Todd Energy Ltd

McKee Mangahewa Production Station Monitoring Programme Annual Report 2023/24

Technical Report 2024-78

Taranaki Regional Council

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McKee Mangahewa Production Station Monitoring Programme

Annual Report

2023/24

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Taranaki Regional Council
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Executive summary

Todd Energy Ltd (Todd Energy) operates a petroleum production station located on Otaraoa Road near Tikorangi, bridging the Waitara and Onaero catchments. The McKee and Mangahewa Production Station (MMPS) processes condensate and natural gas from Todd Energy's McKee and Mangahewa groups of wellsites and includes electricity cogeneration and LPG production facilities.

This report for the period July 2023 to June 2024 describes the monitoring programme implemented by 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 Todd Energy's activities.

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

Todd Energy holds nine resource consents, which includes a total of 98 conditions setting out the requirements that Todd Energy must satisfy. Todd Energy holds one consent to allow for the take and use of water, three consents to discharge stormwater and wastewater, three consents to discharge emissions into the air, and two consents regarding the installation and use of structures.

The Council's monitoring programme for the year under review included four inspections of the MMPS and one annual inspection of associated wellsites, nine water samples (discharge and receiving waters) and five stream sediment samples collected for physicochemical analysis, two biomonitoring surveys of receiving waters, a fish survey (spotlighting), and two ambient air quality surveys. Todd Energy provided results of impounded stormwater samples and information on flaring and various water abstractions through the year.

Stormwater system inspections showed that discharges from the site complied with consent conditions at the time. Biomonitoring surveys did not show any evidence of adverse effects caused by discharges from MMPS.

Results from the fish survey undertaken in the Mangahewa Stream were inconclusive as to whether the weir posed a significant barrier to fish passage, it was recommended that Todd Energy investigate improvements that could be made to the weir to increase the likelihood of comprehensive passage for fish. Todd Energy has engaged a consultant who has proposed several changes to the weir to improve fish passage.

There were no adverse effects on the environment resulting from the exercise of the air discharge consents. Ambient air quality monitoring at the McKee Mangahewa Production Station showed that levels of carbon monoxide, particulate matter and nitrogen oxides were below levels of concern at the time of sampling. No offensive or objectionable odours were detected beyond the boundary during inspections and there were no complaints in relation to air emissions from the site.

One incident was recorded in relation to the site in 2023/24. This was an exceedance of abstraction rate due to unforeseen circumstances during a shutdown to update the safety control systems. Staff ensured downstream flow was maintained in the stream and it is unlikely any adverse effects occurred, with no further action taken by Council

For reference, in the 2023/24 year, consent holders were found to achieve a high level of environmental performance and compliance for 864 (89%) of a total of 967 consents monitored through the Taranaki tailored monitoring programmes, while for another 75 (8%) of the consents a good level of environmental performance and compliance was achieved. A further 26 (3%) of consents monitored required improvement in their performance, while the remaining two (<1%) achieved a rating of poor.

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 2024/25 year.

Table of contents

List of tables

List of figures

List of photos

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 2023 to June 2024 by Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by Todd Energy Limited (Todd Energy). Todd Energy operates the McKee and Mangahewa Production Station (MMPS) on Otaraoa Road at Tikorangi, bridging the Waitara and Onaero catchments.

The report includes the results and findings of the monitoring programme implemented by the Council in respect of the consents held by the Todd Energy that relate to abstractions and discharges of water within the Waitara and Onaero catchments, and the air discharge permits to cover emissions to air from the site. This report is the 34th annual report to be prepared by the Council to cover Todd Energy's air, land and water discharges and their effects.

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 *Resource Management Act 1991* (RMA) and the Council's obligations;
- the Council's approach to monitoring sites though annual programmes;
- the resource consents held by Todd Energy in the Waitara and Onaero catchments;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at the MMPS.

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 2024/25 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 2023/24 year, consent holders were found to achieve a high level of environmental performance and compliance for 864 (89%) of a total of 967 consents monitored through the Taranaki tailored monitoring programmes, while for another 75 (8%) of the consents a good level of environmental performance and compliance was achieved. A further 26 (3%) of consents monitored required improvement in their performance, while the remaining two (<1%) achieved a rating of poor. [1]

1.2 Process description

The MMPS is situated on Otaraoa Road, near Tikorangi and was commissioned in November 1984. It receives and processes condensate and gas from a number of wellsites within the area. Production facilities for the Mangahewa group of wellsites came on-stream in September 2001. The surrounding land is predominantly used for dry stock farming.

Raw product from the wellsites is separated into natural gas and condensate. Pipelines are used to transport the condensate to the Omata tank farm in New Plymouth, and natural gas to the national grid or local users. Produced water is a by-product of the process and this is deep well injected. All uncontaminated stormwater from MMPS passes through an interceptor system and discharges to the Mangahewa Stream. Treated impounded stormwater is discharged to the Waitara River.

A natural gas powered electricity generation plant (EGP), comprised of three generation units, capable of producing a total of up to 9.1MW of electricity, was commissioned early in 2009. During the 2012/14 monitoring period, an adjoining LPG plant was completed and commissioned in the southern corner of the site.

The location of MMPS is shown in Figure 1.

[1] The Council has used these compliance grading criteria for more than 20 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

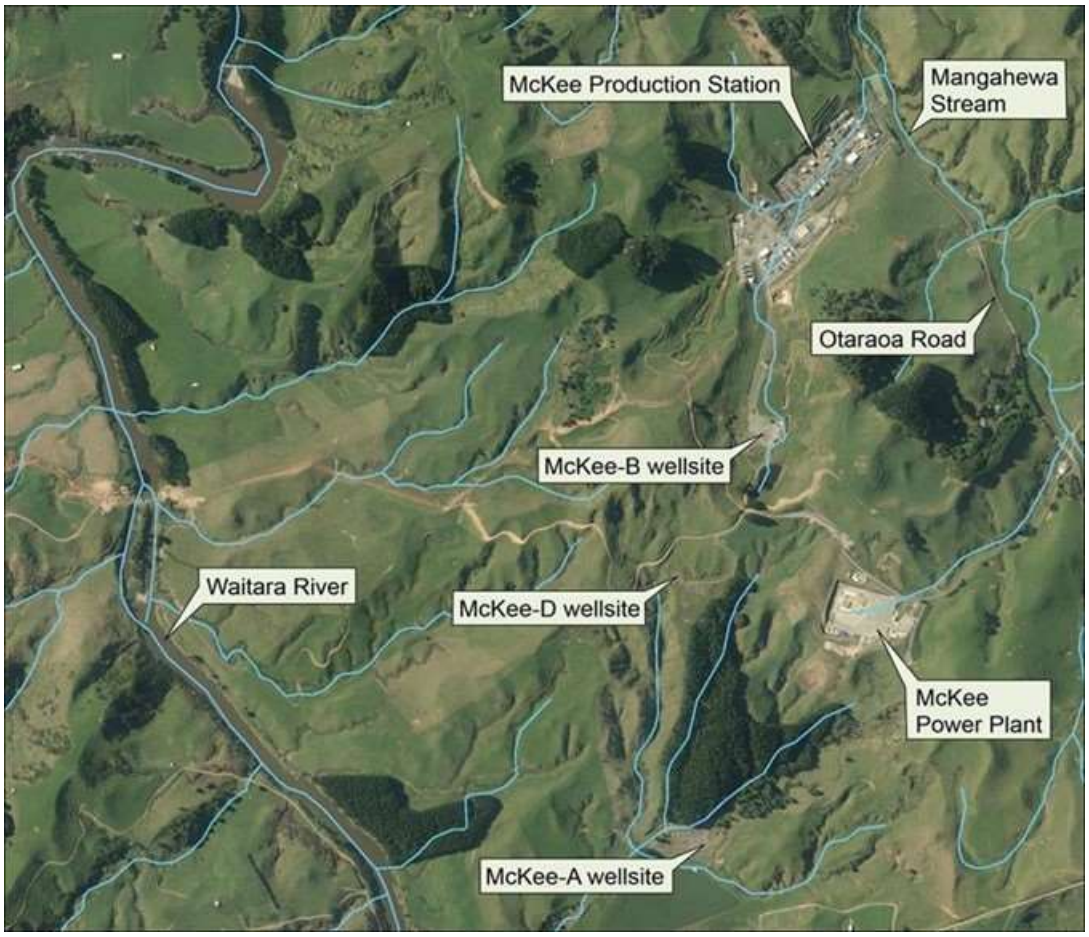

Figure 1 Location of MMPS

1.3 Resource consents

Todd Energy hold nine 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 Resource consents held by Todd Energy in relation to MMPS

Consent number	Purpose	Granted	Review	Expires
	Water abstraction permit			
1226-1	To take water from the Mangahewa Stream for process, fire-fighting and domestic purposes associated with operation of the MMPS	March 1984	-	June* 2023
	Water discharge permits			
1157-1	To discharge uncontaminated stormwater from the site of the MMPS into an unnamed tributary of the Mangahewa Stream	Sept 1983	-	June* 2023
1158-1	To discharge treated impounded stormwater from the site of the MMPS into the Waitara River	Sept 1983	-	June* 2023
7435-1	To discharge stormwater into an unnamed tributary of the Mangahewa Stream in the Onaero Catchment from a LPG Plant	July 2009	June 2027	June 2039
	Land use permits			

Consent number	Purpose	Granted	Review	Expires
1227-1	To construct a weir control for the MMPS water intake on the Mangahewa Stream in the Onaero Catchment	March 1984	-	June 2023^
4006-2	To erect, place and maintain a bridge over the Waitara River for oil field access purposes	July 1999	June 2027	June 2033
Air discharge permits				
4050-3	To discharge emissions into the air arising from the flaring of hydrocarbons associated with production activities at the McKee-C wellsite and from hydrocarbon processing operations and miscellaneous emissions at the MMPS	Sept 2009	-	June 2027
7290-1	To discharge emissions into the air from natural gas combustion and other related activities associated with the operation of an electricity generation plant at the MMPS	June 2008	-	June 2027
7436-1	To discharge emissions to air from the flaring of natural gas in emergency situations and miscellaneous emissions associated with the treatment of gas at the McKee LPG Plant and the Mangahewa Extraction Train 2 (MET2)	July 2009	June 2027	June 2039

* renewal underway, s124 protection ^ 1227-2.0 granted 15 July 2024, this report will refer to 1226-1.
Water permit 11233-1.0, to dam water in the Mangahewa Stream, was granted in conjunction with 1127-2.0.

1.3.1 Wellsite consents

Todd Energy also holds consents for production activities at wellsites associated with MMPS. A summary of these consents is provided in Table 2.

Table 2 Consents for production activities at wellsites associated with MMPS

Wellsite	Consent number	Purpose	Issue date	Expiry
Makara-B	**4883-2**	To discharge treated stormwater and treated produced water from the Makara-B wellsite into an unnamed tributary of the Mangaone Stream in the Waitara Catchment	May 2009	June 2027
Mangahewa-A	**4919-2**	To discharge treated stormwater from hydrocarbon exploration and production operations at the Mangahewa-A wellsite onto and into land and into an unnamed tributary of the Waitara River	Oct 2000	June 2021*
	4920-4.0	To discharge emissions to air during flaring from well workovers and in emergency situations and miscellaneous emissions associated with production activities at the Mangahewa-A wellsite	October 2023	June 2039
Mangahewa-C	**9594-1**	To take and use groundwater for water supply purposes associated with hydrocarbon exploration and production activities	June 2013	June 2027
	10980-1	To discharge contaminants to air from hydrocarbon exploration at the Mangahewa-C wellsite, including flaring of petroleum recovered from natural deposits, in association with well development or redevelopment and testing or enhancement of well head production flows	May 2023	June 2038
	10981-1	To discharge emissions to air during flaring from well workovers and in emergency situations and miscellaneous emissions associated with production activities at the Mangahewa-C wellsite	May 2023	June 2038
	10982-1	To discharge stormwater from skimmer pits at the Manghewa-C wellsite onto and into land, a constructed wetland and an unnamed tributary of the Waiau Stream	May 2023	June 2038
	10983-1	To take groundwater, including the incidental take of heat and energy, that may be encountered as produced water during hydrocarbon exploration and production activities at the Mangahewa-C wellsite	May 2023	June 2038

Wellsite	Consent number	Purpose	Issue date	Expiry
	10984-1	To discharge water based hydraulic fracturing fluids into land at depths greater than 3,000mTVDss beneath the Mangahewa-C wellsite	May 2023	June 2038
	10985-1	To discharge stormwater and sediment from earthworks associated with the construction of the access track, wellsite extension, and culvert at the Manghewa-C wellsite onto and into land in the vicinity of an unnamed tributary of the Waiau Stream	May 2023	June 2038
	10987-1	To construct, place and use a culvert in an unnamed tributary of the Waiau Stream, including the associated disturbance of the stream bed	May 2023	June 2038
	11106-1	To temporarily dam and divert an unnamed tributary of the Waiau Stream to enable the placement of a culvert	May 2023	June 2038
Mangahewa-D	**7404-1**	To take water from the Manganui River for wellsite and well drilling activities during hydrocarbon exploration and production operations at the Mangahewa-D wellsite	Nov 2008	June 2021*
	7405-1	To discharge emissions to air during flaring from well workovers and in emergency situations, and to discharge miscellaneous emissions associated with production activities at the Mangahewa-D wellsite	February 2009	June 2027
	7407-1	To discharge treated stormwater, treated produced water and surplus drill water from hydrocarbon exploration and production operations at the Mangahewa-D wellsite onto and into land in the vicinity of an unnamed tributary of the Manganui River in the Waitara Catchment	Nov 2008	June 2027
	9903-1	To take and use groundwater from a bore for general water supply purposes at the Mangahewa-D wellsite	May 2014	June 2033
Mangahewa-E	**9453-1**	To discharge treated stormwater and produced water from hydrocarbon exploration and production operations at the Mangahewa-E wellsite, onto land and into an unnamed tributary of the Waiau Stream	February 2013	June 2027
	9455-1	To discharge emissions to air associated with hydrocarbon producing wells at the Mangahewa-E wellsite	January 2013	June 2027
Mangahewa-G	**10021-1**	To discharge emissions to air associated with hydrocarbon producing wells at the Mangahewa-G wellsite	Dec 2014	June 2033
	10022-1	To discharge treated stormwater from hydrocarbon exploration and production operations at the Mangahewa-G wellsite, into an unnamed tributary of the Mangahewa Stream	January 2015	June 2033
	10564-1	To take and use water from a dam on an unnamed tributary of the Mangahewa Stream for hydrocarbon exploration activities at the Mangahewa-G wellsite	April 2018	June 2033
McKee-A	**3666-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production operations at the McKee-A wellsite onto and into land and into an unnamed tributary in the Waitara Catchment	April 2003	June 2033
McKee-B	**3667-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production activities at the McKee-B wellsite onto and into land and into an unnamed tributary of the Mangahewa Stream in the Onaero Catchment	April 2003	June 2033
	7462-1	To discharge emissions into the air during flaring from well workovers and in emergency situations and miscellaneous emissions associated with production activities at the McKee-B wellsite	April 2009	June 2027
McKee-C	**3668-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production operations and electricity generation operations and associated activities at the McKee-C wellsite onto and into land and into an unnamed tributary of the Mangahewa Stream in the Onaero Catchment	April 2003	June 2033

