



STAFF REPORT

TO: Environment and Planning Hearing Committee

FROM: Natasha Lewis – Consent Planner, Discharges

REFERENCE: RM041239

SUBJECT: **CW DRILLING AND INVESTIGATION LTD – REPORT EP05/05/05**
- Report Prepared for 16 May 2005 hearing

1. PURPOSE FOR REPORT

This staff report has been prepared by the Council's Consent Planner, Discharges in relation to the application for discharge consent RM041239 sought by CW Drilling & Investigations Ltd, associated with the application for land use consent (RM041237) to operate a light industrial activity.

2. APPLICATION BRIEF

Proposal

The application is for a discharge to land consent.

The applicant has sought resource consent to authorise the discharge of treated wash down water from a proposed vehicle wash facility to land. The wash down water will be generated from a proposed vehicle wash facility associated with the proposed light industrial activities sought to be authorised by RM041237. These applications were sought concurrently and the application for land use consent has been assessed by Bob Askew and presented in Report EP05/05/04

The applicant has sought consent to discharge up to 1500 litres per day of wastewater (vehicle washwater and stormwater) to land, and up to 5000 litres per week.

Site Location and Legal Description

The activity is proposed to be undertaken on a 3.4413 hectare property at 85 Moutere Highway, Motueka. The property is currently owned by James and Angela Chapman and has a legal description Lot 2 DP 1884 Blk VII Mouteka SD.

The property is part of the Rural 2 zone, the eastern corner is located within the Coastal Environment Area and would be subject to specific restrictions. Relevant District Planning matters have been addressed in detail in Bob Askew's report and will not be considered further here. The site is part of the Riwaka Water Management Area (see water quality standards specified later in this report), and the nearby Coastal waters are classified for protection of aquatic ecosystems (see water quality standards specified later in this report) according to the Council's Planning Maps. Approximately half of the property is located in the Flood Hazard Area as defined by the Planning Maps.

No Council reticulated services (stormwater, water or sewerage) are available at the property.

3. NOTIFICATION, SUBMISSIONS AND WRITTEN APPROVALS

Prior to the lodgment of the application with Council, the applicant consulted nearby neighbours, NZ Historic Places Trust and local iwi. Responses from neighbouring landowners varied, as outlined in the report by Bob Askew. In making their decision on this application Council cannot consider adverse effects on persons that would normally be considered adversely affected if their written approvals have been provided. Written approvals were submitted with the application for resource consent from N H & JE Smith and A B & AR Wood, support was also received from the Holland Family Trust.

The applications relating to CW Drilling and Investigations Ltd proposed light industrial activity and associated discharge of truck wash water was publicly notified 27 November 2004. Ten submissions were received, six in opposition and four in support of the proposal. These submissions have been summarised and discussed in the Staff Report provided by Bob Askew in relation to the proposed landuse activities so a detailed assessment is not provided here. The comments of those submitters who made specific reference to the proposed discharge are summarised below, the writer has provided comments in italics below the summary of each relevant opposing submission. Furthermore, concerns raised by the submitters have been incorporated into the assessment of the application which follows in part 5 of this report.

MW Holland (Holland Family Trust) - Support

Effects similar to the effects caused by the operation of a light, industrial workshop on the site since 1960.

Cedric and Josephine French - Oppose

Concerned about contamination from discharge of washing water because high water tables in winter. 10 years ago bores in the area were shut down because of salt water intrusion.

Discharge could be restricted during unsuitable conditions when ground is likely to be saturated, but this has not been offered by the applicant. High water tables are of concern because of increased risk of groundwater contamination and soil saturation which would could lead to surface runoff. Applicant has not sought consent to utilise the bore on the property, but minimizing risk of contamination of groundwater for other uses is critical, the proposed TRMP has water quality standards that would apply.

William Buck - Oppose

Proposed irrigation area adjoins pasture utilized for grazing cattle destined for human consumption. Accumulation of total petroleum hydrocarbons in spray irrigated area will cause substantial permanent contamination. Prevailing south westerly will carry water from rotating sprayers onto pasture. No level of petrochemical or heavy metal contamination is acceptable.

Contaminant levels must be minimized to maintain the productivity of irrigated and surrounding land and associated water resources. ANZECC water quality guidelines for irrigation waters provide some guidance as do the water quality standards of the proposed TRMP, both should apply. Cross boundary effects from sprayers would need to be adequately avoided, remedied or mitigated. Application could be restricted to suitable weather conditions.

Clara and Lars Bouwer - **Oppose**

No specific reference to proposed discharge of washdown water.

Darryl Wilkins and Nicola Walsh - **Oppose**

Pollution of groundwater unacceptable given nature of adjacent landuse (i.e. horticultural, livestock and residential).

Pollution of groundwater would not be acceptable, compliance with relevant water quality standards must be required. Setbacks from adjoining properties have been proposed to limit potential adverse effects.

Lower Moutere Water Scheme Ltd - **Support**

Well researched and well presented application. Irrigation well subject to salt water intrusion 1991 and 1992. Pasture will need to be supplemented by additional freshwater in summer.

K W Palmer - **Support**

Well researched and well presented application. Irrigation well subject to salt water intrusion 1991 and 1992. Pasture will need to be supplemented by additional freshwater in summer.

Owen and Josie Smith - **Oppose**

No specific reference to proposed discharge of washdown water.

Norman Hubert and June Smith - **Support**

Resource consent for truck wash washwater discharge "no problem". Drainage in the area is good.

Unreferenced Petition - **Oppose**

This submission contained a petition with approximately 138 signatories. The signatories were predominately residents from nearby areas (including Bachelor Ford Road, Lower Moutere Highway, Central Road, Chamberlain Street and Hursthouse Street) and some more distant locations.

Discharge of truckwash water across the property adjacent to areas utilized for fruit growing and animal fattening for human consumption poses an unacceptable risk.

Irrigation water quality standards would have to apply to minimise contaminant potential. Some measures to minimise cross boundary effects have been proposed by the applicant, additional measures could be imposed with consent conditions. Protection of productive use of adjoining land is important.

