

**REPORT ON SUBMISSIONS RECEIVED
DURING PUBLIC EXHIBITION**

**USED OIL TRANSFER STATION PART 3A
MAJOR PROJECT**

81-85 CHRISTIE STREET, ST MARYS

**On behalf of
Klekies Pty Ltd**

December 2006

NOTE: This document is Copyright. Apart from any fair dealings for the purposes of private study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced in whole or in part, without the written permission of Glendinning Minto & Associates Pty Ltd, Suite 9, 265-271 Pennant Hills Road, Thornleigh, NSW 2120. [visit our new website at www.glendinningminto.com.au](http://www.glendinningminto.com.au)

address: 6/265-271 pennant hills road, thornleigh postal address: po box 225 thornleigh 2120

telephone: 9875 4788 facsimile: 9875 4799 e-mail: planning@glendinningminto.com.au

TABLE OF CONTENTS

1.	INTRODUCTION	3
2.	ISSUES RAISED IN PUBLIC SUBMISSIONS	3
3.	ISSUES RAISED IN OTHER DEPARTMENT SUBMISSIONS	6
4.	REVISED STATEMENT OF COMMITMENTS	11
5.	CONCLUSION	15

Glendinning Minto & Associates Pty Ltd ABN 68 091 465 271

Planning & Development Control Consultants

6/265-271 Pennant Hills Road

Thornleigh NSW 2120

Tel: (02) 9875 4788

Email: planning@glendinningminto.com.au

1. INTRODUCTION

In accordance with Section 75H(6)(a) of the Environmental Planning & Assessment Act, 1979 this report provides a response to the issues raised in the submissions received by the Department of Planning during the public exhibition of the proposed Used Oil Transfer Station at 81-85 Christie Street, St Marys.

This report provides a summary of the issues raised and appropriate responses to those issues. As a result of the issues raised a revised Statement of Commitments has been prepared and is included in this report.

As a result of that responses provided and the revised Statement of Commitments it is concluded that the development of the site in the manner proposed is considered to be acceptable and is worthy of the support of the Director-General.

2. ISSUES RAISED IN PUBLIC SUBMISSIONS

The Department of Planning received one submission from the public. The submission received was prepared by the General Manager of Dunheved Golf Club Ltd. In summary this submission stated the following objections:

‘There are concerns over the infrastructure the Council and the Proponent have prepared, and the impact on local roads and transportation. There are a raft of environmental issues that have not been clarified, and an abundance of unknown factors that have not been taken into account. Whilst the issue of storm water and floods has been noted, Dunheved Golf Club are not satisfied that the Proponents investigations have fully taken into account the negative impacts on the surrounding properties.’

The following information is provided in response to the issues raised:

Impact on Local Roads & Transportation

The operation of the used oil transfer station does not generate high levels of traffic movement. Traffic generation from the development relates to the daily collection of used oil by 8-10 tonne trucks and the employee’s vehicles entering and leaving the site daily. The daily vehicular movements are summarised below:

Vehicle Type	Daily Movement
8-10 Tonne Trucks	12
Employee Cars	22
Bulk Tankers	Maximum of 1
TOTAL	35

As detailed in the Environmental Assessment, The Road and Traffic Authority's (RTA) 'Traffic Volume Data for the Sydney Region 2002' provides Annual Average Daily Traffic (AADT) statistics assessed as the total volume of traffic recorded at Christie Street at South Creek Bridge, which in close proximity of the site. The following AADT's were recorded at this site:

Year	AADT
1996	12670
1999	15085
2002	15583

Therefore the estimated daily vehicular movements of 35, represents an increase of only 0.2% in the average daily vehicular movements in 2002. This minor increase is considered to be negligible and will not have any detrimental impact on the locality.

The vehicles will comprise 8-10 tonne trucks, 1 bulk tanker and standard vehicles for employees. These vehicles are consistent with the existing traffic generation along Christie Street. Christie Street is a two lane road designed to accommodate typical industrial traffic. Given that Christie Street services the industrial area and as this issue has not been raised by Council, it is assumed that this road is suitable for industrial traffic.

The Environmental Assessment previously submitted provided access routes for trucks and tankers servicing the site. These access routes do not utilise local residential roads, rather vehicles will generally access the site from the M4 Motorway, Great Western Highway and The Northern Road.

Therefore, it is not considered that the proposal will have any detrimental impact on the existing road infrastructure.

Impact of Stormwater & Floods to Surrounding Properties

A Stormwater Drainage Plan was prepared by Kneebone, Beretta & Hall Pty Ltd and submitted with the Environmental Assessment. This plan provided for all stormwater collected from the roof, paved and bunded areas to drain to an existing pit in Christie Street. All collected water passes through a water quality pit prior to entering Council's infrastructure. Therefore, it is not considered that the proposed development will result in additional stormwater overflow to the adjoining properties.

A Flood Assessment was prepared by J Wyndham Prince Pty Ltd and was submitted with the Environmental Assessment. This report provides:

'The investigation undertaken as part of the Flood Assessment for Lot 132 in DP 31912 81-85 Christie Street, St. Mary's has determined that the proposed site fill has negligible impacts on flood flows and flood levels adjacent the development and conforms with Council's acceptance criteria for filling of flood liable land and site access.'

Specifically, the report provides the following comments:

- (i) The increase in flood level associated with the proposal is insignificant (i.e. much less than 0.1m) (refer to Section 7.2).*
- (ii) As the site is not part of an active floodway. There is no velocity increase associated with the proposed site fill works.*
- (iii) Proposed filling does not redistribute flows. The site is not part of an active floodway.*
- (iv) The potential for cumulative effects of possible filling proposals in the South Creek Floodplain at this location are minimal. Loss of storage on a 100 year ARI flood is negligible.*
- (v) The development potential of surrounding properties is not affected by the proposal.*
- (vi) The flood liability on surrounding properties is not increased.*
- (vii) No site drainage flow/runoff problems are created by the filling.*

Therefore, it is considered that the proponent has adequately investigated the impacts on surrounding properties. It is not considered that the proposed development will impact on the adjoining properties.

3. ISSUES RAISED IN OTHER DEPARTMENTS SUBMISSIONS

3.1 New South Wales Fire Brigades

The submission received from the NSW Fire Brigade in summary provided:

The NSWFB has no specific concerns in relation to the proposed development provided the following items are addressed:

- 1. There is a lack of detail in relation to the sites fire hydrant system. The EA and FSS state that local NSWFB station where consulted regarding hydrant location. The EA and HA state two hydrants are to be provided, the FSS states up to four hydrants are provided whilst indicates one hydrant on the site plan. The FSS does not contain any calculations to indicate hydraulic adequacy of the system;*
- 2. The NSWFB recommends that a hydrant system complying with Australian Standard AS 2419.1 be provided for the proposed warehouse/office, and the tank farm as per Clause 3.3 of that standard;*
- 3. Site plans in all the submitted documents indicate either one or two hydrants located within the bunded compound, the NSWFB recommends hydrants be located outside the bunded area.*

The Hazard Analysis Report and specifically the Fire Safety Study prepared by M.J.S Dangerous Goods Solutions has been reviewed and amended. In regard to the proposed hydrants the amended Fire Safety Study provides:

A fire hydrant will be located outside the bunded area of the tank farm and another located halfway down the site close to the fence line on the southern boundary. A third hydrant will be located outside the office/warehouse. These hydrants will be installed as per AS2419.1 2005, "Fire Hydrant Installations".

The site plan accompanying the Fire Safety Study accurately depicts the proposed hydrants. The Statement of Commitments will be amended to reflect these changes.

