

Todd Petroleum Mining Company Ltd KGTP

Monitoring Programme

Annual Report

2021-2022

Technical Report 2022-79



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Taranaki Regional Council
Private Bag 713
Stratford

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Executive summary

Todd Petroleum Mining Company Ltd (the Company) operates a gas treatment plant (Kapuni Gas Treatment Plant, KGTP) located on Palmer Road at Kapuni, in the Kapuni catchment, South Taranaki. This report for the period July 2021 to June 2022 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Company's environmental and consent compliance performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of the Company's activities.

During the monitoring period, Todd Petroleum Mining Company Ltd demonstrated a high level of environmental performance and high level of administrative performance.

During the year the Company held seven resource consents, which included a total of 72 conditions setting out the requirements that they must satisfy. The Company held one consent to allow it to take water, two consents to discharge effluent /stormwater into the Kapuni Stream, two consents to discharge to land, one land use permit, and one consent to discharge emissions into the air at the site.

The Council's monitoring programme for the year under review included four inspections, six water samples collected for physicochemical analysis and inter-laboratory comparisons, and a review of four biomonitoring surveys and two fish surveys of receiving waters. A review of monthly consent holder provided effluent data and surface water abstraction data was undertaken throughout the monitoring period.

The monitoring indicated that the discharge of process and stormwater was undertaken in a compliant manner for the duration of the monitoring period.

The Council review of the independent biological assessment of the Kapuni Stream catchment concluded that the Kapuni Stream was in 'good' to 'excellent' health and there was no discernible impact from any industrial activity at Kapuni.

The findings of the fish survey concluded that overall there was no indication that the KGTP was having any significant adverse effects on fish communities in the Kapuni catchment.

There were no unauthorised incidents recording non-compliance in respect of this consent holder during the period under review.

During the year, the Company demonstrated a high level of environmental and administrative performance with the resource consents.

For reference, in the 2021-2022 year, consent holders were found to achieve a high level of environmental performance and compliance for 88% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 10% of the consents, a good level of environmental performance and compliance was achieved.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance remains at a high level.

This report includes recommendations for the 2022-2023 year, including a recommendation relating to optional reviews of consents 1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, and 7755-1 in June 2023.

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1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is for the period July 2021 to June 2022 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by Todd Petroleum Mining Company Ltd (the Company). The Company operate the Kapuni Gas Treatment Plant (KGTP) which is situated on Palmer Road, at Kapuni, in the Kapuni catchment, South Taranaki.

The report includes the results and findings of the monitoring programme implemented by the Council in respect of the consents held by the Company that relate to abstractions and discharges of water within the Kapuni catchment, and the air discharge permit held by the company to cover emissions to air from the site. This report is the 31st annual report to be prepared by the Council for the site.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about:

- consent compliance monitoring under the RMA if RMA not referenced in full in section 1.1.1 then state full title in the following format here: *Resource Management Act 1991* (RMA) and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by the Company in the Kapuni catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at the KGTP.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2022-2023 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act 1991 and monitoring

The RMA primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- a. the neighbourhood or the wider community around an activity, and may include cultural and social-economic effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
- e. risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' in as much as is appropriate for each activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental performance

Besides discussing the various details of the performance and extent of compliance by the consent holders, this report also assigns a rating as to each Company's environmental and administrative performance during the period under review. The rating categories are high, good, improvement required and poor for both environmental and administrative performance. The interpretations for these ratings are found in Appendix II.

For reference, in the 2021-2022 year, consent holders were found to achieve a high level of environmental performance and compliance for 88% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 10% of the consents, a good level of environmental performance and compliance was achieved.¹

1.2 Process description

The KGTP was originally owned and operated by Vector Limited, known originally as National Gas Company (NGC). It was built during 1969-1970. KGTP was acquired by Todd Petroleum Mining Company Ltd on 1 April 2020.

The original plant was designed to process high carbon dioxide Kapuni gas to a quality suitable for use in general domestic, commercial and industrial appliances. The process involves the removal of carbon dioxide from the gas, which is then dried and chilled to remove some of the heavier hydrocarbons which could affect pipeline operation and appliance efficiency. The pipeline quality gas is then distributed via the transmission distribution network.

The first of several plant expansions occurred in 1973 with the addition of plant to process the heavier hydrocarbons into LPG (liquefied petroleum gas) and natural gas. In 1979-1980, further additions were made to process Maui gas and to recover, purify and liquefy some of the carbon dioxide from the gas. The liquid carbon dioxide is used in the beverage, food processing and refrigeration markets.

¹ The Council has used these compliance grading criteria for more than 18 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018



Photo 1 Kapuni Gas Treatment Plant (KGTP) during three train operation

In 1985, KGTP was expanded with the installation of the low temperature separation (LTS) gas conditioning plant which processed the high carbon dioxide content Kapuni gas for water and heavy hydrocarbon removal only. The conditioned gas was supplied to the region's methanol plants so that it could be blended with the much lower carbon dioxide content Maui gas for more efficient methanol production. Methanex reduced its production capacity and as a result the gas conditioning plant was mothballed in May 2005.

During 1997, the KGTP refrigeration systems were upgraded, enabling more natural gas liquids to be removed from the raw gas. Reliability and efficiencies were further improved with the completion in 1998 of a \$25 million, three-year refurbishment of the plant's processes and control systems.

The Company and Todd Energy were 50:50 partners in Kapuni Energy which had developed a \$37 million, 25MW cogeneration plant within the Company's gas treatment plant complex at Kapuni. It provides the electricity and steam requirements of the KGTP and Fonterra's Lactose factory at Kapuni. It also exports excess electricity into the national grid.

During the 2004-2005 period, NGC completed a \$7 million upgrade of the treatment plant, involving re-commissioning one of the plant's three process trains, adding a further 100 tonnes of LPG storage, and installing a reverse osmosis water treatment plant.

In April 2006 NGC changed its name to Vector Ltd. NGC remains a legal entity holding previously issued consents, but consents applied for after this date were granted in the name of Vector Gas Ltd and more recently, Vector Ltd.

The gas supply for the plant comes from the adjacent Kapuni Gas Production Station formerly operated by Shell Taranaki Ltd and now by Todd Petroleum Mining Company Ltd.

Water is drawn from the Kapuni Stream via the intake structure and raw water supply line for Hawera water treatment plant. Water discharges are from the gas treatment process, plant utilities, domestic effluent and site stormwater. Solid waste discharges are from sediment removed from time to time from the settling basins for water treatment and waste storage. Air discharges are from the gas treatment process.

The KGTP site was acquired by Todd Petroleum Mining Company Ltd in April 2020, who currently own and operate the site.

1.3 Resource consents

The Company holds seven resource consents the details of which are summarised in the table below. Summaries of the conditions attached to each permit are set out in Section 3 of this report.

A summary of the various consent types issued by the Council is included in Appendix I, as are copies of all permits held by the Company during the period under review.

Table 1 Summary of resource consents held by the Company

Consent Number	Purpose	Consent Granted/ Commencement Date	Change to Conditions Date	Next Review Date	Expiry Date
<i>Discharge to Air Permits</i>					
4087-2	Discharge emissions to air from on-site activities and ancillary activities	Jan 1997	-	2023	2029
<i>Discharge to Water Permits</i>					
1123-3	Discharge cooling and wastewater to Kapuni Stream	Jun 2012	-	2023	2035
7755-1	Discharge stormwater from (non-process areas) containing natural gas into Kapuni Stream	Jun 2012	-	2023	2035
<i>Discharge to Land Permits</i>					
1225-3	Discharge up to 13.5 m ³ /day (0.97 L/s) of treated sewage and process wastes to land	Jun 2012	-	2023	2035
7043-1	Discharge stormwater, settling and filter backwash ponds sludge to land	Jan 2010	-	2023	2023
<i>Water Use Permits</i>					
1125-4	Take up to 33 L/s from Kapuni Stream	Jun 2012	-	2020	2035
<i>Land Use Permits</i>					
5090-1	Structures for pipeline crossings above and around the Motumate Stream and an unnamed tributary of the Waiokura Stream for electrical supply	Jan 1997	-	2023	2032

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets obligations upon the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations and seek information from consent holders.

The monitoring programme for the KGTP site consisted of four primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.4.3 Site inspections

The KGTP was visited four times during the monitoring period. With regard to consents for the abstraction of or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the Company were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

1.4.4 Chemical sampling

Chemical sampling undertaken by the Council in this monitoring period was focused on the discharge from the facility and the effects on the receiving waters. The Company holds consent 1123-3. This allows for the discharge of cooling and waste waters to the Kapuni Stream throughout the year. The process of the discharge is controlled by the facility and checked through chemical analysis prior to the discharge occurring. The analysis of the discharge is provided to the Council in the form of a monthly report.

