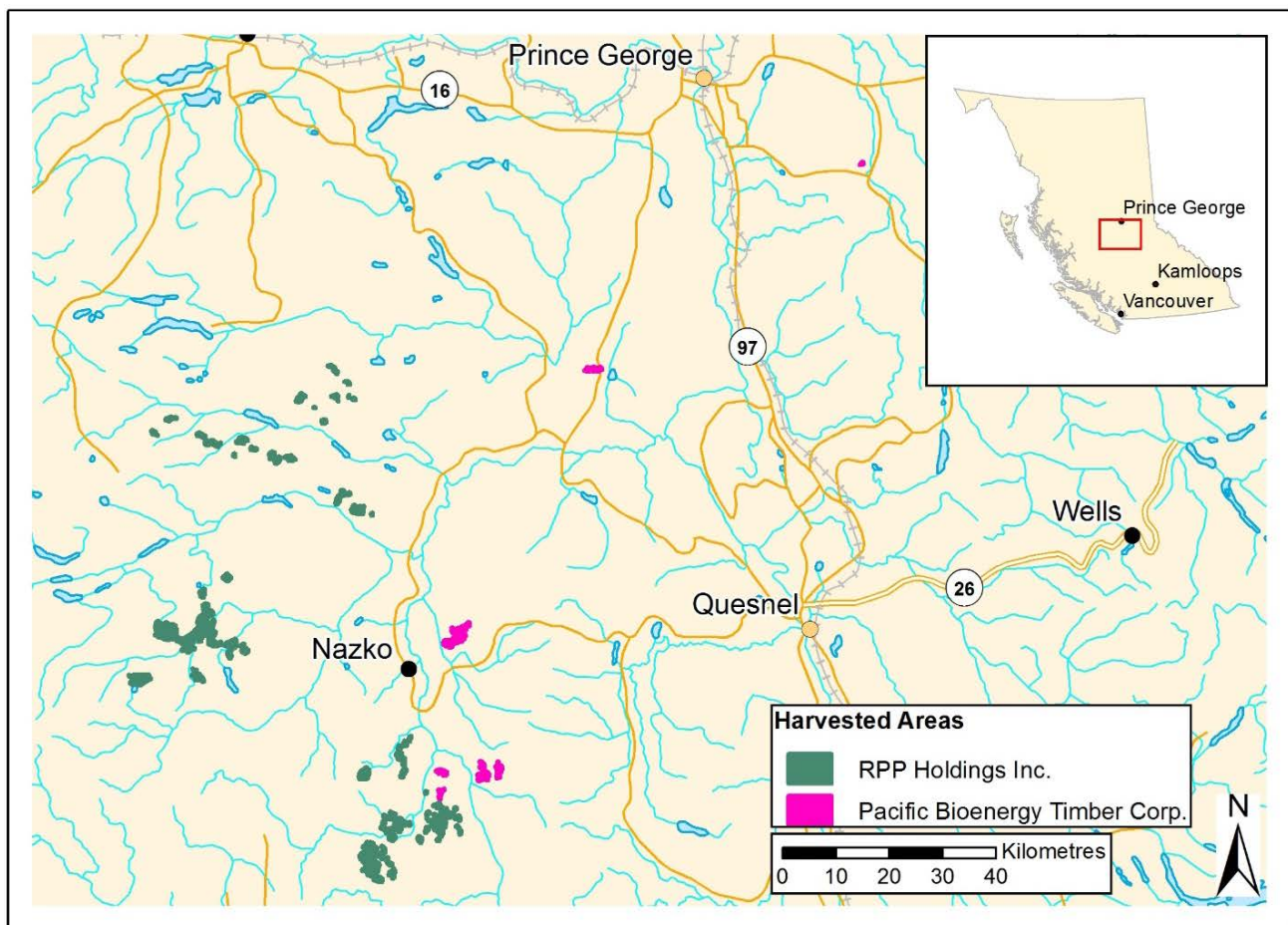
Figure 1. Typical rolling terrain in the audit area.

