

**DAISHOWA-MARUBENI INTERNATIONAL LTD.**

**Forest Resources Business Unit**

**Internal Compliance Audit 2011**

**(Includes CANFOR Operations: Coniferous Timber Quota CTLP  
130001 in DTL P130001, FMA P130127 & FMA P130128)**



**September 2011**

DAISHOWA-MARUBENI INTERNATIONAL LTD.  
Forest Resources Business Unit  
Internal Compliance Audit 2011

September 2011

Prepared for:

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CONFIDENTIAL REPORT Daishowa Marubeni International Ltd., Peace River Pulp Division, Forest Resources Business Unit – 2011 Compliance Audit: September 2011

### **Audit Scope**

Samuel Elkins, Continuous Improvement Coordinator engaged Robert Volkman, EP (EMSLA) EP (CEA), to conduct an internal compliance audit of Peace River Pulp Division (PRPD) Forest Resources Business Unit's operations and CANFOR, Grande Prairie Division operations within DMI operating areas.

Audit scope: ***“All Significant Environmental Aspects as they relate to legislation and regulation requirements”*** and ***“DMI SFM Values, Objectives, Indicators, and Targets”*** for reporting on Indicators 11, 18, 19, 23, 28, 29, 30, 31, 32, 33, 36, 37, & 38. The Indicator assessment can be found in Appendix A of this report.

### **Audit Objective**

The objective of the audit was to utilize an internal compliance audit program developed by the Forest Resources Business Unit (FRBU) and complete an assessment of their operational activities as per *Chapter 15 of the Forest Resources Environmental Management System & Sustainable Forest Management Manual*. This compliance audit used the following checklists, where applicable:

- CHK-023 Compliance Audit Checklist Temporary Camp Sites Rev 0
- CHK-024 Compliance Audit Checklist Operations Rev 0
- CHK-025 Compliance Audit Checklist Roads & Crossings Rev 0
- CHK-026 Compliance Audit Checklist Satellite Yards Rev 0
- CHK-027 Compliance Audit Checklist Silviculture Rev 0

The checklists covered a specific operational aspect of FRBU's operational activities; and each checklist contained a number of questions, which related to legislative or regulatory requirements under Federal, Provincial, or Municipal Acts and Regulations. For the comprehensive listing, refer to *Appendix B List of Legal & Other Requirements of the Forest Resources EMS & SFM Manual Revision 1.5* dated July 9, 2010.

The checklist questions also related to specific dispositions that grant approval, through a Letter of Authority issued by Alberta Sustainable Resource Development (ASRD). These approvals allow FRBU to conduct its activities (i.e. Licence of Occupation – main haul road). These dispositions may have specific operating conditions that FRBU must follow or the company would be in non-compliance with these approvals.

### **Audit Period**

The audit period was from June 1, 2010 to July 9, 2011.

### **Audit Criteria**

The compliance audit checklists and related documentation within the *Forest Resources EMS & SFM Manual Revision 1.5* (chapters 13 & 15) was the primary criteria for the audit. The auditor determined whether FRBU activities were compliant with legislated requirements and for those practices considered to be non-compliant, the auditor then evaluated the significance of the non-compliance based on a number of criteria. Criteria included the magnitude of the event, the frequency of its occurrence, and the severity of the consequences.

The auditor would categorize the findings into the following levels of compliance:

**Compliance** – in compliance, where the auditor finds that practices meets legislative or regulatory requirements.

**Major Non-Compliance** – where the auditor determines a non-compliance event(s) or condition(s) was or would have the potential to be significant. An action plan is required to address the major non-compliance and a revisit to the site may be required upon completion of the action plan to assess its effectiveness.

**Minor Non-Compliance** – where the auditor, upon reaching a non-compliance conclusion, determines that one or more non-compliance event(s) was not considered significant. An action plan is required to address the minor non-compliance and a revisit was not required.

**Opportunity-for-Improvement** – where the auditor believes that there is no occurrence of non-compliance but if the practice were to continue, it would potentially lead to a non-compliance resulting in a minor or major non-compliance.

As this is a “point in time” assessment, the auditor can only determine compliance based on the field site visits and the review of the particular practices or activities at each site during the audit period.

### **Audit Team**

Robert Volkman (Lead Auditor) conducted the EMS & SFM internal audit; and holds Environmental Management System Lead Auditor, Certified Environmental Auditor, Registered Safety Professional, Environmental Professional, and Registered Professional Forest Technologist (Alberta) designations. Samuel Elkins (auditor) and Connie Forrest (auditor) accompanied Robert during field and office assessment work.

### **Audit Process**

The preliminary opening meeting was held March 7, 2011. Preliminary work in formulating a sample commenced in January 2011. The on-site portion of the internal compliance audit was conducted in two phases. The on-site field portion of the first phase was conducted from March 5 to 12, 2011 in conjunction with the ISO 14001 EMS & SFM audit. The second phase of on-site field work was completed from July 2 to 9, 2011 in conjunction with the second phase of the internal SFM audit.