- 4. The FSS quotes AS1940-2002 in relation to building requirements etc. This should be AS1940-2004.*

The 'Description of Facility' on page 18 of the Fire Safety Study has been amended to state:

The tank farm shall be located some 15 meters to the west of the warehouse and office and shall be constructed to comply with Australian Standard AS1940-2004.

Any other reference that Australian Standard in the FSS has also been updated. The amended Statement of Commitments also reflects this change.

5. *The HA states that trucks will be prohibited from turning right from Christie Street into the site, clarification is required as to how this will be policed or are gazetted “No Right Turn” signs proposed.*

The majority of trucks entering and leaving the site are owned and operated by Klekies staff. The ‘Traffic Diagram’ and truck instructions will be included into the Safety Manual for the site which is supplied to every employee. Each employee will be required to read and sign that they understand and will comply with the Safety Manual. Similarly, every contractor on a company purchase order will also be required to read and sign such Safety Manual before entering the site. The Statement of Commitments has been updated to reflect these comments.

6. *The Consequence of Events section of the FSS in relation to arson states that some fire water may access storm water drains, however, the EA states that all site storm water runs to a 180m² existing street pit. This point requires clarification considering that all material on site is harmful to the environment.*

The FSS has been reviewed and amended to state:

‘The bunded area will hold and contain the fire water. The area will hold over 500,000 litres, of fire water, and no fire water will enter the storm water system. If by some chance the fire can not be extinguished within the 4 hour window then dams will be built around the storm water drains to stop any fire water entering the storm water system.’

This amendment will be incorporated into the amended Statement of Commitments.

7. *The same section of the FSS states that signs will be provided regarding materials on site, the NSWFB recommends that signage in accordance with the Occupational Health & Safety Regulation 2001 (with amendments) be provided.*

The FSS has been amended to state:

These signs will be as per AS 1940- 2004, and the Occupational Health and Safety Regulations 2001 [with amendments] and shall be easily visible. There will be signs placed on the front fence near the entrance to the site; these signs will display the UN number of the products being held. The site will have a Dangerous Goods licence issued, “only because of the size of the tanks being used”.

Similarly, the Statement of Commitments has been amended to comply with these comments.

8. *Anti drive off 'Interlocks' should be provided at the tanker loading/unloading bay.*

The Hazard Analysis Report on page 9 has been amended to state:

All trucks that load and unload at the loading area will be equipped with a brake into locking device. This device will comply with AS2809.1 and will not allow the truck to be moved during any loading or unloading operation.

The amended Statement of Commitments reflects this change.

9. *There is no detail provided regarding the location of the manual points throughout the site.*

As detailed in the amended Hazard Analysis Report, provides that staff training manuals shall be placed besides the spill kits and that all staff will be trained in there use.

10. *An emergency services information cabinet is proposed with a key to be deposited at 77 Station St Marys, a further key should be provided to 78 Station Dunheved.*

The FSS has been amended and updated to comply with this requirement as follows:

An emergency services cabinet will be placed in a secure position at the site main entrance that will contain all relevant information in regard to the Dangerous Goods stored on site. A duplicate key will be supplied to St Marys Fire Brigade and the Dunheved Fire Brigade.

The Statement of Commitments has been amended to reflect this change.

11. *The FSS does not address containment of contaminated fire fighting water at all.*

The FSS has been amended to state:

The bunded area will hold and contain the fire water. The area will hold over 500,000 litres, of fire water, and no fire water will enter the storm water system. If by some change the fire can not be extinguished within the 4 hour window then dams will be built around the storm water drains to stop any fire water entering the storm water system. After the fire has been extinguished the contaminated fire water can be pumped out of the bunded area and disposed of in a correct and proper manner.

It is considered that this addresses the concerns of the NSWFB.

12. Neither the HA or the FSS provide any details of the equipment or fuel source used in the oil heating process.

The Material Safety Information Sheet for Used Oil, which is used in the heating process, is provided with this response.

13. Neither the HA or the FSS contain sufficient information to fully address the requirements of the Hazardous Industry Planning & Advisory Papers No. 6 and 2 respectively, given the deficiencies the NSWFB recommends both documents be amended to provide the necessary information if Development Consent is granted.

It is considered that this issue can be addressed if Development Consent is granted, prior to the issue of a Construction Certificate or the commencement of any works on site.

In summary, it is considered that the issues raised in the submission by the NSWFB have been addressed by the amended Hazard Analysis Report and the amended Statement of Commitments.

3.2 Department of Environment & Conservation NSW

The DEC provided comments in relation to the proposed development, which are summarised below:

‘The DEC has reviewed the Environmental Assessment “Construction of Warehouse/Office Building & Oil Tank Farm for use as a Used Oil Transfer Station” prepared by Glendinning Minto & Associates Pty Ltd, (dated October 2006). Based on its review, the DEC recommends the conditions of approval detailed in Attachment A. Also I wish to advise you that pursuant to Schedule 1 of the Protection of the Environment Operations (POEO) Act 1997 construction and operation of the proposed facility will require an Environment Protection Licence. The proponent will need to make a separate application to the DEC to obtain this licence.

The DEC notes that Klekies Pty Ltd proposes to use fuel oil to heat waste oil received at the facility for treatment. Should the fuel oil be sourced from waste, Klekies Pty Ltd will need to contact the DEC to have the proposed fuel and its use assessed. Information required by the DEC to facilitate assessment is detailed in Part 3 of the DEC’s Guidance Note Assessment of Non-standard Fuels.’

It is proposed that the waste oil will be heated using Used Oil. The Material Safety Information Sheet for this product is attached. It is also noted that the proponent will make a separate application to the DEC for the construction and operation of the proposed facility prior to the commencement of any works on site.

4. REVISED STATEMENT OF COMMITMENTS

The table below details the proposed measures, environmental management, mitigation measures and monitoring procedures undertaken to minimise and manage any potential adverse impacts of the development.

Issue	Commitments
Noise	<ul style="list-style-type: none"> ▪ The designated route for trucks to the site is via the access routes identified in Section 6.5.3 of this report. No trucks will travel along local roads where residential properties exist. ▪ The operation of the development will be limited to 6am to 6pm Monday to Friday and 6am to 12noon Saturdays. ▪ All plant and machinery, including trucks, are to be properly maintained to ensure rated noise emissions are not exceeded. ▪ All construction activities shall be undertaken in accordance with AS2436 – Guide to Noise Control on Construction, Maintenance and Demolition Sites. ▪ Construction activities will be limited to 7am to 5pm Monday to Fridays; 8am to 12noon on Saturdays. There will be no noise generating activities throughout the construction period on Sundays or public holidays. ▪ A register of all complaints shall be kept throughout the construction and operation of the plant.
Waste Management	<ul style="list-style-type: none"> ▪ As detailed in Section 6.2 of this report site preparation, construction and operation of the development will be undertaken in accordance with a waste management plan. ▪ Waste water collected from the heating of oil will be diverted to Tank 1A which is a dedicated oily water and contaminated water tank. The contents of this tank are then transported to a specialised water treatment plan. ▪ Tank 1B will be dedicated for the storage of used oil that is not suitable for recycling. The contents of this tank are then transported to a specialised waste plant for treatment. ▪ Any waste sludge will be drummed and transported from site for disposal via a specialised treatment provided for eg. Veiola and Transpacific Industries.
Air Quality	<ul style="list-style-type: none"> ▪ An Air Quality Management Plan (AQMP) is to be developed in accordance with the recommendations of Holmes Air Sciences in their Air Quality Assessment, see Appendix 9.