Wellsite	Consent number	Purpose	Issue date	Expiry
McKee-D	**3669-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production operations at the McKee-D wellsite onto and into land and into an unnamed tributary in the Waitara Catchment	April 2003	June 2033
McKee-E	**4626-2**	To discharge treated stormwater and treated produced water from the McKee-E wellsite into the Mangahewa Stream in the Onaero Catchment	May 2009	June 2027
Mystone-A	**4388-2**	To discharge treated stormwater and treated produced water from hydrocarbon exploration and production operations at the Mystone-A wellsite onto and into land within the vicinity of an unnamed tributary of the Mangaone Stream in the Waitara Catchment	May 2009	June 2027
	7459-1	To discharge emissions to air during flaring from well workovers and in emergency situations and miscellaneous emissions associated with production activities at the Mystone-A wellsite	March 2009	June 2027
Pouri-A	**3671-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production operations at the Pouri-A wellsite onto and into land and into an unnamed tributary of the Mangahewa Stream in the Onaero Catchment	Sept 2003	June 2033
Pukemai-A	**3670-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production activities at the Pukemai-A wellsite onto and into land and into the Pukemai Stream in the Onaero Catchment	April 2003	June 2033
Toetoe-A	**3676-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production operations at the Toetoe-A wellsite onto and into land and into the Mangaone Stream in the Waitara Catchment	April 2003	June 2033
Toetoe-B	**3677-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production activities at the Toetoe-B wellsite onto and into land and into an unnamed tributary of the Mangaone Stream in the Waitara Catchment	April 2003	June 2033
Tuhua-A	**3672-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production activities at the Tuhua-A wellsite onto and into land and into the Pouri Stream in the Onaero Catchment	April 2003	June 2033
Tuhua-B	**3673-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production activities at the Tuhua-B wellsite onto and into land and into the Pouri and Pukemai Streams in the Onaero Catchment	April 2003	June 2033
Tuhua-C	**3674-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production activities at the Tuhua-C wellsite onto and into land and into an unnamed tributary of the Pouri Stream in the Onaero Catchment	April 2003	June 2033
Tuhua-D	**3675-2**	To discharge treated stormwater, uncontaminated treated site water and uncontaminated treated production water from hydrocarbon exploration and production operations at the Tuhua-D wellsite onto and into land and into the Pouri and Pukemai Streams in the Onaero Catchment	April 2003	June 2033

* consent renewal underway, s124 protection

Photo 1 McKee Mangahewa Production Station

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 MMPS 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

Four inspections of the MMPS were carried out during the monitoring period, along with an annual inspection of the wellsites associated with MMPS. 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 Todd 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

The Council undertook sampling of the discharges from the MMPS and the water quality of the receiving waters of the Mangahewa Stream.

The MMPS discharge to the Mangahewa Stream was sampled twice, and the samples analysed for chlorides, conductivity, hydrocarbons, pH and suspended solids. Mangahewa Stream sites upstream and downstream of the discharge were sampled concurrently, and the samples analysed for chlorides, conductivity, hydrocarbons, pH, suspended solids and turbidity. The impounded stormwater which is discharged to the Waitara River was sampled once, and the samples analysed for chlorides, conductivity, hydrocarbons, pH and suspended solids.

The Council undertook sampling of the ambient air quality outside the boundary of the site. A multi-gas meter was deployed on one occasion in the vicinity of the plant, with monitoring consisting of continuous measurements of gas concentrations for the gases of interest (carbon monoxide and combustible gases). A PM_{10} particulate monitor was deployed concurrently with the multi-gas meter. Two nitrogen oxide measuring devices were also deployed in the vicinity of the plant on one occasion during the year under review.

1.4.5 Biomonitoring surveys

Biological surveys were performed on two occasions in the Mangahewa Stream to determine whether or not the discharge of stormwater from the MMPS has had a detrimental effect upon the communities of the stream. Soft sediment samples were taken concurrently from three sites and analysed for hydrocarbons.

1.4.6 Fish survey

A spotlighting survey was undertaken on one occasion (over two nights) upstream and downstream of the MMPS water supply weir in order to assess compliance with the fish passage condition of the consent held for this structure (Photo 2).

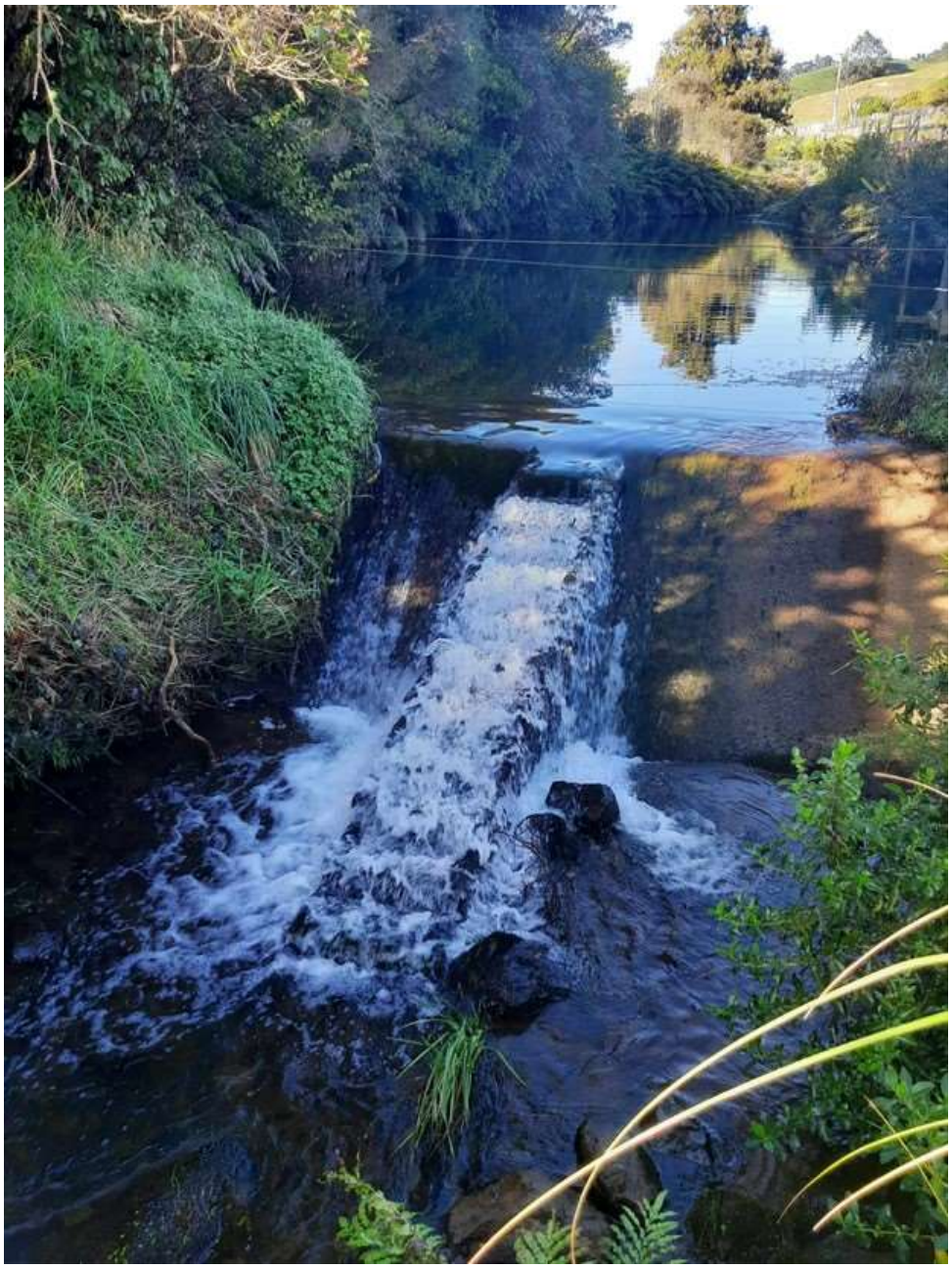

Photo 2 MMPS water supply weir in Mangahewa Stream, with the fish pass in the centre of the weir

2. Results

2.1 Water

2.1.1 Inspections

Four inspections of the MMPS were undertaken during the period under review, along with an annual inspection of the wellsites associated with MMPS.

24 July 2023

An annual inspection of the well sites associated with the MMPS was carried out to check for compliance with resource consent conditions. Light rain fell intermittently throughout the day. Well sites inspected were Mangahewa-A, C, D, E and G; Pouri-A; Pukemai-A; Tuhua-A, B, C and D; McKee B, C, D and E; Toetoe-A, B and C; and Mystone-A. In general, the sites were tidy and clean with minimal activity occurring. The sites were being maintained with weed spraying evident on the site and in some places within the ring drains. The majority of ring drains were vegetated with grasses that helped with controlling and treating sediment laden stormwater. Hydrocarbon sheens were not observed within the skimmer pits or in puddles on any of the sites. The skimmer pits were all in good order with goose neck pipes functioning as required. The majority of the discharges were onto land before flowing to surface water. Some pits were unlined and empty. No effects were noted in the grass (such as burnt patches or dead grass) or within the streams. Flaring from the sites was not occurring at the time of inspection. No visual effects were noted as a result of previous flaring on the sites.

Specific points to note and if applicable, action, were:

Pouri-A: Two goose neck pipes exist in the skimmer pit, a new pipe with shut off valve and an older pipe in the corner. The inspecting officer noted that this older pipe needs to be removed if on site works occur.

Tuhua-B and Tuhua-D: Both sites have ripped liners in the skimmer pits which will need re-lining if on site works occur.

McKee-B: It was noted that removing sediment from the skimmer pit would improve function.

McKee-D: The inspecting officer queried whether there a sampling regime in place around the deepwell injection bund to ensure stormwater that was released is clean.

MMPS: The site was tidy and clean with no stains or spills evident. The ring drain on the northern side of the site was running clear. It was noted that utility water was discharging to site from a hose during maintenance. A discussion was had with MMPS staff concerning the use of the water an where it was discharging to, with Council concerned that high volumes of hot water discharging to the stream may cause adverse effects. Council was notified that the water was used within bunds and captured, and that cold water was used in the event that a fire needed to be controlled. The onsite storage tank that holds water from bunds was low. Weed spraying had taken place along the ring drain. The mini skips next to the crude oil bund were appropriately bunded, as were the 44 gallon methanol drums. Spill control kits were well positioned onsite. Algal growth was noted in the bund below the pipes that enter the site from Mangahewa-G, indicating that stormwater was being contained and checked prior to being released. A small slip had occurred near the LPG load out area. It was noted that it wasn't a recent slip however, staff advised were unaware. The inspecting officer advised that it should be addressed to prevent sediment entering the stormwater network. Only one flare was noted to be active, with a flame and heat haze present. The Mangahewa Stream had a very clear appearance. There was a lot of vegetation present within the

ponded area above the weir. This vegetation was covered with precipitated iron oxide. A large eel was observed swimming in the ponded area.

25 October 2023

The site was tidy and clean with no issues noted.

20 May 2024

The site was dry at the time of the inspection. The workshop and inwards/outwards goods areas were clean and tidy. Methanol drums were stored appropriately on bunds within the tank bund. An IBC container was noted to be stored within a bunded area. No staining was noted on the ground. The stormwater drain behind the LPG tanker load-out, at the base of the hill required cleaning to remove sediment, algae and grasses. A heat haze from two flare pits and one flare stack was noted. No smoke, flame or odour were detected. Water discharging to the stream from the stormwater pipes had a clear appearance and the stream appeared healthy with no effects noted. A freshwater crayfish was observed living amongst rocks at the top pipe (STW001161).

25 June 2024

The site was wet from previous rain. The workshop and inwards/outwards goods areas were clean and tidy. The northern ring drain had an iron oxide sheen on the surface and the edges of the drain and the discharge pipe were coated with orange iron oxide. The water at the northern end of the drain appeared cloudy as the bottom of the drain was not visible however, further up the drain where the depth of water was shallower, the water appeared clear. Grasses and reeds within the drain had been sprayed and were dead. The stormwater drain behind the LPG tanker load out, at the base of the hill had had earthworks carried out to stabilise the bank and remove sediment within the drain. Clear water was discharging to the stream and the stream appeared healthy with no effects noted. One flare was observed, with no smoke or odour detected.

2.1.2 Results of discharge monitoring

General stormwater from the MMPS is discharged to the Mangahewa Stream via two pipes (sampled at STW001119 and STW001161). These discharges are covered by consents 1157-1 and 7453-1. Impounded stormwater, from within bunded areas, filters through a treatment system prior to discharge to the Waitara River (sampled at STW002007). This discharge is covered by Consent 1158-1. Discharges and related stream sampling sites are shown in Figure 2.

2.1.2.1 Discharge to the Mangahewa Stream from MMPS

Water quality sampling of the discharge to the Mangahewa Stream was undertaken twice during the 2023/24 period. Table 3 presents the results of this sampling.

Table 3 Monitoring results for MMPS stormwater discharge to Mangahewa Stream (sites STW001119 and STW001161)

Parameter	Units	STW001119		STW001161		Consent 7435-1^ limits
		7 September 2023	12 April 2024	7 September 2023	12 April 2024	
Chloride	g/m^3	6	5	9	6	50
Conductivity @25°C	mS/m	8.3	6.9	9.6	7.1	-
Hydrocarbons	g/m^3	<0.7	<0.7	<0.7	<0.7	15
pH		7.0	6.7	7.1	6.9	6.0 – 9.0
Suspended solids	g/m^3	3	4	<3	4	100

Parameter	Units	STW001119		STW001161		Consent 7435-1^ limits
		7 September 2023	12 April 2024	7 September 2023	12 April 2024	
Temperature	Deg.C	13.2	17.7	14.0	17.3	-

^ Consent 1157-1 does not currently contain conditions relating directly to the composition of the discharge

The results are indicative of a clean stormwater discharge at the time of sampling, with parameters well below the limits imposed by Consent 7435-1.