The audit sample included review of open non-conformities and opportunities-for-improvement from the 2010 audit; limited file and document reviews (i.e. DMI PRPD website, paper files, etc.) pertaining to the audit sample and field inspections of both active and non-active operations by ground-truthing and aerial overviews.

The audit sample consisted of:

- Harvesting: 67 blocks (status: skid cleared, haul cleared, or final cleared)
  - 2 blocks was associated with private land operations and 65 blocks were on public land (9 of these blocks were harvested under CANFOR coniferous timber quotas)
  - Sample block selection was across dispositions and included 6 forest management areas, 2 deciduous timber quotas, 2 coniferous timber quotas, 1 deciduous timber permit, and private land
- Active chipping operations: 3 sites
- Active hog operations: N/A
- Tree length operations: 9 sites (CANFOR operations)
- Road construction: 1 site (active)
- Hauling: 4 chip trucks
- Temporary campsites: 4

- Silviculture: 50 blocks
  - establishment surveys – 11 blocks
  - performance surveys – 7 blocks
  - road & burn (incidental replacement) – 26 blocks
  - herbicide – 6 blocks

All sixty-seven harvest sample blocks were reviewed in July 2011 to complete the compliance and SFM phases of the audit (one sample block did not require a revisit). This revisit included a review of rehabilitation/reclamation of watercourses and/or pipeline crossings, roll back of in-block roads, and ripping of chipper/landing areas as the result of operations conducted under non-frozen conditions.

The silviculture sample reviewed all 50 blocks during July 2011. This review included an aerial visit to each of the sample blocks; ground checks were conducted for selected sample blocks.

### **Audit Observations**

This is the fifth internal compliance audit and the continuation of an annual review of DMI and CANFOR operations under this lens showed the commitment to measure operational activities against legal requirements.

DMI and CANFOR continued to invest considerable effort in improving and developing new programs and supporting existing programs including:

- Implementation of Wet Areas Mapping and the use of Lidar technology;
- Implementation of the Digital Action Tracking System (DATS) to track preventative and corrective actions;
- Maintenance of the watercourse crossing inspection and monitoring program; and
- Improvements to the compliance audit methodology with a focus on high risk areas.

Although there were findings identified during the audit, environmental impacts as the result of non-compliant activities were considered minimal; and preventative and corrective actions developed for each finding should ensure these non-compliances do not occur in the future.

## **Audit Conclusions**

### **Harvest Blocks**

#### **Status of open Non-Conformities from Internal Compliance Audit 2010**

There were five minor non-conformities (**NC-IA-2010-04, NC-IA-2010-05, NC-IA-2010-06, NC-IA-2010-07, NC-IA-2010-08, & NC-IA-2010-09**) identified during the 2010 internal compliance audit.

#### **NC-IA-2010-04 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section 3.4 Final Harvest Plan. In which 3.4.9 states “*all amendments to harvest plans must be justified and submitted to Alberta in writing. RFP validation of all amendments is required. Any changes must be incorporated into the as-built plan*”.

More specifically, in 3.4.9.1 “*a) additions to the approved AOP harvest area boundary where the final area does not vary from the approved FHP by more than 5% for blocks greater than 10 hectares*”, and in 3.4.9.1 “*g) added crossings on ephemeral or intermittent water courses shall be reported on a bi-weekly basis*”.

A review of the Digital Action Tracking System database (DATS) corrective and preventative action plan verified NC-IA-2010-04 was addressed. A field tour to revisit some sites was conducted in October 2010. DMI planning & operational staff reviewed findings in November 2010. The auditor deemed NC-IA-2010-04 closed.

#### **NC-IA-2010-05 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section 6.0 Watershed Protection. In which 6.0.7 states “*sediment, logging debris or deleterious materials shall not be deposited into the water or onto the ice of any watercourse or water body during road construction, maintenance, harvesting, reclamation, or silviculture operations*”.

A review of the Digital Action Tracking System database (DATS) corrective and preventative action plan verified NC-IA-2010-05 was addressed. DMI was in the process of developing an Operating Ground Rules workshop and at the time of the audit, the workshop had not taken place. The auditor deemed NC-IA-2010-05 closed.

**NC-IA-2010-06 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section 3.4 Final Harvest Plan. In which 3.4.10 states “Detailed harvest plans (DHAP) are required when there is higher than average potential for environmental damage. Circumstances that merit DHAPs are: c) harvest areas with numerous water source areas, seepages, intermittent, or ephemeral watercourses”.

A review of the Digital Action Tracking System database (DATS) corrective and preventative action plan verified NC-IA-2010-06 was addressed. DMI was in the process of developing an Operating Ground Rules workshop and at the time of the audit, the workshop had not taken place. The auditor deemed NC-IA-2010-06 closed.

**NC-IA-2010-07 (DMI Operations)**

This deficiency was in contravention of the *Alberta Regeneration Survey Manual* and the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section 8.3 Silviculture Operations. In which 8.3.3 states “establishment and performance regeneration surveys shall be conducted according to the procedures in the *Alberta Regeneration Survey Manual, (May 2003 or successors)* unless alternate survey methods have been approved by Alberta”.

