

Todd Generation Taranaki Ltd
McKee Power Plant
Monitoring Programme
Annual Report
2019-2020

Technical Report 2020-45

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Taranaki Regional Council
Private Bag 713
STRATFORD
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Executive summary

Todd Generation Taranaki Ltd (Todd Generation), previously Nova Energy Ltd, operates the McKee Power Plant on Otaraoa Road near Tikorangi, bridging the Waitara and Onaero catchments. Located to the south of the McKee Production Station (which processes oil and gas from the McKee and Mangahewa groups of wellsites), the McKee Power Plant was completed and commissioned during the 2012-2014 period. This 100 MW electricity generating facility provides both peak and base load power for the national grid. This report for the period July 2019 to June 2020 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Company's environmental and consent compliance performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of the Company's activities.

Todd Generation holds five resource consents, which include a total of 41 conditions setting out the requirements that the Company must satisfy. The Company holds one consent to allow it to take and use water, two consents to discharge wastewater/stormwater into the Mangahewa Stream and Waitara River, one consent to discharge emissions into the air at the site, and one consent to install and use an outlet structure.

During the monitoring period, Todd Generation demonstrated an overall high level of environmental performance.

The Council's monitoring programme for the year under review included four inspections, six water samples collected for physicochemical analysis, and one ambient air quality analysis. Todd Generation provided water abstraction data and an air report as required by consent conditions.

Stormwater system inspections showed that discharges from the site complied with consent conditions at the time. Receiving water inspections and sampling showed that the discharges were not causing any adverse effects on the Mangahewa Stream at the time of monitoring. There were no adverse effects on the environment resulting from the exercise of the air discharge consents. The ambient air quality monitoring at the site showed that levels of carbon monoxide, combustible gases, and PM₁₀ particulates were all below levels of concern at the time of sampling. There were no complaints in relation to air emissions from the site.

During the year, the Company demonstrated a high level of both environmental performance and administrative compliance with the resource consents. There were no unauthorised incidents recorded by the Council in relation to the Company's activities.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.

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

This report includes recommendations for the 2020-2021 year, including a recommendation relating to an optional review of consents 2393-3, 7920-1, 7921-1 and 7922-1.

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1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is for the period July 2019 to June 2020 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by Todd Generation Taranaki Ltd (Todd Generation). Todd Generation operates the McKee Power Plant (MPP) situated 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 Todd Generation that relate to abstractions and discharges of water within the Waitara and Onaero catchments, and the air discharge permit to cover emissions to air from the site.

One of the intents of the *Resource Management Act 1991* (RMA) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of the Company's use of water, land and air, and is the eighth annual report by the Council for the MPP (the MPP has previously been included in the Todd Petroleum Mining Company Ltd/Todd Energy Ltd McKee Production Station annual report).

1.1.2 Structure of this report

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

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by Todd Generation 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 in the MPP.

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 2020-2021 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' inasmuch 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 and administrative performance

Besides discussing the various details of the performance and extent of compliance by the Company, this report also assigns them a rating for their environmental and administrative performance during the period under review.

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.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.¹

1.2 Process description

The MPP (Photo 1) was completed and commissioned during the 2012-2014 monitoring period. This electricity generating facility utilises two 50 MW gas-fired turbines to provide both peak and base load power for the national grid. Fuel gas for the MPP is supplied from the nearby McKee Production Station (MPS) via a 1 km high pressure pipeline. Stormwater and treated process water from the site is directed to a 250 m³ retention pond on the eastern side of the site. Overflow from this pond is discharged to an unnamed tributary of the Mangahewa Stream to the north. The locations of MPP and MPS are shown in Figure 1.

¹ The Council has used these compliance grading criteria for 15 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018