	<ul style="list-style-type: none"> ▪ Regular inspections of equipment and plant to detect the occurrence of any fugitive emissions and to ensure the leaks are repaired. ▪ All tanks with odour emitting potential will have activated carbon canisters fitted to their vents. ▪ The pre-heating of the oil will be limited to 90°C which is below the temperature of volatilisation. ▪ All disturbed areas to be stabilised as soon as practicable to prevent or minimise wind blown dust. ▪ All unsealed trafficable areas would be kept sufficiently damp during working hours to minimise wind blown or traffic generated dust emissions. ▪ Water sprays, sprinklers and water carts would be employed if needed to adequately dampen stockpiles, work areas and exposed soils to prevent the emission of dust from the site. ▪ Stockpiles and handling areas would be maintained in a condition which minimised wind blown or traffic generated dust; ▪ All equipment for dust control to be kept in good operating condition; ▪ Silt would be removed from behind filter fences and other erosion control structures on a regular basis, so that collected silt does not become a source of dust; ▪ Any dust, soil or mud deposited on public roads by sub contractors construction activities and vehicle movements would be removed immediately and disposed of appropriately.
Soil	<ul style="list-style-type: none"> ▪ The Soil and Erosion Control Plan will be implemented prior to any works commencing on site. ▪ A Construction Environmental Management Plan (CEMP) will be prepared and implemented in accordance with the Department of Infrastructure, Planning & Natural Resources <i>Guideline for the Preparation of Environmental Management Plans</i>.
Water	<ul style="list-style-type: none"> ▪ Collected stormwater will be disposed of in accordance with the Stormwater Management Plan prepared by Kneebone, Beretta & Hall Pty Ltd in Appendix 3. ▪ Disposal of waste water from the oil heating process is in accordance with the Commitments identified in 'Waste' above.

Traffic	<ul style="list-style-type: none">▪ A turning area is provided on site to ensure all vehicles can enter and leave the site in a forward direction.▪ A truck entry and exit diagram has been prepared in Appendix 8, which provides for trucks to enter the site in a westerly direction and to leave the site in an easterly direction. This diagram will be included in the Safety Manual which will need to be read and signed by every employee and contractor. Each employee is required to read and sign that they understand the Safety Manual. Similarly, every contractor on a company purchase order will also be required to read and sign the Safety Manual before entering the site.
Hazards and Risk	<ul style="list-style-type: none">▪ The tank farm is contained within a bunded area that can hold up to 560,000 litres, which is well above the requirements set at 10% capacity detailed in AS1940-2002. The bunded area is to be constructed of a concrete floor which slopes to a blind sump and allows removal of any spilt product. Any spilt product is pumped to a holding tank for disposal off site.▪ A covered bunded area will contain the area where trucks discharge their load. This bunded area will be able to handle 10,000 litres, which is 60% more than the capacity of the individual compartments of the trucks.▪ The bunded area will hold and contain fire water. The bunded area will hold over 500,000L, of fire water, and no fire water will enter the stormwater system. If by some chance the fire can not be extinguished within the 4 hour window then dams will be built around the stormwater drains to stop any fire water entering the stormwater system or the environment without being treated.▪ Four spill kits will be placed around the site for use by staff. All staff will be trained in dealing with spills.▪ The plant will be fitted with a flotation alarm within the bunded area to detect any spills during non-working hours. This alarm is connected to a back to base security system. The alarm is set at a predetermined height of no more than 150mm, which allows for sufficient notice.

- The bunded area will protect the tanks from any flood water. The tanks will be appropriately secured to the ground to prevent any tanks from moving during flooding.
- The site will be securely fenced to assist in preventing malicious acts. However, the capacity of the bunded area is such that even if all tanks were to be discharged the bund would be able to contain the entire product.
- Safety Manuals have been produced for every operation on site and the staff will be trained in these procedures. Material Safety Data Sheets (copy included in **Appendix 16** will be available on site.
- Signs will be placed on each storage tank, which indicates the tank number, the size of the tank and the UN number. These signs will be as per AS1940-2004, and the Occupational Health & Safety Regulations 2001(with amendments) and shall be easily visible.
- Fire Hydrants are to be installed in accordance with the Fire Services Layout Plan provided in **Hazard Analysis Report** dated **December 2006** and the Site Plan referred to in that report, dated 6/12/2006.
- The operation of the used oil transfer station shall be in accordance with the **Hazard Analysis Report** in **dated December 2006**.
- The Tank Farm is to be construction to comply with Australian Standard AS1940-2004.
- All trucks that load and unload at the loading area will be equipped with a brake into locking device. This device will comply with AS2809.1 and will not allow the truck to be moved during any loading or unloading operation.
- An emergency services cabinet will be placed in a secure position at the site main entrance that will contain all relevant information in regard to the Dangerous Goods stored on site. A duplicate key will be supplied to St Marys Fire Brigade and the Dunheved Fire Brigade.

5. CONCLUSION

It is considered that the proponent has reviewed and assessed the issues raised in the submissions received by the Department. As a result of the additional information provided, the amended Hazard Analysis Report and the revised Statement of Commitments, it is considered that the proposed Construction of a Warehouse/Office Building & Oil Tank Farm for use as a Used Oil Transfer Station is worth of the support of the Minister.

Natalie Nolan

Grad Dip (Urban & Regional Planning), Ba App Sci (Env Health) MPIA CPP

GLENDINNING MINTO & ASSOCIATES PTY LTD

December 2006

HAZARD ANALYSIS REPORT

For

KLEKIES PTY LTD

At

81 - 85 CHRISTIE STREET

St MARYS

N.S.W.

Prepared by:-M.J.S. Dangerous Goods Solutions

Authorised by:- Brian Eggleton

Date amended:- December 2006

TABLE of CONTENTS

1. Executive Summary	Page 3
2. Findings and Recommendations	Page 4
3. Site Description	Page 5
4. Location	Page 6
5. Process	Page 6
6. Hazardous Material	Page 7
7. Hazard Identification	Page 7-11
8. Consequence Analysis	Page 11
9. Estimation of the Likelihood Of a Hazardous Events	Page 11
10. Presentation of Risk Result	Page 12
11. Risk Assessment	Page 12
12. Conclusion	Page 13
13. Appendixes	Page 14
14. Fire Safety Study	Page 15-33

1. Executive Summary and Recommendations

Purpose and Scope of the Hazard Analysis

The purpose of this HAZARD ANALYSIS is to show that although the Klekies Pty Ltd proposal exceeds the thresholds set down by a SEPP 33, the proposed development will meet and satisfy the local government concerns of it being a major hazardous site.

The Hazard Analysis has been prepared by Matt Sawtell Principal of MJS DANGEROUS GOODS SOLUTIONS an accredited dangerous goods consultant with AIDGC.

A SEPP 33 was prepared for Klekies Pty Ltd, this clearly showed that the only part of the operation, performed at Klekies Pty Ltd that exceeded the thresholds set out in a SEPP 33 was in relation to vehicle movements.

The goods being carried into and out of the site are CLASS 9 UN 3082 “Environmentally Hazards Substance, Liquids, N.O.S.”. The goods are non dangerous except and are not considered a threat to the environment, that is if they were to be spilt into any water course. There is no watercourse adjacent to the site.

The Scope of this Hazard Analysis is to show that all conceivable hazards have been examined and the possibility of these goods entering the environment is unlikely.

The approach used is a tried and true approach utilizing Risk Analysis techniques to work through and over come any for seen risks that might occur during the operation and occupation of the site by Klekies Pty Ltd.

A fire safety study has been done and is detailed in section on the site and this clearly shows that Klekies Pty Ltd has taken everything into account in the construction and proposed operation of this facility.

