



SABAH FORESTRY DEPARTMENT

DERAMAKOT FORESTRY DISTRICT
(DERAMAKOT FR-FMU 19A & TANGKULAP/SG. PINANGAH FR-FMU 17A)

Standard Operating Procedures

Managing Spillage (Fuel and Lubricant)

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1.0 BACKGROUND & PURPOSE

Sabah Forestry Department (SFD) has initiated a policy to pursue certification by meeting the requirements of FSC as well as national standards in its management systems for Sabah. To ensure that its operations are in line with FSC requirements the SFD has developed a series of Guidelines for forest management in 2008 that has been adopted into procedures for use in FMU 19A and FMU 17.

The purpose of this procedure is to define the process of managing spillage of fuel and lubricants to ensure that it comply with the requirements of FSC management standards.

2.0 SCOPE

The scope of this procedure is limited to **managing spillage of fuel and lubricants on forest floors and on bare earth** within FMU 19A and 17A managed by SFD. This is to ensure that appropriate cleanup is carried out in a controlled, consistent and effective manner.

3.0 RESPONSIBILITIES

The following units are responsible for managing spillage of fuel and lubricants, particularly those in the harvest operation areas or compartment, and in forest road construction and maintenance using heavy machineries.

All Head of the Units (SFD) and the Harvesting Contractor is responsible for:

- Monitoring and reporting incidence of spillage during field operations.
- Excavating, containment and dispatching contaminated soil for safe storage and treatment (where applicable) at the Deramakot base camp workshop.
- Taking preventive measures to avoid spillage.

The Forest Officer is responsible for:

- Training and awareness.
- Implementation of proper storage for the contaminated soil.
- Treatment of contaminated soil.

4.0 DEFINITIONS

This procedure contains definitions of common terms used by FSC & SFD in the procedures for forest management.

FSC: Forest Stewardship Council, an international non-government organization who governs the Forest Management and Chain of Custody standard.

FMU: A clear defined forest area with mapped boundaries, managed by a single managerial body to a set of explicit objectives, which are expressed in a self –contained multi-year management plan.

5.0 SPILLAGE AT THE WORK SITE

In FMU 19A and FMU 17A, spillage at the work place may take two form:

1. **Spillage on forest floor and on bare earth** – this refers to the operational areas for timber harvesting and forest road construction and maintenance involving the use of heavy machineries.
2. **Spillage on concrete or cemented setting** – This refers to storage areas for lubricant and scheduled waste, generator room, workshop and diesel kiosk.

Procedures for handling of spillage on concrete or cemented floor have already been mentioned and addressed in **SFD-DFR-SOP-008 Chemical and Fuel**.

5.1 Spillage on Forest Floors or on Bare Earth

Spillage on forest floor and on bare earth usually occurs during timber harvesting operations and forest road construction and maintenance. The cause of spillage can either be **accidental** or those **stemming from leakages**.

5.1.1 Accidental Spillage

Accidental spillage in FMU 19A and FMU 17A usually occurs while transporting diesel and other lubricants in drums for refueling or ad hoc servicing and maintenance of heavy machineries in the operational areas (harvesting and forest road construction and maintenance).

5.1.2 Leakages

Types of spillage stemming from leakage are:

- Breakage of high pressure hydraulic hoses of heavy machineries such as the motor grader, excavators and crawler tractors (beyond our prediction).
- Leaky and old heavy machineries (can also contribute to spillage if it goes undetected).
- Heavy machinery repairing or ad hoc repairs by the mechanics at the operational site.

6.0 CONTROL PROCEDURES

Procedures for cleaning up in the event of spills are as follows:

- Spills shall be excavated together with the contaminated soil at source as soon as possible upon detection or reporting. The relevant forest officer shall be notified immediately in the event of serious spills which require mobilisation of more manpower and machineries for 'cleanup' operations.
- In addressing serious oil spills cleanup at operational sites which render travelling over long distance, the forest officer to the best of his knowledge shall make available sufficient manpower, appropriate containers, PPEs and hand tools for cleaning which will avoid unnecessary travelling to obtain additional containers or accessories.
- The excavated soil shall be stored in a suitable container temporarily. The procedure shall be repeated until traces of spillage are completely removed. The container shall be properly covered and secured while travelling on any vehicles. Thereafter, it shall be sent to the scheduled waste store as soon as possible to avoid undesired environmental impacts.
- Cleaning spills on forest floor and on bare earth shall be carried out as soon as possible to avoid rain wash or surface run offs.

7.0 PREVENTIVE MEASURES

Spillage can easily be avoided if preventive measures are adhered to. It is much cheaper to prevent spillage than to clean it up. Preventive measures to be taken are:

- Identify the areas of operation that have high level of oil and lubricant spillage incidence.
- The identified areas shall be provided with appropriate drip pans, secondary containment trays or spills trays.
- Ensure that the relevant person given the responsibilities to use the spill tray has received adequate briefing or training on its usage.
- All spills trays shall be made of durable material regardless whether metal or plastic which is able to sustain rough handling and heavy impacts.

The uses of drip pans, secondary containment trays or spill tray are to:

- Prevent any oil leak or drips from contaminating the soil and to trap spills.
- For collecting used oil during periodic vehicles, generators, light and heavy machineries servicing. It is also used to collect used oil such as brake fluid, transmission fluid et cetera in the event of ad hoc machinery breakdown repairing in the operational area.

- To capture oil leak from mobile containers used in the operational site. Examples are the 200 liters metal drums, mobile petrol containers, grease pails and storing big broken down engine parts.
- To capture oil leak during machinery repair work at the operational site.



Secondary Containment Trays
Intercept or capture fuel or lubricant spillage