Audit Approach and Scope

The Board conducted a full scope compliance audit, which includes all harvesting, roads, silviculture and protection activities, and associated planning, carried out between June 1, 2013, and June 23, 2015. Neither PBE nor RPP had any silviculture activities or obligations due during the audit period. Auditors assessed activities for compliance with the *Forest and Range Practices Act (FRPA)*, the *Wildfire Act (WA)* and related regulations.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 7.0, September 2012*, sets out the standards and procedures that were used to carry out this audit.

Pacific Bioenergy Timber Corp. and RPP Holdings Inc. Operations



Audit Results: Pacific Bioenergy Timber Corp.

– NRFL A76553

Planning and Practices Examined

Objectives Set by Government

Forestry activities must comply with objectives set by government in the *Forest and Range Practices Act* (FRPA), *Wildfire Act* (WA) and related regulations, and the Cariboo-Chilcotin Land Use Plan (CCLUP).

The CCLUP covers the Quesnel, Williams Lake and 100 Mile House timber supply areas. The CCLUP was established by Cabinet as a legal higher level plan under the *Forest Practices Code of British Columbia Act* in January 1996 and is continued under FRPA. The land use objectives for the Cariboo-Chilcotin Land Use Plan Area were established through the *Land Use Objective Regulation* (LUOR), under section 93.4 of the *Land Act* (effective June 25, 2010).

Operational Plans

PBE conducts its operational planning under a forest stewardship plan,ⁱ *Pacific Bioenergy: Quesnel TSA, 2011 – 2016 FSP* for NRFL A76553, expiring July 11, 2016.

The FSP provides the link between objectives in FRPA and the CCLUP, and forestry activities for PBE operations, through the establishment of measurable and verifiable results and strategies to achieve these objectives. Auditors reviewed the FSPs to ensure they met FRPA requirements and also evaluated site plans to ensure that they accurately identified site conditions and applied the appropriate standards.

Summary of Activities Audited

The field activities and obligations carried out by PBE during the audit period, and those that were sampled, are shown in Table 1. PBE conducted no silviculture activities and had no silviculture obligations due during the audit period.

Table 1. Summary of Audit Population and Audit Sample

Description	Total Population	Audit Sample
Harvested (cutblocks)	7	4
<i>Wildfire Regulation</i> on Active Operations (cutblocks)	0	0
Hazard Assessment and Abatement (cutblocks)	7	4
Road constructed (km)	26.1	24.0
Road maintained (km)	50.2	33.4
Road deactivated (km)	0	0
Bridges constructed (#)	0	0
Bridges maintained (#)	0	0
Bridges deactivated (#)	1	1

Findings

The audit found that PBE's planning and activities generally complied with FRPA and the WA as of June 2015.

Auditors identified an area requiring improvement related to completing fire hazard assessments for all cutblocks in accordance with the *Wildfire Regulation*.

Operational Planning

The audit found that PBE incorporated relevant CCLUP requirements into the FSP. The FSP contained the legally required information and addressed the legal orders that apply to forest practices in the audit area. The site plans were consistent with the FSP.

There were no concerns with operational planning.

Timber Harvesting

Topography in the operating area was gently rolling with very little rock or steep slopes. PBE used ground-based harvest systems and all blocks were harvested as planned. No concerns were noted.

Soil Disturbance

Soil disturbance associated with harvesting was below the limits allowed by regulation.

Riparian

Riparian areas are very important from an ecological perspective, especially on this landscape that has been heavily impacted by mountain pine beetle, harvesting and wildfires. PBE demonstrated sound riparian management by identifying moist areas and non-classified drainages on maps to ensure these areas were avoided when practicable, and by establishing wildlife tree patches or retaining vegetation around wetlands and streams.

Wildlife Tree Retention

Wildlife tree retention targets are documented in the FSP and vary by landscape unit and ecosystem. Most wildlife tree retention was in patches, often around riparian features. PBE maintained between 5 and 63 percent of the gross area in wildlife tree patches, with an average of 34 percent. This exceeded the targets committed to in the FSP. PBE also retained individual deciduous stems in addition to the patches.



Figure 2. Retention around riparian areas. The cutblock has been site prepared.

Road Construction, Maintenance and Deactivation

Auditors had no concerns with road and bridge construction, maintenance or deactivation.