2. Findings and Recommendations

The fire safety study has identified all of the products being stored in the tank farm along with the hazards that may pose a threat during the operation of the facility.

In relation to the possibility of spills we found that Klekies Pty Ltd have taken all possible scenarios into consideration and have mitigated them altogether.

Traffic flows in and out of the site have been analysed, and our recommendations will reduce the likelihood of any traffic accidents.

We would recommend this project go ahead, as it has been presented to us.

Yours faithfully,
MJS Dangerous Goods Solutions

Matt Sawtell
Principal

3. Site Description

The site is located on Christie St, St Marys in an Industrial suburb of Penrith City Council. Klekies Pty Ltd will occupy the rear of 81 – 85 Christie Street St Marys.

There are two other industrial units on the site, and the activities of these are independent and will not affect the operation of Klekies Pty Ltd.

The Klekies tank farm operation will be separated from the other two by a chain wire boundary dividing fence. The site has its own fire fighting hydrants, and plenty of room for truck movements.

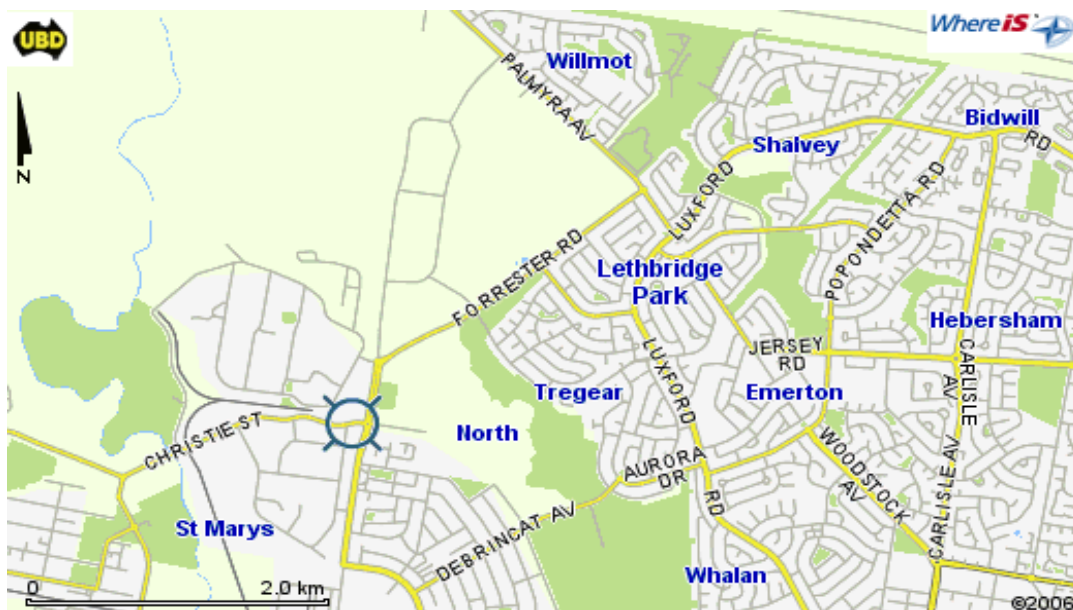
A fully bunded tank farm is to be built 3 metres from the North Western boundary of the site. The adjacent land is vacant and has a disused railway spur line on it.

The site will be used as a collection point for black oil, recycled engine oils and waste transformer oils.

Trucks of 8,000 litres capacity collect the used black oil from Klekies customers in the Sydney Metropolitan Area and pump the oil into the storage tanks contained and positioned within the fully bunded area. The tanks will store different grades of used oils, hence the number of tanks in the tank farm.

The stored oil will be transferred from the tank farm into B-Double trucks and transported to the manufacturing plant located in Wagga Wagga for processing.

A location map supplied by UBD maps is attached to show the surrounding roads etc.



The location of the site on Christie St is above the “s” in Christie St.

4. Location.

South Creek is four hundred meters to the West of the site and does not present any threat to the operation of the site by Klekies Pty Ltd. If a flood were to occur, the concrete bund will protect the tanks from the flood waters.

The vacant land behind the site does not present any threat other than the possibility of a fire, with this in mind a clear barrier of some 1.7 metres will be left from the boundary fence before the bund wall and then the first tank shall be another 5 meter off the internal side of the bund wall. The area between the fence and the bund wall shall be kept clear and tidy at all times. If the grass is kept down then the likelihood of a fire reaching the bund wall would be greatly reduced, and with a concrete floor in the bund the possibility of the fire ever reaching the tanks is very remote.

The neighbouring land to the east of the site has a concrete manufacturing plant on it, and this will not present any problems to the process being carried out by Klekies Pty Ltd.

There should be 5 people working at the site at any one time, and the site will be locked during non working hours.

The Fire Safety Study which is attached to the end of this report in section 14 covers these types of requirements in greater detail.

5. Process.

The process being carried out by Klekies Pty Ltd is as follows.

The tank farm is completely banded and the tanks are to store different types of used oil or more commonly know as “Black Oil”.

The black oil is collected from all over Sydney in 8,000 litre trucks and brought onto site where it is pumped into the tank in the tank farm.

The largest tank will contain 120,000 litres of black oil and the rest of the tanks will hold 55,000 litres of product.

A heat transfer boiler will be used to separate water and other contaminants from some of the black oil collected. Any contaminants are transferred to another tank and disposed of correctly.

B-Double trucks transfer the product from the tanks within the tank farm into the compartments on the trucks for transport down to the oil recycling processing plant located in Wagga Wagga.

The SEPP 33 included with this report indicates the number of truck movements for the site is 1,456 on a yearly basis.

6. Hazardous Materials.

The black oil is classed as Non Hazardous, it is a CLASS 9 UN3082
“ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.”

It is only hazardous to the environment, it is non dangerous or likely to burn except in an extreme temperature fire.

7. Hazard Identification List [HIL].

The hazards that have been identified are list below

- A. Fire
- B. Spills
- C. Truck Movements
- D. Explosions
- E. Floods
- F. Neighboring Sites
- G. Malicious Acts
- H. Operations

A. **FIRE.**

A fire safety study for the site has been completed and is contained in section 14 of this report.

B. **SPILLS.**

The threat of a spill is a major consideration for the construction of this facility. The Australian Standard AS 1940-2004 “The Storage and Handling of Flammable and Combustible Liquids” has been the guideline for the tank farm construction and operation.

B. SPILLS (cont'd).

The bund around the tank farm is the main line of defense against spillage and contamination of the environment in the operation of Klekies Pty Ltd. The bund has been designed to hold some 560,000 litres of liquid, this is well above the requirements set at 10% of capacity detailed in *AS 1940-2002. clause 5.8.2 Capacity.*

“The net capacity of a compound shall be at least the capacity of the largest tank. The capacity of on - site containment shall be increased to include the output of any fire water over a 20 min period. If two or more tanks are operated as a single unit, then the capacity of all such tanks shall be used when calculating the capacity of the compound.”

The largest tank is 120,000 litres capacity and the size of the compound will allow for over 4 hours of fire water to be pumped at rate of over 2,000 litres per minute.

The bunded area will be constructed with a concrete floor slopping towards a sump which will allow the removal of any spilt product. This spilt product will be pumped into one of the holding tanks inside the bund and then disposed of in a correct and proper manner.

A bunded area will also be constructed around the area in which the delivery trucks will sit while discharging there loads into the tank farm. This bunded area will be covered to stop rain water from entering the system, and the system will be able to handle approximately 10,000 litres, which will be 20% more capacity of the delivery truck, it will also be 20% more than the compartments on the trucks being used to move the product off to the processing plant in Wagga Wagga.