4. STATUTORY CONSIDERATIONS

The Resource Management Act, 1991

In accordance with Section 15 (1) of the Resource Management Act, 1991, no person may discharge any contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water unless the discharge is expressly allowed by a rule of a regional plan, a resource consent, or regulations. Section 15 (2) of the RMA prohibits any person from discharging contaminants into or onto land from any place in a manner that contravenes a rule in a regional plan or proposed regional plan unless that discharge is expressly allowed by resource consent or allowed by Section 20 (certain existing lawful activities).

Section 104 of the Resource Management Act, 1991, requires Council to consider a number of factors when assessing an application for resource consent including:

- a) Actual and potential environmental effects of allowing the activity; and
- b) The nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects and the applicants reasons for making the proposed choice; and
- c) Relevant rules and policies of applicable plans and policy statements; and
- d) Any possible alternative methods of the discharge, including a discharge into another receiving environment; and
- e) Whether affected party approval is required/has been obtained; and
- f) Part II of the Resource Management Act, Purpose and Principles.

The relevant matters in Part II are summarised below.

Section 5 describes the purpose of the RMA as being to promote the sustainable management of natural and physical resources. The underlying philosophy is 'enabling' in nature, so that people should be able to meet their needs as long as they do not compromise the ability of others to meet their needs now and in the future. Appropriate protection is to be afforded to the environment from any potential adverse effects. The applicant proposed that the activity would be consistent with the principles of sustainable management "*CW Drilling and Investigation provides services and employment in a way that maintains the health, safety, social, economic and cultural integrity of the local community whilst managing natural and physical resources*".

Section 6 deals with matters of national importance. The applicant proposed that consistency here is achieved through the "*minor nature of the development avoiding such values*". The writer considers that protecting nearby coastal waters from contamination must be considered regardless of the scale of development.

Section 7 details other matters that particular regard must be given to. In summary and having particular relevance to this application are:

- a) Section 7(b) that is concerned with the efficient use and development of natural and physical resources;
- b) Section 7(c) relates to the maintenance and enhancement of amenity values;
- c) Section 7(d) pertains to the intrinsic values of ecosystems.
- d) Section 7(f) requires the maintenance and enhancement of the quality of the environment;
- e) Section 7(g) relates to any finite characteristics of natural and physical resources.

The applicant proposed that the low scale and intensity of the proposed activities are such that this operation is comparable to other rural activities, such as orchards, vineyards or farm operations. The writer considers that protection of the productivity of the disposal area and surrounding land and prevention of contamination of water resources should be considered.

Section 8 requires consideration of the purpose and principles of the Treaty of Waitangi. The applicant met with local Iwi prior to the lodgement of this application, copies of all notified applications are provided to Iwi as part of Council's partnership protocols. Iwi did not lodge a submission on this application, however, Council must still consider the principles of the Treaty of Waitangi when making decisions on applications.

Section 107 of the RMA requires that, other than in exceptional circumstances or for a temporary discharge, any discharge of a contaminant onto or into land in circumstances which may result in that contaminant entering water, should after reasonable mixing with the receiving waters meet the following standards:

- a) no conspicuous oil or grease films, scums, foams or floatable or suspended materials;
- b) no conspicuous change in colour or visual clarity;
- c) no objectionable odour from the discharge;
- d) no significant adverse effects on aquatic life.

In considering an application for resource consent the Council must ensure that if granted, the proposal is consistent with the purposes and principles set out in Part II of the Act. The principles of Part II of the Resource Management Act, 1991, underpin all relevant Plan and Policy Statements, which provide more specific guidance for assessing this application.

Application for resource consent has been sought in accordance with Section 15 of the Resource Management Act, 1991, (RMA) because the proposed discharge of truck wash water does not comply with any of the permitted or controlled activity rules for discharges to land contained within the Regional Plan and is therefore considered a discretionary activity. In accordance with Section 104 (B) of the RMA after considering an application for resource consent for a discretionary activity, a consent authority may grant or refuse the application and if it grants the application may impose conditions under Section 108 of the RMA. In accordance with Section 105 of the RMA if the application is for a discharge permit to do something that would otherwise contravene Section 15 of subsection 15B, the consent authority must, in addition to the matter set out in Section 104 (1) have regard to;

- a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
- b) the applicant's reasons for the proposed choice; and
- c) any possible alternative methods of discharge, including discharge into any other receiving environment.

Tasman Regional Policy Statement

The Regional Policy Statement is a strategic tool to promote sustainable resource management of natural and physical resources in the Tasman District. The policy statement sets out general objectives for achieving this goal and identifies significant issues in this region. Contaminant discharges, land, coastal water and freshwater resources are all identified as a significant issues to this region within the Policy Statement. There are a number of policies that are of direct relevance to this proposal, these are listed below:

Policy 7.4 The Council will:

1. preserve the natural character of wetlands, rivers and lakes, and
2. protect and enhance or support the protection and enhancement of natural, recreational, cultural, intrinsic, and instream features and values of wetlands, rivers (including karst rivers) and lakes, in particular those that are of international, national or regional significance. In relation to all significant wetlands, rivers, and lakes, the risk adverse effects on their natural, recreational, cultural, intrinsic or instream values shall be relevant to achieving such protection or enhancement.

Policy 9.7 Council will avoid, remedy or where appropriate mitigate adverse effects of the subdivision use or development of coastal land having regard to a number of specified factors of such habitats, ecosystems, features, landscapes, sites, values or taonga (abbreviated).

Policy 9.8 Council will classify coastal waters according to iwi and public uses and values, including aquatic ecosystem, gathering or cultivating of shellfish, fishery, contact recreation, and aesthetic uses and values, for which water quality is to be maintained or enhanced.

- Policy 10.1 Council will classify significant water bodies for which water quality is to be maintained and enhanced for specific purposes.
- Policy 10.4 Council will avoid, remedy, or mitigate adverse effects of the disposal of solid or liquid waste contaminants, by seeking land disposal of such wastes where it is the best practicable option.