A review of the Digital Action Tracking System database (DATS) corrective and preventative action plan verified NC-IA-2010-07 was addressed. The incorrect data was updated in the Genus tracking system. Other issues were addressed through email correspondence and an accompanying spreadsheet (SilvActivities\_audit2). The auditor deemed NC-IA-2010-07 closed.

**NC-IA-2010-08 (CANFOR Operations)**

This deficiency was in contravention of the *Alberta Timber Harvest Planning and Operating Ground Rules (1994)*. Under section 3.2 Watershed Protection and Harvest Planning Table 2 Standards & Guideline for Operating beside Watercourses it states “Roads, Landings, Bared Areas, for small permanent or intermittent watercourses, not permitted within 30 m of the high-water mark”.

Under section 3.3 Watershed Protection During Operations it states “soil, logging debris, or deleterious materials should not be deposited into the water or onto the ice of any watercourse or waterbody during road construction, harvest, reclamation or reforestation operations”.

A review of the corrective and preventative action plan verified NC-IA-2010-08 was addressed. CANFOR committed to identifying gaps in the system to prevent future occurrences. The auditor deemed NC-IA-2010-08 closed.

***NC-IA-2010-09 (CANFOR Operations)***

This deficiency was in contravention of the *Alberta Timber Harvest Planning and Operating Ground Rules (1994)* and the associated *Annual Operating Plan Approvals*.

Under section 3.2 Watershed Protection and Harvest Planning it states “*watercourses shall be evaluated and classified according to Table 1 (Watercourse Classification)*”.

Under section 3.4 Watershed Protection during Road, Landing, and Campsite Construction and Maintenance Subsection 3.4.3 Locating, designing, and Constructing Watercourse Crossings it states “*to locate, design, and build stream crossing structures in ways that minimize the potential for soil erosion*”.

A review of the corrective and preventative action plan verified NC-IA-2010-09 was addressed. CANFOR committed to ensuring all deviations, where required, have received forest officer approval. The auditor deemed NC-IA-2010-09 closed.

***Status of Opportunities-for-Improvement from the Internal Compliance Audit 2010***

There were four opportunities-for-improvement (***OFI-IA-2010-06, OFI-IA-2010-07, OFI-IA-2010-08, & OFI-IA-2010-09***) identified during the audit. DMI had two opportunities-for-improvement and CANFOR had two opportunities-for-improvement.

***OFI-IA-2010-06 (DMI Operations)***

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*. Under subsection 3.5.4, it states “*the Annual Operating Plan shall contain the following components, c) Operating Schedule – a table which outlines I. List of harvest areas proposed for harvest (including area and volume by species or species group, with totals)*”.

A review of the Digital Action Tracking System database (DATS) corrective and preventative action plan verified OFI-IA-2010-06 was addressed. The system was reprogrammed to ensure net harvest area was used. A checklist for handoff of operations binders was included as a requirement for review and assessment of maps prior to handoff from planning to operations. The auditor deemed OFI-IA-2010-06 closed.

**OFI-IA-2010-07 (DMI Operations)**

This deficiency was in contravention of the *2009 General Development Plan (GDP)*, *Annual Operating Plans (AOP)* and associated guidance. Inconsistencies in use of terms were used when referring to understory densities.

A review of the Digital Action Tracking System database (DATS) corrective and preventative action plan verified OFI-IA-2010-07 was addressed. A review of the 2010 GDP and subsequent AOPs verified corrective actions. The auditor deemed OFI-IA-2010-07 closed.

**OFI-IA-2010-08 (CANFOR Operations)**

This deficiency was in contravention of the *Alberta Timber Harvest Planning and Operating Ground Rules (1994)*. Under Subsection 3.4.6 Abandoning and Reclaiming Roads, Landings, and Watercourse Crossings it states “*watercourse crossings, roads, skid trails and landings no longer required and have a high risk of erosion shall be reclaimed and abandoned, and their condition monitored annually until they are satisfactorily stabilized*”.

A review of the corrective and preventative action plan verified OFI-IA-2010-08 was addressed. CANFOR committed to snow-free inspections in areas where heavy snow cover may prevent a thorough review of completed activities. The auditor deemed NC-OFI-2010-08 closed.

**OFI-IA-2010-9 (CANFOR Operations)**

This deficiency was in contravention of the *Alberta Timber Harvest Planning and Operating Ground Rules (1994)* and the *2009 General Development Plan*. Under section Appendix 2 Annual Operating Plan, section Road Management it states “*the Road Management Section shall include maps, schedules, or tables, with some or all of the following: a 1:15,000 scale map showing all stream crossings (including type, size, and an inventory identification for follow-up monitoring*”.

A review of the corrective and preventative action plan verified OFI-IA-2010-09 was addressed. CANFOR committed to retain future crossings in a mapping layer until final clearance completed and ensure as-built information matches ground conditions. The auditor deemed OFI-IA-2010-09 closed.