Photo 1 Todd Generation MPP

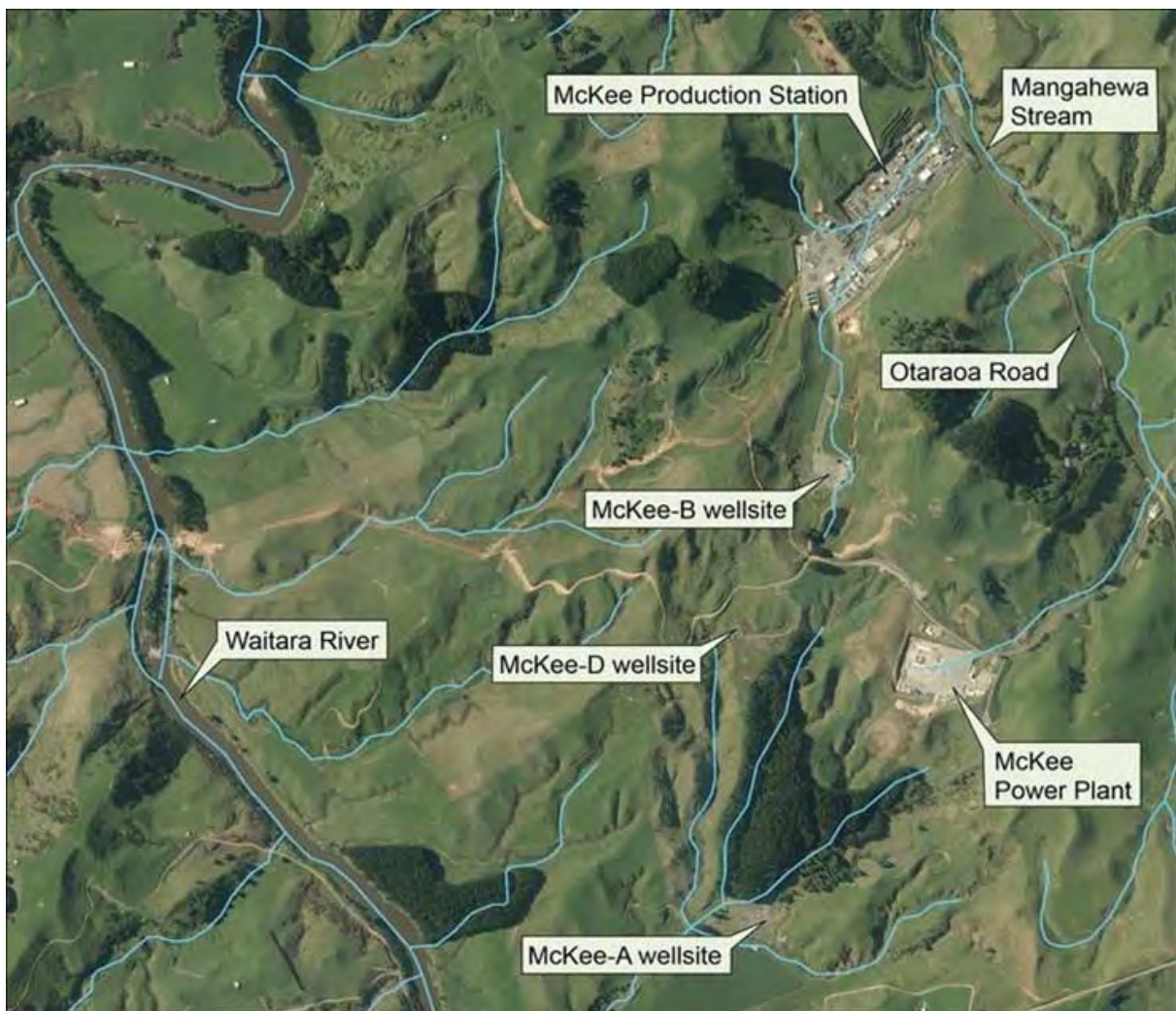


Figure 1 Location of the MPP and adjacent production station

1.3 Resource consents

The Company holds five 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 Appendix I, as are copies of all permits held by the Company during the period under review.

Table 1 Resource consents held for MPP

Consent number	Purpose	Granted	Review	Expires
<i>Water abstraction permit</i>				
2393-3	To take water from the Mangaone Stream for use in a gas fired Power Station.	Feb 2016	June 2021	June 2033
<i>Water discharge permits</i>				
4560-2	To discharge wastewater from filter backwashing and tank cleaning into the Waitara River.	Jan 2003	-	June 2021
7920-1	To discharge wastewater and stormwater from a retention pond at the McKee Power Plant and Organic Rankine Cycle Plant, into water and onto and into land where it may enter an unnamed tributary of the Mangahewa Stream.	Oct 2011	June 2021	June 2031
<i>Air discharge permit</i>				
7921-1	To discharge emissions to air from the combustion of natural gas and other miscellaneous emissions from the McKee Power Plant and Organic Rankine Cycle Plant.	Oct 2011	June 2021	June 2031
<i>Land use permit</i>				
7922-1	To install and use a stormwater and wastewater outlet structure in an unnamed tributary of the Mangahewa Stream associated with the MPP.	Oct 2011	June 2021	June 2031

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 MPP consisted of three primary components.

1.4.2 Programme liaison and management

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

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

- consultation on associated matters.

1.4.3 Site inspections

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

1.4.4 Chemical sampling

Samples of the discharge from the MPP and the receiving waters of the Mangahewa Stream were collected on three occasions during the monitoring year. Samples were analysed for free chlorine, 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 PM₁₀ particulate monitor was deployed concurrently with the multi-gas meter.



Figure 2 Sampling sites relating to the MPP

2 Results

2.1 Water

2.1.1 Inspections

Inspections of the MPP were undertaken on 19 August and 18 September 2019, and 5 and 20 May 2020. The site was found to be satisfactory on all occasions, with no issues noted by the inspecting officer.

2.1.2 Results of discharge monitoring

Overflow from the treated water retention pond at the MPP is discharged to a tributary of the Mangahewa Stream (STW002085). The discharge and related stream sampling sites are shown in Figure 2.

Water quality sampling of the discharge to the tributary of the Mangahewa Stream from MPP was undertaken on three occasions during the 2019-2020 period. Table 2 presents the results of this sampling.