Figure 2 Sampling sites relating to MMPS

2.1.2.2 Discharge to the Waitara River

During the previous monitoring period Todd Energy undertook maintenance on the impounded stormwater system. This included fully cleaning out the oily water system (sediment and residual hydrocarbons), the Corrugated Plate Interceptor (CPI), and Dissolved Air Floatation plant (DAF). Sediment was also removed from the final holding pond. Todd Energy also began periodically flushing sediment build up from the final pond back into the oily water system to manage sediment in the final pond. The discharge location of the water treatment plant backflush water within the final pond was changed, so that any sediment discharged into the pond is further from the final pump out location. Further works are scheduled to clean the stream intake area of excessive sediment build up to minimise sediment carryover into the system.

Water quality sampling of the impounded stormwater which is discharged to the Waitara River was undertaken once during the 2023/24 period (the site was not able to be accessed on 12 April 2024). Table 4 presents the results of this sampling.

Table 4 Monitoring results for stormwater discharge to the Waitara River (site STW002007)

Parameter	Units	7 September 2023	12 April 2024	Consent 1158-1 limits
Chloride	g/m^3	13	-	-
Conductivity @25°C	mS/m	8.3	-	-
Hydrocarbons	g/m^3	12.2	-	90%<10, 100%<20

Parameter	Units	7 September 2023	12 April 2024	Consent 1158-1 limits
pH		6.9	-	6.5 – 8.5
Suspended solids	g/m^3	7	-	30
Temperature	Deg.C	-	-	<20

Hydrocarbons, pH, and suspended solids complied with limits imposed by Consent 1158-1.

Todd Energy collected regular samples of the impounded stormwater which is discharged to the Waitara River. A selection of results provided are presented in Table 5 below. The results are indicative only in relation to conditions of Consent 1158 as the consent limits are given for 24 hour flow-proportioned composite samples (not grab samples).

In August 2023 Todd Energy amended their water sampling procedure to give a more representative discharge sample. Previously the pumps were activated at the same time every week and a sample was collected from the pump through-flow. This was not representative as the discharge was not usually occurring, and starting of the pump during low pond conditions would periodically suck some sediment from the bottom of the pond into the sampler. A weekly sample is still collected but this is now via a grab sample.

Table 5 Todd Energy self-monitoring results (grab samples) for stormwater discharge to the Waitara River

Date	Number	pH (range)	Hydrocarbons (max) g/m^3	Suspended solids (max) g/m^3
July 2023	4	6.9 - 7.3	17	17
August 2023	5	7.0 - 7.4	**105**	7
September 2023	4	7.0 - 7.1	5	11
October 2023	4	7.1 - 7.2	6	8
November 2023	5	7.0 - 7.2	7	11
December 2023	4	7.0 – 7.3	9	**47**
January 2024	5	7.0 - 7.2	7	19
February 2024	3	7.0 - 7.3	6	5
March 2024	3	7.2 - 7.3	7	8
April 2024	3	7.2 - 7.4	10	17
May 2024	5	6.9 - 7.4	7	**36**
June 2024	4	7.0 – 7.2	11	**60**
Consent limit*		6.5 – 8.5	<10 (90%) or <20 (100%)	30

* Consent limit is for 24 hour flow-proportioned composite samples

The pH of the samples showed compliance with consented limits at all times. Hydrocarbons were mostly below the consent limit with the exception of one sample in August 2023. Stormwwater water was not released to the river on this occasion, instead it was pumped back through the system and the pond was given a full clean out. Suspended solids were above the consent limit of $30g/m^3$ on four occasions. However, the current standard limit for grab samples is $100g/m^3$, which was not exceeded at any time. High levels of suspended solids would have been unlikely to have had an impact on the water quality of the Waitara River due to the massive dilution involved and the already elevated sediment levels in the receiving waters.

2.1.3 Results of receiving environment monitoring

2.1.3.1 Chemical

Water quality

Water quality sampling of the Mangahewa Stream was undertaken in conjunction with stormwater discharge sampling.

The results for upstream site MHW000060 and downstream site MWH000065 are presented in Table 6.

Table 6 Receiving environment results for Mangahewa Stream in relation to MMPS

Parameter	Units	7 September 2023		12 April 2024	
		u/s	d/s	u/s	d/s
Chloride	g/m^3	6	6	10	9
Conductivity@25°C	mS/m	7.0	6.7	8.8	8.4
Hydrocarbons	g/m^3	<0.7	<0.7	<0.7	<0.7
pH		6.9	6.9	6.7	6.7
Suspended solids	g/m^3	21	15	8	7
Temperature	Deg.C	12.9	12.8	16.9	17.0
Turbidity	NTU	13	13	6.2	6.3

Key: upstream (u/s) = MHW000060, downstream (d/s) = MWH000065

The results show minimal impact of discharges from MMPS on the water quality of the Mangahewa Stream at the time of sampling. This indicates compliance with the conditions of consents 1157-1 and 7435-1.

Sediment sampling

Sediments within the bed of the Mangahewa Stream in the vicinity of MMPS have been found to contain residual hydrocarbons. The likely source is from historical contamination within the former McKee-E wellsite located between MMPS and the Mangahewa Stream, although hydrocarbons have been found in sediments upstream of the MMPS discharges and McKee-E. Monitoring of the levels of these hydrocarbons has been undertaken since 2011, in conjunction with biomonitoring surveys, to determine any potential impact on the health of the stream communities and whether the concentrations are decreasing over time due to degradation and/or downstream transport.

As a result of the residual hydrocarbons in the sediment and the possibly detrimental impacts on the stream communities below the site, Todd Energy commissioned a stream sediment study. The initial findings from the investigation were:

- There was no pattern to the results,
- There are instances of contamination quite a way upstream of the MMPS,
- The hydrocarbon signature was consistent with drilling mud,
- The McKee 13 event propagated mud upstream of the incident and the MMPS,
- There are periodic stream erosion events along the stream edge.

Based on this, it is unlikely that the hydrocarbons in the sediment are due to any current operations, and instead likely that residual legacy contamination and periodic stream bank erosion are contributing to these results. Todd Energy, working with the upstream farmer, has fenced approximately 100m upstream of the car park and this has been riparian planted.

Table 7 shows the results of soft sediment sampling undertaken by the Council for the period 2011 to 2024. The sampling locations are shown in Figure 2. Due to unsafe access, samples are no longer able to be collected from the site 250m downstream and this site has been replaced by MHW000066, which is 200m downstream.

Levels found at all three sites were fairly similar during 2023/24.

Table 7 Soft sediment sampling of the Mangahewa Stream for hydrocarbons 2011-2024

Date	Hydrocarbons in sediment – mg/kg dry weight			
	100m u/s of discharge MHW000060	50m d/s of discharge MHW000065	200m d/s of discharge MHW000066	250m d/s of discharge MHW000068
3 June 2011	49	130	-	190
12 April 2013	< 10	170	-	56
6 June 2014	< 0.5	94	-	(no sample)
8 January 2015	11	34	-	87
2 April 2015	20	114	-	62
9 December 2015	< 14	39	-	40
1 April 2016	< 18	< 17	-	99
28 February 2017	93	443	-	235
28 April 2017	29	72	-	38
25 October 2017	16	155	-	48
7 February 2018	45	611	-	20
26 November 2018	< 70	< 110	-	*
18 February 2019	< 70	179	-	*
27 November 2019	< 70	< 120	< 90	*
3 March 2020	< 80	< 100	< 170	*
30 October 2020	<70	< 90	<100	*
2 February 2021	<110	<120	<110	*
9 November 2021	<160	<150	<150	*
1 February 2022	<180	<170	<170	*
18 January 2023	<130	<90	<80	*
29 March 2023	<110	<110	<100	*
11 December 2023	<100	^	<130	*
18 March 2024	<90	<80	<100	*

* site no longer used due to unsafe access

^ sample smashed after collection

2.1.3.2 Macroinvertebrate monitoring

The Council's 'kick-sampling' technique was used at three sites, on 18 January and 18 March 2024, to collect benthic macroinvertebrates from the Mangahewa Stream in relation to discharges from the MMPS. This provided data to assess any potential impacts the consented discharges have had on the macroinvertebrate communities of the stream. Samples were processed to provide number of taxa (taxa richness), Macroinvertebrate Community Index (MCI) and semi-quantitative MCI value (SQMCI) scores for each site.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of nutrient pollution in streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to pollution. The SQMCI takes into account taxa abundance as well as sensitivity to pollution and may reveal more subtle changes in communities. Significant differences in either the MCI or SQMCI between sites

indicate the degree of adverse effects (if any) of the discharges being monitored and enable the overall health of the macroinvertebrate communities to be determined.

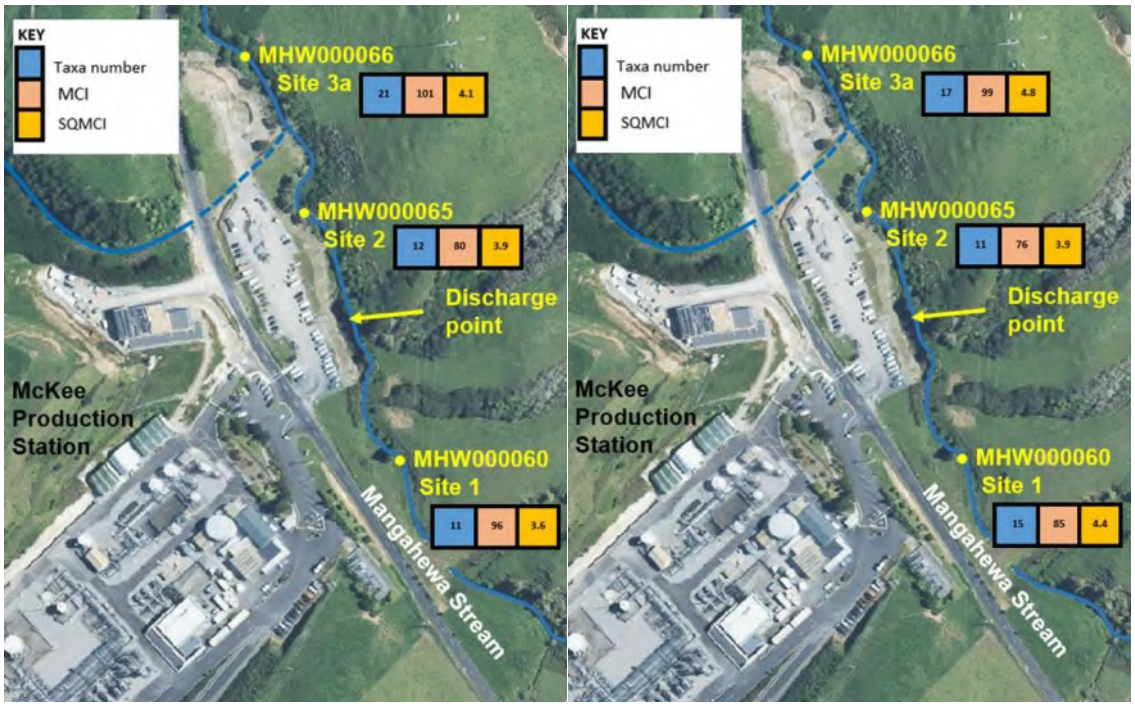

Figure 3 Macroinvertebrate indices recorded at sites in the Mangahewa Stream in summer (left) and autumn 2024 (right)

The summer survey (January 2024, Figure 3) found taxonomic richness ranged from moderate to high at the sampled sites, with an increase of taxa richness downstream. MCI scores were reflective of 'fair' to 'good' health. Site 2 recorded an MCI score significantly less than both site 1 and 3a, while sites 1 and 3a recorded similarly. SQMCI scores were reflective of 'poor' to 'fair' health, however, there were no significant differences between sites. The most downstream site 3 recorded the highest scores for all metrics out of the three sites, suggesting that the decline in MCI health is likely localised.

The autumn (March 2024, Figure 3) survey found taxonomic richness was moderate at the sampled sites. There was a decline in taxa richness between sites 1 and site 2, however this improved downstream. MCI scores were reflective of 'fair' to 'poor' health. Sites 1 and 2 were not significantly different from each other, but both sites recorded an MCI score significantly less than the most downstream site 3a. SQMCI scores were also reflective of 'fair' to 'poor' health. Site 2 recorded significantly less than site 3a, while sites 1 and 3a recorded similarly. The most downstream site 3 recorded the highest scores for all metrics out of the three sites, suggesting any degradation is likely localised.

Hydrocarbon concentrations in the streambed sediment have been monitored in conjunction with the macroinvertebrate survey since 2011. No hydrocarbon odour was recorded at any site at the time of sampling, and no hydrocarbons were recorded above the detection limit.

From these results, there is no evidence of toxic discharges from the McKee production station.

Copies of biomonitoring reports for this site are available from the Council upon request.

2.1.3.3 Fish survey

A spotlighting survey was undertaken on 19 and 20 February 2024 at three sites in the Mangahewa Stream, one upstream and two downstream of the McKee Production Station water supply weir (Photo 2) in order to assess compliance with the fish passage condition of the consent held for the structure (1227-1).

Five species were recorded in the current survey: longfin eel (*Anguilla dieffenbachii*), redfin bully (*Gobiomorphus huttoni)*, banded kōkopu (*Galaxias fasciatus*), giant kōkopu (*Galaxias argenteus*) and shortjaw kōkopu *(Galaxias postvectis).* Kōura (*Paranephrops planifrons) and freshwater shrimp (Paratya)* were also recorded in the current survey. The highest species diversity and abundance was recorded downstream of the weir.

With regard to whether the weir meets the special condition of Consent 1227-1, historical and current survey data suggest that fish passage, to an extent, is possible for some native species due to their ability to migrate past the weir as juveniles. However, the proportion of successful passage attempts cannot be assessed due to the degraded fish community (assessed by fish abundance), making it difficult to draw conclusions. This may be indicative of further partial barriers downstream unrelated to the MPPS (double barrel culverts directly downstream of the weir and the Foreman Road weir have been identified as having fish passage issues).

The fish passage observed is likely being facilitated by the edge of the weir, where fish may climb through or under moist grass at the water flow's edge. While the grass has been historically critical to fish migration, and should not be removed or sprayed, it is not an appropriate mechanism to rely on solely for fish passage purposes.

It cannot be concluded at this time if the weir poses a significant barrier to fish passage. Other species, such as īnanga (*Galaxias maculatus*) and torrentfish (*Cheimarrichthys fosteri*), which were present in historical surveys but not observed in the current survey, are likely to also face challenges with this structure based on their known climbing abilities.

Given the growing regional direction to improve fish passage, it is expected that downstream barriers will be addressed in the future, potentially leading to changes in community composition such as greater fish abundance and species richness, providing better insight into extent of the barrier of the weir. It was recommended that improvements be made to the weir to increase the likelihood of comprehensive passage for fish.

A copy of the full fish survey report for this site is available from the Council upon request.