In order to ascertain the quality of the results provided by the Company, the Council conducted inter-laboratory comparison exercises which encompassed the following methodology.

A sample of the discharge waters is collected and split between two samples. The same is performed at the upstream and the downstream (below the discharge point) sample locations.

These samples are then analysed separately, (one set is analysed at the Company, the other by the Council via Hill Laboratories in Hamilton) and the results compared.

Table 2 Inter-laboratory comparison analytes

Discharge sample analytes	Upstream and downstream sample analytes
Chlorine (Free)	Conductivity
Conductivity	Dissolved reactive phosphate (DRP)
Dissolved reactive phosphate (DRP)	Potassium
Hydrocarbon	Sodium
Potassium	Ammonia and un-ionised
Sodium	pH
Ammonia and un-ionised	Temperature
pH	Turbidity
Suspended solids	Vanadium
Temperature	
Turbidity	
Vanadium	
Zinc	

1.4.5 Biomonitoring surveys

Four macroinvertebrate surveys and two electric fishing surveys were performed by the third party consultant Stark Environmental during the 2021-2022 monitoring year. The Council reviews the reports submitted by Stark Environmental. The review is provided within this report and is also available on request.

2 Results

2.1 Water

2.1.1 Inspections

Four inspections of the Company site were undertaken this monitoring period by an officer of the Council. The inspections were undertaken on 19 October and 14 December 2021, and 19 May and 28 June 2022. Inspections covered the following:

- Upcoming operations and current operation;
- Heat recovery steam generator operation;
- Discharge process effluent and stormwater management;
- Kapuni Stream monitoring;
- Liquid transfer system;
- Dry and wet chemical storage;
- On-site sewage treatment system;
- Land treatment;
- River gauging;
- LPG load out facility; and
- Housekeeping.

Overall, the plant was found to be in a very tidy condition, with staff knowledgeable about processes and compliance requirements. Further liaison with the Company was also undertaken through inter-laboratory comparison exercises.

2.1.2 Abstraction monitoring

Water for KGTP is drawn from the Kapuni Stream, about 1.4 km above the plant, via the intake structure and raw water supply line for Hawera water treatment plant. South Taranaki District Council (STDC) holds land use permit 7413-1 for the structure and water permit 0146-2 to take.

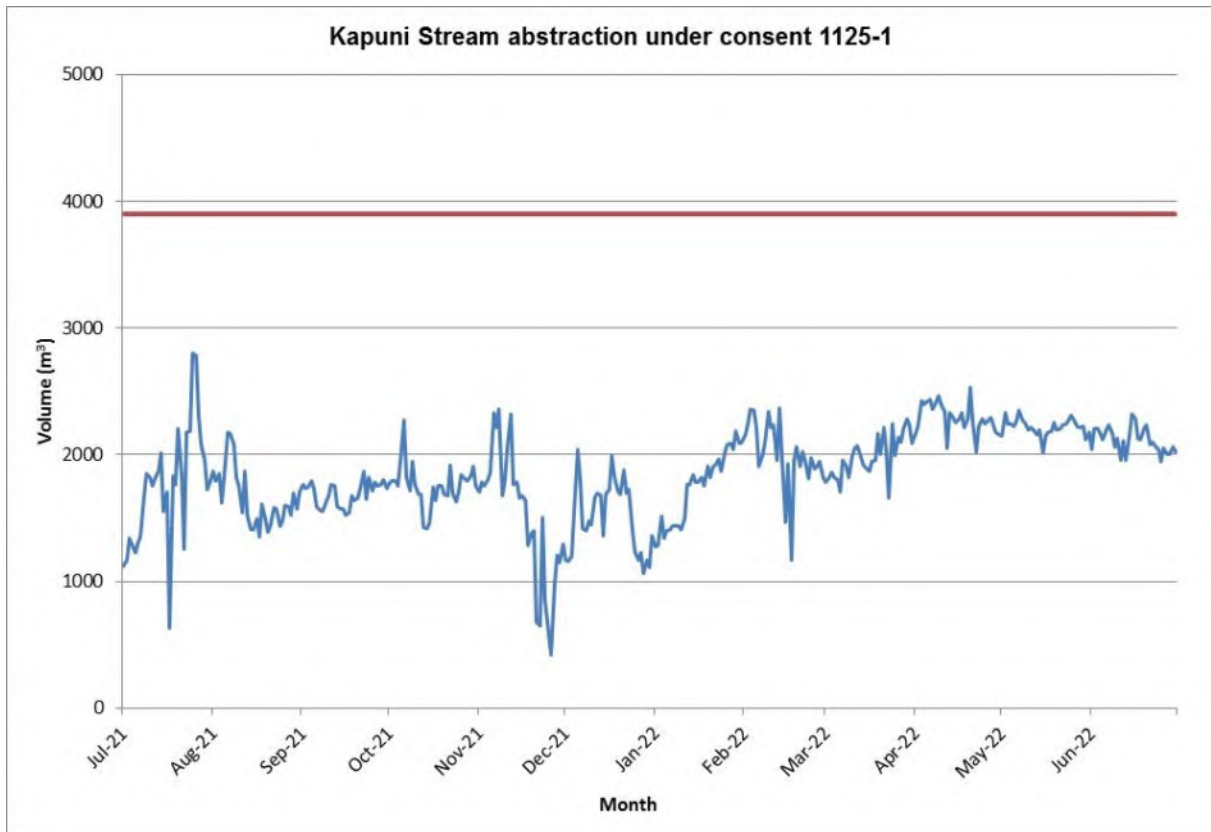


Figure 1 Surface water abstraction data from the Kapuni Stream 2021-2022 consent 1125-1

The daily surface water extraction record is provided above in Figure 1. Consent 1125-4 allows for a maximum daily surface water abstraction of 3,900 m³ per day. In this monitoring period the Company were well below this limit. The total volume abstracted was recorded at 675,596 m³.

This is an increase of 151,536 m³ when compared to the 2020-2021 monitoring period. The Company utilised 47% of its total abstraction allowance in the 2021-2022 monitoring period.

2.1.3 Provision of consent holder data

Monitoring of the discharge constituents and the Kapuni Stream is undertaken by the Company, prior to each discharge and one hour following commencement of the discharges authorised by discharge consent 1123-3.

Consent 1123-3 requires the preparation of an effluent disposal management plan. The plan includes the reporting on the exercise of the consents. As such the Company provided, at approximately monthly intervals, discharge data in relation to these consents for the monitoring period.

On two occasions in this monitoring period the Council carried out inter-laboratory comparisons with the KGTP laboratory. The results are discussed in the following section 2.1.4.

The Company discharge and stream monitoring data was provided to the Council at monthly intervals throughout the year. This has been assessed by the Council and summarised below.

Temperature

Temperature is recorded continuously by the Company both upstream and downstream of the discharge point. In 2021-2022, the maximum temperature differential recorded was 0.9°C. This occurred on 7 January 2022. This was within consent limits, which stipulates a maximum allowable increase of 2.0°C.

pH

Consent 1123-3 requires the discharge to not cause the pH within the Kapuni Stream to be outside the range 6.5-9.0 pH when measured at the downstream (KPN000293) monitoring location. Results provided by the Company showed that compliance was achieved throughout the monitoring period. In 2021-2022, the maximum recorded pH at the downstream sampling site was 8.3 recorded on 24 January 2022. The corresponding upstream pH was 8.1. The minimum pH recorded downstream was 6.8 recorded on 1 June 2022. The corresponding upstream pH value was also 6.8.

Ammonia

Special condition 6 of consent 1123-3 limits the concentration of unionised-ammonia to not exceed 0.006 g/m³ when measured at the downstream monitoring location on the Kapuni Stream except under specific circumstances. On all occasions, the discharge shall not cause the concentration of un-ionised ammonia to exceed 0.025 g/m³ in the Kapuni Stream at this point. This limit was set for the protection of aquatic species.

Results provided by the Company show that compliance was achieved throughout the monitoring period, with the majority of results below the Company's limit of detection (>0.001g/m³). The maximum result recorded was 0.004 g/m³ on 5 February 2022.

Inter-laboratory comparison samples collected by the Council (which is assessed to a lower concentration than the periodic batch testing undertaken by the Company) indicated values of 0.00011 g/m³ (October 2021) and 0.0001 g/m³ (May 2022) for NH₃ at the downstream monitoring location of KPN000293. This was also confirmed by the KGTP laboratory during the inter-laboratory comparisons, with both results below the limit of detection.