Table 2 Monitoring results for discharge to a tributary of the Mangahewa Stream (site STW002085)

Parameter	Units	23 Aug 2019	18 Sep 2019	25 May 2020	Consent 7920-1 limits
Free Chlorine	g/m ³	< 0.05	< 0.05	< 0.05	0.1
Hydrocarbons	g/m ³	< 0.7	< 0.7	< 0.7	15
pH		7.0	7.2	7.3	6.0 – 9.0
Suspended solids	g/m ³	< 3	< 3	< 3	100
Temperature	Deg. C	10.8	-	14.5	-

The results are indicative of a clean discharge at the time of sampling, with no free chlorine or hydrocarbons detected.

2.1.3 Results of receiving environment monitoring

Water quality sampling of the unnamed tributary of the Mangahewa Stream in relation to the MPP discharge was undertaken in conjunction with stormwater discharge sampling. The results are presented in Table 3.

Table 3 Receiving environment results for the Mangahewa Stream tributary (site MHW000052)

Parameter	Units	23 Aug 2019	18 Sep 2019	25 May 2020
Free Chlorine	g/m ³	< 0.05	< 0.05	< 0.05
Hydrocarbons	g/m ³	< 0.7	< 0.7	< 0.7
pH		7.1	7.1	6.9
Suspended solids	g/m ³	< 3	< 3	< 3
Temperature	Deg. C	10.8	-	13.7

The results are indicative of good water quality in the tributary. No free chlorine or hydrocarbons were detected downstream of the MPP discharge.

2.1.4 Summary of water abstractions reported by Todd Generation

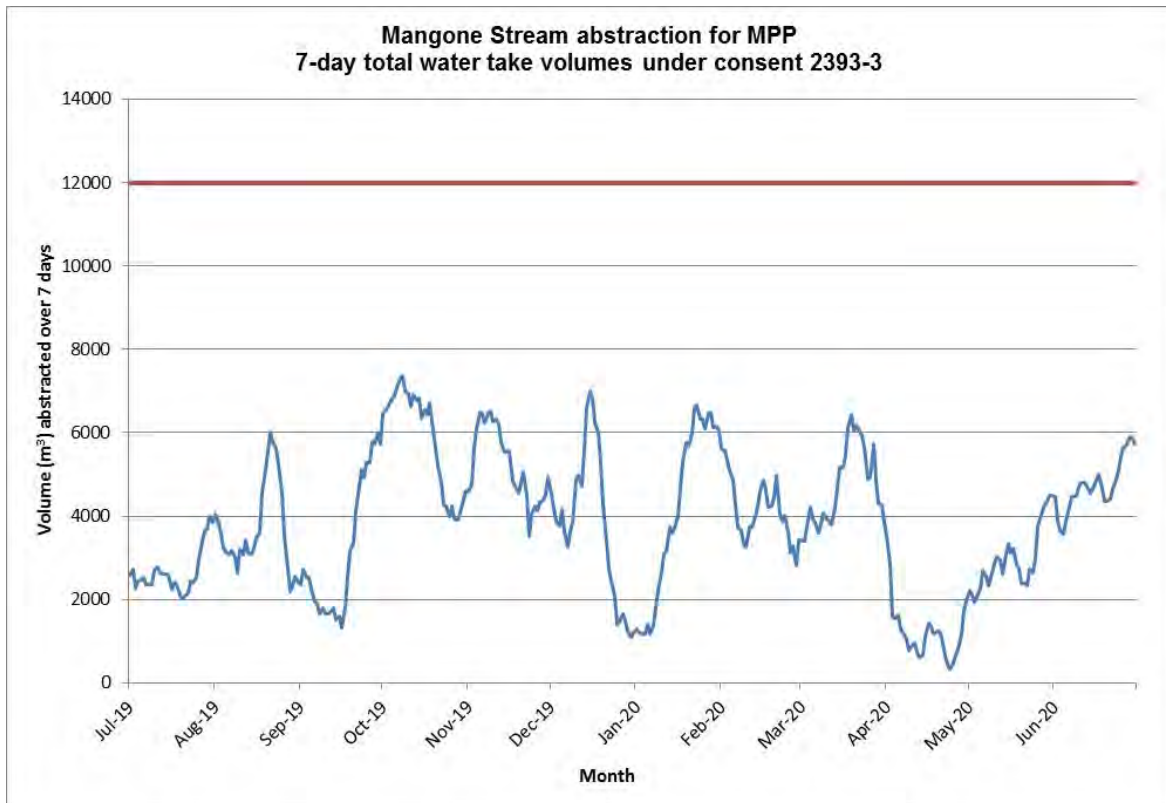


Figure 3 Seven-day water abstraction volumes for MPP under consent 2393-3

Figure 3 provides a summary of the abstraction volumes for the consented water take 2393-3. Seven day volumes for the abstraction were within the limits stipulated by the consent.

Condition 7 of consent 2393-3 requires Todd Generation to cease abstracting water when the flow in the Waitara River at Bertrand Road is less than 4,600 L/s. Flows dropped slightly below this level between 14-18 February 2020, with a minimum of 4,371 L/s. Todd Generation were not required to cease abstraction at the time as there are uncertainties in flow calculations of +/- 10% which mean the absolute limit for this consent is a flow of 4,140 L/s in the Waitara River at Bertrand Road.