New roads were constructed in block and under a road permit. Roads were well constructed, drainage structures were functional and natural drainage patterns were maintained.

All roads with maintenance obligations were stable. There was no evidence of rutting, siltation or road failures. In-block seasonal road deactivation included installing waterbars and removing culverts and was considered part of the maintenance population. PBE did not permanently deactivate any roads within the audit period.

Bridge Deactivation

There were no concerns with the one bridge that was removed. The exposed soil on the bridge approaches was grass seeded and there was no evidence of erosion or siltation into the stream.



Figure 3. Crossing after PBE pulled the bridge.

Fire Protection Activities

PBE generally complied with the *Wildfire Act*. There were no active operations so auditors did not inspect fire tools and water delivery systems.

The auditors observed that PBE had piled logging debris in a manner that would facilitate burning. On most blocks where burning had taken place, the piles had completely burned. However, on one cutblock, most of the piles did not burn. PBE said they will reassess this cutblock in the fall to determine if it needs to be re-burnt to meet hazard abatement objectives. PBE did not conduct broadcast burning.

Fire hazard assessments were completed on two of the four cutblocks reviewed. PBE had abated the hazard by burning the slash piles on the two cutblocks where the assessments were not completed. However, the WA requires licensees to assess the fire hazard, including an assessment of the fuel hazard and its associated risk of a fire starting or spreading on all cutblocks.¹ In this case, the licensee is abating the hazard as a standard practice but it cannot demonstrate that it has been diligent in assessing the hazard, which could be an issue in the future if a fire were to start in a PBE cutblock. As a result, this is an area requiring improvement.



Figure 4. Slash piles burnt and roads cross ditched.

¹ *Wildfire Act: Hazard assessment and abatement*

- 7 (1) In prescribed circumstances and at prescribed intervals, a person carrying out an industrial activity or a prescribed activity on forest land or grass land or within 1 km of forest land or grass land must conduct fire hazard assessments.
- (2) A person, other than a person who is in a prescribed class of persons referred to in subsection (2.1), carrying out an industrial activity or a prescribed activity, must, within a prescribed time period and to the prescribed extent, abate a fire hazard of which the person is aware or ought reasonably to be aware.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road construction, maintenance and deactivation and fire protection activities carried out by Pacific Bioenergy Timber Corp. on non-replaceable forest licence A76553 between June 1, 2013, and June 22, 2015, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2015. No opinion is expressed with respect to silviculture activities.

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.

Without qualifying my opinion, I draw attention to the *Fire Protection Activities* section of this 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.



Christopher R. Mosher CPA, CA, EP(CEA)
Director, Audits

Victoria, British Columbia
September 8, 2015

Audit Results: RPP Holdings Ltd. – NRFL A76729

Planning and Practices Examined

Objectives Set by Government

Forestry activities must comply with objectives set by government in the *Forest and Range Practices Act* (FRPA), *Wildfire Act* (WA) and related regulations, and the Cariboo-Chilcotin Land Use Plan (CCLUP).

The CCLUP covers the Quesnel, Williams Lake and 100 Mile House timber supply areas. The CCLUP was established by Cabinet as a legal higher level plan under the *Forest Practices Code of British Columbia Act* in January 1996 and is continued under FRPA. The land use objectives for the Cariboo-Chilcotin Land Use Plan Area were established through the *Land Use Objective Regulation* (LUOR), under section 93.4 of the *Land Act* (effective June 25, 2010).

Operational Plans

RPP conducts its operational planning under a joint forest stewardship plan with West Fraser Mills Ltd., *West Frasers Mills Ltd, 2012 Forest Stewardship Plan, Quesnel TSA and TFL52*, expiring July 23, 2017.

The FSP provides the link between objectives in FRPA and the CCLUP, and forestry activities for RPP operations through the establishment of measurable and verifiable results and strategies to achieve these objectives. Auditors reviewed the FSP to ensure it meets FRPA requirements and also evaluated site plans to ensure that they accurately identified site conditions and applied the appropriate standards.

Summary of Activities Audited

The field activities and obligations carried out by RPP during the audit period, and those that were sampled, are shown in Table 2. Under section 29.1 of FRPA, a licensee may transfer their silviculture obligations to another party if approved by the minister. RPP did transfer the silviculture obligations on this licence, therefore silviculture activities or obligations were not included in this audit.