Transitional Regional Plan

The discharge of truck wash water to land was not permitted by any of the general authorisations contained within Tasman District Council's Transitional Regional Plan. However, General Authorisation 6. Take/Discharge (Drilling and Aquifer Investigation) permitted the *"taking and discharge of water during well drilling operations, aquifer testing and investigation. Any discharge must be onto land to minimise resource impacts. The General Authorisation covers water taken and used for cooling and lubrication of drilling equipment and water taken and discharged from a bore for water quality and yield testing. Care must be taken with water discharged to ensure that no pollution of natural water takes place"*. This authorisation does not specifically permit the proposed activity so resource consent would be required, however, in assessing the resource consent consideration of the effects of the activity permitted by this authorisation is required. An activity not covered by these General Authorisations would have been considered a discretionary activity, however, this plan should be given little weight due to the advanced status of the Discharge Chapter of the proposed Tasman Resource Management Plan.

Proposed Tasman Resource Management Plan

The Proposed Tasman Resource Management Plan (proposed TRMP) contains more detailed policies and objectives based on the issues identified in the Regional Policy Statement and sets out specific rules for various types of contaminant discharges.

There are a number of policies contained in the proposed TRMP of relevance to this proposal. These are listed below:

- Policy 5.4.2 Avoid, remedy or mitigate the likely adverse effects of facilities for the manufacture, storage, use or disposal of hazardous substance, on human health, other land use activities or the environment, including those effects arising from the location, design, construction or management of such facilities.
- Policy 5.4.3 To avoid, remedy or mitigate the likely adverse effects of the transport or use of hazardous substances, arising out of their manufacture storage or use.
- Policy 5.4.4 To avoid any escape or discharge to surface water or groundwater, or drift to other property, of any hazardous substance, from within the site it is in.
- Policy 5.4.4A To require adoption of land management practices that avoid the potential for creating future contaminated sites.

Policy 5.4.4B To require the preparation of a contingency plan to avoid, remedy or mitigate any adverse effects of an emergency discharge or accidental spill of hazardous substances.

Policy 5.4.4C To encourage the reduction in the use of hazardous substances.

(Policies 5.4.2 – 5.4.4C outlined above are of relevance to the storage and use of hazardous substances on the site and as such are also included in the assessment of the land use application by Bob Askew. They are of relevance to this assessment because of the potential for hazardous substances to enter the wash water system).

Policy 33.1.1 To recognise and provide for the uses and values of water through a system of classification that establishes the water quality standards required to protect the water quality needs of those uses and values.

Policy 33.1.4 To ensure that water quality is not degraded where the existing water quality is the same or higher than the relevant water classification or any water conservation order.

Policy 33.1.5 To ensure that existing water quality is not degraded after reasonable mixing as a result of any discharge of contaminants into water and to take into account certain criteria outlined in the Plan when determining what constitutes reasonable mixing.

Policy 33.1.6 To take into account a range of factors specified in the Plan in determining the significance of actual or likely adverse effects on the receiving water of or from contaminant discharges.

Policy 33.1.8 To avoid, remedy or mitigate the adverse effects of non-point source contamination arising from land use and discharge activities.

Policy 33.1.9 To seek to improve water quality by appropriate riparian and coastal land management.

Policy 33.1.10 To promote and encourage discharge of waste to land or constructed wetlands in preference to water where:

- a) Discharge to land or constructed wetlands has less actual or potential adverse environmental effects than discharge to water;
- b) Land disposal system design and operation is such that the adverse effects on the environment, including soil and surface and groundwater quality are avoided, remedied or mitigated; and
- c) The discharge to land is the best practicable option.

The discharge of truck wash water to land is not authorised by any of the permitted or controlled activity rules in the proposed TRMP for discharges to land and therefore, falls to be assessed as a discretionary activity under Rule 36.1.16.

Schedule 36.1A: Water Classification for the Motueka / Riwaka Plains Water Management Area

The groundwater of the Motueka/Riwaka Plains Water Management Area

G – Management for stock water, irrigation and water supply
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| <ol style="list-style-type: none">1. The natural temperature of the water must not be changed by more than 3 degrees Celsius.2. The water must not be tainted or contaminated so as to make it unsuitable for the irrigation of crops growing or likely to be grown in the area to be irrigated.3. The water must not be tainted or contaminated so as to make it unsuitable for consumption by animals.4. The pH of the water must be within the range of 6.0 - 9.0 pH units.5. The water must not be tainted or contaminated so as to make it unpalatable or unsuitable for consumption by humans, after treatment (equivalent to coagulation, filtration and disinfection), or unsuitable for irrigation.6. The water must not be rendered unsuitable for treatment (equivalent to coagulation, filtration and disinfection) for human consumption by the presence of contaminants. |
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Schedule 36.1C: Water Classification for the Coastal Marine Area

Coastal waters shown on the Coastal Marine Area planning maps as Class FAE

FAE – Management for aquatic ecosystems, fisheries, and fish spawning
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| <ol style="list-style-type: none">1. The natural temperature of the water must not be changed by more than 2 degrees Celsius.2. The following must not be allowed if they have an adverse effect on aquatic life:<ol style="list-style-type: none">(a) any pH change;(b) any increase in the deposition of matter on the bed of any coastal marine area;(c) any discharge of a contaminant into the water.3. The concentration of dissolved oxygen must exceed the higher of 6 milligrams per litre or 80 percent saturation.4. There must be no undesirable biological growths as a result of any discharge of a contaminant into the water.5. Fish must not be rendered unsuitable for human consumption by the presence of contaminants. |
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5. ASSESSMENT

In accordance with Section 104 and 105 of the Resource Management Act, 1991, Council must consider the actual and potential effects on the environment of allowing the activity to occur, having regard to any relevant objectives, policies, rules (outlined in part 4 of this report above) and consider any other matters relevant and reasonably necessary to determine the application.