2.2 Air

2.2.1 Results of receiving environment monitoring

2.2.1.1 Carbon monoxide and combustible gases

During the monitoring year, a multi-gas meter was deployed on one occasion in the vicinity of the plant (Figure 4). The deployment lasted approximately 32 hours, with the instrument placed in a down-wind position at the start of the deployment. Monitoring consisted of continuous measurements of gas concentrations for the gases of interest (carbon monoxide and combustible gases).



Figure 4 Air monitoring sites at MPP 2019-2020

Because of the nature of the activities on the site, it was considered that the primary information of interest in respect of gases potentially emitted from the site was the average downwind concentration, rather than any instantaneous peak value. That is, the long-term exposure levels, rather than short-term maxima, are of most interest. The gas meter was therefore set up to create a data set based on recording the average concentration measured during each minute as raw data.

The details of the sample run are summarised in Table 4 and the data from the sample run are presented graphically in Figure 5.

The consents covering air discharges from MPP have specific limits related to particular gases. Special condition 3 of consent 7921-1 sets a limit on the carbon monoxide concentration at or beyond the production station's boundary. The limit is expressed as 10 mg/m^3 for an eight hour average exposure. The maximum concentration of carbon monoxide found during the monitoring run was 3.8 mg/m^3 , with an average concentration for the entire dataset of 0.34 mg/m^3 both of which comply with consent conditions.

Table 4 Results of carbon monoxide and LEL monitoring at MPP

Period (from-to)		30 to 31 January 2020 32 hours
Max	CO(ppm)	3.30*
	LEL(%)	0.10
Mean	CO(ppm)	0.30*
	LEL(%)	0.00
Min	CO(ppm)	0.00*
	LEL(%)	0.00

Note: (1) the instrument records in units of ppm. At 25°C , 1 atm.

* $1 \text{ ppm CO} = 1.145 \text{ mg/m}^3$

(2) See text for explanation of LEL. Because the LEL of methane is equivalent to a mixture of approximately 5% methane in air, then the actual concentration of methane in air can be obtained by dividing the percentage LEL by 20.

LEL gives the percentage of the lower explosive limit, expressed as methane that is detected in the air sampled. The sensor on the instrument reacts to gases and vapours such as acetone, benzene, butane, methane, propane, carbon monoxide, ethanol, and higher alkanes and alkenes, with varying degrees of sensitivity. The Council's Regional Air Quality Plan has a typical requirement that no discharge shall result in dangerous levels of airborne contaminants, including any risk of explosion. At no time did the level of explosive gases downwind of the MPS reach any more than a trivial level.

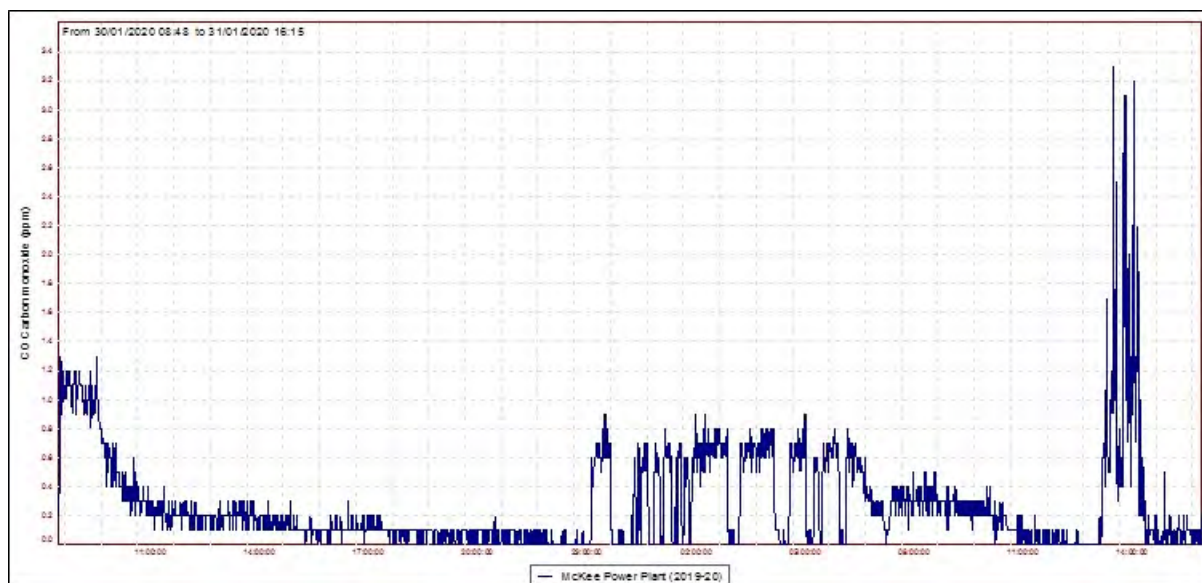


Figure 5 Ambient CO levels in the vicinity of MPP 2019-2020

2.2.1.2 PM₁₀

In September 2004 the Ministry for the Environment made public National Environmental Standards (NESs) relating to certain air pollutants. The NES for PM₁₀ is 50 µg/m³ (24 hour average). The same limit is imposed on consent 7921-1, in condition 3 that provides for the discharge of emissions to air from MPP.