### **Compliance Audit 2011**

During the January and July 2011 site visits, 67 harvested blocks were field reviewed respectively. The review focused on the following as it related to the detailed block plan for each harvest area:

- Block configuration and location;
- In-block roads and skid trails;
- Retention features (in-block & adjacent to boundary);
- Water features (in-block & adjacent to boundary);
- Wildlife features (in-block & adjacent to boundary);
- Water course crossings (in-block & on access roads);
- Utility crossings (in-block & on access roads).

The Compliance Audit Checklist *Operations* (CHK-24) provided the detailed audit criteria.

In summary, overall block configuration and location, in-block roads and skid trails, retention features, wildlife features, and utility crossings were compliant with the detailed block plans for the sample blocks reviewed.

### **Major Non-Compliance**

One new major non-compliance was identified during the audit. DMI had a major non-compliance associated with the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*.

#### ***NC-IA-2011-04 (DMI Operations)***

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, under section **6.0 Watershed Protection**:

- **Subsection 6.0.5** states ***“All unmapped or incorrectly classified watercourses encountered during operations shall be given the appropriate protection as described in Table 2”***.
- **Subsection 6.0.8** states ***“Equipment shall cross watercourses only at approved crossings”***.

Furthermore, under section **11.4 Watercourse Crossings**:

- **Subsection 11.4.20** states ***“Crossing intermittent or ephemeral watercourses within harvest areas shall be avoided when possible. When the crossings are***

***necessary, they shall be constructed at specified locations using appropriate watercourse crossing structures”.***

In total twenty-four blocks had issues identified:

- 14 blocks contained unidentified watercourses;
- 16 blocks contained unidentified watercourse crossings on access or in-block roads; and
- 20 blocks contained unidentified skidder crossings.

This non-compliance related to operations where watercourses were not identified during planning or road access construction and not following the approved plan. Operations conducted in frozen conditions and/or where a deep snowpack was present during operations minimized impacts to these unidentified watercourse features.

Increased disturbance occurred in non-frozen operations or during rollback and reclamation of the access road. Individual occurrences may not necessarily result in a major non-compliance; however, the pervasiveness of the occurrences is of concern.

Therefore, the auditor deemed **NC-IA-2011-04** a major non-compliance.

### **Minor Non-Compliance**

Three new minor non-compliances were identified during the audit. DMI had three non-compliances associated with the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*; further one (NC-IA-2011-05) was also associated with the *Watercourse Crossing Field Guide and Strategy Manual (Revision 1 2010)*. CANFOR had two non-compliances associated with the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*; further one (NC-IA-2011-08) was also associated with the *Watercourse Crossing Field Guide and Strategy Manual (Revision 1 2010)*.

### **NC-IA-2011-05 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, under section **11.4 Watercourse Crossings**:

- **Subsection 11.4.26** states ***“Each operator shall establish a monitoring program acceptable to Alberta, for their watercourse crossings. Documentation as to current condition, repair requirements, or removal dates of the crossing structures must be maintained and made available to Alberta upon request”.***

Furthermore, the deficiency was also in contravention of the *Watercourse Crossing Field Guide and Strategy Manual (Revision 1 2010)*: **Section 10 Crossing Inspection and Monitoring, 10.1 Methodology**.

In sixteen blocks, inconsistencies were identified between watercourse crossing inspections results recorded in the GENUS database and field audit observations:

- 7 crossings were a different Water Course Class;
- 14 crossings were a different Water Course Profile; and
- 4 crossings were a different Disturbance Class.

After incorporating the field audit observations into the Crossing Risk Rating calculation, six crossings went from Low to Medium in their Crossing Risk Rating.

In addition, **Subsection 6.1.6 Temporary Crossing Structure Selection**, states *“It should be noted that under certain low risk circumstances, the use of no structure may be an acceptable temporary crossing strategy; for instance in the case of a flat / shallow ephemeral under frozen winter conditions. However, in general a crossing structure will be required in order to achieve DMI’s environmental goals”*.

In four blocks, six crossing identified with a Crossing Class of “No structure” had impact on the watercourse; these impacts included exposed soil and disruption of natural drainage patterns.

This non-compliance related to DMI’s internal monitoring program and the field data gathered during operations. Accurate identification of watercourse class, profile, and level of disturbance at a watercourse crossing ensures the monitoring program selects the crossings that require future monitoring. Inaccurate watercourse determinations may increase the risk of a crossing that requires monitoring to be overlooked as well as being inconsistent with Annual Operating Plan approvals. In addition, there is an increased risk to a watercourse (i.e. disturbance) when “no structure” is implemented as per methodology. Therefore, the auditor deemed **NC-IA-2011-05** a minor non-compliance.

#### **NC-IA-2011-06 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, under section **6.0 Watershed Protection**:

- **Subsection 6.0.4** states *“Riparian protection areas shall be established as in Table 2, Standards and Guidelines for Operating beside Watercourses”*.
- **Table 2** states for a Small Permanent watercourse *“No disturbance or removal of timber within 30 m of high water mark unless specifically approved in the AOP”*.

In three blocks, less than the required buffers were established on the block boundaries.