Sodium

Special condition 7 of consent limit 1123-3 limits the sodium concentration of the Kapuni Stream to 40 g/m³. The sodium concentration is further limited to 22 g/m³ in accordance with an agreement with the Company's neighbours, Ballance.

Results provided by the Company in this monitoring period indicated that compliance was achieved for this condition. During the 2021-2022 monitoring period the results indicated that the maximum recorded downstream sodium concentration was 16 g/m³. This was recorded on 18 March 2022. The corresponding upstream value was 12 g/m³.

Vanadium

Special condition 8 of consent 1123-3 stipulates the discharge shall not cause the total vanadium concentration of the Kapuni Stream to exceed 0.08 g/m³, when measured 50 m downstream of the discharge point.

Analysis provided by the Company indicated compliance with this condition. There were however eight occasions when this concentration was exceeded in samples, ranging between 0.09-0.10 g/m³. However, these concentrations were recorded in the stream prior to the discharge occurring, and so these events were not the result of any non-compliance by the Company.

Water treatment chemicals

Special condition 12 of consent 1123-3 requires the consent holder to notify the Council of any change in water treatment chemical or increase in maximum concentration of any water treatment chemical at least one month prior to the change of a water treatment programme.

In this monitoring period the Council received notification that the Company intended to replace ferric sulphate with aluminium sulphate (13 May 2022) and AZ8104 with ECP8130 (2 June 2022). These changes were accepted.

2.1.4 Results of receiving environment monitoring

The Council carried out compliance monitoring checks on the Company's wastewater discharge and impact on the receiving environment on 19 October 2021 and 19 May 2022.

Split samples were collected by the Company and the Council from the Company's discharge point, and from the Kapuni Stream, both upstream and downstream of the discharge point. Results are presented in Table 3.

Table 3 Inter-laboratory comparison KGTP and Council 19 October 2021 and 19 May 2022

Date	19 October 2021						19 May 2022					
Sampler	KGTP	TRC	KGTP	TRC	KGTP	TRC	KGTP	TRC	KGTP	TRC	KGTP	TRC
Parameter	Upstream KPN000290		Downstream KPN000293		A-705 Outfall IND002008		Upstream KPN000290		Downstream KPN000293		A-705 Outfall IND002008	
Time (NZST)	08:55		09:15		09:05		09:45		10:15		10:00	
Temperature (°C)	12.0	11.7	12.0	11.9	21.7	22.2	12.9	13.5	12.9	12.9	27.2	27.5
pH	7.4	7.2	7.3	7.2	7.4	7.2	7.1	7.3	7.2	7.3	8.1	8.0
Free Ammonia (g/m ³)	<0.001	0.00012	<0.001	0.00011	<0.001	0.0009	<0.001	0.00011	<0.001	0.0001	0.0066	0.0008
Ammonia (g/m ³)	0.02	0.034	<0.02	0.032	0.09	0.12	0.028	0.02	0.028	0.02	0.093	0.012
Sodium (g/m ³)	7.9	7.1	7.9	7.5	23	22	8.0	7.7	8.3	7.7	30	28
Potassium (g/m ³)	3.1	3.3	2.9	3.3	5.0	5.0	3.2	3.2	3.3	3.2	12.3	11.4
Vanadium (g/m ³)	0.01	0.0021	0.01	0.0027	0.13	0.05	0.01	0.0017	0.01	0.0014	0.31	<0.011
Dissolved Zinc (g/m ³)	-	-	-	-	-	0.06	-	-	-	-	-	<0.01
Conductivity (uS/m)	96	97	97	99	153	156	108	100	107	101	350	328
Dissolved reactive phosphorus (g/m ³)	-	0.018	-	0.023	-	0.57	-	0.013	-	0.012	-	0.100
Total suspended solids (g/m ³)	-	-	-	-	9	7	-	-	-	-	<3	<3
Hydrocarbons (g/m ³)	-	-	-	-	<4	<4	-	-	-	-	0	<4
Turbidity NTU	-	-	-	-	-	3.1	-	-	-	-	-	0.38
Turbidity FNU	-	2.4	-	1.85	-	-	-	1.15	-	1.11	-	-

The results of the inter-laboratory comparisons (Table 3) undertaken in this period indicated the following:

- All temperatures were within consent limits and there appeared to be very good agreement between both parties, with only minor variation recorded.
- pH results across all samples also remained relatively stable, with the largest variation recorded 0.2 pH.
- Un-ionised ammonia concentrations demonstrated reasonably good agreement between both parties. Levels were generally very low with different levels of detection which makes it more difficult to get a good agreement.
- Ammonia concentrations were found to contain some variation, with the Company recording a significantly high concentration from the outfall on 19 May 2022.
- Sodium results were compliant, with no result recorded at the downstream monitoring location of KPN000293 above the consent limit (40 g/m³). Good agreement was seen between both sets of results.
- Potassium results also recorded good agreement between both parties.

- In similarity to the previous monitoring period, the vanadium results indicated slight variations. The largest variation (0.3 g/m³) was recorded at the outfall on 19 May 2022. The reason for this variation is well understood by the Council. It is due to the method of analysis undertaken by the Company. The Company need a swift result as they are required to discharge almost daily. The Company infers vanadium concentration based on the ratio between vanadium and potassium in the Benfield solution (this is the source of vanadium in the KGTP effluent). As potassium concentrations may increase from other sources in the process effluent, it results in an over-estimate of the true vanadium in the effluent. The Company treats the effluent vanadium value as true which allows for a margin of error with respect to the discharge concentration.
- Dissolved reactive phosphorus (DRP) was recorded in all samples analysed by the Council. There was very little change between upstream and downstream samples, with a small reduction found in the samples collected in May 2022. It is noted that currently under the National Policy Statement for Fresh Water Management in New Zealand (NPS-FM 2020) there is no bottom line for DRP in surface waters.
- There was good agreement between labs regarding electrical conductivity, with no significant change noted downstream.
- Suspended solid concentrations within the A-705 discharge were low (<100 g/m³) on both occasions sampled, with good agreement between parties.

2.1.5 Review of biomonitoring in Kapuni catchment 2021-2022

Four macroinvertebrate surveys and two fish surveys were scheduled for the Kapuni Catchment for the 2021-2022 monitoring period (Table 4). The reports are summarised here, please refer to the specific reports for full details (available upon request from the Council).

Table 4 Overview of the monitoring programme for the Kapuni Catchment

Survey dates	Report number	Taxa	Number of sites	
			Kapuni Stream	Tributaries
21-Sep-21	2021-05	Macroinvertebrate	7	2
17-Nov-21	2021-07	Fish	11	0
17-Nov-21	2021-08	Macroinvertebrate	11	2
27-Jan-21	2021-01	Macroinvertebrate	7	2
12-May-22	2022-04	Fish	7	0
12-May-22	2022-05	Macroinvertebrate	7	2