Particulates can be derived from many sources, including motor vehicles (particularly diesel), solid and oil-burning processes for industry and power generation, incineration and waste burning, photochemical processes, and natural sources such as pollen, abrasion, and sea spray.

PM₁₀ particles are linked to adverse health effects that arise primarily from the ability of particles of this size to penetrate the defences of the human body and enter deep into the lungs significantly reducing the exchange of gases across the lung walls. Health effects from inhaling PM₁₀ include increased mortality and the aggravation of existing respiratory and cardiovascular conditions such as asthma and chronic pulmonary diseases.

During the reporting period, a "DustTrak" PM₁₀ monitor was deployed on one occasion in the vicinity of the MPS (Figure 4). The deployment lasted approximately 30 hours, with the instrument placed in a down-wind position at the start of the deployment. Monitoring consisted of continual measurements of PM₁₀ concentrations. The location of the "DustTrak" monitor during the sampling run is shown in Figure 4.

The details of the sample run are presented in Figure 6 and Table 5.

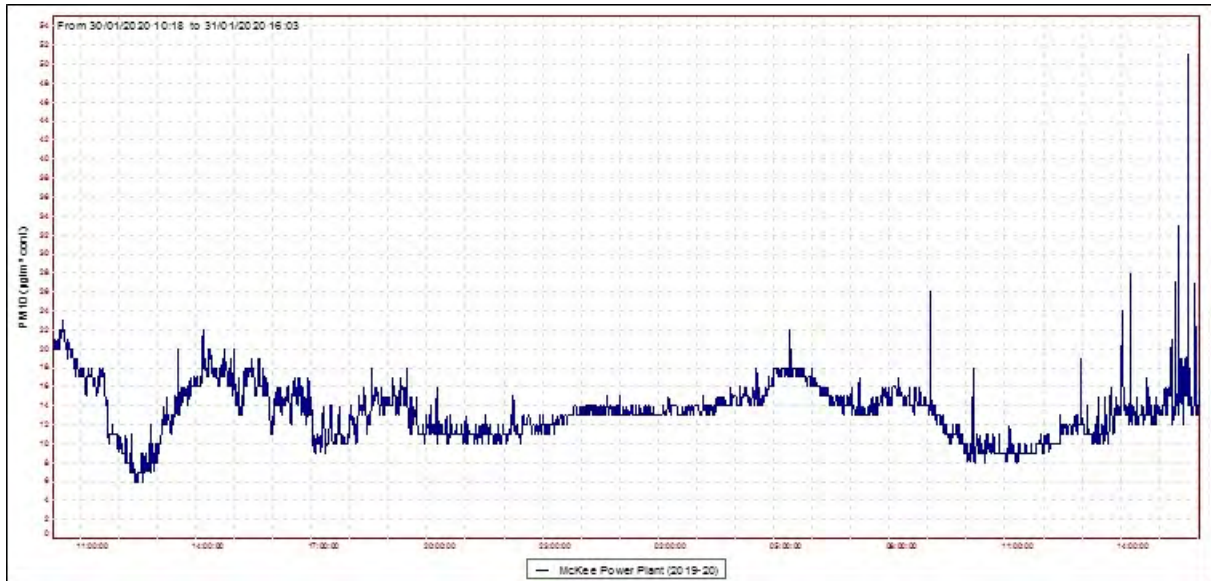


Figure 6 PM₁₀ concentrations (µg/m³) at MPP

Table 5 Daily mean of PM₁₀ results during monitoring at MPP

	30 hours (30 to 31 January 2020)	
24 hr. set	Day 1 (Start to 24 hrs)	Day 2 (24 hrs to end)
Daily average	13.7 µg/m ³	13.1 µg/m ³
NES	50 µg/m ³	

During the 30 hour run, from 30 to 31 January 2020, the average recorded PM₁₀ concentration for the first 24 hour period was 13.7 µg/m³, and 13.3 µg/m³ from 24 hours to the end. These daily means equate to 27% and 26%, respectively, of the 50 µg/m³ value that is set by the National Environmental Standard and consent 7921-1.

Background levels of PM₁₀ in the region have been found to be typically around 11 µg/m³.

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

2.2.2 Air report required by consent 7921-1

Conditions 1 and 2 of consent 7921 require:

1. The consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants into the environment from the property.
2. By 31 October 2013 and every six years thereafter, the consent holder shall provide to the Council a written report that demonstrates compliance with condition 1 above. The report shall include but not necessarily be limited to:
 - a. A review of any of technological advances in the reduction or mitigation of emissions, how these might be applicable and/or implemented at the power station, and the costs and benefits of these advances; and
 - b. An inventory of emissions from the site of such contaminants as the Chief Executive, Taranaki Regional Council, may from time to time specify following consultation with the consent holder; and

- c. Documentation showing that emissions of contaminants is the minimum that can be reasonably achieved; and
- d. Details of any measures that have been taken by the consent holder to improve the energy efficiency of the power station.