The transfer pumps used to pump the product from the trucks to the tanks and vice versa are located inside the bund; if they spring a leak then the spill will be contained by the bund.

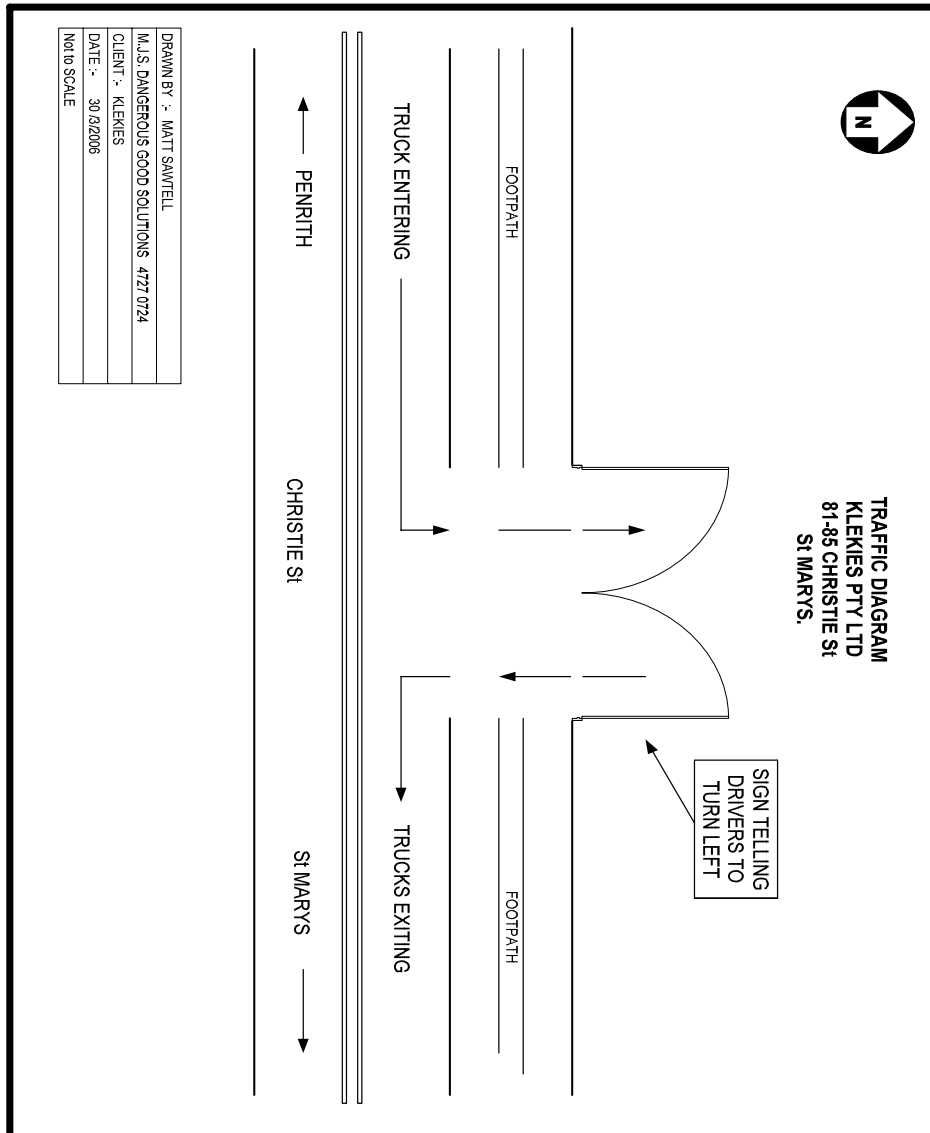
The tank farm bunding and the truck standing transfer bunding will cope with any spills and will contain them. No product will or should escape off the site.

Around the site four spill kits will be located just to cover the possibility of a small spill should one occur. The spill kits will be sign posted and all staff will be trained to operate them correctly.

C. TRUCK MOVEMENTS.

The trucks entering and leaving the site are to enter from the West, and leave the site towards the East. These instructions are written into the Safety Manual for the site, which every employ shall read and sign. They will also be given to every contractor on a company purchase order before they enter the site.

A sketch map of the correct way to enter and exit the site follows.



The proposed truck movements will reduce the possibility of a vehicle accident involving Klekies trucks turning across Christie Street, and will allow the Klekies drivers a better view of the oncoming traffic.

All trucks that load and unload at the loading area will be equipped with a brake into locking device. This device will comply with AS 2809.1 and will not allow the truck to be moved during any loading or unloading operation.

D. EXPLOSIONS.

There is nothing on the site that could explode; the workshop may contain tools, compressors or gas cylinders which have not been taken into consideration in this assessment.

Any explosion would not cause any real problem to the site. The products being stored in the tank farm do not have the right characteristics to cause an explosion.

E. FLOODING.

South Creek is approximately 400 meters to the West of the site. A levee bank between South Creek and the site would keep the water away from the site in normal flood conditions. Even if the levee bank does not stop the rising water the bund will protect the tank farm from flood water.

The bund wall is 600 mm high, and will be higher than the Flood level determined by Penrith City Council and shown on the proposed storm water concept plan prepared by Kneebone Beretta and Hall attached to the EIS. The tanks themselves are 2.7 meters in diameter and are 800 mm above the tank farm floor.

The tanks will not move and float away as they will be bolted to the foundations.

F. NEIGHBOURING SITES.

The site to the South of the proposed site is already in use with two manufacturing businesses operating; both of these sites do not pose any problems to the proposed Klekies tank farm site

The sites to the West and North are vacant land and only a grass fire is a threat which is covered in the fire safety study in Section 14.

The site to the East is a concrete plant which does not cause any problems to the proposed Klekies tank farm site.

G. MALICIOUS ACTS.

The possibility of a malicious act is real, and the site has been constructed to cover such a contingency.

The capacity of the bunded tank farm is over 560,000 litres, even if all the tanks were full and the entire product allowed to escape the bund would still contain it.

The total capacity of the all the tanks is 540,000 litres and no product would be able to enter the environment.

H. OPERATIONS.

The likelihood of a mishap at the Klekies tank farm is minimal due to the controls that have been implemented both in the design of the tank farm and the day-to-day operational procedures and methods employed.

Safety Manuals have been produced for every operation that happens during the working hours, and the staff, are fully aware of these, and of the material safety data sheets on the products that they handle everyday.

8. Consequence Analysis

The Consequence Analysis has been done as the last section of this report. During the preparation of the Hazard Identification List the 'worst case scenarios' have been assumed and the possibility of any other incidents that may happen is very unlikely.

The possibility of any harm to the local population is extremely unlikely, the product is not harmful to anything except the environment, and the controls to keep it away from the environment have been developed and put into place.

9. Estimation of the likelihood of Hazardous Events.

The control of the product escaping into the environment via the tank farm will not happen because of the controls put in place with the construction of the bund wall around the tank farm.

The only likelihood of a Hazardous Event occurring would be during the movements trucks in and out of the site.

The likelihood of a truck accident entering and exiting the location is real, which is why Klekies Pty Ltd has implemented the following traffic movement recommendations.

Trucks are to enter the site from a Westerly direction along Christie St and turn left into the site, proceed to the truck loading or unloading area, then return to Christie St and turn left onto Christie St leaving in a Easterly direction.

A sign stating the correct way to exit the site shall be placed on the left hand side of the gate way leading out of the site.

These instructions shall be written into the site safety manuals sign by each employee and every contractor that enters the site will be given a written set of these instructions on the Klekies purchase order, which allows the contractor onto the site.