2.1.4 Summary of water abstractions reported by Todd Energy

Figures 4 provides a summary of the abstraction volumes for the abstraction form the Mangahewa Stream under Consent 1226-1. A negligible amount of water was abstracted from the Mangahewa-C and Mangahewa-D wellsite bores (consents 9594-1 and 9903-1). No water was abstracted under the water take consents for Mangahewa-D (Manganui River, 7404-1), Mangahewa-E (9456-1), Wyatt dam (Mangahewa-G wellsite, 10564-1), Te Kiri North-A (9877-1) or Mystone-A (7455-1), during the period under review.

There was one exceedance of the limits stipulated by Consent 1226-1. This occurred during a scheduled safety control systems electronic update, which required a full plant Emergency Depressurisation/Emergency Shutdown. This unintentionally resulted in fire water and utility water (the latter being critical for flare seal water and personnel safety systems) being reduced to critically low levels, and take rates were exceeded for a time to ensure these water systems were back to safe operational levels. Plant operators observed the Mangahewa Stream water intake weir during the high take period and ensured downstream flow was maintained.

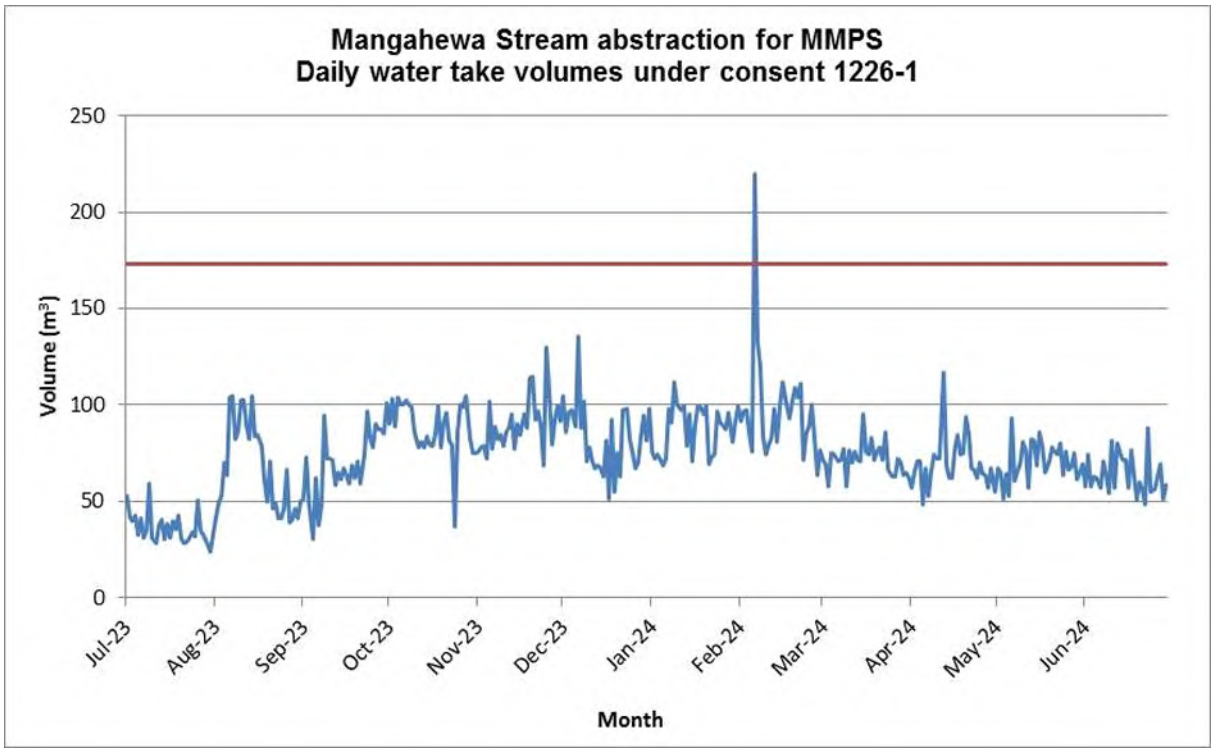

Figure 4 Daily water abstraction volumes for MMPS under Consent 1226-1

2.2 Air

2.2.1 Inspections

Air inspections were carried out in conjunction with site inspections as discussed in section 2.1.1 above. Air discharges were all found to be satisfactory, with no offensive or objectionable odours noted during the inspections.

2.2.2 Results of receiving environment monitoring

Taranaki Regional Council (TRC) undertakes annual air quality monitoring at the region's hydrocarbon production stations to measure concentrations of hazardous air pollutants (HAPs) in ambient air at the boundary. During the 2023/24 survey instrumental monitoring was undertaken for nitrogen oxides (NO_x), fine particulate (PM_{10} and $PM_{2.5}$), carbon monoxide (CO) and the lower explosive limit (LEL) for gases.

Monitoring of CO and LEL was undertaken using a Rae Systems MultiRae gas monitor which continuously measures gas levels in ambient air. The monitor was located at the north-eastern boundary of the site (Figure 5) and records maximum, mean, and minimum CO levels, and the percentage of the LEL. The instrument was deployed on 5 April 2024 and recorded data for three hours. Typically, the instrument records for 24hr but it's likely the battery failed.

The concentration of PM_{10} and $PM_{2.5}$ in ambient air was measured using a TSI DustTrak aerosol monitor which can simultaneously measures particle mass and size fraction. It was deployed at the same location as the MultiRae on 3 April 2024 and recorded data for 9.5 hours which is also a shorter duration than usual.

Passive sampling devices were deployed at both monitoring locations from 19 January to 9 February 2024 to measure NOx. The samplers absorb NOx over the duration of the deployment and are sent for laboratory analysis. The laboratory results are used to calculate 1- and 24-hr time weighted averages (TWA).

The results of the monitoring are presented below and compared against the following human health-based assessment criteria;

- Ambient Air Quality Standards (AAQS, Ministry of the Environment (MfE), 2004)
- The Ambient Air Quality Guidelines (AAQG, MfE, 2002)
- World Health Organisation Guidelines (WHO), and
- The limits set out in air discharge Consent 4050-3.1.

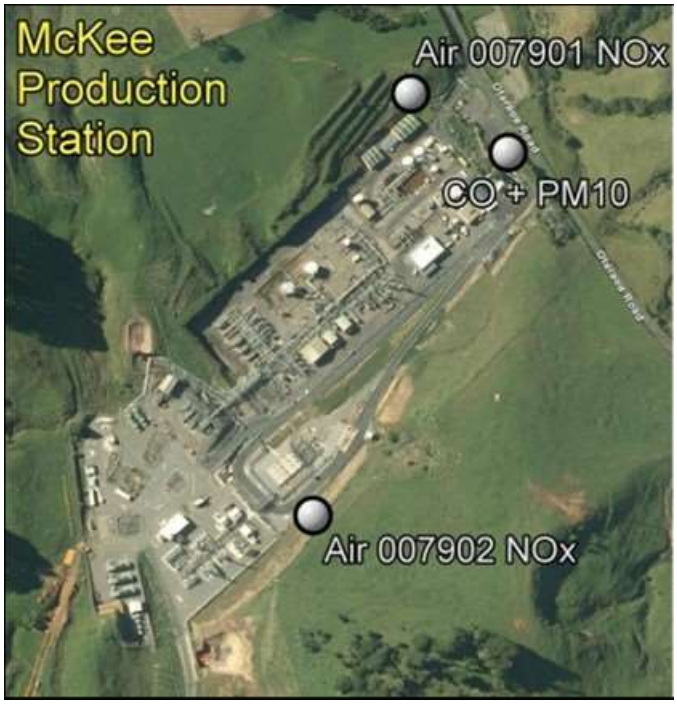

Figure 5 Air monitoring sites at MMPS

2.2.2.1 Carbon Monoxide and Lower Explosive Limit

Exposure to low levels of CO can cause nausea, dizziness, and disorientation. Higher levels of CO can cause coma, collapse and loss of consciousness. The AAQS for exposure to CO is 10mg/m³ averaged over an 8 hour period.

The data retrieved from the instrument did not exceed zero at any time during the deployment. The cause is unknown and may be due to equipment malfunction or unfavourable wind directions. Records indicate that there was no flaring during the deployment, while wind direction data indicated that the instrument was never downwind of site emissions. Given the rural location of the site there are not likely to be other notable sources of these HAPs.

Due to the uncertainty of the data for this monitoring year, a qualitative approach was adopted to assess compliance with the consent, with historical data used to infer potential effects. Since monitoring began in 2015 the concentration of CO measured at the monitoring locations has never exceeded or approached the AAQS limit. During the most recent monitoring (2021/22) the maximum CO concentration reported was 1.3mg/m³, significantly lower than the AAQS limit of 10mg/m³.

Lower Explosive Limit (LEL) is the concentration of flammable gas, vapour, or mist in ambient air, below which an explosive gas atmosphere will not be formed. In past years methane has been used as a proxy for LEL and is measured using the MultiRae. During the 2021/22 monitoring the instrument recorded methane at 0.1% of the LEL. This low result is to be expected given that methane will likely readily disperse over the distance between the source and the instrument.

Given that there have not been any significant changes to activities on-site or to the scale of production it is unlikely that the concentration of CO and percentage LEL at the monitoring site during the 2023/24 monitoring year would be significantly different than other years.

2.2.2.2 Fine Particulate Matter

Fine particulate less than 10µm in diameter (PM_{10}) and less than 2.5µm ($PM_{2.5}$) can enter deep into the lungs significantly reducing the exchange of gases across the lung walls. At high concentrations these can cause health impacts ranging from increased susceptibility to asthma and respiratory illness through to increased risk of premature death. PM_{10} and $PM_{2.5}$ come from multiple natural and anthropogenic sources including sea spray, crustal matter, and in particular, the combustion of fossil fuels. Emissions from the MMPS are primarily from the combustion of hydrocarbons in the flare and from vehicle engines. Records indicate that there was no flaring during the deployment.

The maximum concentrations of PM_{10} and $PM_{2.5}$ recorded during monitoring at MMPS were 30µg/m^3 and 29µg/m^3 respectively, while the 99th percentile of results was 16.9µg/m^3 for PM_{10} and 16µg/m^3 for $PM_{2.5}$ (Table 8). The results demonstrate that the majority of fine particulate was in the $PM_{2.5}$ size fraction which is expected for emissions from the combustion of natural gas.

Table 8 Results of fine particulate monitoring at McKee PS.

Pollutant	Maximum (µg/m^3)	99%ile (µg/m^3)	Maximum 24-hr average (µg/m^3)
PM_{10}	30.0	16.9	-
$PM_{2.5}$	29.0	16.0	-

The DustTrak only operated for 9.5 hours so 24-hour averages were not able to be calculated. Based on the 99 percentile results offsite concentrations of PM_{10} and $PM_{2.5}$ the relevant health assessment criteria were not likely to have been exceeded during the deployment.

The MMPS is located in a rural area and the level of background PM_{10} is likely to be a result of vehicle emissions from the Otaraoa Rd to the south, dust from unsealed roads, and other rural activities such as fertiliser application. On this basis the background concentration of PM_{10} in the area is likely to be low and therefore discharges from the combustion of natural gas at the MMPS site are not likely to cause ambient concentrations to approach the AAQS limit of 50µg/m^3 (24-hour average) at any time.

2.2.2.3 Nitrogen dioxide

A portion of total NO_x includes nitrogen dioxide (NO_2) which can cause adverse health impacts as a result of short and long-term exposure durations. Short-term exposure to high concentrations can result in the inflammation of airways which may exacerbate asthma and other pre-existing respiratory problems. Long-term exposure to NO_2 may adversely impact lung development in children and may lead to the development of asthma. The risk of developing certain forms of cancer and premature death also increases with long-term exposure to NO_2.

As a conservative approach the NO_x data are used as a proxy for NO_2 and the calculated TWAs are compared to the relevant health-based assessment criteria for NO_2 in Table 9 below.

Table 9 Raw data and calculated TWAs

Monitoring site	NO_x result (µg)	NO_x 1-hour average (µg/m^3)	NO_x 24-hour average (µg/m^3)
AIR007901	0.4	1.39	0.74
AIR007902	<0.3	1.04	0.55
NO_2 Assessment criteria		**200 (AAQS)**	**100 (AAQG)**

The total NO_x results at the monitoring sites were reported as 0.4µg/m³ and <0.3µg/m³ which are equivalent to 1-hour TWA of 1.39µg/m³ and 1.04µg/m³ respectively. The results are substantially lower than the NO_2 AAQS limit of 200µg/m, and among the lowest since monitoring began in 2016.

Similarly, the 24-hour average concentration at each of the monitoring locations was comparatively low with the concentrations calculated to be between 0.55µg/m³ and 0.74µg/m³. These results are significantly lower than the NO_2 AAQG of 100µg/m³.

Only a portion of NO_X is NO_2 and therefore the actual concentration of NO_2 at the monitoring locations will be less than reported. The 1-hour and 24-hour results are likely to be largely representative of background concentrations in rural areas.

A copy of the air monitoring report for this site is available from the Council upon request.

2.2.3 Summary of flaring and fuel use reported by Todd Energy

Summaries of flaring and fuel use at MMPS are provided in Figures 6 and 7.

During the period under review, Todd Energy kept the Council informed of all non-routine flaring at MMPS. The majority of this flaring related to power outages, compressor trips and maintenance. The unusually large amount of flaring during July 2023 was due to flaring from Mangahewa-D wells shut-in, August there were a large number of compressor issues while in September power outages were responsible for the large volume of flaring. No visible smoke events were recorded. There was no flaring associated with the exercise of the air discharge consents for the McKee EGP (7290-1).