A report was provided in January 2020 in accordance with condition 2.

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 the Company. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

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

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

In the 2019-2020 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the Company's conditions in resource consents or provisions in Regional Plans.

3 Discussion

3.1 Discussion of site performance

Inspections of the MPP during the 2019-2020 period found that the site was well managed and the stormwater system was maintained to a satisfactory standard. Emissions to air were well controlled.

The water abstraction complied with the requirements of consent 2393-3.

An air report was received as per condition 2 of consent 7921-1.

3.2 Environmental effects of exercise of consents

Stormwater system inspections showed that discharges from the site complied with consent conditions at the time. Receiving water inspections and sampling showed that the discharges were not causing any adverse effects in the Mangahewa Stream at the time of monitoring.

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 6-10.

Table 6 Summary of performance for consent 2393-3

Purpose: To take water from the Mangaone Stream in the Waitara catchment for use in a gas fired Power Station		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Abstraction rate not to exceed 36 L/s or 12,000 m ³ over seven days	Abstraction records received	Yes
2. Install and maintain a water meter and data logger at the take point	Meter installed and verified	Yes
3. Provide certification of the measuring and recording equipment	Certification received January 2020, next due before February 2025	Yes
4. Notify the Council of any malfunctions and repairs	Liaison with consent holder	Yes
5. The equipment shall be accessible to the Council at all reasonable times	Inspection	Yes
6. Provide records in a suitable format	Abstraction records received	Yes
7. No taking when flow in Waitara River is less than 4,600 L/s	The flow dropped below 4,600 L/s between 14 – 18 February 2020. Todd Generation were allowed to continue abstracting because flow calculations have a +/- 10% uncertainty which was not breached.	Yes
8. Adoption of best practicable option	Inspection	Yes

Purpose: To take water from the Mangaone Stream in the Waitara catchment for use in a gas fired Power Station		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
9. Design and screen the intake to avoid entrapment of fish	Inspection	Yes
10. Review provision	Next option for review in June 2021, recommendation attached in section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 7 Summary of performance for consent 4560-2

Purpose: To discharge wastewater from filter backwashing and tank cleaning into the Waitara River		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Exercise of consent to be in accordance with information submitted in support of application	Liaison with consent holder	Yes
2. Discharge not to cause effects beyond mixing zone	Not assessed during period under review	N/A
3. Review provision	No further review options	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 8 Summary of performance for consent 7920-1

Purpose: To discharge wastewater and stormwater from a retention pond at the McKee Power Plant and Organic Rankine Cycle Plant, into water and onto and into land where it may enter an unnamed tributary of the Mangahewa Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Consent holder shall adopt the best practicable option	Liaison with consent holder	Yes
2. Maximum catchment area 4.9 ha	Liaison with consent holder	Yes
3. Ensure all potentially contaminated stormwater is directed for treatment prior to discharge	Liaison with consent holder	Yes
4. Limits on contaminants in discharge	Water sampling	Yes

Purpose: To discharge wastewater and stormwater from a retention pond at the McKee Power Plant and Organic Rankine Cycle Plant, into water and onto and into land where it may enter an unnamed tributary of the Mangahewa Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
5. Effects on receiving water below the mixing zone	Water sampling and visual inspection	Yes
6. Prepare and maintain contingency plan	Plan approved (February 2018)	Yes
7. Prepare and maintain stormwater management plan	Plan approved	Yes
8. No alterations to be made that may alter the discharge without consulting the Council	No changes proposed	Yes
9. Undertake and maintain fencing and riparian planting	Site fenced and planted	Yes
10. Lapse provision	Not applicable – consent exercised	N/A
11. Review provision	Next option for review in June 2021, recommendation attached in section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 9 Summary of performance for consent 7921-1

Purpose: To discharge emissions to air from the combustion of natural gas and other miscellaneous emissions from the McKee Power Plant and Organic Rankine Cycle Plant		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Consent holder shall adopt the best practicable option	Liaison with consent holder	Yes
2. Provision of report demonstrating compliance with condition 1 every six years	Report received May 2020, next required in October 2025	Yes
3. Maximum ground level concentration of carbon monoxide, nitrogen dioxide, PM10 and sulphur dioxide at or beyond the boundary	Air quality monitoring	Yes
4. Hazardous, toxic or noxious contaminants at or beyond the boundary not allowed	Not monitored during period under review	N/A
5. Minimum discharge stack height	Construction complete	Yes

Purpose: To discharge emissions to air from the combustion of natural gas and other miscellaneous emissions from the McKee Power Plant and Organic Rankine Cycle Plant		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
6. Discharges shall not give rise to significant adverse environmental effects	Air quality monitoring	Yes
7. Lapse provision	Not applicable – consent exercised	N/A
8. Review provision	Next option for review in June 2021, recommendation attached in section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 10 Summary of performance for consent 7922-1