This should reduce the possibility of a truck turning across Christie St into the path on a coming vehicle.

10. Presentation of Risk Results

The risk results presented in this report have been prepared based on all possible occurrences that might happen during the operational hours of Klekies Pty Ltd.

The qualitative and quantitative criteria risk to people has been assessed and deemed to be extremely low.

The product being handled is not harmful to anything except the environment, and if it does escape, then it will be controlled and managed because of the design controls of this facility, which will stop the product from entering the environment.

The product will not explode, it will not burn with out extreme heat, and if it does the smoke is not hazardous.

A flood is not a threat, the only possible risk to people would be an accident of a truck arriving or leaving the site, hence the rules for truck movements.

11. Risk Assessment

All risk have been assessed and expanded upon through out this report, and once again the only real risk to people is the risk of an accident with a truck entering or leaving the site.

This problem has been address and the correct action has been taken to rectify and reduce the possibility of an accident.

12. Conclusion

This proposed development for Klekies at 81 to 85 Christie St, St Marys does not present any threat nor is it in anyway harmful to the people in and around the site.

The product that Klekies Pty Ltd handles is only harmful to the environment. The controls that Klekies Pty Ltd are putting in place will reduce the likelihood of exposure of this product to the environment.

We can not see any reason why this project should not go ahead.

Yours faithfully,
MJS Dangerous Goods Solutions

Matt Sawtell
Principal

13. Appendixes

The following material was used in reference to the report.

Australian Standard AS 1940-2002 “The Storage and Handling of Flammable and Combustible Liquids”

Australian dangerous Goods Code Volume II

Guidelines for Hazard Analysis Hazardous Industry planning Advisory Paper No 6

Applying SEPP 33 Hazardous and Offensive Development Application Guidelines

Protection of the Environment Operations Act 1997

This report was compiled by Matt Sawtell:- Accredited Dangerous Goods Consultant, and member of Australasian Institute of Dangerous Goods Consultants, and Brian Eggleton, Business development Manager Southern Oil Refineries.

Matt has over twenty five years experience with the fuel industry and Brian has over thirty years experience with oil recovery systems.

Fire Safety Study

For

KLEKIES PTY LTD

**Class 9 Products
UN 3082**

**Environmentally Hazardous
Substances, Liquid, N.O.S.**

At

81 -85 Christie St

St Marys

2760

N.S.W.

Table of Contents

1.	Summary of Main Findings & Recommendations	page 18
2.	Scope of Report	page 18
3.	Description of Facility	page 18
4.	Hazards Identified	page 20
5.	Consequences of Incidents	page 20
6.	Fire Prevention Strategies/Measures	page 23
7.	Details of Detection and Protection	page 26
8.	Drawings of Fire Services Layout	page 28
9.	First Aid Fire Protection Arrangements and Equipment	page 28
10.	Site Location Sketch	page 29
11.	Site Layout Diagram	page 29
12.	Proposed Manifest & Appropriate MSDA	page 29
	References	page 30
	Appendix	page 31 to 33

1. Summary of Main Findings & Recommendations

It is proposed that a tank farm be constructed at 81-85 Christie St, St Marys.

The farm will be constructed to Australian Standard AS 1940-2004
“The Storage and Handling of Flammable and Combustible Liquids”.

The tank farm shall comprise the following:

1. 6 x 55,000 Litre on ground storage tanks.
2. 1 x 110,000 Ltrs on ground storage tank.
3. 2 x 45,000 Ltrs vertical storage tanks.

A dangerous goods licence will be obtain from WorkCover NSW . The only reason that the site requires one, is the size of the tanks being used. If Kleckies were to use small tanks, less than 50,000 ltrs they would not require a licence.

The materials need to be stored are Class 9 products and they need to be stored in a secure and safe way. The proposed construction of a tank farm complying with the relevant Australian Standards and other site safeguards to be undertaken sufficiently reduces the risks to a manageable level.

2. Scope of Report

This report is being prepared to satisfy conditions of a development consent to be issued by Penrith City Council. It is also a Klekies initiative as part of the Company’s safety upgrading.

3. Description of Facility

The site is located at lot No 132 in DP 31912 known as 81-85 Christie St, St Marys NSW.

The site consists of a brick and corrugated iron building along with a concrete factory and a corrugated shed. To the north of this shed will be the location of the tank farm.

A 2m-chain wire security fence all around bound the site. There is one set of double gates to the property for entrance and exit and another set of entry and exit from the tank farm. To the front of the property is a landscaped area which contains the existing fire supply piping, this is located on your right has you enter.

3. Description of Facility (cont'd)

A warehouse with office shall be built on the southern side boundary fence. It shall be 30m x 15m and constructed in precast concrete panels and a metal deck roof.

The tank farm shall be located some 15 meters to the west of the warehouse and office and shall be constructed to comply with Australian Standard AS 1940-2004.

A fire hydrant will be located outside the Bunded area of the tank farm and another located half way down the site close to the fence line on the southern boundary. A third hydrant will be located outside the office / warehouse. These hydrants will be installed as per AS 2419.1 - 2005, "Fire Hydrant Installations".

An existing hydrant is located directly across Christie St from the entrance / exit of No 81 - 85 Christie St. There is also an existing hydrant located between the front two buildings.

The tank farm is designed to handle B double tankers, and the design calls for a bunded loading and unloading area with the design of being able to handle a spill of 8,000 Ltrs from the largest compartment of any of the trucks. The spills if any will be drained off to a tank located inside the bund wall.

The company will collect, store and ship enough Class 9 product on a daily basis to have 5 x 8 ton truck movements and 3 x 42 ton truck movements.

(a) Accessibility

During working hours good access is provided with the gate to the tank farm open and the office being manned.

After hours, will be via the front gate to the complex.

4. Hazards Identified

The hazardous Goods involved in the proposed storage are classified as Class 9, "Environmentally Hazardous Substances liquid", N.O.S.

The materials consist of: -

Un Number	Chemical Name	DG Classification	Quantity
UN 3082	Reused Oil	Class 9	480,000 L

It is stored in 9 on ground tanks, the smallest being 45,000 Ltrs to 55,000 Ltrs and tank No 3 of 120,000 Ltrs.

Great Danger	Packaging Group 1	(PG 1)
Medium Danger	Packaging Group 11	(PG11)
Minor Danger	Packaging Group 111	(PG111)

The goods to be stored at Klekies have no PG group, with this in mind they don't present any fire risk to person or property.

5. Consequences of Incidents

(a) Likelihood of a major hazardous incident

The likelihood of a fire happening at the Klekies property is minimal due to the controls that have been implemented both in the design of the storage Depots and the day-to-day operational methods employed.

(b) Fire Scenarios

i. Adjacent fire

The most likely scenario for a fire to affect the Depot would be for a fire to start in or on adjacent land. The tank farm is located at the rear of the property and a abandon railway line is directly to the rear and on the western side of the site, beyond the railway is Dunheved Golf Course.

The bund wall for the tank farm is set back 1.7 meters off the western boundary and the actual location of the closest tank to the inside of the bund wall on that side is some 5 meters . The tank located on the eastern side of the tank farm is approximately 50 meters from the eastern boundary. This distance should be plenty to cope with a grass fire.

i Adjacent fire (cont'd)

A fire from the brick and corrugated building on the western side of the site would have approximately 15 meters to travel before it came into contact with the closest storage tank and the concrete building fire would have approximately 40 meters to travel. This distance should be plenty to cope with a fire. The point that has to be remembered is that the product being stored is only classed as hazardous to the environment it does not burn well and would require a fire of great heat to ignite the product being stored in the tanks.

ii Depot fire

If a fire were to start in or at the tank farm, the following causes need to be taken into consideration.