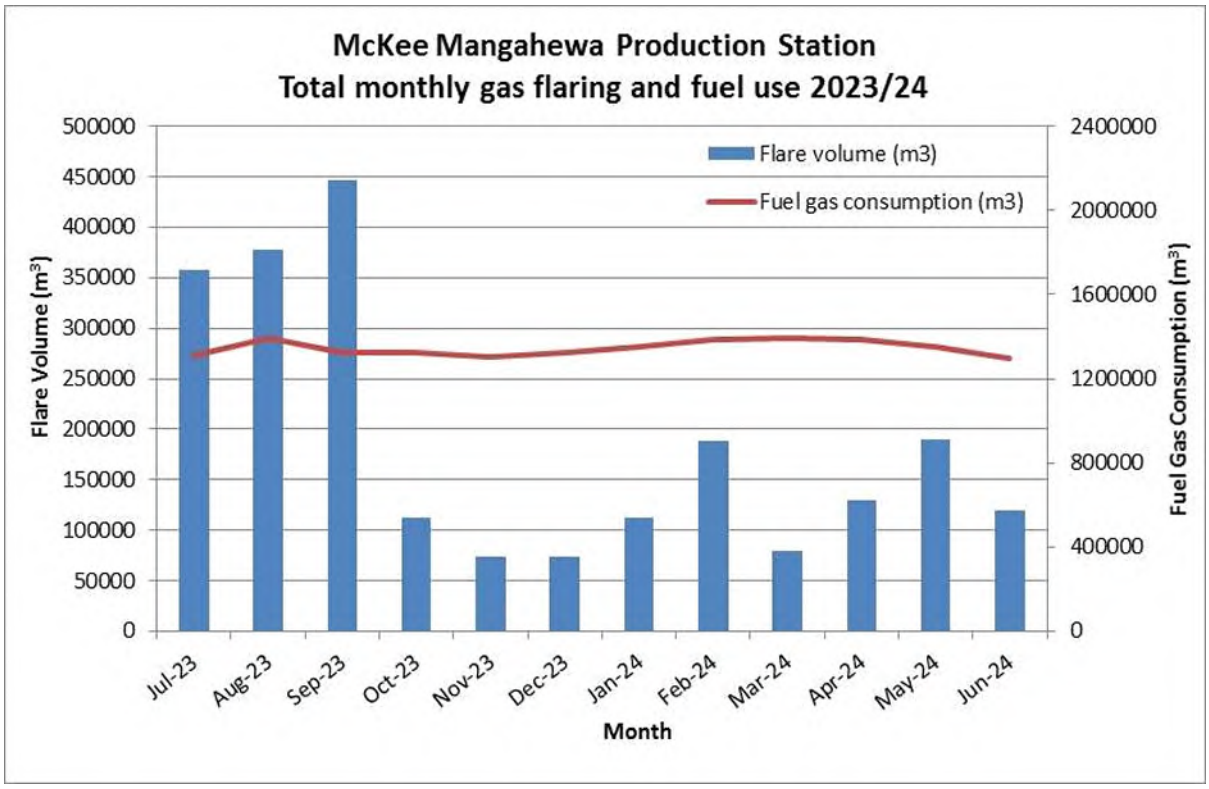

Figure 6 Monthly natural gas flaring and fuel use for MMPS under Consent 4050-3

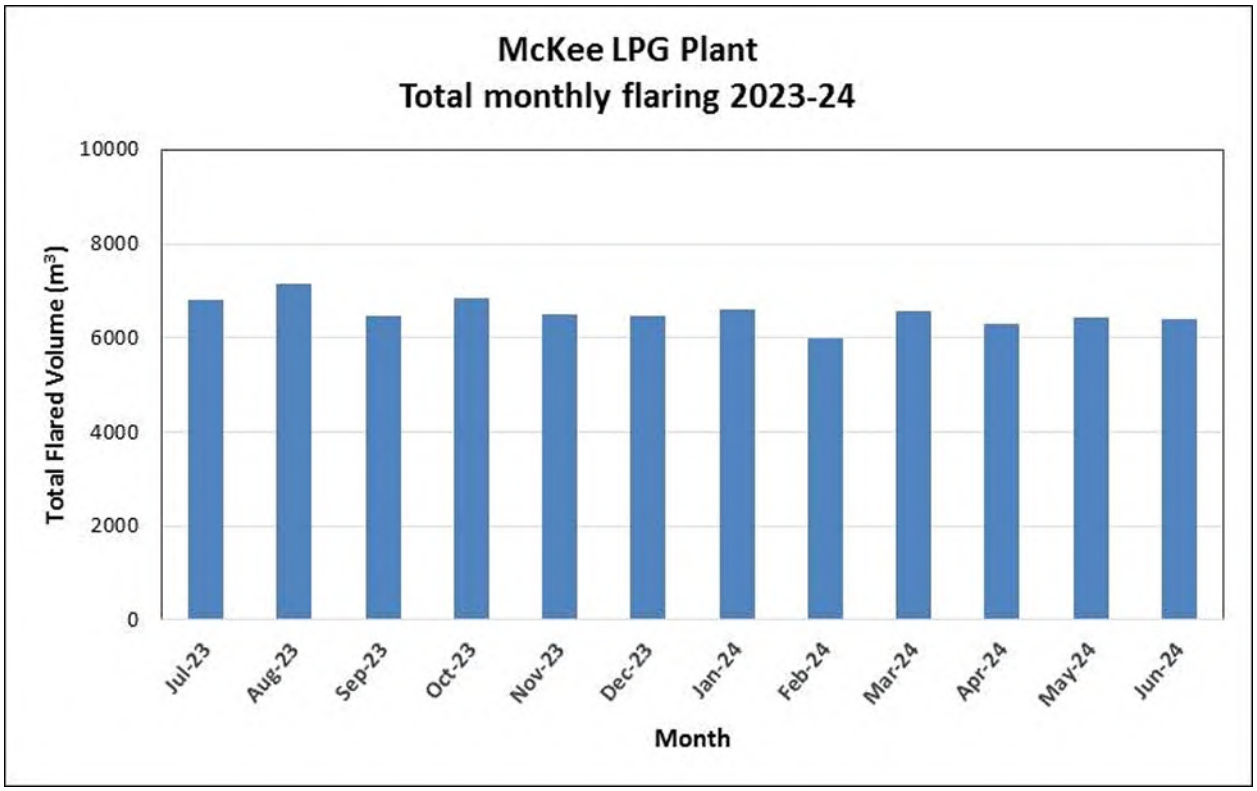

Figure 7 Monthly flaring volumes for McKee LPG Plant under Consent 7436-1

2.3 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 Todd Energy. 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).

Table 10 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to the Company's activities during the 2023/24 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 10 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
6 February 2024	Self-notification was received regarding an exceedance of the daily abstraction limit for Consent 1226-1	N	Explanation provided, no further action required	On that morning there was a scheduled safety control systems electronic update, which required a full plant Emergency Depressurisation/ Emergency Shutdown. An unplanned outcome of this was the activation of the LPG load out and LPG bullet deluge systems (where deluge water flows through an interceptor system and back into the stream). By the time these systems were identified as activated and manually shut down, the fire water and utility water (the latter being critical for flare seal water and personnel safety systems) were critically low. Take rates were exceeded for a time, to ensure fire and utility water systems were back to safe operational levels, which are required for the plant to operate. Plant operators observed the Mangahewa Stream water intake weir during the high take period and downstream flow was maintained.

3. Discussion

3.1 Discussion of site performance

Inspections of the MMPS during the 2023/24 period found that the site was well managed and the stormwater system was maintained to a satisfactory standard. Emissions to air were well controlled.

One incident was recorded by the Council in relation to activities at the site during the 2023/24 monitoring period. This related to the exceedance of the daily water abstraction allowed by Consent 1226-1 on one occasion. This was the result of unforeseen circumstances during a shutdown to update the safety control systems. Staff ensured downstream flow was maintained in the stream and it is unlikely any adverse effects occurred, with no further action taken by Council.

3.2 Environmental effects of exercise of consents

Stormwater discharges from the sites complied with consent conditions at the time of sampling.

Macroinvertebrate monitoring undertaken in summer and autumn 2024 did not find any evidence of adverse effects caused by discharges from the MMPS.

Although the results of the fish survey undertaken during the current monitoring period, along with the results of previous monitoring, were not conclusive as to whether the weir poses a significant barrier to fish passage it was recommended that Todd investigate improvements that could be made to the weir to increase the likelihood of comprehensive passage for fish.

Figure 8 Proposed improvements to the Mangahewa Stream weir

Todd Energy engaged a consultant to assess the suitability of the weir for providing fish passage. Due to the potential presence of brown trout in the catchment, it was decided that the weir be modified and enhanced to improve fish passage past the weir for 'climbing and jumping' species, but not 'swimming' species. The redundant fish ladder will be removed and replaced with a spat rope ladder on the true right bank. An 'I' beam will be anchored to the weir to create attractant flow towards the spat rope ladder during periods of low flow (Figure 8). It is recognised that, until further information is gained regarding trout abundance in the catchment, the MMPS weir will still be a significant barrier to 'swimming' native fish species and prevent

their migration into the upper catchment. Consent 1227-2 has subsequently been granted (15 July 2024) with conditions which requires Todd to address the above.

There were no adverse effects on the environment resulting from the exercise of the air discharge consents. The ambient air quality monitoring at the production station showed that levels of carbon monoxide, combustible gases, PM_{10} particulates, and nitrogen oxides were all below levels of concern at the time of sampling. No offensive or objectionable odours were detected beyond the boundary during inspections.

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 11-19.

Table 11 Summary of performance for Consent 1157-1

Purpose: To discharge uncontaminated stormwater from the site of the MMPS to an unnamed tributary of the Mangahewa Stream		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Ensure the stream can cope with increased volume of water	Inspection	Yes
2. Minimise disturbance of the stream	Inspection	Yes
3. Prevent or mitigate erosion	Inspection	Yes
4. Corrective measures applied are to be to the satisfaction of the Council	Inspection	Yes
5. Install a sampling chamber in the main stormwater line	Inspection	Yes
6. Stormwater design and discharge points to be forwarded to Council	Information received	Yes
7. Provide contingency plan	Latest version February 2023	Yes
8. Discharge not to affect various parameters of the receiving water	Sampling	Yes
9. Council may carry out biological monitoring	Biomonitoring undertaken	Yes
10. Review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 12 Summary of performance for Consent 1158-1

Purpose: To discharge treated impounded stormwater from the site of the MMPS into the Waitara River		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Stormwater to be directed for treatment prior to discharge	Inspection	Yes
2. Prevent or mitigate erosion	Inspection	Yes
3. Corrective measures applied are to be to satisfaction of Council	Inspection	Yes
4. Install a sampling chamber in the main stormwater line	Inspection	Yes
5. Stormwater layout design and discharge points are to be forwarded to the Council	Information received previously	Yes
6. Supply specifications of works to Council	Information received previously	Yes

Purpose: To discharge treated impounded stormwater from the site of the MMPS into the Waitara River		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
7. Trained operator onsite capable of operation of all aspects of the treatment works	Inspection	Yes
8. Limits on contaminants in the discharge	Consent holder monitoring – indicative only due to sampling method	N/A
9. Discharge shall have no other effect on the receiving water	Inspection	Yes
10. Discharge not to cause adverse effects on the biological community of the Waitara River	Not assessed during the period under review	N/A
11. Discharge not to alter colour or clarity of the water	Inspections	Yes
12. Management plan	Management Plan received previously	Yes
13. Spill plan	Latest version February 2023	Yes
14. Council may undertake ecological monitoring of the receiving water	Not assessed during the period under review	N/A
15. Toxicological monitoring of discharge	Not undertaken during the period under review	N/A
16. Monitoring of discharge shall be undertaken as required	Consent holder monitoring	Yes
17. Review provision	Consent has expired	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 13 Summary of performance for Consent 1226-1

Purpose: To take water from the Mangahewa Stream for process, fire-fighting and domestic purposes associated with operation of the MMPS		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Minimum flow of at least 5 litres/sec to be maintained in tributary	Not assessed	N/A
2. Install metering system and forward records to Council	Records provided to Council	Yes
3. Intake structure to be designed to minimise disturbance	Inspection	Yes
4. Submit plans of intake structure	Provided	Yes
5. Review provision	Consent has expired	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 14 Summary of performance for Consent 1227-1

Purpose: To construct a weir control for the MMPS water intake on the Mangahewa Stream in the Onaero Catchment		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Submit plans and location of all works	Received previously	Yes

Purpose: To construct a weir control for the MMPS water intake on the Mangahewa Stream in the Onaero Catchment		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
2. Works to minimise disturbance to beds and banks of river channel flows	Inspection	Yes
3. Prevent or mitigate any erosion	Inspection	Yes
4. Intake structure to be designed and constructed to permit passage of fish upstream	Fish survey	**Fish survey results inconclusive**
5. Minimum flow of no less than 5 litres/sec in the Mangahewa Stream	Not assessed	N/A
6. Operation of sluice pipe for desilting only with written approval of Council	No requests to undertake desilting	N/A
7. Review provision	No further option for review prior to expiry (new consent granted July 2024)	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Good** **High**

N/A = not applicable

Table 15 Summary of performance for Consent 4006-2

Purpose: To erect, place and maintain a bridge over the Waitara River for oil field access purposes		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Notify Council prior to maintenance works which may disturb the river bed	No works undertaken	N/A
2. Structure shall be maintained to ensure conditions of consent are met	Inspection	Yes
3. Structure shall be removed and area reinstated when no longer required	Structure still in use	N/A
4. Review provision	Next option for review in June 2027	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 16 Summary of performance for Consent 4050-3

Purpose: To discharge emissions into the air arising from the flaring of hydrocarbons associated with production activities at the McKee-C wellsite and from hydrocarbon processing operations and miscellaneous emissions at the MMPS		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Consent holder shall adopt the best practicable option	Inspection	Yes
2. Hydrocarbon storage vessels are to be fitted with vapour recovery systems	Inspection	Yes
3. Opacity of smoke emissions shall not exceed 1 on the Ringlemann Scale	Not assessed	N/A
4. There shall be no offensive odour or smoke beyond the boundary	Inspection	Yes
5. Limits on CO concentration at or beyond the boundary	Ambient air sampling	Yes

Purpose: To discharge emissions into the air arising from the flaring of hydrocarbons associated with production activities at the McKee-C wellsite and from hydrocarbon processing operations and miscellaneous emissions at the MMPS		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
6. Limits on NOx concentration at or beyond boundary	Ambient air sampling	Yes
7. No hazardous/toxic/noxious emissions at or beyond boundary	Inspection and ambient air sampling	Yes
8. Limit on increase of contaminant concentrations at or beyond boundary	Not assessed during current monitoring period	N/A
9. Natural gas and condensate analysis to be made available	Not requested	N/A
10. Consent holder to record occasions of visible smoke	Inspection	Yes
11. Consent holder to maintain flaring log	Inspection and log received by Council	Yes
12. Provision of flaring and emissions report each May	Report received	Yes
13. No alterations to be made without consulting Council prior	Inspection	Yes
14. No liquid or solid hydrocarbons to be combusted except in emergency	Inspection and consent holders records	Yes
15. Council to be notified of flaring	Notifications received	Yes
16. Consent holder to notify residents within 1 km prior to flaring	No complaints received	Yes
17. Wind speed and direction to be taken into consideration for flaring	No complaints received	Yes
18. Natural gas flared to be treated by effective separation and recovery	Inspection	Yes
19. Council to be notified if separation fails	No incidents during period	N/A
20. Only well stream substances to be combusted in flare pit	Inspection and records	Yes
21. Review provision	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 administrative performance in respect of this consent		**High**

N/A = not applicable

Table 17 Summary of performance for Consent 7290-1

Purpose: To discharge emissions into the air from natural gas combustion and other related activities associated with the operation of an electricity generation plant at the MMPS		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adoption of the best practicable option	Inspection	Yes
2. Consult with Council prior to alterations	Inspection	Yes
3. Dangerous levels of airborne contaminants at or beyond the boundary not allowed	Air quality monitoring	Yes