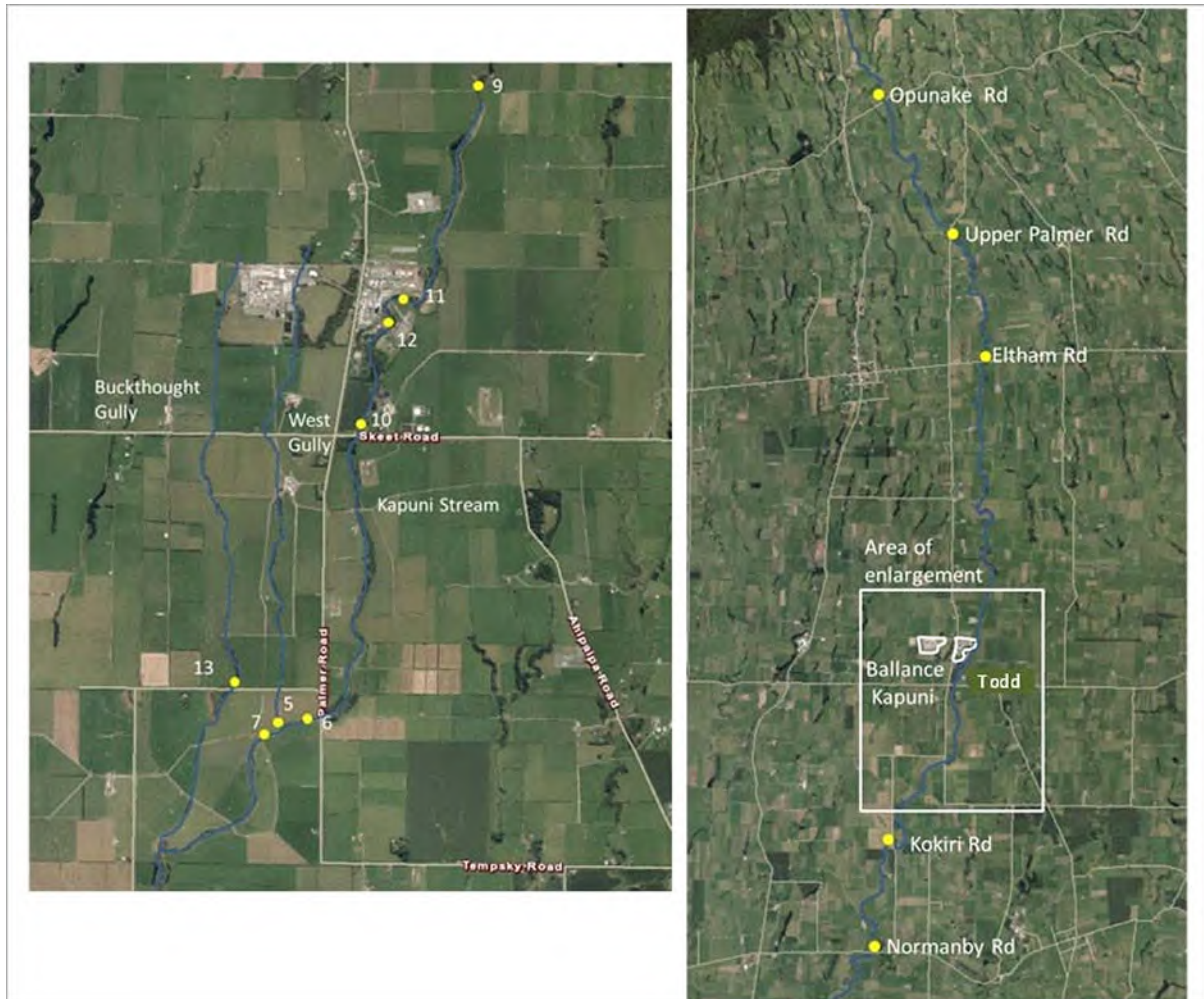


Figure 2 Biomonitoring sites in the Kapuni catchment

Macroinvertebrate monitoring

Targets for Macroinvertebrate Community Index (MCI) values have been set for the Kapuni main stem and gully system. For the Kapuni Stream a hard bottom MCI (MCI-hb) target of 100 units has been obtained from historical data and the expected mild enrichment in the mid-catchment. The gully system (site 5, Figure 2) previously had a MCI target of 72 units using the hard-bottom score but this has been revised to a soft-bottomed MCI (MCI-sb) of 73 units based on the 25th percentile of historical data. Site 13 has a tentative target of MCI-sb 90 units.

During all four surveys, the Kapuni Stream had scores above 100 MCI-hb indicating 'good' to 'excellent' macroinvertebrate health, while the two tributary sites had MCI-sb scores between 89 and 113 units indicating 'fair' to 'good' health.

Overall, the results did not provide conclusive evidence that the petrochemical industries were having significant adverse effects on macroinvertebrate communities in the Kapuni catchment.

Electric fishing

Monitoring of fish communities via electric fishing was undertaken in the Kapuni Stream on 17 November 2021 (11 sites) and 12 May 2022 (7 sites). The tributaries were not fished in either survey.

All sites were surveyed for fish using the single pass electric fishing technique. The results of these surveys are given in Table 5 and 6.

Table 5 Results of spring fish survey in the Kapuni Stream conducted on 17 November 2021

Site	Rainbow trout	Unidentified trout	Redfin bully	Koaro	Bully	Eels	Koura	Total number of species
O	-	-	-	1	-	-	-	1
P	-	-	-	1	-	-	-	1
E	1	-	-	1	-	1	1	4
9	-	-	-	-	-	1	-	1
11	-	1	-	-	-	2	-	3
12	-	-	-	-	-	-	-	0
10	-	-	-	-	-	1	-	1
6	-	-	-	-	-	4	-	4
7	-	-	-	-	-	4	-	4
8/K	-	-	-	-	-	4	-	4
N	-	-	-	1	-	3	-	4
Total abundance	1	1	-	4	-	20	1	-

Table 6 Results of fish survey in the Kapuni Stream 12 May 2022

Site	Brown trout	Redfin bully	Koaro	Eels	Koura	Total number of species
9	-	-	1	3	1	3
11	-	-	-	1	-	1
12	-	1	-	1	3	3
10	-	1	-	2	-	2
6	-	4	-	4	1	3
7	-	-	-	3	-	1
8/K	-	4	-	7	2	3
Total abundance	0	10	1	21	7	-

A total of 28 fish and one koura, were caught during the November 2021 survey. During the May 2022 survey, 32 fish and seven koura were caught. The November 2021 and May 2022 survey results were within the range (3-221) of total numbers and variety (2-8 taxa) recorded in previous years.

It has been noted in previous reports that fine sand has been a dominant feature on the streambed, due in part to the erosion on the mountain. This has continued in both reports reviewed and it is likely to have reduced the suitability of habitat for some taxa, such as koura. This reduction in available habitat is probably also responsible for a reduction in the numbers of brown trout recorded per site.

Overall, these electric fishing results from the Kapuni catchment do not provide any indication that the petrochemical industries are having any significant adverse effects on fish communities in the Kapuni Stream.

2.1.6 Air quality

There were no noted issues pertaining to visible plumes or odour during the four inspections undertaken during this period. No complaints were received from the public with respect to potential odour generation from this facility in the 2021-2022 monitoring period.

2.1.7 Provision of consent holder data

Special condition 4 of the Company's air discharge permit (4087) states:

That the consent holder shall provide to the General Manager, Taranaki Regional Council, by 1 June 1999 and every three years thereafter a written report:

- a. Reviewing any technological advances in the reduction or mitigation of discharges to air from the site, and the costs and benefits of these advantages; and*
- b. Detailing an inventory of the discharges to air from the site of such contaminants as the General manager may from time to time specify following consultation with the consent holder; and*
- c. Detailing any measures that have been taken by the consent holder to improve the energy efficiency of the site's activities and processes; and*
- d. Addressing any other issue relevant to the minimisation or mitigation of discharges of contaminants to air from the site that the General Manager, Taranaki Regional Council, considers should be included.*

Such reports have been provided in 1999, 2002, 2005, 2009, 2011, 2014, and 2017, with the latest report received in October 2020. This report is discussed in compliance monitoring report 2020-03.

2.2 Incidents, investigations, and interventions

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the Company. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

For all significant compliance issues, as well as complaints from the public, the Council maintains a database record. The record includes events where the individual/organisation concerned has itself notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified individual/organisation is indeed the source of the incident (or that the allegation cannot be proven).

In the 2021-2022 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the Company's conditions in resource consents or provisions in Regional Plans.

3 Discussion

3.1 Discussion of site performance

Inspections during the 2021-2022 monitoring period indicated that the site was well managed with good housekeeping apparent across all areas. This included chemical storage areas, catch basins and discharge locations.

Water abstraction was well below the maximum daily extractable volumes. The Company drew more water than the previous monitoring period, however, this was only 47% of their total annual allowance.

Discharge monitoring of effluent and stormwater was undertaken by the Company and reported monthly to the Council. The monthly reports were found to be compliant with consent conditions. Inter-laboratory sample analysis were also undertaken on two occasions this monitoring period and the results indicated good agreement across parameters. Some variation was observed, but did not indicate a cause for concern when considered in context of detection limits and uncertainty of measurement at low concentrations. Continued calibration of key instruments is encouraged as well as participation in inter-laboratory comparison procedures.

Communication between the Company and the Council is regular and open during inspections as well as throughout the monitoring period. This also includes when discussing monitoring requirements, operational adjustments and equipment malfunctions.

3.2 Environmental effects of exercise of consents

Minimal environmental effects were noted during the monitoring period. A review of the Company's independent biological monitoring, on the Kapuni Stream catchment, was undertaken by one of the Council's biologists. The review indicated the Kapuni Stream was in 'good' to 'excellent' health and there was no discernible impact from any industrial activity at Kapuni.

The findings of the fish survey concluded that the petrochemical industries were not having any significant adverse effects on fish communities in the Kapuni catchment.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 7-13.