Assessment of Environmental Effects

Pursuant to section 104 1 (a) of the Resource Management Act, 1991, an assessment of any actual and potential effects on the environment of allowing the activity to occur follows.

Receiving Environment

The site is located in a rural area, predominant surrounding land uses are horticultural, agricultural and a number of small residential and rural residentially sized properties. The nearest surface natural water body is a tributary of the Moutere River which runs parallel to the southern boundary of the property approximately 150 metres from the property. This tributary enters the Moutere River at the boundary of the neighbouring property owned by L & C Brouwers, flowing to the Moutere Inlet a few hundred meters away. The water quality parameters and values of the Moutere River have not yet been assessed under the proposed TRMP so a precautionary approach is required. The Coastal Waters of the Moutere Inlet have been classified as Class FAE (Management for aquatic ecosystems, fisheries, and fish spawning) and water quality standards apply to protect these values. The applicant proposed that their operations were not “envisaged” to have any adverse effects on aquatic habitats.

The applicant stated that groundwater was located approximately 2-3 metres below the ground surface, although the bore log provided with a reply to Council’s request for further information indicated the presence of water at shallower depths (approximately 1.3 metre depth). Due to the proximity of the site to the river it was assumed probable that the groundwater at this location is hydraulically connected to the Moutere River and its tributaries. Two submitters (Lower Moutere Water Scheme Ltd and C & J French) raised the probability of coastal influences to groundwater at the site, salt water intrusion was said to have prevented the use of groundwater bores in the area approximately ten years ago. The applicant has not sought resource consent to utilise the existing groundwater bore on the property. Groundwater in the Riwaka Water Management Area (of which this site is part) has been classified and water quality standards contained within the proposed TRMP apply. These standards seek to protect the groundwater quality for stock water, irrigation and domestic water supply purposes.

The applicant described the subsoil identified in the bore log on the site as a sandy gravel. The Soil Bureau Bulletin 30, Soils and Agriculture of Waimea County, New Zealand¹ classifies soils in the area as Hau stony clay loam. These soils are said to have formed on stony alluvium from greywacke, argillite, quartzite, limestone, granite, and basic igneous rocks. The predominance of gravels and sands within the soil profile highlights the free draining nature of soils at the site (consistent with submitter comment, N Hubert and J Smith). The productivity of soils in the area is recognised. As discussed in the report prepared by Bob Askew for RM041237 the proposed light industrial activity will lead to a loss of some productive land. The proposed discharge of truck wash water should not lead to further losses of productive land, provided adequate contaminant controls apply, however, productive uses of that land are likely to be limited.

¹ New Zealand Department of Scientific and Industrial Research, 1966, Soils and Agriculture of Waimea County, New Zealand Soil Bureau- Bulletin 30.

Characteristics of the discharge

The proposed discharge will comprise of wash down water from the cleaning of vehicles and equipment, and stormwater from the proposed wash pad facility. The facility is intended to service vehicles associated with the applicants drilling and investigation business such as the drill rig and associated equipment. Public use of the vehicle wash facility should not be permitted under any circumstances due to the risks involved. Any consent granted to authorise the proposed activity must restrict such use. Likely contaminants associated with the proposed discharge have not been clearly identified by the applicant, contaminant levels and types of consent will be dependant on the work undertaken with the equipment.

The most obvious contaminants of concern from the proposed activity would be suspended sediment, total petroleum hydrocarbons and oils and greases. High sediment levels in the wash water discharge are likely to clog the irrigation system and in turn the land disposal area, leading to reduced permeability of receiving soils. Additionally, sediments often contain elevated levels of contaminants as contaminants such as heavy metals, polynuclear aromatic hydrocarbons tend to bind to particulate material. High levels of hydrocarbons in the discharge can result in crop and organism mortalities and major losses in production. Wash water from vehicle and equipment washing could contain heavy metals (in particular copper, lead and zinc). Many metal elements are essential for animal and plant health, but elevated concentrations of certain compounds will cause chronic or toxic effects. Bioavailability is the key to determining effects.

Detergents and surfactants will affect the performance of the proposed interceptor system, mobilising oils and greases preventing separation prior to disposal. Additionally, such chemicals are hazardous substances and pollutants in their own right. The applicant proposed that no detergents or cleaning products would be used at the truck wash facility, only a hot water blaster. This restriction must be reflected in the conditions of any consent and adequate retention time in the system will be required to reduce the temperature prior to discharge.

It is possible that a much wider range of contaminants (than those mentioned above) and much higher concentrations of those contaminants could be present if work was to be undertaken on sites which have stored and/or used hazardous substances. If consent was to be granted to authorise this activity, conditions restricting the nature of contaminants able to enter the disposal system must be imposed to reduce the risk of adverse effects on the receiving environment. If work was to be undertaken on contaminated sites, equipment washing should be required to take place at a commercial vehicle wash facility that discharges to a reticulated sewerage system that would be better able to cope with potential contaminants or contained in the proposed treatment system and taken off site by a septic tank cleaning truck.

The applicant has proposed that the discharge of truck wash water will not exceed 1500 litres per day and 5000 litres per week. The rate at which this wastewater is applied to land is an important factor in assessing the potential effects of the discharge. The wastewater must be applied at an appropriate rate to ensure that the receiving soils have the treatment capacity and the hydraulic capacity to accommodate the discharge.

The applicant was requested to provide details of the maximum proposed loading rates on two occasions (Further information requests from Council dated 11 November 2004 and 26 January 2005). This information has still not yet been provided in a satisfactory form to enable a thorough assessment of potential adverse effects.

In their latest response the applicant proposed that at a maximum discharge rate of 1500 litres, with the two sprinkles operating the daily volume of wastewater will be discharged within approximately 67 minutes. Truck washing is predicted to occur only once or twice a week, with additional quantities included for stormwater and equipment washing. The site plan provided by the applicant depicting the proposed disposal area indicates that the area will cover approximately 200 square meters. A maximum discharge of 1500 litres irrigated over this area would indicate a maximum daily application rate of approximately 8 millimetres. If these assumptions are correct, given the free draining nature of soils at the site it would appear that the hydraulic capacity of these soils should be able to cope with the proposed discharge of wash water without causing ponding and runoff.