This non-compliance related to operations where required watercourse buffers were not established on portions of watercourses adjacent to the external block boundary.

Watercourse buffers on larger watercourses provide an additional protection measure restricting timber harvest or equipment access to minimize impacts from industrial activity. Under certain circumstances, a lesser buffer can be established; however, prior Annual Operating Plan approval must be obtained. The portions of buffers removed were limited to small areas and there were no identifiable impacts from harvesting, except for timber removal, as the blocks were harvested under frozen conditions. Therefore, the auditor deemed **NC-IA-2011-06** a minor non-compliance.

#### **NC-IA-2011-07 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, under section **9.0 Soils**:

- **Subsection 9.6** states ***“Operations shall cease when instances of multiple ruts in a limited area are created that are clearly related to operations during unfavourable ground conditions”***.

In three blocks, there was evidence of rutting. In two blocks the chipper sites appeared to be excessive in size; and further in one of these blocks the skid trails were visible.

This non-compliance related to operations where ground conditions at the time were not favourable for skidding. The ground was either wetter than normal or areas within a block were better suited to frozen conditions. In these situations, early detection is paramount to ensure soil disturbance/compaction does not occur. Rutting or excessive disturbance around chipper sites was limited to three blocks. Therefore, the auditor deemed **NC-IA-2011-07** a minor non-compliance.

#### **NC-IA-2011-08 (CANFOR Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, under section **6.0 Watershed Protection**:

- **Subsection 6.0.5** states ***“All unmapped or incorrectly classified watercourses encountered during operations shall be given the appropriate protection as described in Table 2”***.
- **Subsection 6.0.8** states ***“Equipment shall cross watercourses only at approved crossings”***.

Furthermore, under section **11.4 Watercourse Crossings**:

- **Subsection 11.4.20** states *“Crossing intermittent or ephemeral watercourses within harvest areas shall be avoided when possible. When the crossings are necessary, they shall be constructed at specified locations using appropriate watercourse crossing structures”*.

In total six blocks had issues identified with unidentified watercourses and crossings:

- 5 blocks contained unidentified watercourses;
- 5 blocks contained unidentified watercourse crossings on access or in-block roads; and
- 5 blocks contained unidentified skidder crossings.

Two of the six blocks also had other issues identified:

- 1 block contained two watercourse crossings with conditions that indicated “No structure” was constructed; and
- 1 block contained a watercourse crossing with excessive disturbance.

This non-compliance related to operations where watercourses were not identified during planning or road access construction and not following the approved plan. Operations conducted in frozen conditions and/or where a deep snowpack was present during operations minimized impacts to most of these unidentified watercourse features, however, in some circumstances, impacts had occurred from harvest activities.

Therefore, the auditor deemed **NC-IA-2011-08** a minor non-compliance.

#### **NC-IA-2011-09 (CANFOR Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, under section **4.2 Tree Utilization**:

- **Subsection 4.2.6** states *“All trees/pieces used in the construction of crossing structures may be scattered or piled along the right-of-way or in the harvest area, but they shall not be piled in riparian areas”*.

Two blocks had log crossing structures not removed, only partially removed, or logs left within the riparian area.

This deficiency was in contravention of the *Watercourse Crossing Field Guide and Strategy Manual (Revision 1 2010)*. Under subsection **6.1.1 Log Fill**:

- Both **6.1.1.3** and **6.1.2.3 Decommissioning Guidelines** state *“Recover and remove to an approved landfill as much of the fabric material as possible. Used fabric is not to be left on site”*.

In fourteen crossings, there was fabric material from log watercourse crossing structures left on site.

Two crossing structures were not completely removed at the end of the operating season. There was potential to impact natural drainage patterns and an increased risk for sediment delivery. These crossings were still being used and evidence showed excessive disturbance in and around these watercourses. Also, logs were not piled or scattered outside of riparian area on a transitional watercourse. The placement of the logs did not disrupt natural drainage patterns.

There was fabric material from log watercourse crossing structures left on site at fourteen watercourse crossings. The fabric did not pose an impact to the watercourse, as the fabric was not within the channel and did not disrupt natural drainage patterns; however, the pervasiveness of the occurrences is of concern .

Therefore, the auditor deemed **NC-IA-2011-09** a minor non-compliance.

#### **Opportunity-for-Improvement**

Five new opportunities-for-improvement were identified during the audit. DMI had five opportunities-for-improvement and CANFOR had no opportunities-for-improvement.

#### ***OFI-IA-2011-05 (DMI Operations)***

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section **4.2. Tree Utilization:**

- The **purpose** states ***“To utilize all merchantable trees and pieces in a merchantable stand as defined by the timber disposition and the FMP”***.

In six haul cleared blocks, there were single stems, drags or an accumulation of merchantable deciduous timber remaining. Merchantable volume remaining was not considered to be excessive and it was limited to 9% of the sample blocks.

Therefore, the auditor deemed this an opportunity-for-improvement. DMI is expected to address **OFI-IA-2011-05** and it will be reassessed at the next internal audit.