Table 7 Summary of performance for consent 1125-4

Purpose: To take water from the Kapuni Stream in association with the operation of a gas processing facility		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limits to volume of water abstracted	Volume measurement by the Company and review of records by Council	Yes
2. Defines three take locations	Inspection by Council	Yes
3. Limit take duration at alternative locations	Not required by the Company this period	N/A
4. Adopt best practicable option to prevent or minimise adverse effects	Inspection and review of the Company records	Yes

Purpose: To take water from the Kapuni Stream in association with the operation of a gas processing facility		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
5. Installation and maintenance of water meter and data logger	Inspection by Council. Telemetry to Council via STDC system established January 2014	Yes
6. Certification of water measuring equipment	Verification carried out in October 2019, next due October 2024	Yes
7. Notification of equipment failure	Liaison with the consent holder	N/A
8. Metering equipment accessible to Council	Inspection	Yes
9. Details of take recording	Records in format required	Yes
10. Notification of details of emergency takes	Not required during period under review	N/A
11. Fish screen	Check screen, and intake design	Yes
12. Financial contributions for riparian planting and fencing in Kapuni catchment	Payments received, no further obligation	N/A
13. Option for Council to review consent conditions	Option for review in June 2023, recommendation attached in Section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

N/A = not applicable

Table 8 Summary of performance for consent 1123-3

Purpose: To discharge process effluent and stormwater to the Kapuni Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option to prevent or minimise adverse effects	Inspection and liaison with consent holder	Yes
2. Limit on stormwater catchment area	Inspection	Yes
3. Monitor temperature from discharge and keep within limits	Company records and measurement, with review and checking by Council.	Yes
4. Monitor pH levels and keep within range	Company records and sampling, with review and checking by Council.	Yes
5. Discharge cannot produce visible effects on the surface of Kapuni Stream	Inspection	Yes
6. Concentration of un-ionised ammonia in Kapuni Stream not to exceed limits as a result of the discharge	Company records and sampling, with review and checking by Council	Yes

Purpose: To discharge process effluent and stormwater to the Kapuni Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
7. Concentration of sodium in Kapuni Stream not to exceed limits as a result of the discharge	Company records and sampling, with review and checking by Council	Yes
8. Concentration of vanadium in Kapuni Stream not to exceed limit as a result of the discharge	Company records and sampling, with review and checking by Council	Yes
9. Discharge not to contain free available chlorine	Not assessed during period under review	N/A
10. Submission of effluent disposal management plan to Council	Provision of plan as required	Yes
11. Effluent disposal management plan to be followed	Company records, inspection and sampling	Yes
12. Provision of programmes of water treatment and notification of any changes	Inspection and provision of information. Chemical changes notified.	Yes
13. Review of programmes of chemical cleaning treatment and notification of any changes	Inspection and provision of information	Yes
14. Optional review provision re water treatment or chemical cleaning programmes	No review required this period	N/A
15. Option for Council to review consent conditions	Option for review in June 2023, recommendation attached in Section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

N/A = not applicable

Table 9 Summary of performance for consent 1225-3

Purpose: To discharge domestic sewage, tri-ethylene glycol, methanol and some water treatment chemicals (i.e. phosphate corrosion inhibitor) from an aerated sewage treatment plant onto and into land		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option to prevent or minimise adverse effects	Inspection and liaison with consent holder	Yes
2. No direct discharge to surface water	Inspection	Yes
3. Discharge limit	Data provided by consent holder	Yes
4. Option for Council to review consent conditions	Option for review in June 2023, recommendation attached in Section 3.6	N/A

Purpose: To discharge domestic sewage, tri-ethylene glycol, methanol and some water treatment chemicals (i.e. phosphate corrosion inhibitor) from an aerated sewage treatment plant onto and into land		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

N/A = not applicable

Table 10 Summary of performance for consent 7043-1

Purpose: To discharge sludge, and some liquid, from two stormwater retention ponds, a filter backwash pond and a settlement pond onto and into land		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option to minimise adverse effect	Inspection and company records	Yes
2. Exercise to be in accordance to submission	Inspection	Yes
3. Specific sludge sources	Inspection	Yes
4. Liquids may be discharged as alternative when stream in low flow	Action not required during period under review	N/A
5. Disposal area specified	Inspection	Yes
6. Minimum distance to and no discharge to surface water	Inspection	Yes
7. Keeping of records	Not requested in period under review	Yes
8. Relocation of soil to approval of Council	Inspection, no soil moved	N/A
9. No adverse effects on any water body	Inspection and biomonitoring	Yes
10. Compliance with soil and groundwater guidelines	Records not requested	N/A
11. Advice to District Council on land use	Company records	Yes
12. Option for Council to review conditions of consent	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

N/A = not applicable

Table 11 Summary of performance for consent 4087-2

Purpose: To discharge emissions into the air from the treatment of natural gas, cogeneration, other on-site activities and other related and ancillary activities		
Condition requirement	Means of monitoring during period under review	Compliance achieved?²
1. Adopt best practicable option to prevent or minimise adverse effects	Inspection and records	Yes
2. Emissions maintained to a minimum	Inspection, company records and sampling	Yes
3. Approval for alterations affecting discharge to be gained from Council	Notifications	Yes
4. Three yearly written report to Council	Report received October 2020	Yes
5. Written report reviewing technological advances	Report provided to Council 1 June 1996	Yes
6. Written report evaluating risk to human health	Report provided to Council 1 June 1996	Yes
7. Annual report on gross emission of carbon dioxide	Change to RMA - no longer required. CO ₂ emission data provided in triennial report	N/A
8. Control of discharges to air of carbon monoxide	Company records of monitoring undertaken in 2004 and 2008 indicated compliance with this condition Additional monitoring undertaken in the 2019-2020 monitoring period	Yes
9. Control of discharges to air of nitrogen dioxide	Company records of monitoring undertaken in 2004 and 2008 indicated compliance with this condition Additional monitoring undertaken in the 2019-2020 monitoring period	Yes
10. Option for Council to review conditions re excess of carbon monoxide or nitrogen dioxide limits	Not exercised	N/A
11. Concentration of benzene not to exceed limits	Not assessed since 2019 as LTS not in operation at present. Other BTEX sources removed Council monitoring 2018-2019 in the vicinity indicated 'good' category for benzene in air	Yes

² Assessed on basis of most recent triennial report

Purpose: To discharge emissions into the air from the treatment of natural gas, cogeneration, other on-site activities and other related and ancillary activities		
Condition requirement	Means of monitoring during period under review	Compliance achieved?²
12. Control all other discharges as to not exceed limits	Company records and sampling	Yes
13. Discharge of odour	Inspections did not find offensive or objectionable odour	Yes
14. Depressurisation to avoid dense black smoke	Inspection and Company records	Yes
15. No adverse ecological effect on eco-systems	Inspection and biomonitoring	Yes
16. Notice to review consent conditions	Option for review in June 2023, recommendation attached in Section 3.6	N/A
17. Site contingency plan	Provided	Yes
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

Table 12 Summary of performance for consent 5090-1

Purpose: To erect, place, use and maintain two above ground pipelines, an electrical ring main and associated structures over beds of various streams between and including the Motumate Stream and an unnamed tributary of the Waiokura Stream for steam and electricity supply purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Structures constructed and maintained according to submission	Inspection	Yes
2. Notification of initial construction and maintenance work	No maintenance undertaken during monitoring period	N/A
3. Option for Council to review conditions of consent	Option for review in June 2023, recommendation attached in Section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

N/A = not applicable

Table 13 Summary of performance for consent 7755-1

Purpose: To discharge stormwater from site areas of a natural gas treatment plant where no industrial processes occur (e.g. landscaped areas and roads) into the Kapuni Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option to prevent or minimise adverse effects	Inspection and liaison with consent holder	Yes
2. Limit on stormwater catchment area	Inspection	Yes
3. Controls on effect of discharge in receiving water	Inspection and biological monitoring	Yes
4. Discharge cannot produce visible effects on the surface of Kapuni Stream	Inspection	Yes
5. Maintenance of contingency plan	Receipt and review of plan	Yes
6. Maintenance of stormwater management plan	Receipt and review of plan	Yes
7. Provision for lapse of consent		N/A
8. Option for Council to review consent conditions	Option for review in June 2023, recommendation attached in Section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administration performance in respect of this consent		High

N/A = not applicable

Table 14 Evaluation of environmental performance over time

Year	Consent no	High	Good	Improvement req	Poor
2008-2009	1123-2, 1124-2, 1225-3, 4087-1, 5007-1, 5008-1, 5090-1, 5126-1, 5496-1, 7043-1	10	-	-	-
2010-2012	1123-2, 1124-2, 1125-3, 1225-2, 4087-2, 5007-1, 5008-1, 5090-1, 5126-1, 5496-1, 7043-1	11	-	-	-
2012-2014	1125-3	-	1	-	-
	1123-2, 1225-2, 4087-2, 5090-1, 5496-1, 7043-1, 7755-1	7	-	-	-
2015-2016	1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 5496-1, 7043-1, 7755-1	8	-	-	-

Year	Consent no	High	Good	Improvement req	Poor
2016-2017	1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 5496-1, 7043-1, 7755-1	8	-	-	-
2017-2018	1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, 7755-1	7	-	-	-
2018-2019	1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, 7755-1	7	-	-	-
2019-2020	1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, 7755-1	7	-	-	-
2020-2021	1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, 7755-1	7	-	-	-
Total		72	1	0	0

During the year, the Company demonstrated a high level of environmental and a high level of administrative performance with the resource consents as defined in Appendix II.