However, consideration of the ability of the soils to cope with the contaminant load of the discharge still requires careful assessment. The applicant was reluctant to obtain monitoring data from their current operations which would provide some indicative data for this assessment, the applicant felt that the system proposed in this instance provides a higher level of treatment so results would be inaccurate. The applicant was also reluctant to utilise information from other companies due to variability in the operations (volumes, source of material etc). The lack of information regarding likely contaminant levels makes an assessment of the potential effects of the proposal difficult. The applicant has proposed compliance with the contaminant limit for total petroleum hydrocarbons for stormwater discharges from the proposed TRMP and have stated that they will “endeavour to comply with the ANZECC Water Quality Guidelines for irrigation waters²” there is little confidence and certainty with this statement.

Consent was not sought to discharge contaminants to air with this application for resource consent so compliance with Councils permitted activity provisions is required.

Treatment and Irrigation System

A 50 square metre concrete pad is proposed to be constructed within the proposed yard area to accommodate the vehicle wash facility. Washwater was to be directed to a 2.7 cubic metre collection tank, before passing through an Alpha Precast 3 stage interceptor system (total volume 1.6 cubic metres) then to a 4.5 metre storage tank, prior to irrigation to land. Interceptors aim to treat most of the flow (90-95 %) to a reasonable degree (15 milligrams per litre oil and grease) and remove free floating oils³. However, these interceptors are not primarily designed to remove suspended sediment and further treatment is generally required. Interceptors provide additional benefits for spill containment, as spills can be contained within the interceptor tanks and removed from site for appropriate disposal.

² ANZECC, 2000, Water Australia New Zealand Guidelines for Fresh and Marine Water Quality.

³ Auckland Regional Council, 1992. Stormwater Treatment Devices Design Guidelines Manual, Technical Publication 10.

Irrigation will occur via two or three impact sprinklers permanently located along the fence line that runs east to west down the centre of the property. The applicant proposed that these may be moved up and down the fence line if required. Irrigators are to operate with a 11.5 metre radius, the applicant has proposed that a minimum 50 metre buffer will be maintained between all neighbouring boundaries, proposing that "any potential cross boundary effects are anticipated to be negligible". The proposed surface irrigation system increases risk of adverse cross boundary effects but would reduce the risk of disturbance of the midden located on the site that could occur through installation of below ground irrigation lines.

The applicant proposed in their original application documentation that the discharge would be disposed of over 3 hectares of land, this seems to have been modified subsequently as the area nominated on a recent site plan is much smaller (approximately 200 square metres) see Appendix A. This reduction may be an attempt to address submitter concern about cross boundary effects but does decrease the area available for disposal, consequently increasing the application rates required.

The applicant proposed that when necessary, a hazardous waste disposal contractor will be commissioned to clean out the interceptor. Regular maintenance of an interceptor is critical to maintaining its efficiency in reducing contaminant levels in the discharge. Without systematic, regular maintenance oil and total petroleum hydrocarbon removal will be insufficient. If consent was to be granted it would be necessary to REQUIRE maintenance at defined intervals. Frequency of maintenance will be dependant on the level of contaminants entering the system.

A contingency plan was not submitted with the application for resource consent. Council policy (Policy 5.4.4B) requires such plans to avoid, remedy or mitigate any adverse effects of emergency discharges or accidental spillages of hazardous substances. Although the storage and use of hazardous substances on site may meet Council's permitted activity requirements, a contingency plan should be required as spillages in the yard area could affect quality of the discharge. Bunding around all areas in which hazardous substances are stored and or used will be necessary. This contingency plan should cover the operation and maintenance requirements of the irrigation system to ensure that in the event of failure or other emergency, adverse effects are minimised. Operation and management provisions to minimise cross boundary effects raised by submitters and potential adverse effects on surrounding productive land must be incorporated as conditions of any consent granted and taken into account in the preparation of an Operation, Management and Contingency Plan.

Discharges of truck wash water are considered to be more appropriately discharged to a reticulated, Council, sewerage system than having to be accommodated on-site. Reticulated sewerage schemes provide more treatment than can be provided through an interceptor system and are better able to cope with fluctuations in load which are likely in this system. As Council sewerage is not available at this site the applicant should have considered alternative sites where such servicing was available.

However, the shortage of industrially zoned land in the region is recognised and is to be addressed by Council in the near future. The proposed disposal of truck wash water to land is considered, by the writer, to be more appropriate than a direct discharge to groundwater where risks of contamination are accentuated. Additionally, the discharge can provide irrigation benefits when applied to land.

It is the writers opinion that if the applicant was able to provide additional assurance of contaminant levels of the discharge and accepted a comprehensive suite of conditions controlling the activity, the effects of the activity should be no more than minor and resource consent could be granted. Provided adequate controls on contaminant levels of the discharge and operation and management controls, the cross boundary effects of concern to submitters should be largely avoided.

Monitoring

Following Council concern regarding potential contamination levels raised in requests for further information, the applicant proposed a condition to require:

“From the point of discharge CW Drilling and Investigation Ltd will collect a water sample to be analysed for total petroleum hydrocarbons. Monitoring will be monthly for the first three months, three monthly for the first year, six monthly for the following two years and 12 monthly thereafter”.

The applicant proposed that if any of these samples identify levels of total petroleum hydrocarbons above the 15 milligrams per litre limit they will cease the discharge and clean out the interceptor system. A second sample was proposed to be collected in the two weeks following the incident. The applicant proposed staggered monitoring which would see the monitoring frequency reduce to annually within three years. The applicant proposed that if the truckwash is able to meet the standards listed in the TRMP then 12 month monitoring would be sufficient. But, there are no permitted activity, controlled activity or discretionary activity standards which apply to discharges of truckwash water to land (these would be imposed by conditions of any resource consent). The total petroleum hydrocarbon standard referred to by the applicant relates to discharges of stormwater to land or water and is of some significance in an assessment of permitted baseline activities but is not directly relevant to this proposal.