#### ***OFI-IA-2011-06 (DMI Operations)***

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section **4.2. Tree Utilization:**

- **Subsection 4.2.6** states ***“All trees/pieces used in the construction of crossing structures may be scattered or piled along the right-of-way or in the harvest area, but they shall not be piled in riparian areas”***.

In one block, the logs from a crossing structure were not piled or scattered outside of riparian area on a transitional watercourse. The placement of the logs did not disrupt natural drainage patterns. This practice related to only this water course crossing and represented 1% of the sampled watercourses.

Therefore, the auditor deemed this an opportunity-for-improvement. DMI is expected to address **OFI-IA-2011-06** and it will be reassessed at the next internal audit.

#### **OFI-IA-2011-07 (DMI Operations)**

This deficiency was in contravention of the *Watercourse Crossing Field Guide and Strategy Manual (Revision 1 2010)*. Under subsection **6.1.1 Log Fill**:

- Both **6.1.1.3** and **6.1.2.3 Decommissioning Guidelines** state “**Recover and remove to an approved landfill as much of the fabric material as possible. Used fabric is not to be left on site**”.

In six crossings, there was fabric material or culverts from log watercourse crossing structures left on site. The fabric or culverts did not pose an impact to the watercourse as the fabric or culverts were not within the channel and did not disrupt natural drainage patterns.

Therefore, the auditor deemed this an opportunity-for-improvement. DMI is expected to address **OFI-IA-2011-07** and it will be reassessed at the next internal audit.

#### **OFI-IA-2011-08 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section **12.0 Silviculture and Harvest Activity Reporting**:

- **Subsection 12.0.3** states “**As built harvest area maps shall be submitted to Alberta each year with the GDP showing all harvest areas from the previous year’s operations**”.

In five blocks, additional road was constructed within the block that was not identified on the as-built maps. The intent of activity reporting is to communicate that a given activity has occurred, where the activity is located and when the activity took place. These roads were approved under an Annual Operating Plan or a temporary Field Authorization.

Therefore, the auditor deemed this an opportunity-for-improvement. DMI is expected to address **OFI-IA-2011-08** and it will be reassessed at the next internal audit.

#### **OFI-IA-2011-09 (DMI Operations)**

This deficiency was in contravention of the *Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, section **6.0 Watershed Protection**:

- **Subsection 6.0.7** states ***“Sediment, logging debris or deleterious materials shall not be deposited into the water or onto the ice of any watercourse or water body during road construction, maintenance, harvesting, reclamation, or silviculture operations”***.
- **Table 2** states for an Ephemeral watercourse ***“Accumulations of slash and debris to be removed progressively”***.

In seven blocks, the watercourse crossings had debris that disrupted natural drainage patterns. Operations should ensure logging debris does not enter riparian areas during reclamation activities (road rollback). Although there was disruption of natural drainage patterns from debris in these watercourses, damming of flow was not occurring at these sites.

Therefore, the auditor deemed this an opportunity-for-improvement. DMI is expected to address ***OFI-IA-2011-09*** and it will be reassessed at the next internal audit.

### **Road Construction & Maintenance**

No open non-compliance(s) or open opportunities-for-improvement from internal audit 2010.

### **Compliance Audit 2011**

DMI constructed the Whisky Jack Access Road (LOC 951150). The road consisted of approximately 11 kilometers built to a Class III standard to provide all season access. Access was off the East Haul Road at approximately 56 km and the Whisky Jack Road heads west towards the Peace River.

Road maintenance was examined from kilometer 56 to kilometer 170 on the East Haul Road at the same time as bridge maintenance.

### **Major Non-Compliance**

No major non-compliance(s) was noted.

### **Minor Non-Compliance**

No minor non-compliance(s) was noted.

### **Opportunity-for-Improvement**

No opportunity-for-improvement was noted.

**Bridge Construction & Maintenance**

No open non-compliance(s) or open opportunities-for-improvement from internal audit 2010.

**Compliance Audit 2011**

Bridge construction occurred during this audit period. The Whisky Jack road required two structures to be constructed, a 6.1m span (transitional) and a 15.3m span (small permanent).

A review of bridge maintenance was undertaken on the East Haul Road from kilometer 56 to kilometer 170. A total of 20 bridges and large culvert structures were reviewed.

**Major Non-Compliance**

No major non-compliance(s) was noted.

**Minor Non-Compliance**

No minor non-compliance(s) was noted.

**Opportunity-for-Improvement**

No opportunity-for-improvement was noted.

**Temporary Camps**

No open non-compliance(s) or open opportunities-for-improvement from internal audit 2010.

**Compliance Audit 2011**

Four temporary camps were visited in January 2011 and all four camps were active at that time. These four camps were revisited in June 2011 and the three of the four camps were inactive. The July 2011 on-site field visits verified the inactive camps were decommissioned and sites had undergone full reclamation.

*Manning Diversified Forest Products Ltd., Operating Ground Rules (2009)*, Temporary Field Authorizations, and the *Alberta Private Sewage Standard of Practice* provided the legislative/regulatory guidance. The Compliance Audit Checklist *Temporary Camp Sites* (CHK-23) provided the detailed audit criteria.