Purpose: To discharge emissions into the air from natural gas combustion and other related activities associated with the operation of an electricity generation plant at the MMPS		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
4. Odour, dust or smoke that is offensive or obnoxious or objectionable at or beyond the boundary not allowed	Inspection	Yes
5. Hazardous, toxic or noxious contaminants at or beyond the boundary not allowed	Not assessed during current monitoring period	N/A
6. Maximum ground level concentration of carbon monoxide at or beyond the boundary	Air quality monitoring	Yes
7. Maximum ground level concentration of nitrogen dioxide at or beyond the boundary	Air quality monitoring	Yes
8. Specified maximum ground level concentrations for contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides	Not assessed during current monitoring period	N/A
9. Lapse condition	Not applicable – consent exercised	N/A
10. Review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 18 Summary of performance for Consent 7435-1

Purpose: To discharge stormwater into an unnamed tributary of the Mangahewa Stream in the Onaero Catchment from a LPG Plant		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Consent holder shall adopt the best practicable option	Inspection and liaison with consent holder	Yes
2. Maximum catchment area 7,800 m^2	Site plans	Yes
3. Provide site plans	Plans received	Yes
4. Notify Council prior to exercise of consent	Notifications received	Yes
5. Maintain contingency plan	Latest version February 2023	Yes
6. Maintain stormwater management plan	Plan received	Yes
7. Stormwater directed to treatment system	Inspection	Yes
8. Hazardous substance storage to be bunded	Inspection	Yes
9. Limits contaminants in the discharge	Consent holder monitoring	Yes
10. Discharge not to cause certain effects in receiving waters	Inspection and biomonitoring	Yes
11. Lapse provision	Not applicable - consent exercised	N/A
12. Review provision	Next option for review in June 2027	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

Table 19 Summary of performance for Consent 7436-1

Purpose: To discharge emissions to air from the flaring of natural gas in emergency situations and miscellaneous emissions associated with the treatment of gas at the McKee LPG Plant and the Mangahewa Extraction Train 2		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Consent holder shall adopt the best practicable option	Inspection	Yes
2. No alterations to be made without consulting Council prior	Inspection	Yes
3. Consent holder to minimise emissions	Inspection	Yes
4. Monthly flaring information to be provided to Council	Information received	Yes
5. No dangerous levels of contaminants at or beyond the boundary	Inspection and ambient air sampling	Yes
6. There shall be no offensive/obnoxious/objectionable odour/dust/smoke at or beyond the boundary	Inspection	Yes
7. No hazardous/toxic/noxious emissions at or beyond boundary	Not assessed during current monitoring period	N/A
8. Limits on CO concentration at or beyond boundary	Ambient air sampling	Yes
9. Limits on NOx concentration at or beyond boundary	Ambient air sampling	Yes
10. Limit on increase of contaminant concentrations at or beyond boundary	Not assessed during current monitoring period	N/A
11. Lapse provision	Not applicable - consent exercised	N/A
12. Review provision	Next option for review in June 2027	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 20 Evaluation of environmental performance over time

Year	Consent numbers	High	Good	Improvement req	Poor
2019/20	1157-1, 1158-1, 1159-1, 1226-1, 1227-1, 4006-2, 4050-3, 7290-1, 7435-1, 7436-1	10	-	-	-
2020/21	1157-1, 1158-1, 1159-1, 1226-1, 1227-1, 4006-2, 4050-3, 7290-1, 7435-1, 7436-1	9	1	-	-
2021/22	1157-1, 1158-1, 1159-1, 1226-1, 1227-1, 4006-2, 4050-3, 7290-1, 7435-1, 7436-1	9	1	-	-
2022/23	1157-1, 1158-1, 1159-1, 1226-1, 1227-1, 4006-2, 4050-3, 7290-1, 7435-1, 7436-1	9	1	-	-
2023/24	1157-1, 1158-1, 1226-1, 1227-1, 4006-2, 4050-3, 7290-1, 7435-1, 7436-1	8	1	-	-

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

3.4 Recommendations from the 2022/23 Annual Report

In the 2022/23 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of consented activities at McKee Mangahewa Production Station in the 2023/24 year continue at the same level as in 2022/23.
2. THAT should there be issues with environmental or administrative performance in 2023/24, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

3.5 Alterations to monitoring programmes for 2024/25

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.

Planned changes for 2024/25 monitoring programme consist of reducing air quality monitoring (carbon monoxide and fine particulate matter) to biannually, this will next be undertaken in the 2024/25 monitoring period. Nitrogen dioxide monitoring will no longer be undertaken.

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 2024/25.

4. Recommendations

1. THAT in the first instance, monitoring of consented activities at McKee Mangahewa Production Station in the 2024/25 year continue at a similar level as in 2023/24, with the reduction of air quality monitoring to biennially.
2. THAT should there be issues with environmental or administrative performance in 2024/25, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Glossary of common terms and abbreviations

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

AAQG	Ambient Air Quality Guidelines (AAQG, MfE 2002).
AAQS	Ambient Air Quality Standards (AAQS, MfE 2004).
Biomonitoring	Assessing the health of the environment using aquatic organisms.
Bund	A wall around a tank to contain its contents in the case of a leak.
Conductivity	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 25°C and expressed in mS/m.
EGP	The electricity generation plant at MMPS.
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.
LEL	Lower Explosive Limit. The percentage of the lower explosive limit, expressed as methane that is detected in the air sampled.
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.
MfE	Ministry for the Environment.
mg/m^3	Milligrams per cubic metre.
MPP	McKee Power Plant.
MMPS	McKee Mangahewa Production Station.
mS/m	Millisiemens per metre.
NO_3	Nitrate, normally expressed in terms of the mass of nitrogen (N).
NOx	Nitrogen oxides.
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}	Relatively fine airborne particles (less than 10 micrometre diameter).
ppm	Parts per million. Equal to 1mg/L (water) or 1mg/kg (soil).
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	*Resource Management Act 1991* 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.
TWA	Time weighted average.
µg/m	Micrograms per cubic metre of air, equivalent to one-millionth of a gram per cubic metre of air.

For further information on analytical methods, contact a manager within the Environment Quality Department.

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Appendix I

Resource consents held by Todd Energy Ltd

(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 Energy Limited P O Box 802 NEW PLYMOUTH
Decision Date (Change):	8 August 1984
Commencement Date (Change):	8 August 1984 [Granted: 28 September 1983]

Conditions of Consent

Consent Granted:	To discharge up to 325 litres/second of uncontaminated stormwater from the site of McKee Production Facility into an unnamed tributary of the Mangahewa Stream at or about GR: Q19:255-343
Expiry Date:	1 June 2023
Site Location:	Grantee's property, near unnamed tributary of Mangahewa Stream
Legal Description:	Pt Otaraoa No 3 DP 2961 Blk X Waitara SD
Catchment:	Onaero
Tributary:	Mangahewa

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

General conditions

a) This right is subject to all the relevant provisions of the Water and Soil Conservation Act 1967, and any regulations made thereunder. It is the obligation of the grantee of this right to comply with all statutory requirements relating to the exercise thereof.

b) The Taranaki Regional Council may prescribe the method of management of this right, including the limitation of periods during which the right may be fully exercised, if a water shortage or other abnormal circumstance occurs in the locality.

c) The grantee shall keep such records relating to the exercise of this right as may reasonably be required by the Taranaki Regional Council and shall, if so requested, supply this information to the Taranaki Regional Council. Further, the grantee shall, at his own expense, if the Taranaki Regional Council so requests, install such measuring devices as are considered reasonably necessary by the Taranaki Regional Council for the acquisition of such records.

d) This right is granted subject to the Taranaki Regional Council or its servants or agents being permitted such access as is reasonably required for the purposes of carrying out inspections and measurements in connection with this right.

e) The standards, techniques and methods of monitoring of this right shall be to the specific approval of the Chief Executive, Taranaki Regional Council.

f) The design, construction and maintenance of any works relating to the right shall be to a standard adequate to meet the conditions of this right, so that the exercise of this does not cause damage to any property or injury to any person.

g) This right may be cancelled in writing to the grantee by the Taranaki Regional Council if the right is not exercised within twelve months of the date or grant or such longer time as the Chief Executive, Taranaki Regional Council, may approve.

h) This right may be terminated by the Taranaki Regional Council upon not less that 12 months notice in writing to the grantee if, in the opinion of the Taranaki Regional Council, the public interest so requires, but without prejudice to the grantee to apply for a further right in respect of the same matter.

i) The actual and reasonable cost of supervision of this right, including certification, approval, monitoring, water sampling and analyses, be met by the grantee.

j) The Grantee shall provide to the Chief Executive, Taranaki Regional Council, on his request (and, at his discretion, for his approval) plans, specifications and maintenance programmes of works associated with the exercise of this right, showing that the conditions of this right are able to be met.

k) Before the Taranaki Regional Council or its Chief Executive:

   i) imposes any requirement or makes any request under General Condition (c); or
   ii) grants or withholds any approval under the provisions of this right; or

iii) makes any determination as to any programme or supervision or monitoring or as to the actual and reasonable cost to be met by the Grantee; or

iv) makes any determination as to adequacy under General Conditions (f) and/or (j);

the Taranaki Regional Council shall confer with the Grantee to enable agreement to be reached between the Taranaki Regional Council and the Grantee on the subject matter and costs thereof, provided that if any dispute arises concerning the matters dealt with in (i)-(iv) above, the dispute shall be referred to an independent arbitrator to be mutually agreed upon, the arbitration to be conducted in accordance with the Arbitration Act 1908, or in such a manner as the parties affecting may agree upon.

Special conditions

1. That the Grantee shall be responsible for ensuring that the natural channels of the streams below the discharge point, for a distance to be decided upon by agreement between the Chief Executive, Taranaki Regional Council and the Grantee, are capable of coping with the increased volumes of water.

2. That the works associated with the exercise of this right shall be designed to minimise disturbance to the bed and banks of the stream channels both at low flows and design flood levels, subject to Condition 1 above.

3. That the Grantee shall, where possible, prevent or mitigate any erosion which may occur as a result of works associated with the exercise of this right.

4. That any corrective measures applied as a result of (2) and (3) above shall be to the satisfaction of the Chief Executive, Taranaki Regional Council.

5. That the Grantee shall install a sampling chamber in the main stormwater discharge lines, to the satisfaction of the Chief Executive, Taranaki Regional Council.

6. That plans for stormwater design layout and discharge points shall be forwarded to the Chief Executive, Taranaki Regional Council, for his approval prior to the commencement of construction.

7. That the Grantee shall provide, for the approval of the Chief Executive, Taranaki Regional Council, a contingency plan for actions to be taken in the event of a spillage or accumulation of off-specification effluent, at least three months or such shorter time as the Chief Executive, Taranaki Regional Council may allow, prior to the exercise of this right.

8. That the discharge shall not alter the level or concentration of suspended solids, oils and hydrocarbons, pH, temperature or any other parameter in the receiving water, without prior written approval of the Chief Executive, Taranaki Regional Council.

9. That the Taranaki Regional Council may carry out a programme of biological monitoring of the Mangahewa Stream environment, subject to Section 24K of the Water and Soil Conservation Act 1967.

10. That there shall be a review by the Grantee and Taranaki Regional Council of all conditions, restrictions and prohibitions every five years, and if as a result of this review the Grantee or the Taranaki Regional Council require a variation, then the variation procedures shall be pursuant to Section 24B of the Water and Soil Conservation Act 1967.

Transferred at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited P O Box 802 NEW PLYMOUTH
Decision Date (Change):	8 August 1984
Commencement Date (Change):	8 August 1984 [Granted: 28 September 1983]

Conditions of Consent

Consent Granted:	To discharge up to 10 litres/second of treated impounded stormwater from the site of the McKee Production Facility into the Waitara River at or about GR: Q19:241-337
Expiry Date:	1 June 2023
Site Location:	East Bank Of Waitara River
Legal Description:	Pt Otaraoa No 3 DP 2961 Blk X Waitara SD
Catchment:	Waitara

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

General conditions

a) This right is subject to all the relevant provisions of the Water and Soil Conservation Act 1967, and any regulations made thereunder. It is the obligation of the grantee of this right to comply with all statutory requirements relating to the exercise thereof.

b) The Taranaki Regional Council may prescribe the method of management of this right, including the limitation of periods during which the right may be fully exercised, if a water shortage or other abnormal circumstance occurs in the locality.

c) The grantee shall keep such records relating to the exercise of this right as may reasonably be required by the Taranaki Regional Council and shall, if so requested, supply this information to the Taranaki Regional Council. Further, the grantee shall, at his own expense, if the Taranaki Regional Council so requests, install such measuring devices as are considered reasonably necessary by the Taranaki Regional Council for the acquisition of such records.

d) This right is granted subject to the Taranaki Regional Council or its servants or agents being permitted such access as is reasonably required for the purposes of carrying out inspections and measurements in connection with this right.

e) The standards, techniques and methods of monitoring of this right shall be to the specific approval of the Chief Executive, Taranaki Regional Council.

f) The design, construction and maintenance of any works relating to the right shall be to a standard adequate to meet the conditions of this right, so that the exercise of this does not cause damage to any property or injury to any person.

g) This right may be cancelled in writing to the grantee by the Taranaki Regional Council if the right is not exercised within twelve months of the date or grant or such longer time as the Chief Executive, Taranaki Regional Council, may approve.

h) This right may be terminated by the Taranaki Regional Council upon not less that 12 months notice in writing to the grantee if, in the opinion of the Taranaki Regional Council, the public interest so requires, but without prejudice to the grantee to apply for a further right in respect of the same matter.

i) The actual and reasonable cost of supervision of this right, including certification, approval, monitoring, water sampling and analyses, be met by the grantee.

j) The Grantee shall provide to the Chief Executive, Taranaki Regional Council, on his request (and, at his discretion, for his approval) plans, specifications and maintenance programmes of works associated with the exercise of this right, showing that the conditions of this right are able to be met.

k) Before the Taranaki Regional Council or its Chief Executive:

   i) imposes any requirement or makes any request under General Condition (c); or
   ii) grants or withholds any approval under the provisions of this right; or

iii) makes any determination as to any programme or supervision or monitoring or as to the actual and reasonable cost to be met by the Grantee; or

iv) makes any determination as to adequacy under General Conditions (f) and/or (j);

the Taranaki Regional Council shall confer with the Grantee to enable agreement to be reached between the Taranaki Regional Council and the Grantee on the subject matter and costs thereof, provided that if any dispute arises concerning the matters dealt with in (i)-(iv) above, the dispute shall be referred to an independent arbitrator to be mutually agreed upon, the arbitration to be conducted in accordance with the Arbitration Act 1908, or in such a manner as the parties affecting may agree upon.