Ongoing and appropriate monitoring is necessary to adequately assess actual effects of an activity over the long term. With the uncertainties evident in this proposal with respect to contaminant limits, monitoring would be essential if Council were of the mind to approve such a consent. Any such consent would require a comprehensive review provision to enable Council to review conditions of the consent (including contaminant load) if concerns were identified at a later date. The monitoring proposed by the applicant goes some way in addressing these concerns but additional parameters are recommended.

Permitted Baseline

As outlined in Bob Askew's report, the 2003 Amendments of the Resource Management Act means that Council may consider effects of activities permitted to be undertaken at the site. Please note this assessment was previously required but is now at Council's discretion. There are no permitted activity standards for discharges of truck wash water to land, however, other permitted activities involving discharges to land could be considered, those of some relevance to this application follow;

Rule 36.1.8 Discharge of Drilling Water

Permits the discharge of up to 200 cubic metres of water per day likely to contain clay or non-toxic polymer drilling contaminants onto land or into soakage pits or drill holes during drilling provided compliance with a number of conditions.

36.1.11 Discharge of Mining Washwater

Permits the discharge of wastewater that may contain sediment for or in connection with alluvial mining exploration or prospecting operations into the ground for disposal by seepage, or into groundwater provided compliance with specified conditions.

Rule 36.4.2 Discharge or Diversion of Stormwater or Drainage Water

Permits the discharge of stormwater or drainage water to land or water subject to a number of standards and compliance with several specified conditions. Of particular relevance *"any discharge or diversion from a site or any part of a site that is used for the use, storage or disposal of hazardous substances does not contain hazardous substances that is used, stored or disposed on site, except where it is less than 15 milligrams per litre of total petroleum hydrocarbons"*.

An assessment of activities permitted by the TRMP indicates that provided adequate contaminant limits were imposed on the discharge the effects of the proposed activity would not be expected to be significantly greater than effects permitted through these permitted activity rules. However, as outlined above, Council retains discretion over whether to consider these issues.

Assessment of Alternatives

The applicant considered three alternatives in their investigations, firstly connection to Council sewerage system (as this wasn't available at the proposed site no further discussion was provided on this option), secondly a direct discharge to groundwater and thirdly, the discharge to land proposed in their application. No consideration of collection and removal from site by a septic tank cleaning truck was provided in the application. This option may have been discounted because of financial implications. Furthermore, no consideration of alternative methods of treatment was provided in the application.

6. EXECUTIVE SUMMARY AND RECOMMENDATIONS

The discharge of truck wash water to land at the proposed site is a discretionary activity and Council have retained full discretion over the matters to be considered. Information supplied by the applicant to date has not provided the writer with adequate assurance that the proposed discharge of truck wash water will contain acceptable contaminant levels for irrigation in a manner which will not adversely affect the receiving soils, groundwater and nearby productive landuses.

The TRMP requires strict controls for sites which store and/or use hazardous substances to avoid remedy or mitigate adverse effects. The Plan has recognised the importance of protecting groundwater quality particularly in productive areas such as these. TRMP policy promotes discharges of wastes to land rather than water where practicable. Consequently, if contaminant levels and other operation and management requirements were appropriately restricted the writer considers that the discharge of wash water proposed would not be contrary to the objectives and policies of the TRMP.

The volume of wastewater proposed to be discharged and the area available for disposal, indicate that loading rates can be appropriately set to take account of the hydraulic capacity of the soils. The proposed volume is significantly less than volumes permitted by other discharges to land authorised through the permitted activity rules of the TRMP. However, contaminant loadings on the soils must be adequately controlled to minimise potential adverse effects, particularly given the potential water logging and high groundwater table that may be experienced at the site during some months.

The shorter term of consent recommended by Bob Askew would also be appropriate for the discharge activity also if consent was to be granted. This would lessen the risk from long term accumulation of contaminants. A shorter term is appropriate for the discharge consents, particularly in instances such as this where some uncertainty surrounds potential effects. The applicant did not specify their desired term of consent in their application for resource consent, the maximum term of consent permissible for a discharge consent is 35 years (in accordance with Section 123 of the RMA). The writer considers a ten year term of consent would be appropriate in this instance if Council were of a mind to grant the consent, reasoning has been outlined in part 5 of this report. Within the 10 year period, industrial rezoning should have provided additional land for the applicant in a serviced zone which would negate the need for resource consent to discharge vehicle wash water. As discussed earlier in this report, it is considered more appropriate that such a discharge were to occur into a reticulated system from outset.

7. REASONS FOR DECISION

The level of treatment of the wash water prior to disposal and the specifications of the irrigation system recommended through conditions of consent will minimise the potential for contamination of receiving soils, groundwater or surface waters as a result of the discharge. Any adverse effects on the receiving environment as a result of the discharge are expected to be no more than minor, provided there is compliance with these recommended conditions.

Provided adequate controls the effects of the discharge are likely to be comparable with the effects of other activities authorised through permitted activity rules in the proposed Tasman Resource Management Plan for discharge to land. Although disposal to a reticulated sewerage network is considered a more appropriate means of disposal for vehicle wash discharges, controls can be imposed through conditions of consent to minimise potential effects. The activity is only envisaged to be a short term solution until a more suitable industrially zoned, and serviced site becomes available.

As discussed in part 5 of this report the activity could be considered to be consistent with the purpose of the Resource Management Act 1991, and in keeping with the objectives and policies of the proposed Tasman Resource Management Plan and Tasman Policy Statement if contaminant controls were appropriate. Should Council decide to grant consent, the writer has provided recommended draft conditions without prejudice, for the guidance of Council only.