**Major Non-Compliance**

No major non-compliance(s) was noted.

**Minor Non-Compliance**

No minor non-compliance(s) was noted.

**Opportunity-for-Improvement**

No opportunity-for-improvement was noted.

**Satellite Yards**

No open non-compliance(s) or open opportunities-for-improvement from internal audit 2010.

**Compliance Audit 2011**

No activity in the satellite yard(s) during the audit period.

No assessment work was undertaken by the auditor; therefore, there were no major, minor or opportunities-for-improvement in the audit period.

**Silviculture****Compliance Audit 2011**

During the July 2011 site visit, 50 silviculture blocks were field reviewed. The review focused on the following:

- establishment surveys – aerial review of 11 blocks with comparison to establishment survey map results
- performance surveys – aerial review of 7 blocks with comparison to performance survey map results
- road & burn (incidental replacement) – aerial review of 26 blocks with comparison to silviculture block plan maps
- herbicide– aerial review of 6 blocks with comparison to silviculture - planting block plan maps

**Major Non-Compliance**

No major non-compliance(s) noted in audit period.

**Minor Non-Compliance**

No minor non-compliance(s) was noted.

**Opportunity-for-Improvement**

No opportunity-for-improvement was noted.

## **Audit Summary**

DMI FRBU and CANFOR continue to make a concerted effort in several areas of their operation to ensure that their company operations meet or exceed legislative requirements that govern forest operations in the province of Alberta. DMI FRBU and CANFOR should continue their proactive role when it comes to:

- Identification of an issue where the company may be in non-compliance;
- Notification of the non-compliance to the appropriate agency;
- Implementation of a remediation plan including corrective action; and
- Communication of identified issues to DMI/CANFOR staff and contractors.

Taking this proactive approach reduced the potential for any adverse environmental impact and if there was a deviation from procedures, the resulting impacts were considered minimal or non-existent. This approach also ensured that FRBU and CANFOR are not in a situation where non-compliance may lead to enforcement action taken by the Province (i.e. fines).

This compliance audit also has allowed FRBU and CANFOR to see where the operation may need to focus its attention when it comes to areas not previously identified as an issue.

All minor non-conformities and opportunities-for-improvement from previous compliance audits were closed. There were one major non-compliance, five minor non-compliances, and five opportunities-for-improvement identified in this compliance audit.

Major non-conformities require a corrective action plan immediately and may require a plan to reduce any potential adverse impacts or enforcement actions.

Minor non-conformities require a corrective action plan within a reasonable time period (i.e. 30 days).

Opportunities-for-improvement do not require an action plan but if not addressed appropriately, may lead to a minor non-compliance at subsequent compliance audits.

Disclaimer / Statement of Limitations

This audit report was prepared exclusively for Daishowa-Marubeni International Ltd. Peace River Pulp Division, Forest Resources Business Unit and Canadian Forest Products Ltd, Grande Prairie Division. The scope and accuracy of information, findings and recommendations contained herein is consistent with the level of effort expended and is based on: i) information provided by FRBU and CANFOR personnel; the scope of operations, activities and aspects inspected or about which information was provided; ii) limited on-site inspection and interviews conducted by the audit team.

Thank you for the opportunity to complete this internal compliance audit. Please contact me if you have any questions or concerns.

Sincerely,

A handwritten signature in blue ink, appearing to be 'R. Volkman', with a long horizontal stroke extending to the right.

Robert Volkman, PMP CRSP RFT (BC&AB) EP (CEA) EP EMSLA) EPt (GHG)

**APPENDIX A**  
**Indicator Report**  
**For**  
**Indicators**  
**#11, 18, 19, 23, 28, 29, 30, 31, 32, 33, 36, 37, & 38**

Indicator #	Indicator Label	DMI/Canfor Status of Objective	To Be Completed By	Indicator Monitoring Plans	Audit Observations
11	% of Government identified Swan nesting lakes meeting required harvest rules.	Complete		Compliance Audit - 0% Blocks within 1 km radius of identified Swan nesting lakes. Document findings and report accordingly.	A review of the SRD Wildlife Sensitivity Maps and corresponding DMI operations did not identify Swan Nesting Lakes within 1 km of any block in the 2011 timber year operations.  DMI FRBU has achieved the requirements identified for this indicator.
18	Number of penalties and/or audit findings concerning failure to follow provincial tree improvement standards by company.	Complete		Acquire data from independent internal audit and gather government records of compliance for DMI.	A review of the SRD website that publishes compliance reports did not identify DMI in the contravention listings for the past five years. Internal audit did not identify findings related to the tree improvement standards.  DMI FRBU has achieved the requirements identified for this indicator (refer to Silviculture section of the 2011 internal audit report).
19	Annual percent of genetically modified (GMO) planted trees by company.	Complete		Compliance Audit - 0% genetically modified (GMO) planted trees by company. Document findings and report accordingly.	A review of the 2010 silviculture program, including the sample blocks (50), did not identify genetically modified trees planted on Crown lands.  DMI FRBU has achieved the requirements identified for this indicator. Refer to Silviculture section of the <i>2011 Internal Compliance Audit Report</i> for details.