Special conditions

1. That any stormwater originating from process or tankage areas, or areas where the level of contamination or likely contamination is significant, or is contaminated in the opinion of the Chief Executive, Taranaki Regional Council, shall be retained in the stormwater holding pond for treatment and discharged via the treatment system as treated stormwater.

2. That the Grantee shall, where possible, prevent or mitigate any erosion which occurs as a result of works associated with the exercise of this right.

3. That any corrective measures applied as a result of (2) above shall be to the satisfaction of the Chief Executive, Taranaki Regional Council.

4. That the Grantee shall install a sampling chamber in the treated stormwater discharge line to the outfall, to the satisfaction of the Chief Executive, Taranaki Regional Council

5. That plans for stormwater design layout, discharge point and works shall be forwarded to the Chief Executive, Taranaki Regional Council, for the written approval, prior to the commencement of construction.

6. The Grantee shall supply specifications of all works associated with the exercise of this right showing that the special conditions of the right particularly (8) and (9) can be met, at least three months prior to the exercise of this right for the written approval of the Chief Executive, Taranaki Regional Council.

7. That at all times of plant operation a suitably trained operator be available on site capable of operation of all aspects of the treatment works, to the satisfaction of the Chief Executive, Taranaki Regional Council.

8. That on the basis of 24 hour flow-proportioned composite samples, components of the effluent stream shall conform to the following:

Temperature	$<20^{o}C$
pH	6.5 – 8.5
Total recoverable hydrocarbons	90% of samples $<10\ g/m^3$
	the balance of samples $<20\ g/m^3$
Suspended solids	$<30\ g/m^3$

9. That other than specified in Condition 8 above, the discharge shall not alter the level of concentration of any other parameter in the receiving water, without prior written approval of the Chief Executive, Taranaki Regional Council

10. The discharge shall cause no adverse effects to the biological communities of the Waitara River.

11. That the discharge shall not alter to a conspicuous extent the natural colour and clarity of the receiving water.

12. That the grantee shall provide an Effluent Disposal Management Plan for the plant, including commissioning phases, at least three months (or such shorter time as the Chief Executive, Taranaki Regional Council, may allow) prior to the exercise of this right for the approval of the Chief Executive, Taranaki Regional Council.

13. That the Grantee shall provide a Contingency Plan for actions to be taken in the event of a spillage or accumulation of off-specification effluent, at least three months (or such shorter time as the Chief Executive, Taranaki Regional Council may allow) prior to the exercise of this right, for the approval of the Chief Executive, Taranaki Regional Council

14. That ecological monitoring of the receiving water may be carried out by the Taranaki Regional Council to determine the effects of the discharge on in-stream ecology, subject to Section 24K of the Water and Soil Conservation Act 1967.

15. The Commission may undertake such toxicological testing of the final discharge from time to time, as may be required by the Chief Executive, Taranaki Regional Council, subject to Section 24K of the Water and Soil Conservation Act 1967.

16. The Grantee shall undertake such monitoring of the final discharge as may be required by the Chief Executive, Taranaki Regional Council (Section 24K of the Water and Soil Conservation Act 1967).

17. That there shall be a review by the Grantee and Taranaki Regional Council of all conditions, restrictions and prohibitions every five years, and if as a result of this review the Grantee or the Taranaki Regional Council require a variation, then the variation procedures shall be pursuant to Section 24B of the Water and Soil Conservation Act 1967.

Transferred at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited P O Box 802 NEW PLYMOUTH
Decision Date (Change):	8 August 1984
Commencement Date (Change):	8 August 1984 (Granted: 14 March 1984)

Conditions of Consent

Consent Granted:	To take up to 172,800 litres/day of water at a maximum rate of 2 litres/second from the Mangahewa Stream for process and domestic purposes associated with operation of the Mckee Production Station at or about GR: Q19:256-344
Expiry Date:	1 June 2023
Site Location:	Mangahewa Stream, Otaraoa Road, Waitara
Legal Description:	Pt Otaraoa No 3 DP 2961 Blk X Waitara SD
Catchment:	Onaero
Tributary:	Mangahewa

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

General conditions

a) This right is subject to all the relevant provisions of the Water and Soil Conservation Act 1967, and any regulations made thereunder. It is the obligation of the grantee of this right to comply with all statutory requirements relating to the exercise thereof.

b) The Taranaki Regional Council may prescribe the method of management of this right, including the limitation of periods during which the right may be fully exercised, if a water shortage or other abnormal circumstance occurs in the locality.

c) The grantee shall keep such records relating to the exercise of this right as may reasonably be required by the Taranaki Regional Council and shall, if so requested, supply this information to the Taranaki Regional Council. Further, the grantee shall, at his own expense, if the Taranaki Regional Council so requests, install such measuring devices as are considered reasonably necessary by the Taranaki Regional Council for the acquisition of such records.

d) This right is granted subject to the Taranaki Regional Council or its servants or agents being permitted such access as is reasonably required for the purposes of carrying out inspections and measurements in connection with this right.

e) The standards, techniques and methods of monitoring of this right shall be to the specific approval of the Chief Executive, Taranaki Regional Council.

f) The design, construction and maintenance of any works relating to the right shall be to a standard adequate to meet the conditions of this right, so that the exercise of this does not cause damage to any property or injury to any person.

g) This right may be cancelled in writing to the grantee by the Taranaki Regional Council if the right is not exercised within twelve months of the date or grant or such longer time as the Chief Executive, Taranaki Regional Council, may approve.

h) This right may be terminated by the Taranaki Regional Council upon not less that 12 months notice in writing to the grantee if, in the opinion of the Taranaki Regional Council, the public interest so requires, but without prejudice to the grantee to apply for a further right in respect of the same matter.

i) The actual and reasonable cost of supervision of this right, including certification, approval, monitoring, water sampling and analyses, be met by the grantee.

j) The Grantee shall provide to the Chief Executive, Taranaki Regional Council, on his request (and, at his discretion, for his approval) plans, specifications and maintenance programmes of works associated with the exercise of this right, showing that the conditions of this right are able to be met.

k) Before the Taranaki Regional Council or its Chief Executive:

   i) imposes any requirement or makes any request under General Condition (c); or
   ii) grants or withholds any approval under the provisions of this right; or

iii) makes any determination as to any programme or supervision or monitoring or as to the actual and reasonable cost to be met by the Grantee; or

iv) makes any determination as to adequacy under General Conditions (f) and/or (j);

the Taranaki Regional Council shall confer with the Grantee to enable agreement to be reached between the Taranaki Regional Council and the Grantee on the subject matter and costs thereof, provided that if any dispute arises concerning the matters dealt with in (i)-(iv) above, the dispute shall be referred to an independent arbitrator to be mutually agreed upon, the arbitration to be conducted in accordance with the Arbitration Act 1908, or in such a manner as the parties affecting may agree upon.

Special conditions

1. That a minimum flow of not less than 5 litres/second should be maintained in the tributary at all times except when due to natural conditions.

2. That the Grantee shall install a metering system to continuously record the abstraction rate with an error of less than 10%, and shall supply this record or parts of this records to the Taranaki Regional Council at the Taranaki Regional Council's request.

3. That the intake structure shall be designed to minimise disturbance to the stability of the bed and banks of the streams/river's channels both at low flows and flood levels. The intakes shall be so designed, constructed, maintained and modified so as to permit upstream passage of fish.

4. That the Grantee shall submit plans of the intake structure, its location, and the metering system to the Taranaki Regional Council for written approval by the Chief Executive, prior to commencement of construction.

5. That there shall be a review by the Grantee and Taranaki Regional Council of all conditions, restrictions and prohibitions every five years, and if as a result of this review the Grantee or the Taranaki Regional Council require a variation, then the variation procedures shall be pursuant to Section 24B of the Water and Soil Conservation Act 1967.

Transferred at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited P O Box 802 NEW PLYMOUTH
Decision Date:	14 March 1984
Commencement Date:	14 March 1984

Conditions of Consent

Consent Granted:	To construct a weir control for the Mckee Production Site water intake on the Mangahewa Stream in the Onaero Catchment at or about GR: Q19:256-344
Expiry Date:	1 June 2023
Site Location:	Mangahewa Stream, Otaraoa Road, Waitara
Legal Description:	Pt Otaraoa No 3 DP 2961 Blk X Waitara SD
Catchment:	Onaero
Tributary:	Mangahewa

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

General conditions

a) This right is subject to all the relevant provisions of the Water and Soil Conservation Act 1967, and any regulations made thereunder. It is the obligation of the grantee of this right to comply with all statutory requirements relating to the exercise thereof.

b) The Taranaki Regional Council may prescribe the method of management of this right, including the limitation of periods during which the right may be fully exercised, if a water shortage or other abnormal circumstance occurs in the locality.

c) The grantee shall keep such records relating to the exercise of this right as may reasonably be required by the Taranaki Regional Council and shall, if so requested, supply this information to the Taranaki Regional Council. Further, the grantee shall, at his own expense, if the Taranaki Regional Council so requests, install such measuring devices as are considered reasonably necessary by the Taranaki Regional Council for the acquisition of such records.

d) This right is granted subject to the Taranaki Regional Council or its servants or agents being permitted such access as is reasonably required for the purposes of carrying out inspections and measurements in connection with this right.

e) The standards, techniques and methods of monitoring of this right shall be to the specific approval of the Chief Executive, Taranaki Regional Council.

f) The design, construction and maintenance of any works relating to the right shall be to a standard adequate to meet the conditions of this right, so that the exercise of this does not cause damage to any property or injury to any person.

g) This right may be cancelled in writing to the grantee by the Taranaki Regional Council if the right is not exercised within twelve months of the date or grant or such longer time as the Chief Executive, Taranaki Regional Council, may approve.

h) This right may be terminated by the Taranaki Regional Council upon not less that 12 months notice in writing to the grantee if, in the opinion of the Taranaki Regional Council, the public interest so requires, but without prejudice to the grantee to apply for a further right in respect of the same matter.

i) The actual and reasonable cost of supervision of this right, including certification, approval, monitoring, water sampling and analyses, be met by the grantee.

j) The Grantee shall provide to the Chief Executive, Taranaki Regional Council, on his request (and, at his discretion, for his approval) plans, specifications and maintenance programmes of works associated with the exercise of this right, showing that the conditions of this right are able to be met.

k) Before the Taranaki Regional Council or its Chief Executive:

   i) imposes any requirement or makes any request under General Condition (c); or
   ii) grants or withholds any approval under the provisions of this right; or

iii) makes any determination as to any programme or supervision or monitoring or as to the actual and reasonable cost to be met by the Grantee; or

iv) makes any determination as to adequacy under General Conditions (f) and/or (j);

the Taranaki Regional Council shall confer with the Grantee to enable agreement to be reached between the Taranaki Regional Council and the Grantee on the subject matter and costs thereof, provided that if any dispute arises concerning the matters dealt with in (i)-(iv) above, the dispute shall be referred to an independent arbitrator to be mutually agreed upon, the arbitration to be conducted in accordance with the Arbitration Act 1908, or in such a manner as the parties affecting may agree upon.

Special conditions

1. That the Grantee shall submit plans and the proposed locations of all works associated with this right to the Chief Executive, Taranaki Regional Council for written approval prior to commencement of construction.

2. That the works associated with the exercise of this right shall be designed to minimise disturbance to the bed and banks of the river channel both at low flows and design flood levels.

3. That the Grantee shall, where possible, prevent or mitigate any erosion which may occur as a result of works associated with the exercise of this right.

4. That the intake structure shall be so designed, constructed and maintained so as to permit the upstream passage of fish.

5. That a minimum flow of not less than 5 litres/second should be maintained in the Mangahewa Stream at all times.

6. That the operation of the sluice pipe through the weir, for the purposes of desilting the impoundment, shall only take place following the obtaining of prior written approval from the Chief Executive, Taranaki Regional Council.

7. That there shall be a review by the Grantee and Taranaki Regional Council of all conditions, restrictions and prohibitions every five years, and if as a result of this review the Grantee or the Taranaki Regional Council require a variation, then the variation procedures shall be pursuant to Section 24B of the Water and Soil Conservation Act 1967.

Transferred at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited P O Box 802 NEW PLYMOUTH
Decision Date:	14 July 1999
Commencement Date:	14 July 1999

Conditions of Consent

Consent Granted:	To erect, place and maintain a bridge over the Waitara River for oil field access purposes at or about GR: Q19:248-322
Expiry Date:	1 June 2033
Review Date(s):	June 2003, June 2009, June 2015, June 2021, June 2027
Site Location:	Waitara River, Bristol/McKee Road, Waitui
Legal Description:	Road Reserve Blk XIV Waitara SD
Catchment:	Waitara

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 (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) 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. That the consent holder shall notify the Taranaki Regional Council, at least 48 hours prior to the commencement and upon completion of any subsequent maintenance works which would involve disturbance of or deposition to the riverbed or discharges to water.

2. That the structure[s] authorised by this consent shall be maintained to ensure the conditions of this consent are met.

3. That the structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure[s] are no longer required. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to structure[s] removal and reinstatement.

4. 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 2003 and/or June 2008 and/or June 2015 and/or June 2021 and/or June 2027, for the purpose of ensuring that the conditions adequately deal with the environmental effects arising from the exercise of this 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 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited PO Box 802 New Plymouth 4340
Decision Date (Change):	24 June 2015
Commencement Date (Change):	24 June 2015 (Granted Date: 30 September 2009)

Conditions of Consent

Consent Granted:	To discharge emissions into the air from flaring of hydrocarbons associated with the production activities at the McKee-C wellsite, the Mangahewa Expansion Compression facility and from hydrocarbon processing operations and miscellaneous emissions at the McKee Production Station
Expiry Date:	1 June 2027
Review Date(s):	June 2015, June 2021
Site Location:	McKee-C wellsite, 1334 Otaraoa Road, Tikorangi
Legal Description:	Lot 2 DP 474093 Lot 1 DP 14374
Grid Reference (NZTM)	1715282E-5672495N and 1715153E-5672258N

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 adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or potential effect on the environment arising from any emission to air from the flare or any other emissions to air from the McKee Production Station or McKee-C wellsite or the Mangahewa Expansion Compression facility, including use of a separator during well clean-up.

2. All liquid hydrocarbon storage vessels shall be fitted with vapour recovery systems.

3. The opacity of any smoke emissions shall not exceed a level of 1 as measured on the Ringelmann Scale.

4. There shall not be any offensive odour or smoke, as determined by an enforcement officer of the Taranaki Regional Council, at or beyond the boundary of the property where the production station and wellsite is located.

5. The consent holder shall control all emissions of carbon monoxide to the atmosphere from the flare so that, whether alone or in conjunction with any other emissions from the wellsite, the maximum ground level concentration of carbon monoxide arising from the exercise of this consent measured under ambient conditions does not exceed 10 milligrams per cubic metre (mg/m^3) (eight-hour average exposure), or 30 mg/m^3 one-hour average exposure at or beyond the boundary of the property where the production station and wellsite are located.

