# HYDROCARBON & CHEMICAL MANAGEMENT PROCEDURE

## ECP06

ECP06

**DOCUMENT USERS** : **ALL PERSONNEL**

**PERSON RESPONSIBLE FOR KEEPING DOCUMENT CURRENT** : **ENVIRONMENTAL COORDINATOR**

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| 1 | Matilda Minerals | | | 01/08/2005 | Draft for Review |
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# DETAILS OF REVISION CHANGES

| Old Section Ref. | New Section Ref. | Description |
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# 0.0 INTRODUCTION

This procedure provides information for the storage and handling of hydrocarbons and bulk chemicals, including diesel fuel, oils, greases, chemicals and explosives. This procedure outlines the manner in which bulk and small containers of these substances should be stored and handled on-site. Bulk containers include 55 thousand L tank down to 200 L drums with small containers being 20 L drums.

Implementing and maintaining sound hydrocarbon and chemical management practices will minimise environmental impacts from mishandling and improve the control of their use.

## 0.0 STANDARDS OR OBJECTIVES

- Australian Standard 1940-1993
- Australian Standard 3780-1994
- Australian Standard / New Zealand Standard 4452:1997
- Reduce the effects of emissions, develop opportunities for recycling and more efficient use of resources.

## 0.0 RESPONSIBILITIES

- The Resident Manager is ultimately responsible for the safe storage and handling of hydrocarbons and chemicals at MMG.
- The Mining Superintendent is responsible for hydrocarbon management associated with the mining contract (contractors), the pit dewatering bores and the water supply bores.
- The Processing Superintendent Manager is responsible for hydrocarbon management associated with the power station fuel supply and Matilda vehicles.
- Maintenance Supervisor is to ensure waste oil is disposed of through the approved contractor.

## 0.0 PROCEDURE

Supply to maintain an inventory of all receivals and dispatches of all hydrocarbon and chemical products including supplier, quantities, types and storage location of hydrocarbon, chemical products and associated products arriving onsite.
Mining is to maintain an inventory of explosives and associated products used.

## 1.0 STORAGE

- Containment facilities will be appropriate to the type of hydrocarbon/chemical being stored/used and will, as a minimum, meet the relevant Australian Standards.
- A register of containment facilities will be maintained to enable the effectiveness of such facilities to be maintained. Appropriate testing will be carried out on an annual basis. Records of all tests should be maintained on the register.
- All hydrocarbon containers will be stored in bunded areas according to the statutory requirements by licence conditions, regulations, relevant Standards and industry good practice.
- All storage will be above ground and tank storage will be contained within an isotainer with a storage for spillage within the outside skin of 1.1 times the capacity of the largest tank or 25% of the total storage (whichever is the largest).
- All 200 L drums will be stored within either:
    - A compacted earthen floor and bund with a spillage capacity of at least 20% of the total hydrocarbon stored within the bund
    - A concrete floor and bund with a spill holding capacity of 20% of the total hydrocarbon stored in the drums
    - A concrete floor within a workshop with the floor bunded on three sides and the fourth open to enable any spillage to enter the drainage system and ultimately be retained by the waste oil collection system.

In addition, in both cases:

- All drums stored vertically will be held individually or by groups on steel or plastic grates over drip or spillage trays with a capacity to hold 220 L (1.1 times the capacity of a drum)
- All drums stored horizontally will be located on suitable holding tables over a steel or plastic drip tray with a capacity of 220 L
- Each row of horizontal drums will have a sand drip tray under each row of outlet (supply) valves.
- All drums with a volume less than 200 L will be stored on steel or plastic grates or shelving located over a concrete floor either bunded with a storage capacity of 20% of the total volume of all stored materials, or unbunded with drainage to a triple oil interceptor tank.

## 2.0 HANDLING

- All site personnel using hydrocarbon and chemical products will take the appropriate precautions to minimise the risk of spillage and misuse. All employees must be aware of *ECP 7 – Spill Response Procedure*.
- Wherever possible, hydrocarbons and chemicals will be purchased, stored and handled in re-useable or returnable bulk containers.
- Wherever possible, all oils and greases used in plant maintenance and servicing at workshops will be provided from bulk containers with the outlets provided with drip collection trays over a concrete floor. The concrete floor to be graded towards the workshop drainage and discharging to a triple oil interceptor tank.
- Transfer points to or from bulk containers or permanent refuelling stations will be provided with a bunded concrete apron with collection of drainage discharging to a triple oil interceptor tank.
- If a spill of hydrocarbons occurs, the procedure for clean-up and disposal of the materials outlined in *ECP 7 – Spill Response* is to be followed and the incident reported as required and in the form provided by *ECP16 – Notification and Reporting*.
- When any waste oils are collected from the servicing of equipment or machinery, the oils should be transferred immediately to the waste oil collection system in the relevant area.
- Filters should be placed on a rack for draining
- Any spillage of waste oil outside the bunded area should be reported (refer *ECP 16*)
- When the waste oil containers are nearly full, contact the maintenance supervisor to organise removal for recycling.
- Inspect facility on a regular basis to determine whether the container requires emptying and to ensure area is kept clean and tidy with no fire hazards.