3.4 Recommendations from the 2020-2021 Annual Report

In the 2020-2021 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of consented activities at the Kapuni Gas Treatment Plant in the 2021-2022 year continue at the same level as in 2020-2021.
2. THAT should there be issues with environmental or administrative performance in 2021-2022, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while additional investigation or monitoring as per recommendation two was not required.

3.5 Alterations to monitoring programmes for 2022-2023

In designing and implementing the monitoring programmes for air/water discharges in the region, the Council has taken into account:

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

The Council also takes into account the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki exercising resource consents.

No planned changes have been made to the 2022-2023 monitoring programme.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2022-2023.

3.6 Exercise of optional reviews of consent

Resource consents 1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, and 7755-1 each provide for an optional review of the consent in June 2023. Conditions attached to the consents allow the Council to review the consent, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of the consent.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require a review of any consent to be pursued.

4 Recommendations

1. That in the first instance, monitoring of consented activities at the Kapuni Gas Treatment Plant in the 2022-2023 year continue at the same level as in 2021-2022.
2. That should there be issues with environmental or administrative performance in 2022-2023, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. That the option for a review of resource consents 1123-3, 1125-4, 1225-3, 4087-2, 5090-1, 7043-1, and 7755-1 in June 2023, as set out in conditions of the consents, not be exercised, on the grounds that the current conditions are adequate.

Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

AAQG	Ambient Air Quality Guidelines (Ministry for the Environment, 2002).
Biomonitoring	Assessing the health of the environment using aquatic organisms.
Conductivity	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 25°C and expressed in $\mu\text{S}/\text{cm}$.
DRP	Dissolved reactive phosphorus.
Fresh	Elevated flow in a stream, such as after heavy rainfall.
$\text{g}/\text{m}^2/\text{day}$	grams/metre ² /day.
g/m^3	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
Incident register	The Incident Register contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.
L/s	Litres per second.
m^2	Square metres.
MCI	Macroinvertebrate Community Index; a numerical indication of the state of biological life in a stream that takes into account the sensitivity of the taxa present to organic pollution in stony habitats.
mS/m	Millisiemens per metre.
MfE	Ministry for the Environment.
NES	National Environmental Standards.
NH_4	Ammonium, normally expressed in terms of the mass of nitrogen (N).
NH_3	Unionised ammonia, normally expressed in terms of the mass of nitrogen (N).
NO_3	Nitrate, normally expressed in terms of the mass of nitrogen (N).
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.

Physicochemical	Measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
PM ₁₀ , PM _{2.5} , PM _{1.0}	Relatively fine airborne particles (less than 10 or 2.5 or 1.0 micrometre diameter, respectively).
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	<i>Resource Management Act 1991</i> and including all subsequent amendments.
SS	Suspended solids.
SQMCI	Semi quantitative macroinvertebrate community index.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.
Zn*	Zinc.

*an abbreviation for a metal or other analytes may be followed by the letters 'As', to denote the amount of metal recoverable in acidic conditions. This is taken as indicating the total amount of metal that might be solubilised under extreme environmental conditions. The abbreviation may alternatively be followed by the letter 'D', denoting the amount of the metal present in dissolved form rather than in particulate or solid form.

For further information on analytical methods, contact an Environmental Services Manager.

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Appendix I

Resource consents held by Todd Kapuni GTP

(For a copy of the signed resource consent
please contact the TRC Consents department)

Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14. Permits authorising the abstraction of water are issued by the Council under Section 87(d) of the RMA.

Water discharge permits

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations. Permits authorising discharges to water are issued by the Council under Section 87(e) of the RMA.

Air discharge permits

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising discharges to air are issued by the Council under Section 87(e) of the RMA.

Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

Land use permits

Section 13(1)(a) of the RMA stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Land use permits are issued by the Council under Section 87(a) of the RMA.

Coastal permits

Section 12(1)(b) of the RMA stipulates that no person may erect, reconstruct, place, alter, extend, remove, or demolish any structure that is fixed in, on, under, or over any foreshore or seabed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Coastal permits are issued by the Council under Section 87(c) of the RMA.

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 18 June 2012

Commencement Date 18 June 2012

Conditions of Consent

Consent Granted: To discharge process effluent and stormwater to the Kapuni Stream

Expiry Date: 1 June 2035

Review Date(s): June 2023, June 2029

Site Location: Kapuni Gas Treatment Plant, 298 Palmer Road, Kapuni

Grid Reference (NZTM) 1700945E-5629537N

Catchment: Kapuni

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The discharge of stormwater shall be from a catchment area not exceeding 3.37 ha.
3. The discharge shall not raise the temperature of the Kapuni Stream by greater than 2 degrees Celsius, when measured 50 metres downstream of the discharge point and all practicable steps shall be taken by the consent holder to minimise the temperature rise in the Kapuni Stream. Further, the consent holder shall continuously monitor the temperature of the wastewater, and receiving water upstream and downstream of the discharge point.
4. The discharge shall not cause the pH of the Kapuni Stream to be outside the range 6.5 to 9.0 when measured 50 metres downstream of the discharge point. Further, the consent holder shall continuously monitor the pH of the wastewater, and receiving water upstream and downstream of the discharge point.
5. After allowing for reasonable mixing, within a mixing zone extending 50 metres downstream of the discharge point, the discharge shall not produce any visible oil or hydrocarbon films, scums or foams on the surface of the Kapuni Stream.
6. The discharge shall not cause the concentration of un-ionised ammonia in the Kapuni Stream to exceed 0.006 grams per cubic metre when measured 50 metres downstream of the discharge point, unless agreement is given by the holder of consent 0598-3. In any case, the discharge shall not cause the concentration of un-ionised ammonia in the Kapuni Stream to exceed 0.025 grams per cubic metre.
7. The discharge shall not cause the concentration of sodium in the Kapuni Stream to exceed 15 grams per cubic metre when measured 50 metres downstream of the discharge point, unless agreement is given by the holder of consent 0598-3. In any case, the discharge shall not cause the concentration of sodium in the Kapuni Stream to exceed 40 grams per cubic metre.
8. The discharge shall not cause the total vanadium concentration of the Kapuni Stream to exceed 0.08 grams per cubic metre when measured 50 metres downstream of the discharge point.
9. The discharge shall not contain free available chlorine.

Consent 1123-3

10. Prior to the exercise of this consent, the consent holder shall submit an effluent and stormwater management plan for approval by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The management plan shall detail the procedures and processes that will be followed to ensure that the conditions of this consent are met, including but not limited to:
 - i) controlling the effluent and stormwater discharge rate;
 - ii) measuring and recording the discharge;
 - iii) measuring and recording the Kapuni Stream (chemical and biological);
 - iv) calibration of monitoring equipment;
 - v) co-ordination with the holder of consent 0598-3 on discharge of ammonia and sodium;
 - vi) minimisation of free phosphate in the discharge, and how this can be achieved;
 - vii) minimisation of the temperature increase to the receiving environment;
 - viii) contingency events (including discharging in extended low flow events and the use of alternative receiving environments); and
 - ix) reporting on exercise of consent.
11. The consent shall be exercised in accordance with the approved effluent and stormwater management plan required by condition 10. Within one months notice given by the Taranaki Regional Council, the consent holder shall review the management plan and resubmit the plan for approval by the Chief Executive, Taranaki Regional Council.
12. The consent holder shall forward to the Chief Executive, Taranaki Regional Council, details of any programmes of water treatment used at the Gas Treatment Plant, including raw water, boiler water and cooling water. Further, the consent holder shall notify the Chief Executive, Taranaki Regional Council, of any change in water treatment chemical, or increase in maximum concentration of any water treatment chemical, at least one month prior to change of a water treatment programme.
13. The consent holder shall forward to the Chief Executive, Taranaki Regional Council, details of any programmes of chemical cleaning used at the gas treatment plant. Further, the consent holder shall notify the Chief Executive, Taranaki Regional Council, of any change in chemical cleaning agent, or increase in concentration of any chemical cleaning agent used, where the effluent is to be disposed of to the Kapuni Stream, at least one month prior to change of a chemical cleaning programme.
14. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice within three months of notification of proposed changes in water treatment or chemical cleaning programmes under special conditions 12 and 13, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Consent 1123-3

15. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2017, and/or June 2023 and/or June 2029 for the purpose of:
- a. ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or
 - b. requiring any data collected in accordance with the conditions of this consent to be transmitted directly to the Council's computer system, in a format suitable for providing a 'real time' record over the internet.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 19 June 2012

Commencement Date 19 June 2012

Conditions of Consent

Consent Granted: To take water from the Kapuni Stream in association with the operation of a gas processing facility

Expiry Date: 1 June 2035

Review Date(s): June 2020, June 2023, June 2029

Site Location: Kapuni Gas Treatment Plant, 298 Palmer Road, Kapuni

Grid Reference (NZTM) 1701464E-5630826N

Catchment: Kapuni

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The volume of water taken from the Kapuni Stream shall not exceed 3,900 m³ at a rate no greater than:
 - (a) 52 litres/second under normal operating conditions; or
 - (b) 58 litres/second in the event of an emergency shutdown situation, or equipment breakdown/failure; or
 - (c) 58 litres/second in the event that the taking of water under 1(a) or 1(b) cannot occur.
2. Water shall be taken from the South Taranaki District Council intake structure, except at times when water is taken in accordance with special condition 1(c), when water shall be taken from the Kapuni Stream at or about the following locations:
 - (a) (NZTM) 1701160E-5629699N; or
 - (b) (NZTM) 1700943E-5629620N; or
 - (c) (NZTM) 1700952E-5629494N.
3. The taking of water from an alternative location, as specified in special condition 1(c) of this consent, shall only be exercised for up to five days (120 hours) per calendar year, or such longer period as approved by the Chief Executive, Taranaki Regional Council for emergency or other purposes.
4. At all times the consent holder shall adopt the best practicable option as defined in the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the taking of water from the Kapuni Stream, including, but not limited to, the efficient and conservative use of water.
5. Before exercising this consent, the consent holder shall install, and thereafter maintain, a water meter and a datalogger at the point where the water enters the supply line for the Kapuni Gas Treatment Plant (i.e. (NZTM) 1701293E-5629885N). The water meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of $\pm 5\%$. Records of the date, the time and the rate and volume of water taken at intervals not exceeding 15 minutes, shall be made available to the Chief Executive, Taranaki Regional Council at all reasonable times.

Note: Water meters and dataloggers must be installed, and regularly maintained, in accordance with manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance water meters and dataloggers have a limited lifespan.

Consent 1125-4

6. The consent holder shall provide the Chief Executive, Taranaki Regional Council with a document from a suitably qualified person certifying that water measuring and recording equipment required by the conditions of this consent ('the equipment'):
 - (a) has been installed and/or maintained in accordance with the manufacturer's specifications; and/or
 - (b) has been tested and shown to be operating to an accuracy of $\pm 5\%$.

The documentation shall be provided:

- (i) within 30 days of the installation of a water meter or datalogger;
 - (ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and
 - (iii) no less frequently than once every five years.
7. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person.
8. The water meter and datalogger shall be accessible to Taranaki Regional Council officers at all reasonable times for inspection and/or data retrieval.
9. The records of water taken shall:
 - (a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
 - (b) specifically record the water taken as 'zero' when no water is taken; and
 - (c) for each 12-month period ending on 30 June, be provided to the Chief Executive, Taranaki Regional Council within one month after end of that period.
10. At times when water is taken from an alternative location, as specified in special condition 1(c) of this consent, the consent holder shall advise the Chief Executive, Taranaki Regional Council, within 12 hours of taking water, and within 2 days of ceasing, shall provide details of the length and time the take occurred and the volume and rate of take (cubic metres per day and litres per second).
11. The consent holder shall ensure that the intake is screened to avoid fish entering the intake or being trapped against the screen.
12. The consent holder shall make three annual payments of \$16,667 (plus GST) to the Taranaki Regional Council as a financial contribution for the purpose of providing riparian planting and fencing in the Kapuni Stream catchment. These payments shall be made no later than 1 September each year from 2012 to 2014.

Consent 1125-4

13. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2017 and/or June 2020 and/or June 2023 and/or June 2029 for the purposes of:
- (a) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or
 - (b) to require any data collected in accordance with the conditions of this consent to be transmitted directly to the Council's computer system, in a format suitable for providing a 'real time' record over the internet.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 20 June 2012

Commencement Date 20 June 2012

Conditions of Consent

Consent Granted: To discharge domestic sewage, tri-ethylene glycol, methanol and some water treatment chemicals (i.e. phosphate corrosion inhibitors) from an aerated sewage treatment plant onto and into land

Expiry Date: 1 June 2035

Review Date(s): June 2023, June 2029

Site Location: Kapuni Gas Treatment Plant, 298 Palmer Road, Kapuni

Grid Reference (NZTM) 1700726E-5629194N

Catchment: Kapuni

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. There shall be no direct discharge of any contaminant into a surface water body.
3. The discharge shall not exceed 13.5 m³ per day (0.97 litres per second), which shall be spread as evenly as practicable to a disposal area of not less than 1,325 m².
4. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2017 and/or June 2023 and/or June 2029, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 27 January 1997

Commencement Date 27 January 1997

Conditions of Consent

Consent Granted: To discharge emissions into the air from the treatment of natural gas, cogeneration, other on-site activities and other related and ancillary activities

Expiry Date: 1 June 2029

Review Date(s): June 2023

Site Location: Palmer Road, Kapuni

Grid Reference (NZTM) 1700840E-5629660N

Catchment: Kapuni

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- (a) That on receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- (b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- (c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - (i) the administration, monitoring and supervision of this consent;
 - (ii) charges for the carrying out of the Council's functions under section 35 in relation to this consent; and
 - (iii) charges authorised by regulations.

Special conditions

- 1) That the consent holder shall at all times adopt the best practicable option to prevent or minimise any actual or likely adverse effects on the environment arising from discharges to air from the site. 'Best practicable option' shall be determined by the Chief Executive, Taranaki Regional Council, taking into account the information supplied by the consent holder under conditions 4, 5 and 6 of this consent, and following review as set out under condition 16 of this consent.
- 2) That the consent holder shall at all times operate, maintain, supervise, monitor and control all processes so that emissions authorised by this consent are maintained at a practicable minimum.
- 3) That prior to undertaking any alterations to the plant, processes or operations which may significantly change the nature or quantity of contaminants discharged to air from the site, the consent holder shall consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991.
- 4) That the consent holder shall provide to the Chief Executive, Taranaki Regional Council, by 1 June 1999 and every three years thereafter a written report:
 - (a) reviewing any technological advances in the reduction or mitigation of discharges to air from the site, and the costs and benefits of these advances; and
 - (b) detailing an inventory of the discharges to air from the site of such contaminants as the Chief Executive may from time to time specify following consultation with the consent holder; and
 - (c) detailing any measures that have been taken by the consent holder to improve the energy efficiency of the site's activities and processes; and
 - (d) addressing any other issue relevant to the minimisation or mitigation of discharges of contaminants to air from the site that the Chief Executive, Taranaki Regional Council, considers should be included.