Indicator #	Indicator Label	DMI/Canfor Status of Objective	To Be Completed By	Indicator Monitoring Plans	Audit Observations
21	Annual percent of sites identified as requiring protection that received appropriate protection by company.	In Progress	2011	Compliance Audit - Assess actions/buffers in accordance with unique sites requirements. Document findings and report accordingly.	The harvest sample did not identify any unique sites that did not have an adequate buffer (i.e. raptor nesting site, trapper cabin).  DMI FRBU has achieved the requirements identified for this indicator with respect to operational activities related to harvesting.
28	Annual percentage of harvest blocks without reportable rutting issues by company.	Complete		Compliance Audit - 100% of harvest blocks without reportable rutting issues. Document findings and report accordingly.	Refer to <b><i>NC-IA-2011-07 (DMI Operations), 2011 Internal Compliance Audit Report</i></b> for documented findings.  DMI FRBU was 95% compliant with this indicator for operations assessed in the 2011 timber year.  Therefore, DMI FRBU has not achieved the <b><i>"100% of harvest blocks without reportable rutting issues"</i></b> identified for this indicator.
29	Annual percent of forest area disturbed by roads and landings by company.	In Progress	2011	Compliance Audit - Less than 5% annual percentage of forest area disturbed by roads and landings. Document findings and report accordingly.	A review of the 2011 General Development Plan and operations during the 2011 timber year provided the auditor assurance that the annual 5% threshold was not exceeded.  DMI FRBU has achieved the requirements identified for this indicator.

Indicator #	Indicator Label	DMI/Canfor Status of Objective	To Be Completed By	Indicator Monitoring Plans	Audit Observations
30	Annual number of significant surface erosion events related to silviculture, harvesting, and road activities by company.	Complete		Compliance Audit - No (zero) major erosion events. Document findings and report accordingly.	No major erosion events were identified during field reviews of DMI FRBU operations in the 2011 timber year. DMI FRBU has achieved the requirements identified for this indicator.
31	% of temporary road (km) within cutblocks deactivated satisfactorily within 6 months following end of usage.	In Progress	2011	Compliance Audit - 100% of temporary road deactivated within 6 months. Document findings and report accordingly.	There was no temporary road within sample that was not deactivated within the six months of end of use. DMI FRBU has achieved the requirements identified for this indicator.
32	Annual number of reportable spills by company.	Complete		Compliance Audit - No (zero) reportable spills. Document findings and report accordingly.	A review of the Digital Action Tracking System (DATS) database and 2010 Incident Binder identified ten reportable spills had occurred. Therefore, DMI FRBU has not achieved the threshold of " <b>zero reportable spills</b> " identified for this indicator.
33	Annual percentage of temporary crossings that meet all standards.	Complete		Compliance Audit - 100% of temporary crossings meet all standards. Document findings and report accordingly.	Refer to <b>NC-IA-2011-04, OFI-IA-2011-06, OFI-IA-2011-07, OFI-IA-2011-09 (DMI Operations), 2011 Internal Compliance Audit Report</b> for documented findings. DMI FRBU was 58% compliant with this indicator for assessed operations. Therefore, DMI FRBU has not achieved the " <b>100% of all temporary crossings meet all standards</b> " identified for this indicator.

Indicator #	Indicator Label	DMI/Canfor Status of Objective	To Be Completed By	Indicator Monitoring Plans	Audit Observations
36	Annual percentage of inspected crossings that achieve a low SCQI index rating.	In Progress	2011	Compliance Audit - 100% of inspected crossings achieve a low SCQI Index rating. Document findings and report accordingly.	Refer to <b>NC-IA-2011-05 (DMI Operations)</b> , 2011 Internal Compliance Audit Report for documented findings.  DMI FRBU was 86% compliant (3 – high, 13 – medium) with this indicator for operations assessed in the 2011 timber year.  Therefore, DMI FRBU has not achieved the <b>“100% of inspected crossings achieve a low SCQI Index rating”</b> identified for this indicator.
37	% of sampled blocks with buffers in place as required by government.	Complete		Compliance Audit - 100% of blocks with buffers in place. Document findings and report accordingly.	Refer to <b>NC-IA-2011-06 (DMI Operations)</b> , 2011 Internal Compliance Audit Report for documented findings.  DMI FRBU was 95% compliant with this indicator for operations assessed in the 2011 timber year.  Therefore, DMI FRBU has not achieved the <b>“100% of blocks with buffers in place”</b> identified for this indicator.
38	% sampled blocks with no harvest area located within incised valleys or on slumping soils.	Complete		Compliance Audit - 100% of harvest area not located within incised valleys or on slumping soils. Document findings and report accordingly.	The harvest sample did not identify any sites that were located in incised gullies or on slumping soils.  DMI has achieved the requirements identified for this indicator with respect to operational activities related to harvesting.