8. RECOMMENDED CONDITIONS

1. Site and Discharge Details

Physical Address:	<i>85 Moutere Highway, Motueka</i>
Legal Description:	<i>Lot 2 DP 1884 Blk VII Motueka SD</i>
Valuation Number:	<i>1928027400</i>
Total Property Area:	<i>3.4413 hectares</i>
Map Reference of Disposal Area:	<i>East 2509589 North 6006740</i>
Receiving Environment:	<i>Land</i>
Maximum Discharge Volume:	<i>1500 litres per day</i>
Maximum Discharge Rate:	<i>5 millimetres per day, 35 millimetres per week</i>
Discharge Characteristics:	<i>Wash water from the washing of the Consent Holders vehicles and equipment associated with their drilling and investigation business and stormwater from the sealed wash pad.</i>

2. The maximum daily discharge shall not exceed 1500 litres per day. The discharge will contain only wash water generated from the washing of the Consent Holders own vehicles and equipment associated with their drilling and investigation business and stormwater arising from the wash pad area.

NOTE:

A shut off valve on the collection system is recommended for periods when the wash facility is not in use. This will reduce volumes of stormwater entering the collection system, increasing probability of compliance with discharge volume restrictions imposed by this consent. However, the Consent Holder is warned that such valves require careful management (to ensure they are operating when required) and will require that the wash pad area is kept free from contaminants when the treatment system was not in use.

3. The maximum hydraulic loading rate at which the wash water is applied to land shall not exceed 5 millimetres per day and 35 millimetres per week.

NOTE:

The irrigation area may be altered provided compliance with the loading rate imposed above can be maintained and buffer distances set by conditions of consent are maintained.

4. The wash water collection, treatment and irrigation system shall be constructed, operated and maintained in accordance with the relevant documentation submitted to Council as part of application RM041239 and in accordance with Appendix 1 attached and dated May 2005. The treatment system shall contain a primary collection tank (not less than 2.7 cubic metre capacity), a interceptor system (not less than 3 stages with minimum total capacity of 1.6 cubic metres) and an irrigation tank (not less than 4.5 cubic metre capacity).
5. The Consent Holder shall construct a fully sealed and enclosed wash pad area for the washing of vehicles and equipment. A nib wall or similar mechanism shall be constructed around the boundaries of the wash pad to reduce stormwater infiltration to the wash pad area and wash water escape. The Consent Holder shall submit to Council for written approval of Co-ordinator, Compliance Monitoring a design plan including the wash pad area prior to the exercise of this consent.
6. The wastewater shall consist solely vehicle and equipment wash water and stormwater from the wash pad; no hazardous substances (other than hydrocarbons associated with the vehicles) will be included. Stormwater from the wash pad (50 square metre concrete pad) may enter the treatment and irrigation system, but all practicable measures shall be taken to prevent stormwater from any other parts of the yard from entering the treatment and irrigation system.

NOTE:

The discharge of detergents, cleaning agents and/or any other hazardous substances (other than residual quantities of oils and greases) is not authorised by this consent, only stormwater and wash water from the vehicles and equipment is permitted. Detergents mobilise oils and greases rendering the interceptor useless and any discharge would be likely to exceed consent contaminant requirements.

7. The discharge shall occur not less than:
 - a) 20 metres away from any surface water body;
 - b) 50 metres away from any bore for water supply;
 - c) 50 metres away from any adjoining property boundary.
8. There shall be no discharge, percolation or run-off of wash water to surface water.

NOTE:

This condition may require the Consent Holder to cease the discharge during wet weather conditions or periods following rainfall events when ground conditions are saturated. During such periods irrigation should be suspended and alternative means of disposal utilised (such as collection and removal by septic tank cleaning truck) or the facility should not be used and alternative facilities where disposal is not restricted should be utilised.

9. The collection tank receiving the wash water shall be cleaned out as required but not less than every three months or when the sludge thickness in the collection tank exceeds 150 millimetres (whichever occurs first). Waste material from the desludging shall be removed from the site for disposal at a facility authorised to receive such material.
10. Any hazardous substances stored in any area on the site subject to inundation from any source, is stored in a manner that the substance cannot be moved by, released into or contaminate flowing water.
11. a) The Consent Holder shall submit and Operation and Management Plan for the written approval of Council's Co-ordinator, Compliance Monitoring prior to the exercise of this consent. This Plan shall be prepared by suitably qualified person in accordance with the conditions of this resource consent and shall contain, but not be limited to, the following:
 - i) the routine inspection programme to verify the correct functioning of the collection, treatment and irrigation system at all times;
 - ii) a schedule for the daily, weekly, monthly and annual operational requirements;
 - iii) a schedule of maintenance requirements for the pumps, collection and holding tanks and irrigators;
 - iv) details of a schedule for the de-sludging of the tanks and how and where the sludge is to be disposed;
 - v) details of how the irrigation system will be managed;
 - vi) a list of suitable vegetation species for use on the irrigation area and a schedule of maintenance and care requirements for the management for the vegetation species used;
 - vii) a contingency plan specifying the actions to be taken in the event of failure of any component of the system, unexpected spillage into the system and any non-compliance with the conditions of this resource consent;
12. A sampling point to allow collection of the treated wash water before being discharged to the irrigation area shall be provided and a plan indicating this point shall be submitted to Tasman District Council's Co-ordinator Compliance Monitoring for approval within the first month of the exercise of this consent.
13. Monthly for the first three months, three monthly for the first year, six monthly for the following two years and annually thereafter the consent holder or their agent shall obtain a sample of washwater from the point required by Condition 12. These samples shall be analysed for temperature, total petroleum hydrocarbons, oils and greases, total suspended solids and pH. Samples shall be collected by a person experienced in collecting such samples using standard sampling methodologies and equipment and shall be transported to the laboratory under chain of custody. The sample shall be analysed using standard methodology by an IANZ accredited laboratory. The analytical results shall be forwarded to the Council's Co-ordinator,

Compliance Monitoring within 20 working days of the results being received from the laboratory.

NOTE:

Notwithstanding the above, the Council reserves the right to collect additional samples, either during the first five years or any other time following and irrespective of whether the conditions of consent are being complied with.