Consent 4087-2

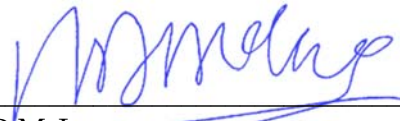
- 5) That in addition to the requirements of condition 4, the consent holder shall provide to the Chief Executive, Taranaki Regional Council, by 1 June 1996 a written report reviewing any technological advances in the reduction or mitigation of discharges of benzene, toluene, ethyl benzene, and xylene, from the glycol towers, and discussing how these might be applicable and/or implemented at the Gas Treatment Plant, and the costs and benefits of these advances.
- 6) That by 1 June 1996 the consent holder shall provide to the Chief Executive, Taranaki Regional Council, a written report evaluating the risk to human health presented by the discharge to air of benzene, toluene, ethyl benzene, and xylene from the site. The report shall be to such detail as is required by the Chief Executive, Taranaki Regional Council.
- 7) That the consent holder shall provide to the Chief Executive, Taranaki Regional Council, on an annual basis the gross emissions of carbon dioxide from the site.
- 8) That the consent holder shall control all discharges to air from the site of carbon monoxide, in order that the maximum concentration of carbon monoxide measured under ambient conditions at or beyond the site boundary arising from discharges to air from the site does not exceed 30 mg/m³ (one-hour average exposure) or 10 mg/m³ (eight-hour average exposure).
- 9) That the consent holder shall control all discharges to air from the site of nitrogen dioxide, in order that the maximum ambient concentration of nitrogen dioxide measured under ambient conditions at or beyond the site boundary arising from discharge to air from the site does not exceed 300 µg/m³ (one-hour average exposure) or 100 µg/m³ (twenty-hour average exposure).
- 10) That should an off-site concentration of carbon monoxide or of nitrogen dioxide in the vicinity of the site be found to exceed a limit established in condition 8 or 9 above, then the Taranaki Regional Council may review any or all of the conditions of this consent pursuant to section 128(1)(a) of the Resource Management Act.
- 11) That the consent holder shall control all discharges of benzene to air from the site, in order that the maximum concentration measured under ambient conditions at or beyond the site boundary arising from discharges to air from the site, shall not exceed 16 µg/m³ (annual average of twenty-four-hour average exposure), nor 3.2 mg/m³ at any time, nor 0.32 mg/m³ (any eight-hour average exposure).
- 12) That the consent holder shall control all discharges to air from the site other than of carbon dioxide, carbon monoxide, nitrogen oxides and benzene, so that the maximum concentration measured under ambient conditions at or beyond the boundary of the site, arising from the exercise of this consent, does not exceed:
 - (a) more than 1/30th of the relevant Occupation Threshold Value (Time Weighted Average); or
 - (b) the Short Term Exposure Limit at any time (Workplace Exposure Standards and Biological Exposure Indices for New Zealand, 1992, Department of Labour).
- 13) That the discharges authorised by this consent shall not give rise to an odour at or beyond the boundary of the site that in the opinion of at least one officer of the Taranaki Regional Council is offensive or obnoxious or objectionable.

Consent 4087-2

- 14) That whenever practicable depressurisation of the plant or sections of the plant shall be so controlled as to avoid dense black smoke from being discharged from any flare.
- 15) That the discharges authorised by this consent shall not give rise to any significant adverse ecological effect on any ecosystems, including but not limited to habitats, plants, animals, microflora and microfauna.
- 16) That pursuant to the provisions of section 128(1)(a) of the Resource Management Act the Council may within six months of receiving a report prepared by the consent holder subject to conditions 4, 5, or 6 of this consent or otherwise by giving notice of review during June 1999 and/or June 2005 and/or June 2011 and/or June 2017 and/or June 2023 serve notice that it intends to review any condition of this resource consent for the purposes of:
 - (a) dealing with any significant adverse effect on the environment arising from the exercise of this consent; or
 - (b) requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment caused by the discharge.
- 17) That the consent holder shall prepare a site contingency plan to the satisfaction of the Chief Executive, Taranaki Regional Council, no later than six months after the granting of this consent. The contingency plan shall be reviewed and if necessary updated to the satisfaction of the Chief Executive, Taranaki Regional Council, annually.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Land Use Consent
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 27 January 1997

Commencement Date 27 January 1997

Conditions of Consent

Consent Granted: To erect place use and maintain two above ground pipelines, an electrical ring main and associated structures over beds of various streams between and including the Motumate Stream and an unnamed tributary of the Waiokura Stream for steam and electricity supply purposes

Expiry Date: 1 June 2032

Review Date(s): June 2023

Site Location: Palmer Road To Manaia Road Kapuni

Grid Reference (NZTM) 1700840E-5629760N

Catchment: Waiokura

Tributary: Motumate

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- (a) That on receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- (b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- (c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - (i) the administration, monitoring and supervision of this consent;
 - (ii) charges for the carrying out of the Council's functions under section 35 in relation to this consent; and
 - (iii) charges authorised by regulations.

Special conditions

- 1. That the structures licensed by this consent shall be constructed and maintained in accordance with the documentation submitted in support of application 96/322.
- 2. That the consent holder shall notify the Taranaki Regional Council at least 48 hours prior to, and again upon completion of initial construction works, and again 48 hours prior to and upon completion of any subsequent maintenance works which may result in disturbance of the stream beds and/or discharges to the streams.
- 3. That the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 1999 and/or June 2005 and/or June 2011 and/or June 2017 and/or June 2023 and/or June 2029, for the purpose of ensuring that the conditions are adequate to deal with any significant adverse effects of the discharge on the receiving environment arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at the time.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 25 January 2010

Commencement Date 25 January 2010

Conditions of Consent

Consent Granted: To discharge sludge, and some liquid, from two stormwater retention ponds, a filter backwash pond and a settlement pond onto and into land

Expiry Date: 1 June 2023

Site Location: Kapuni Gas Treatment plant, 298 Palmer Road, Kapuni

Grid Reference (NZTM) 1700973E-5629335N

Catchment: Kapuni

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of applications 4506 and 6313. In the case of any contradiction between the documentation submitted in support of applications 4506 and 6313 and the conditions of this consent, the conditions of this consent shall prevail.
3. The consent holder shall ensure that only sludge generated in the stormwater retention ponds, filter backwash ponds and from settlement of Kapuni Stream water in the northern pond is discharged.
4. During times when the Kapuni Stream is in low flow, or when equipment failure prevents discharge to the stream, the discharge may include liquids [excluding demineralisation wastes] that normally reside in these ponds as an alternative to discharging them to the stream.
5. No disposal shall occur outside the area specified in application 4506.
6. The discharge onto and into land shall occur a minimum of 25 metres from any surface water body or property boundary. Discharge shall be onto and into land and there shall be no discharge of any contaminant to surface water.
7. The consent holder shall keep records of the following:
 - a) Analysis of a representative sample of sludge each time the stormwater ponds and filter backwash pond is de-sludged, and soil quality after each discharge (analysing for arsenic, cadmium, chromium, copper, lead, nickel, mercury and zinc)
 - b) Volumes of material discharged
 - c) Dates and times of discharge events


and shall provide the results to the Chief Executive, Taranaki Regional Council, on request.

Consent 7043-1

8. Any relocation of soil from within the defined disposal area shall only occur if it can be shown to the satisfaction of the Chief Executive, Taranaki Regional Council that the standards, terms, and conditions of Rule 29 of the Regional Freshwater Plan for Taranaki will be complied with.
9. The discharge authorised by this consent shall not give rise to any of the following effects in any water body:
 - a) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
10. At all times, the consent holder shall comply with the guidelines for industrial sites developed by the Australian National Environmental Protection Council (Assessment of Site Contamination) Schedule B(1): Guideline on the Investigation Levels for Soil and Groundwater (1999).
11. The consent holder shall advise the South Taranaki District Council that the disposal area is being used for disposal of contaminated silts at levels and rates expected to result in the soil of that area exceeding agricultural land use guidelines, but not exceeding industrial land use guidelines.
12. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2011 and/or June 2017, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Todd Petroleum Mining Company Limited
PO Box 802
New Plymouth 4340

Decision Date 20 June 2012

Commencement Date 20 June 2012

Conditions of Consent

Consent Granted: To discharge stormwater from site areas of a natural gas treatment plant where no industrial processes occur (e.g. landscaped areas and roads) into the Kapuni Stream

Expiry Date: 1 June 2035

Review Date(s): June 2023, June 2029

Site Location: Kapuni Gas Treatment Plant, 298 Palmer Road, Kapuni

Grid Reference (NZTM) 1700830E-5629418N

Catchment: Kapuni

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions


1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from a catchment area not exceeding 9.39 ha.
3. After allowing for reasonable mixing, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a. the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b. any conspicuous change in the colour or visual clarity;
 - c. any emission of objectionable odour;
 - d. the rendering of fresh water unsuitable for consumption by farm animals; and
 - e. any significant adverse effects on aquatic life.
4. The consent holder shall maintain a contingency plan (which is incorporated into the contingency plan for the entire site). The contingency plan shall be adhered to in the event of a spill or emergency and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council, detail measures and procedures to be undertaken to prevent spillage or accidental discharge of contaminants not authorised by this consent and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.
5. The consent holder shall maintain a stormwater management plan (which is incorporated into the stormwater management plan for the entire site). This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater.
6. This consent shall lapse on 30 June 2017, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 7755-1

7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2017 and/or June 2023 and/or June 2029, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 1 April 2020

For and on behalf of
Taranaki Regional Council



A D McLay

Director - Resource Management

Appendix II

Categories used to evaluate environmental and administrative performance

Categories used to evaluate environmental and administrative performance

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the Company's approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

Environmental Performance

High: No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.

Good: Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.

Improvement required: Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.

Poor: Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

High: The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.

Good: Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively

adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

Improvement required: Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

Poor: Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.