6. The consent holder shall control all emissions of nitrogen oxides to the atmosphere from the flare so that, whether alone or in conjunction with any other emissions from the wellsite, the maximum ground level concentration of nitrogen dioxide arising from the exercise of this consent measured under ambient conditions does not exceed 100 micrograms per cubic metre ($\mu g/m^3$) (24-hour average exposure), or 200 $\mu g/m^3$ (1-hour average exposure) at or beyond the boundary of the of the property where the production station and wellsite are located.

7. The consent holder shall control emissions to the atmosphere, from the production station, wellsite and flare, of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides so that, whether alone or in conjunction with any other emissions from the production station, is not hazardous or toxic or noxious at or beyond the boundary of the property.

8. The consent holder shall control emissions to the atmosphere from the production station, wellsite and flare of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides so that, whether alone or in conjunction with any emissions from the flare, the maximum ground level concentration for any particular contaminant arising from the exercise of this consent measured at or beyond the boundary of the property where the wellsite is located, is not increased above background levels:

    a) by more than 1/30th of the relevant Occupational Threshold Value-Time Weighted Average, or by more than the Short Term Exposure Limit at any time (all terms as defined in Workplace Exposure Standards, 2002, Department of Labour); or
    b) if no Short Term Exposure Limit is set, by more than three times the Time Weighted Average at any time (all terms as defined in Workplace Exposure Standards, 2002, Department of Labour).

9. The consent holder shall make available to the Chief Executive, Taranaki Regional Council, upon request, an analysis of a typical gas and condensate stream from the field, covering sulphur compound content and the content of carbon compounds of structure C_6 or higher number of compounds.

10. Each time there is visible smoke as a result of the exercise of this consent, the consent holder shall record the time, duration and cause. The consent holder shall make the record available to the Chief Executive, Taranaki Regional Council, upon request.

11. The consent holder shall record and maintain a log of all continuous flaring events longer than five minutes duration, and any intermittent flaring lasting for an aggregate of ten minutes or longer in any 120-minute period. The log shall contain the date, the start and finish times of the flaring event, the quantity and type of material flared, and the reason for flaring. The log shall be made available to the Chief Executive, Taranaki Regional Council, upon request, and summarised annually in the report required under condition 12.

12. The consent holder shall provide to the Taranaki Regional Council during May of each year, for the duration of this consent, a report:

    i) detailing smoke emissions as required under condition 11;
    ii) detailing any measures undertaken or proposed to reduce smoke emissions;
    iii) detailing any measures undertaken or proposed to reduce flaring;
    iv) addressing any other issue relevant to the minimisation or mitigation of emissions from the flare.

McKee Production Station and the Mangahewa Expansion Compression (MEC) facility

13. No alteration shall be made to plant equipment or processes which may substantially alter the nature or quantity of flare emissions or other site emissions, including but not limited to the recovery of produced gas, other than as authorised by this consent , without prior consultation with the Chief Executive, Taranaki Regional Council.

14. No liquid or solid hydrocarbons from the McKee Production Station and the Mangahewa Expansion Compression facility shall be combusted through the gas flare system, other than in an emergency.

McKee-C wellsite

15. The consent holder shall notify the Chief Executive, Taranaki Regional Council, whenever the continuous flaring of hydrocarbons (other than purge gas) from the McKee-C wellsite is expected to occur for more than five minutes in duration. Notification shall be no less than 24 hours before the flaring commences. Notification shall include the consent number and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.

16. At least 24 hours before any flaring from the McKee-C wellsite, other than in emergencies, the consent holder shall provide notification to all residents within 1000 metres of the site of the commencement of flaring. The consent holder shall include in the notification a 24-hour contact telephone number for a representative of the consent holder, and shall keep and make available to the Chief Executive, Taranaki Regional Council, a record of all queries and complaints received in respect of any flaring activity.

17. Other than for the maintenance of a pilot flare flame, the consent holder shall have regard to the prevailing and predicted wind speed and direction at the time of initiation of, and throughout, any episode of flaring from the McKee-C wellsite so as to minimise offsite effects.

18. All gas that is flared from the McKee-C wellsite must first be treated by effective liquid and solid separation and recovery to ensure that smoke emission during flaring is minimised.

19. If separation required by special condition 18 cannot be implemented or maintained at any time while there is a flow from the well, whether natural or induced, then the consent holder shall immediately advise the Compliance Manager, Taranaki Regional Council, and shall in any case re-establish liquid and solid separation and recovery within three hours.

20. Only substances originating from the well stream and treated as outlined by conditions 18 and 19 shall be combusted within the flare pit.

Review

21. 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 2015 and/or June 2021, for any of the following purposes:

    a) dealing with any significant adverse effect on the environment arising from the exercise of the consent which was not foreseen at the time the application was considered or which it was not appropriate to deal with at the time;
    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;
    c) to alter, add or delete limits on mass discharge quantities or discharge or ambient concentrations of any contaminant.

Signed at Stratford on 24 June 2015

For and on behalf of
Taranaki Regional Council

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B G Chamberlain
Chief Executive

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 Energy Limited P O Box 802 NEW PLYMOUTH 4340
Decision Date:	24 June 2008
Commencement Date:	24 June 2008

Conditions of Consent

Consent Granted:	To discharge emissions into the air from natural gas combustion and other related activities associated with the operation of an electricity generation plant at the McKee Production Station at or about (NZTM) 1715334E-5672399N
Expiry Date:	1 June 2027
Review Date(s):	June 2015, June 2021
Site Location:	McKee Production Station, Otaraoa Road, Tikorangi
Legal Description:	Lot 1 DP 14374 Blk X Waitara SD

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. Notwithstanding any other conditions of this consent 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 actual or likely adverse effects on the environment associated with the discharge of contaminants into the environment arising from the emissions to air from the site.

2. Prior to undertaking any alterations to the plant, processes or operations, which may significantly change the nature or quantity of contaminants emitted to air from the site, the consent holder shall first consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991.

3. The discharges authorised by this consent shall not, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent held by the consent holder, give rise to any dangerous levels of airborne contaminants at or beyond the boundary of the property including but not limited to any risk of fire or explosion.

4. The discharges authorised by this consent shall not, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent held by the consent holder, give rise to any odour or dust or smoke that is offensive or obnoxious or objectionable at or beyond the boundary of the property on which the production station is located.

5. The consent holder shall not discharge any contaminant to air from the site at a rate or a quantity such that the contaminant, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent held by the consent holder, is or is liable to be hazardous or toxic or noxious at or beyond the boundary of the property where the electricity generation plant is located.

6. The consent holder shall control all discharges of carbon monoxide to the atmosphere from the site, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent held by the consent holder, in order that the maximum ground level concentration of carbon monoxide arising from the exercise of this consent measured under ambient conditions does not exceed 10 milligrams per cubic metre [eight-hour average exposure], or 30 milligrams per cubic metre [one-hour average exposure] at or beyond the boundary of the property on which the production station is located.

7. The consent holder shall control all discharges of nitrogen dioxide or its precursors to the atmosphere from the site, whether alone or in conjunction with any other discharges to the atmosphere from the site arising through the exercise of any other consent held by the consent holder, in order that the maximum ground level concentration of nitrogen dioxide arising from the exercise of this consent measured under ambient conditions does not exceed 200 micrograms per cubic metre [one hour average exposure], or 100 micrograms per cubic metre [twenty-four hour average exposure], at or beyond the boundary of the property on which the production station is located.

8. The consent holder shall control discharges to the atmosphere from the site of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent held by the consent holder, in order that the maximum ground level concentration for any particular contaminant arising from the exercise of this consent, measured at or beyond the boundary of the property on which the production station is located, is not increased above background levels:

    a) by more than 1/30th of the relevant Workplace Exposure Standard-Time Weighted Average [exposure averaged over a duration as specified for the Workplace Exposure Standard-Time Weighted Average], or by more than 1/10th of the Workplace Exposure Standard-Short Term Exposure Limit over any short period of time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour]; or
    b) if no Short Term Exposure Limit is set, by more than the General Excursion Limit at any time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour].

9. This consent shall lapse five years after the date of issue of this consent, 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.

10. 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 2015 and/or June 2021, 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.

Signed at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited P O Box 802 NEW PLYMOUTH 4340
Decision Date:	8 July 2009
Commencement Date:	8 July 2009

Conditions of Consent

Consent Granted:	To discharge stormwater into an unnamed tributary of the Mangahewa Stream in the Onaero catchment from a LPG Plant at or about (NZTM) 1715355E-5672389N
Expiry Date:	1 June 2039
Review Date(s):	June 2015, June 2021, June 2027, June 2033
Site Location:	McKee Production Station, Otaraoa Road, Waitara
Legal Description:	Lot 1 DP 14374 Blk X Waitara SD
Catchment:	Onaero
Tributary:	Mangahewa

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 of the discharge on any water body.

2. The stormwater discharged shall be from a catchment area not exceeding 7,800 m^2.

3. Within one month of the completion of the development of the site the consent holder shall provide, to the written satisfaction of the Chief Executive, Taranaki Regional Council, detailed plans of stormwater catchment and drainage pathways, including clean areas, potentially contaminated areas, and bunded areas, and the containment, treatment and discharge systems put into place.

4. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least seven days prior to the exercise of this consent. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable only if the consent holder does not have access to email.

5. The consent holder shall maintain a contingency plan. 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.

6. The consent holder shall maintain a stormwater management plan. 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. The plan shall include but not necessarily be limited to:

   a. management of the interceptor system.
   b. the loading and unloading of materials;
   c. maintenance of conveyance systems; and
   d. general housekeeping.

7. All stormwater discharged under this permit shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this permit.

8. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not directly to the stormwater catchment.

9. The following concentrations shall not be exceeded in the discharge,

Component	**Concentration**
pH (range)	6.0-9.0
suspended solids	100 gm^{-3}
total recoverable hydrocarbons [infrared spectroscopic technique]	15 gm^{-3}
chloride	50 gm^{-3}

   This condition shall apply prior to the entry of the treated stormwater into the unnamed tributary of the Mangahewa Stream at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

10. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not give rise to any of the following effects in the receiving waters of the unnamed tributary of the Mangahewa Stream:

    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;
    e) any significant adverse effects on aquatic life.

11. This consent shall lapse on 30 September 2014, 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.

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 2015 and/or June 2021 and/or June 2027 and/or June 2033, 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.

Signed at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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 Energy Limited P O Box 802 NEW PLYMOUTH 4340
Decision Date (Change):	24 October 2012
Commencement Date (Change):	24 October 2012 (Granted: 8 July 2009)

Conditions of Consent

Consent Granted:	To discharge emissions to air from the flaring of natural gas in emergency situations and miscellaneous emissions associated with the treatment of gas at the McKee LPG Plant and the Mangahewa Extraction Train 2 at or about (NZTM) 1715363E-5672126N
Expiry Date:	1 June 2039
Review Date(s):	June 2015, June 2021, June 2027, June 2033
Site Location:	McKee Production Station, Otaraoa Road, Waitara
Legal Description:	Lot 1 DP 14374 Blk X Waitara SD (Discharge source & site)

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 actual or likely adverse effects on the environment associated with the discharge of contaminants into the environment arising from the emissions to air from the site.

2. Prior to undertaking any alterations to the plant, processes or operations, which may significantly change the nature or quantity of contaminants emitted to air from the site, the consent holder shall first consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991.

3. The consent holder shall minimise the emissions and impacts of air contaminants discharged from the site by the selection of the most appropriate process equipment, process control equipment, emission control equipment, methods of control, supervision and operation, and the proper and effective operation, supervision, control and maintenance of all equipment and processes.

4. The consent holder shall supply to the Taranaki Regional Council each month a copy of flaring information comprising: the type and amount of material flared (including any gas used to maintain a pilot flame), the date this was flared, the reason why flaring was undertaken, and an indication of whether smoke was produced from such flaring events.

5. The discharges authorised by this consent shall not, whether alone or in conjunction with any other emissions from the McKee Production Station, give rise to any dangerous levels of airborne contaminants at or beyond the boundary of the property including but not limited to any risk of fire or explosion.

6. The discharges authorised by this consent shall not, whether alone or in conjunction with any other emissions from the McKee Production Station arising through the exercise of any other consent held by the consent holder, give rise to any odour or dust or smoke that is offensive or obnoxious or objectionable at or beyond the boundary of the property on which the production station is located.

7. The consent holder shall not discharge any contaminant to air from the site at a rate or a quantity such that the contaminant, whether alone or in conjunction with any other emissions from the McKee Production Station arising through the exercise of any other consent held by the consent holder, is or is liable to be hazardous or toxic or noxious at or beyond the boundary of the property where the LPG plant is located.

8. The consent holder shall control all discharges of carbon monoxide to the atmosphere from the site, whether alone or in conjunction with any other emissions from the McKee Production Station arising through the exercise of any other consent held by the consent holder, in order that the maximum ground level concentration of carbon monoxide arising from the exercise of this consent measured under ambient conditions does not exceed 10 milligrams per cubic metre [eight-hour average exposure], or 30 milligrams per cubic metre [one-hour average exposure] at or beyond the boundary of the property on which the LPG plant is located.

9. The consent holder shall control all discharges of nitrogen dioxide or its precursors to the atmosphere from the site, whether alone or in conjunction with any other discharges to the atmosphere from the McKee Production Station arising through the exercise of any other consent held by the consent holder, in order that the maximum ground level concentration of nitrogen dioxide arising from the exercise of this consent measured under ambient conditions does not exceed 200 micrograms per cubic metre [one hour average exposure], or 100 micrograms per cubic metre [twenty-four hour average exposure], at or beyond the boundary of the property on which the LPG plant is located.

10. The consent holder shall control discharges to the atmosphere from the site of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides, whether alone or in conjunction with any other emissions from the McKee Production Station arising through the exercise of any other consent held by the consent holder, in order that the maximum ground level concentration for any particular contaminant arising from the exercise of this consent, measured at or beyond the boundary of the property on which the LPG plant is located, is not increased above background levels:

    a) by more than 1/30th of the relevant Workplace Exposure Standard-Time Weighted Average [exposure averaged over a duration as specified for the Workplace Exposure Standard-Time Weighted Average], or by more than 1/10th of the Workplace Exposure Standard-Short Term Exposure Limit over any short period of time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour]; or
    b) if no Short Term Exposure Limit is set, by more than the General Excursion Limit at any time [all terms as defined in Workplace Exposure Standards, 2002, Department of Labour].

11. This consent shall lapse on 30 September 2014, 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.

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 2015 and/or June 2021 and/or June 2027 and/or June 2033, 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.

Signed at Stratford on 15 November 2013

For and on behalf of
Taranaki Regional Council

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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.