14. The quality of treated wastewater analysed in accordance with Condition 13 above shall not exceed the following quality standards:

- | | | |
|----|------------------------------|---|
| a) | Total petroleum hydrocarbons | 15 milligrams per litre |
| b) | pH | Within the range 6-9 |
| c) | Temperature | Not more than 3 degree change from Natural temperature. |
| d) | Oils and greases | 15 milligrams per litre |
| e) | Copper | 0.2 milligrams per litre * |
| f) | Zinc | 2 milligrams per litre * |
| g) | Lead | 5 milligrams per litre * |

* Long term trigger values from ANZECC Water Quality Guidelines for irrigation water have been used for additional protection.

NOTE:

Care will be required to minimise oil, grease and other contaminant additions to the system. The Consent Holder is advised that alternative methods of disposal (i.e. sump truck removal) or alternative wash facilities (which discharge to an appropriate reticulated sewerage network) must be utilised if work has been undertaken on sites containing elevated levels of hazardous substances. Failure to do so is likely to cause a breach in the contaminant limits specified above.

15. In the event that there is non-compliance with the contaminant limits outlined in Condition 14 above, the consent holder must investigate the problem and if necessary undertake modifications/improvements to the system to reduce contaminant levels of the washwater to meet limits set by Condition 14.

16. The applicant will provide Council with a written report of any investigation undertaken in accordance with Condition 15 within two months of the non-compliance incident and any mitigation and/or remediation works required shall be implemented to the satisfaction of Council within this time period.

17. If contaminants of concern are identified in the wash water monitoring required by Condition 13, upstream and downstream monitoring bores shall be installed to assess the effect of the discharge on the receiving groundwater. The proposed location of these bores shall be submitted to Council's Resource Scientist - Water in writing for approval prior to their installation and within two months of the non-compliance identified in accordance with Condition 15. Six monthly groundwater monitoring of upstream and downstream bores would be required to the satisfaction of Tasman District Council's Co-ordinator, Compliance Monitoring.

18. The discharge shall have none of the following effects on the waters beyond the boundary of the site on which the discharge occurs:
- a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in colour or visual clarity;
 - c) the rendering of freshwater unsuitable for consumption by farm animals;
 - d) any significant adverse effects on aquatic life.
19. The discharge shall have none of the following effects on groundwater beyond the boundary of the site on which the discharge occurs:
- a) the natural temperature of the water must not be changed by more than 3 degrees Celsius;
 - b) the water must not be tainted or contaminated so as to make it unsuitable for the irrigation of crops growing or likely to be grown in the area to be irrigated.
 - c) the water must not be tainted or contaminated so as to make it unsuitable for consumption by animals;
 - d) the pH of the water must be within the range of 6.0-9.0 pH units;
 - e) the water must not be tainted or contaminated so as to make it unpalatable or unsuitable for consumption by humans, after treatment (equivalent to coagulation, filtration and disinfection), or unsuitable for irrigation;
 - f) the water must not be rendered unsuitable for treatment (equivalent to coagulation, filtration and disinfection) for human consumption by the presence of contaminants.

NOTE: The Consent Holder will have to ensure the treatment system is sized to allow adequate retention of wash water prior to irrigation if heat is to be used in the washing process to ensure the temperature of receiving waters is not adversely effected.

20. The consent holder shall log all complaints received relating to the exercise of this consent, shall notify Council's Co-ordinator, Compliance Monitoring within 24 hours of receiving the complaint and shall maintain a register of complaints, which shall include but not be limited to, the following information:
- a) date and time of the complaint;
 - b) nature of the complaint;
 - c) name, address and telephone number of the complainant (if available);
 - d) details of discharge at time of alleged problem (including but not limited to flow conditions of river, discharge rate, characteristics of discharge, discharge pipes in use);

- e) any remedial action taken to rectify problem or mitigation proposed to prevent future complaints.
21. The Council may, during the period 31 May to 31 August each year, review any or all of the conditions of the consent pursuant to Section 128 of the Resource Management Act 1991 for all or any of the following purposes:
- a) to deal with any adverse effect on the environment which may arise from the exercise of the consent that was not foreseen at the time of granting of the consent, and which is therefore more appropriate to deal with at a later stage; and/or
 - b) to require the consent holder to adopt the best practical option to remove or reduce any adverse effects on the environment resulting from the discharge; and/or
 - c) reviewing the contaminant limits and/or loading rates of this consent if it is appropriate to do so; and/or
 - d) reviewing the frequency of sampling and/or number of determinants analysed if the results indicate that this is required and/or appropriate.
22. Pursuant to Section 36 of the Resource Management Act, 1991, the permit holder shall meet the reasonable costs associated with the monitoring and administration of this permit. Costs can be minimised by consistently complying with the conditions of this consent and thereby reducing the frequency of Council visits.

ADVICE NOTES

1. Any matters not referred to in this application for resource consent or that are not otherwise covered in the consent conditions must comply with the proposed Tasman Resource Management Plan and the Resource Management Act 1991.
2. The applicant shall meet the requirements of Council with regard to all Building and Health Bylaws, Regulations and Acts.
3. Access by the Council or its officers or agents to the property is reserved pursuant to Section 332 of the Resource Management Act.
4. Pursuant to Section 127 of the Resource Management Act 1991, the consent holder may apply to the consent authority for the change or cancellation of any condition of this consent.
5. All reporting required by Council shall be made in the first instance to the Co-ordinator, Compliance Monitoring.
6. Compliance with the ANZECC Water Quality Guidelines for Irrigation Waters and any successor document is recommended to maintain the productivity of the land in accordance with the principles of ecologically sustainable development.

7. The consent holder shall keep such other records as may be reasonably required by the Council and shall, if so requested, supply this information to the Council. If it is necessary to install measuring devices to enable satisfactory records to be kept, the permit holder shall, at his or her own expense, install, operate and maintain suitable devices.

Natasha Lewis
Consent Planner, Discharges