## 0.0 ATTACHMENTS

None

## 0.0 RELATED DOCUMENTS

ECP 7 – Spill Response

ECP 16 – Notification and Reporting

Matilda Minerals Emergency Response Manual

Chem Alert II

# SPILL RESPONSE PROCEDURE

# ECP07

ECP07

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# 1.0 INTRODUCTION

# 2.0 PURPOSE

The purpose of this procedure is to provide details of action to be taken when a hydrocarbon spill is identified along with post spill actions. It is imperative that the appropriate response is carried out in order to prevent any potential environmental or safety impacts.

This procedure outlines:

- Action required when a spill is identified
- Techniques to restrict the extent of the contamination
- Techniques to collect spilled material
- Techniques to collect and dispose of contaminated material
- Techniques to treat soils contaminated by hydrocarbon.

# 3.0 STANDARDS OR OBJECTIVES

To reduce the effects of emissions, develop opportunities for recycling and more efficient use of energy, water and other resources.

# 4.0 RESPONSIBILITY

- The Resident Manager ultimately is responsible to ensure that relevant action is taken to restrict the extent of hydrocarbon spills and that the incident is reported to the relevant authorities and parent company management (if necessary). The Resident Manager is responsible also to ensure that the spill is cleaned-up and disposal of contaminated material or bioremediation treatment is undertaken to mitigate any long term contamination.
- The Mining Superintendent is responsible to ensure that Matilda Minerals mining personnel and contractors carry out this procedure.
- The Processing Superintendent is responsible for ensuring that Matilda Minerals administrative, processing and maintenance personnel follow this procedure.
- The Exploration Manager is responsible to ensure that Matilda Minerals geological staff and contract drillers carry out this procedure.
- The Safety Coordinator is responsible to ensure that the technique used to stop the flow of the spill is undertaken in a safe manner and to ensure that advice and facilities are provided to mitigate any potential for explosion or fire.
- The Environmental Coordinator is responsible for providing technical advice for the clean-up of the spill and for treatment or disposal of contaminated material following advice obtained from relevant authorities (if deemed necessary). The Environmental Coordinator is also responsible to advise relevant authorities as required by *ECP16 Notification and Reporting.*
- All staff and contractors are responsible to ensure that immediate action is taken to report any hydrocarbon incident as outlined in *ECP11 Notification and Reporting* and to minimise the spread and environmental impact of any hydrocarbon spill provided it is safe to do so.

# 5.0 PROCEDURE

A spill is defined as a loss of hydrocarbon where contamination of soil, land or water occurs, or where a contained spill or loss of hydrocarbon greater than 10 L occurs.

## 5.1 ACTION REQUIRED WHEN A SPILL IS IDENTIFIED

- Isolate the spill area;
- Identify the spilt substance;
- Identify hazards and PPE Requirements;
- If safe to do so, the source of the spill should be restricted or stopped (eg if a valve is inadvertently left open, it should be closed, if safe to do so);
- If suitable equipment is readily available and can be operated in a safe manner, the extent of the spill is to be contained;
- If considered necessary, the Safety Coordinator be advised and requested to provide assistance;
- Complete incident report as detailed in *ECP 16 – Notification and Reporting*;
- The Environmental Coordiantor is to be advised;
- The Resident Manager is to be immediately advised in those cases where the spill may have a detrimental effect on production at Matilda Minerals or if the spill has resulted in injury or has the potential to be a safety issue.

## 5.2 TECHNIQUES TO RESTRICT THE EXTENT OF THE CONTAMINATION

- If possible restrict the source of the spill;
- If the spill is occurring outside a containment bund, use earthmoving equipment to construct additional earthen bunds to contain the extent of the flow;
- Isolate drains;
- On advice of the Environmental Coordinator or Safety Coordinator, pump source material from either or both of the source container or the bunded containment into a safe container.

## 5.3 TECHNIQUES TO COLLECT SPILLED HYDROCARBON

- On advice of the Environmental Coordinator or the Safety Coordinator, pump spilled hydrocarbon from the source tank and/or the containment area into a second container
- Use absorbent materials to soak up residual hydrocarbon
- If the spill occurs in an area where a water body has become contaminated, use mini air booms to contain the spread of hydrocarbon on the surface of the water
- Use a skimmer to collect contained hydrocarbon in a triple oil separator or retained on the surface of a water body and pump to a waste oil tank or other safe container
- Hydrocarbon absorbents are to be collected and disposed of on the recommendation of the Environmental Coordinator. This may include incineration or disposal off -site.

## 5.4 TECHNIQUES TO TREAT SOILS CONTAMINATED BY HYDROCARBON

- On advice from the Environmental Coordinator, contaminated soils may be collected and disposed of or encapsulated within the waste dump or may be collected or remain *in situ* and treated by bioremediation to breakdown the hydrocarbon.
- The most common technique is to thinly spread or scarify the contaminated soil and broadcast ammonium nitrate (fertiliser not prilled) over the soil surface at a rate not

exceeding 300 kg/ha. The surface is again scarified to mix in the fertiliser and regularly watered with potable quality water. Every two months add additional fertiliser and scarify. Generally, after a period of regular rainfall and fertiliser applications, the hydrocarbons break down and the soil can be returned or disposed of into the waste dump.

- On completion of the rehabilitation program, the Environmental Coordinator is to verify that the spill has been successfully remediated as required under ECP14 Verification Work Certificate.

## 6.0 ATTACHMENTS

None

## 7.0 RELATED DOCUMENTS

ECP 6 – Hydrocarbon and Chemical Handling

ECP 16 – Notification and Reporting