Electrical Wiring is Flame Proofed

Handling equipment is intrinsically safe.

iii Arson

The tank farm is an open area comprising of some 932 square metres and has a bund wall constructed completely around the area. The height of the bund wall is 600 mil. A wall this high should help keep a grass fire at bay, keeping in mind that the area inside of the boundary shall be kept clean and tidy at all times. The instruction shall be written into the site manual. The bund wall is constructed using concrete blocks filled with concrete. There aren't any valves or storm water pits inside the bund, it is designed to contain any spills or tank ruptures that may happen. The bund is designed to hold the contents of the largest tank. The bund is also designed not to allow any spilt product escaping into the environment. There are no valves in the design of the bund and the bund floor is made of concrete, and is sloped towards a blind pit. This pit will be pumped out after rain and the pumped out water shall be disposed of in a correct and proper manner.

There is a hydrant located on the north eastern corner of the area and one on the southern boundary fence near the entrance gate. Another hydrant is located outside the office storage shed. Installed beside the office store room on a outside wall is a fire hose reel, installed as per Australian Standards. A number of fire extinguishers are to be installed throughout the site, as per fire safety plan.

iii Arson (cont'd)

The bunded area will contain 561,000 ltrs of fire water. If the fire fighting equipment supplies 2,280 ltrs of water per minute, "this figured obtained from the NSWFB", the bunded area will take 4.10 hours to fill with fire fighting water. This should be sufficient time to extinguish a fire. The largest tank in the bunded area contains 120,000 Ltrs of Class 9 product. This product does not have a PG number thus the product is not likely to catch fire.

There will be signs on each and every tank, which will show the tank number, the size of tank and the UN number. These signs will be as per AS 1940- 2004, and the Occupational Health and Safety Regulations 2001 [with amendments] and shall be easily visible. There will be signs placed on the front fence near the entrance to the site; these signs will display the UN number of the products being held. The site will have a Dangerous Goods licence issued, "only because of the size of the tanks being used". This information will advise the Fire Brigade of types of chemicals involved in the fire, when transmitted to the Fire Brigade from WorkCover Stored Chemical Information Database ((SCID)) whilst on route.

The bunded area will hold and contain the fire water. The area will hold over 500,000 litres, of fire water, and no fire water will enter the storm water system. If by some change the fire can not be extinguished within the 4 hour window then dams will be built around the storm water drains to stop any fire water entering the storm water system.

After the fire has been extinguished the contaminated fire water can be pumped out of the bunded area and disposed of in a correct and proper manner.

A fire outside the bunded area will pose a threat to the storm water system, with this in mind, spill kits will be placed around the site at strategic points. They will be also located near any storm water grate. The spill kits will contain enough sausage type material as to be able to make a dam around the storm water grate.

The instructions shall be written into the staff training manuals, and signs shall be placed beside the spill kits and all the staff shall be trained in there use. It should be stipulated that the damming of the storm water system should only be done without putting anyone in harm.

The adjoining factory wall is tilt slab concrete and should remain unaffected other than by smoke.

Smoke from the fire is thick and acrid but not toxic.

(c) Harm to persons

In the case of a person falling from the elevated walk way is very possible, although the walk way is built to the relevant standard it is still possible for someone to fall down. The possibility of someone starting a fire because they fell down is extremely rare. The tanks are constructed to the standards, the product being stored has an extremely high flash point and no naked lights are allowed on site.

There is good ventilation and the chance of being overcome by fumes is minimal. A safety shower is close by and there are no close ignition sources.

6. Fire Prevention Strategies / Measures

The main hazards associated with the storage of flammable and combustible materials would be the introduction of uncontrolled ignition sources and access to Restricted Areas by unauthorised personnel.

a. Potential & Control of Ignition sources

When loading or unloading any vehicle the engine must be switched off and must not be started whilst in the hazardous zone. The vehicle must stay outside any delineated hazardous zone.

No active or potential ignition source shall be introduced into a restricted area without authorisation. Portable electric equipment shall not be taken into a hazardous zone unless approved for use in such a zone or authorised by a Work Permit note.

All known ignition sources such as power outlets and light switches that don't meet AS 3000 Standard will be removed to a distance of three metres to the tank farm.

i. Engines

Only a compression ignition engine designed and certified to comply with AS2359 to operate in a hazardous zone may operate in zones for which it is certified.

A compression ignition engine which does not comply with the above shall not be operated in any hazardous zone and **a spark ignition engine shall not be operated** in any hazardous zone unless approved by a duly authorized hotwork permit issued in accordance with AS 1940-2004 and AS 1674.1.

Lawn mowers, trimmers, chainsaws and the like are spark ignition engines and in regard to the tank farm, shall not be started or run.

b. Static Electricity

The tanks within the tank farm shall be earthed.

Earth straps shall be used in all product transfer operations as per the operation manual issued to all staff and contracting staff used in the day to day operation of the site.

Earthing and bonding conductors for dissipating static shall be sufficiently robust to withstand all mechanical and corrosive influences likely to occur in normal use. They shall be attached by soldering, welding (away from the flammables area) or suitable screwed terminations. Chains shall not be used.

The conductors shall be checked at regular intervals to ensure their electrical continuity.

c. Wearing Apparel and footwear

It is recommended that persons working in hazardous locations and liable to attain a charge in their normal work processes do not wear metal articles such as metal watchbands or bracelets. Finger rings are the only exception to this rule.

Care should also be shown in the choice of clothing. Clothing of synthetic fibres is prone to generation and accumulation of static unless regularly treated with antistatic solutions.

Static discharges are liable to emanate from such untreated clothing when worn loose fitting on the body, and from tight-fitting clothing as it is removed from contact with the skin.

Clothing of synthetic fibres or other non-conducting materials is therefore not recommended in areas where flammable or explosive materials are liable to be present. Clothing manufactured from the following materials is suitable:

- (a) Cotton.
- (b) Polyester 50 percent and cotton 50 percent blend.
- (c) Polyester 65 percent and viscose 35 percent blend.
However this is not recommended because of the tendency to cause injuries by melting in the event of a fire.

c. Wearing Apparel and footwear (cont'd).

Unsuitable materials include the following:

- (i) Nylon.
- (ii) Pure wool and wool blends (unless treated with an antistatic process).
- (iii) Polyvinyl materials-especially if coated with a nylon base.

Conducting footwear is recommended for use in areas where there is no risk of electric shock from supply mains. In order to ensure that the footwear is definitely conducting, the resistance shall not exceed 150 k W.

Leather-soled footwear may not always be sufficiently conducting to give protection against build-up of static. Care should always be taken to ensure that the antistatic or conducting properties of footwear are not impaired, e.g. by ageing or the formation of insulating layers such as oil or wax on the sole. The likelihood of the latter occurrence may increase if the footwear is worn outside the danger area. It is therefore recommended that the resistance of footwear be tested at regular intervals.

d. Depot Security

Strict procedures shall be established for the control of entry to the restricted area and the prevention of unauthorised access to the facility will be adhered to.

All tanks in the tank farm are kept closed; no de-canting takes place in the Depot.

As a Zone 2 area (AS2430-1) the Depot is a Restricted Area and access to the Depot is to be by Authorised Personnel Only.

At all times the Depot is unattended it shall be kept closed and locked. By restricting access to trained personnel only, the hazards associated with uncontrolled access are avoided.

d. Depot Security (cont'd)

The Site Safety Manual outlines the Daily Fire Prevention Duties of the appointed Site Warden including:

- Housekeeping
- Combustible rubbish
- Ignition Sources
- Exit Lights
- Exit doors and hardware in good condition
- Exit routes unobstructed
- Fire Exits and Hose Reels accessible and ready for use

7. Details of Detection and Protection

Ignition sources have been eliminated as a credible risk by means of:

- separation distances,
- the control of access,
- the control of on-site procedures and activities
- good housekeeping in keeping the site clear of combustibles.