Purpose: To install and use a stormwater and wastewater outlet structure in an unnamed tributary of the Mangahewa Stream associated with the MPP		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Constructed in accordance with application	Construction complete	Yes
2. Minimum pipe diameter of 525 mm	Construction complete	Yes
3. Notification of installation	Notification received	Yes
4. Minimisation of streambed disturbance	No work undertaken during monitoring period	N/A
5. Undertake works in accordance with Council guidelines	No work undertaken during monitoring period	N/A
6. Removal and reinstatement when no longer required	Structure still in use	N/A
7. Shall not alter flow or restrict passage of fish	Not assessed during period under review	N/A
8. Lapse provision	Not applicable – consent exercised	N/A
9. Review provision	Next option for review in June 2021, recommendation attached in section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 11 Evaluation of environmental performance over time

Year	Consent no	High	Good	Improvement req	Poor
2012-14	2393-2, 4560-2, 7920-1, 7921-1, 7922-1	5	-	-	-
2014-15	2393-2, 4560-2, 7920-1, 7921-1, 7922-1	5	-	-	-
2015-16	2393-3, 4560-2, 7920-1, 7921-1, 7922-1	5	-	-	-
2016-17	2393-3, 4560-2, 7920-1, 7921-1, 7922-1	5	-	-	-
2017-18	2393-3, 4560-2, 7920-1, 7921-1, 7922-1	5	-	-	-
2018-19	2393-3, 4560-2, 7920-1, 7921-1, 7922-1	5	-	-	-
Totals		30	0	0	0

During the year, the Company demonstrated a high level of both environmental performance and administrative compliance with the resource consents as defined in Section 1.1.4. There were no unauthorised incidents recorded by the Council in relation to the Company's activities. The MPP was well managed and maintained.

3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of consented activities at MPP in the 2019-2020 year be amended from that undertaken in 2018-2019, by reducing the number of inspections from six to four.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation 1 was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation 2.

3.5 Alterations to monitoring programmes for 2020-2021

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.

It is proposed that for 2020-2021 the programme remains the same as 2019-2020.

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 2020-2021.

3.6 Exercise of optional review of consent

Resource consents 2393-3, 7920-1, 7921-1, and 7922-1 provide for an optional review of the consent in June 2021. Conditions attached to the consents allow the Council to review the consent, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment.

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

4 Recommendations

1. THAT in the first instance, monitoring of consented activities at MPP in the 2020-2021 year remain the same as 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, 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:

Conductivity	An indication of the level of dissolved salts in a sample, usually measured at 25°C and expressed in mS/m.
g/m ³	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
Incident Register	The Incident Register contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.
L/s	Litres per second.
m ²	Square Metres.
MPP	McKee Power Plant
MPS	McKee Production Station
mS/m	Millisiemens per metre.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
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.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	<i>Resource Management Act 1991</i> and including all subsequent amendments.
SS	Suspended solids.
Temp	Temperature, measured in °C (degrees Celsius).
UI	Unauthorised Incident.

For further information on analytical methods, contact a Science Services Manager.

Bibliography and references

- Ministry for the Environment. 2018. Best Practice Guidelines for Compliance, Monitoring and Enforcement under the Resource Management Act 1991. Wellington: Ministry for the Environment.
- Taranaki Regional Council (2020): Ambient Gas (PM10, CO and LEL) Monitoring at McKee Power Plant during the 2019-2020 monitoring year. Internal Memorandum.
- Taranaki Regional Council (2020): Todd Generation Ltd McKee Power Plant Monitoring Programme Annual Report 2018-2019. Technical Report 19-64.
- Taranaki Regional Council (2019): Nova Energy Ltd McKee Power Plant Monitoring Programme Annual Report 2017-2018. Technical Report 18-72.
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- Taranaki Regional Council (2017): Todd Petroleum Mining Company Ltd McKee Production Station and Power Plant Monitoring Programme Annual Report 2015-2016. Technical Report 16-26.
- Taranaki Regional Council (2016): Todd Petroleum Mining Company Ltd McKee Production Station and Power Plant Monitoring Programme Annual Report 2014-2015. Technical Report 15-83.
- Taranaki Regional Council (2016): Todd Petroleum Mining Company Ltd McKee Production Station and Power Plant Monitoring Programme Biennial Report 2012-2014. Technical Report 14-102.

Appendix I

Resource consents held by Todd Generation Taranaki 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.

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

Name of
Consent Holder: Nova Energy Limited
PO Box 10141
Wellington 6143

Decision Date: 29 February 2016

Commencement Date: 29 February 2016

Conditions of Consent

Consent Granted: To take water from the Mangaone Stream for use in a gas fired Power Station

Expiry Date: 1 June 2033

Review Date(s): June 2018 and 3-yearly intervals thereafter

Site Location: McKee Oil Field, Bristol Road, Inglewood

Grid Reference (NZTM) 1714710E-5670423N (Site of take)
1715631E-5671543N (Site of use)

Catchment: Waitara

Tributary: Mangaone

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

General condition

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

Special conditions

1. The rate of taking shall not exceed 36 litres per second, and the volume taken in any 7-day period ending at midnight (New Zealand Standard Time) shall not exceed 12,000 cubic metres.
2. Before exercising this consent the consent holder shall install, and thereafter maintain a water meter and a datalogger at the site of taking (or a nearby site in accordance with Regulation 10 of the *Resource Management (Measurement and Reporting of Water Takes) Regulations 2010*. The water meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of $\pm 5\%$. Records of the date, the time and the rate and volume of water taken at intervals not exceeding 15 minutes, shall be made available to the Chief Executive, Taranaki Regional Council at all reasonable times.