Table 2. Summary of Audit Population and Audit Sample

Description	Total Population	Audit Sample
Harvested (cutblocks)	56	15
<i>Wildfire Regulation</i> on Active Operations (cutblocks)	3	3
Hazard Assessment and Abatement (cutblocks)	56	15
Road constructed (km)	299.6	180.0
Road maintained (km)	334.3	181.0
Road deactivated (km)	0	0
Bridges constructed (#)	4	4
Bridges maintained (#)	2	2
Bridges deactivated (#)	0	0

Findings

The audit found that RPP's planning and activities complied with FRPA and the WA as of June 2015.

Operational Planning

The audit found that RPP incorporated relevant CCLUP requirements into the FSP. The FSP contained the legally required information and addressed the legal orders that apply to forest practices in the audit area. The site plans were consistent with the FSP.

Three cutblocks were in designated scenic areas. Visual impact assessments were on file and harvesting met government's established visual quality objectives.

There were no concerns with operational planning.

Timber Harvesting

Topography in the operating area was gently rolling with very little rock or steep slopes. RPP used ground-based harvest systems and all blocks were harvested as planned. No concerns were noted.

Soil Disturbance

Soil disturbance associated with harvesting was below the limits allowed by regulation.

Riparian

Riparian areas are very important from an ecological perspective, especially on a landscape that has been heavily impacted by mountain pine beetle, harvesting and wildfires. RPP demonstrated sound riparian management by identifying moist areas and non-classified drainages on maps to ensure these areas were avoided when practicable, and by establishing wildlife tree patches or retaining vegetation around wetlands and streams.



Figure 5. Mechanized harvesting operation.



Figure 6. RPP retained a buffer around the wetland that was later damaged by a wildfire.

Wildlife Tree Retention

Wildlife tree retention targets are documented in the FSP and vary by landscape unit and ecosystem. RPP maintained between 0 and 41 percent of the gross area in wildlife tree patches, with an average of 21 percent. This exceeded the targets committed to in the FSP. Most wildlife tree retention was in patches and around riparian features when possible.

Road Construction, Maintenance and Deactivation

Auditors had no concerns with road construction or maintenance. New roads were constructed within cutblocks under authority of the site plan, and under a road permit. All roads were well constructed, natural drainage patterns were maintained and drainage structures were functional.

All roads with maintenance obligations were stable. There was no evidence of rutting, siltation or road failures. In-block seasonal road deactivation included installing waterbars and removing culverts and was considered part of the maintenance population. RPP did not permanently deactivate any roads within the audit period.

Bridge Construction and Maintenance

There were no concerns with bridge construction. All four bridges constructed during the audit period spanned the stream channel. Documentation, including bridge site plans and crossing assurance statements, was complete and readily available.

There were no concerns with bridge maintenance on any of the bridges audited.

Fire Protection Activities

RPP complied with the *Wildfire Act*. Auditors inspected the three operations that were active during the audit field work and determined that there was at least one hand tool per person and there were adequate water delivery systems on-site.

The auditors also observed that RPP had piled logging debris in a manner that would facilitate burning. Hazard assessments had been completed and on blocks where burning had taken place, the piles had completely burned. RPP did not conduct broadcast burning.



Figure 7. Slash piled and ready for abatement.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road construction and maintenance and fire protection activities carried out by RPP Holdings Ltd. on non-replaceable forest licence A76729 between June 1, 2013, and June 23, 2015, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2015. No opinion is expressed with respect to road deactivation.

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.

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 CPA, CA, EP(CEA)
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Victoria, British Columbia
September 8, 2015

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 2010, the Board randomly selected the Mackenzie district as a location for an audit. After assessing the activities within that area, we discovered that a large licensee 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, and we knew that some of the licence area is very remote, the new licence holder was selected for audit.

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 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 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 form

the timber harvesting population and all road sections constructed form 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 week 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.

Unsound Practice – where the auditor identifies a significant practice that, although they are found to be in compliance with FRPA or WA, are considered to not be sound management.

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 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.



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