The fire alarm system will comply with AS 1670 and AS1603.5.

Hardwired (flame proofed) smoke detectors will be fitted to the office and warehouse areas. The alarm will activate an audible alarm and a flashing light in the front of the building. The alarm systems will be capable of being manually activated at clearly identified positions.

The warning signal of the alarm system shall be sufficiently distinguishable from other signals to permit ready recognition, and shall be clearly audible throughout the installation. The power supply for the alarm system shall be independent of the main electricity isolating switch for the area.

a. Physical Damage

Physical damage arises mainly from vehicles - most commonly trucks arriving and departing. The solutions being:

- impact protection,
- the choice of a safe location,
- truck movement
- appropriate signage

a. Physical Damage (cont'd)

An accidental on-site fire is dealt with by preventive measures and procedures. Liquid spills at the Depot, are prevented from becoming a major hazard by bunding of the Depot, containment humps in the warehouse, grading, and other spillage controls.

Spill Kits will be positioned at strategic locations adjacent to the Depot and the areas where the material is loaded or unloaded to vehicles.

The proposed construction of a complying bund to the tank farm and other site safeguards to be undertaken sufficiently reduces the risks to a manageable level.

Staff training and manuals of operation are to be employed and all staff and contractors will be fully aware of their location and contents.

All vehicles that will use the loading and unloading area will be equip with a brake into lock bar that will prevent the vehicle from moving forward whilst unloading or loading. This bar shall be fitted across the tanker manifolds and when in the up position to allow for the removal of the cam lock caps on the filling tubes will leave the brakes applied, to stop the vehicle from moving. After the loading or unloading of the vehicle and the cam lock caps have been placed over the filling tubes, the bar shall be brought down across the manifolds to allow the release of the vehicles brakes.

This will meet AS 2809.01- 1999"Road Tank Vehicles for Dangerous Goods - general Requirements".

All trucks that enter the site will be controlled by the site manager, and vehicle loading and unloading will be overseen by the site manager.

8. Drawings of Fire Services Layout

As per attached drawing of Fire Safety Plan

9. First Aid Fire Protection Arrangements and Equipment

Site-specific safety manuals are available dealing with:

- storage and handling of flammable and combustible materials

AS 1940-2004 “The Storage and Handling of Flammable and Combustible Materials”
- emergency action plans including first response fire fighting
- site evacuation.

Key staff will undergo specific training for first response procedures.

All staff involved in the handling of dangerous goods will be made aware of the workplace hazards by referral to the site safety manuals and the current Material Safety Data Sheets, which will be kept on site. All necessary signage for identification will be in place as specified by consultants.

As detailed on the site plan, the installation of fire extinguishers, hose reels and street hydrants are clearly marked.

Additional fire extinguishers will be installed in accordance with Regulation AS1940/2004 Section 11.4 and Table 11.1

Adjacent to the tank farm will be 2 x 9kg 2A60 B (E) dry chemical fire extinguishers, and 2 x 9kg, 2A 20B foam extinguishers.

Access to the extinguishers will be kept clear at all times, a yellow line will be marked on the ground to delineate a no storage area in front of the extinguishers and the two existing Hose Reels in the warehouse area.

All fire extinguishers are maintained under arranged contract.

An emergency services cabinet will be placed in a secure position at the site main entrance that will contain all relevant information in regard to the Dangerous Goods stored on site. A duplicate key will be supplied to St Marys Fire Brigade and the Dunheved Fire Brigade.

10. Site Location Sketch

As per attached site location plan

11. Site Layout Diagram

As per attached site layout diagram

12. Proposed Manifest & Appropriate Material Safety Data Sheet

Product manifest, site plans, services, appropriate material safety data sheets and other relevant material will be kept in the emergency services cabinet adjacent to the main entrance. These will be updated on a regular basis.

References:

- DUAP Hazardous Industry Planning Advisory Paper - Fire
- DUAP Hazardous Industry Planning Advisory Paper - Construction
- Material Safety Data Sheets for the relevant products.
- Dangerous Goods (General) Regulation 1999 under the Dangerous Goods Act 1975
- Australian Dangerous Goods Code, Sixth Edition 1998.
- AS 1940-2002 "The storage and handling of flammable and combustible liquids".
- AS/NZS 1020-95 The control of undesirable static electricity
- AS2419 Fire hydrants installations
- AS2430 Classification of hazardous areas Part 1:
Explosive gas atmospheres
- AS 3765-90 Clothing for protection against hazardous chemicals

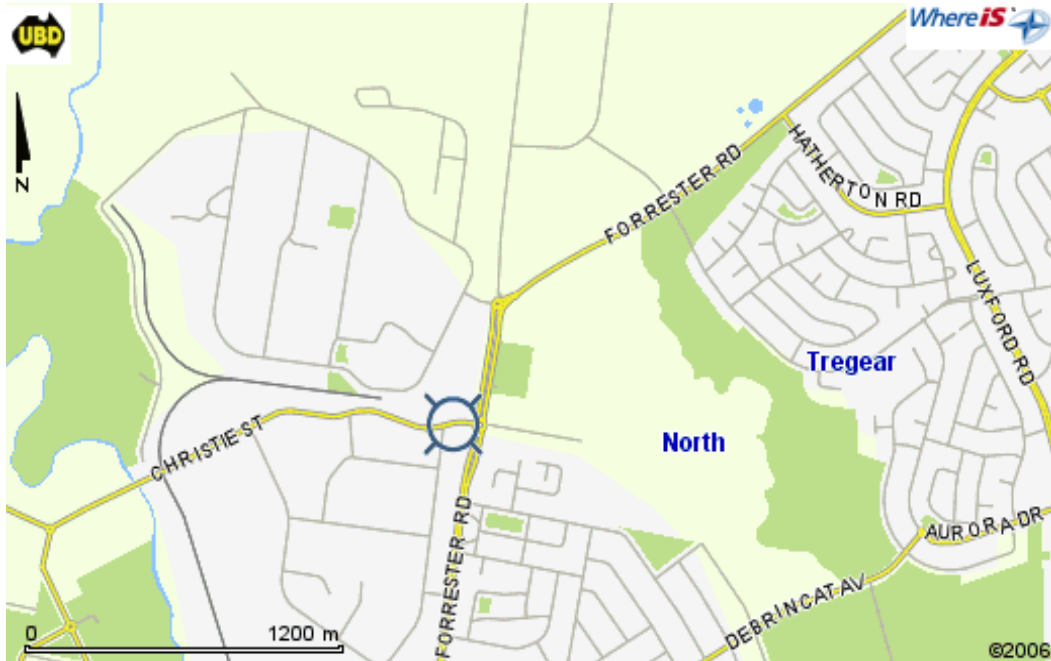
Australian Institute of Petroleum, Guidelines for Emergency Plans - 9

APPENDIX

Fire fighting media installed at Klekies 85 Christie St, St Marys

EXTINGUISHING AGENT	DEVICE	EFFECT	APPLICATION
Water	Hose reel	Cooling	Small To Large Fires Cooling Exposed Surfaces
Foam	Portable Extinguisher	Smothering Cooling	Flammable liquid Fires
Dry Chemical	Portable Extinguisher	Smothering	Small to Large Fires

SITE LOCATION



The site is located just above the letter H in Christie St.

End of Report.