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

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

The documentation shall be provided:

- (i) within 30 days of the installation of a water meter or datalogger;
 - (ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and
 - (iii) no less frequently than once every five years.
4. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person.
 5. Any water meter or datalogger shall be accessible to Taranaki Regional Council officers at all reasonable times for inspection and/or data retrieval. In addition the data logger shall be designed and installed so that Taranaki Regional Council officers can readily verify that it is accurately recording the required information.

Consent 2393-3.0

6. The records of water taken shall:
 - (a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
 - (b) specifically record the water taken as 'zero' when no water is taken; and
 - (c) from a date no later than 1 September 2016, be transmitted directly to the Taranaki Regional Council's computer system, in a format suitable for providing a 'real time' record over the internet.
7. No taking shall occur when the flow of the Waitara River at the Bertrand Road flow recorder is less than 4,600 litres per second.

Advice Note:

During a serious temporary shortage of water the Taranaki Regional Council may, in accordance with section 329 of the Resource Management Act 1991, direct that water is allocated as it considers appropriate at the time. In issuing any such direction the Taranaki Regional Council will have regard to any allocation priorities that may be set out in any of its Standard Operating Procedures.

8. At all times the consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the abstraction of water, including, but not limited to, the efficient and conservative use of water.
9. The consent holder shall ensure that the intake is screened to avoid fish (in all stages of their life-cycle) entering the intake or being trapped against the screen.
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 2018 and/or June 2021 and/or June 2024 and/or June 2027 and/or June 2030, for the purposes 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 29 February 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of
Consent Holder: Nova Energy Limited
P O Box 10141
WELLINGTON 6143

Decision Date: 7 January 2003

Commencement Date: 7 January 2003

Conditions of Consent

Consent Granted: To discharge wastewater from filter backwashing and tank cleaning into the Waitara River

Expiry Date: 1 June 2021

Review Date(s): June 2009, June 2015

Site Location: McKee Oilfield, Bristol Road, Waitui, Inglewood

Legal Description: Pt Rimutauteka 12 DP 658 Blk XIV Waitara SD

Grid Reference (NZTM) 1714714E-5670564N

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. The exercise of this consent shall be conducted in accordance with the information submitted in support of the application and to ensure that the conditions of this consent are met at all times.
2. That after allowing for reasonable mixing in a zone of 100 metres downstream of the discharge point, the discharge shall not give rise to all or any of the following effects in the receiving water:
 - i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - ii) any conspicuous change in the colour or visual clarity;
 - iii) any emission of an objectionable odour;
 - iv) any significant adverse effects on aquatic life, habitats, or ecology;
 - v) any undesirable biological growths.
3. 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 2009 and/or June 2015, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 8 April 2013

For and on behalf of
Taranaki Regional Council



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 Generation Taranaki Limited PO Box 8358 New Plymouth 4340	
Decision Date (Change):	30 April 2019	
Commencement Date (Change):	30 April 2019	(Granted Date: 12 October 2011)

Conditions of Consent

Consent Granted:	To discharge wastewater and stormwater from a retention pond at the McKee power Plant and Organic Rankine Cycle Plant, into water and onto land where it may enter an unnamed tributary of the Mangahewa Stream	
Expiry Date:	1 June 2031	
Review Date(s):	June 2021, June 2026 and in accordance with special condition 11	
Site Location:	McKee Production Station, 1444 Otaraoa Road, Tikorangi	
Grid Reference (NZTM)	1715630E-5671570N	
Catchment:	Onaero	
Tributary:	Mangahewa	

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

General condition

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

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from a catchment area not exceeding 4.9 hectares comprising of 2.7 hectares from the plant pad and runoff from 2.2 hectares of adjacent land.
3. All stormwater from areas of potential contamination shall be directed for treatment through a hydrocarbon interceptor prior to entering the retention pond for discharge in accordance with the special conditions of this permit.
4. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm ⁻³
total recoverable hydrocarbons	Concentration not greater than 15 gm ⁻³
free chlorine	Concentration not greater than 0.1 gm ⁻³

This condition shall apply before entry of the combined stormwater and wastewater into the receiving waters at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

5. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
6. Within three months of the granting of this consent, the consent holder shall prepare and 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.

Consent 7920-1.1

7. Within three months of the granting of this consent, the consent holder shall prepare and 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:
- the loading and unloading of materials;
 - maintenance of conveyance systems;
 - general housekeeping; and
 - management of the interceptor system.

Note: A Stormwater Management Plan template is available in the Environment section of the Taranaki Regional Council's web site www.trc.govt.nz.

8. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site, that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
9. The consent holder shall undertake and maintain fencing and riparian planting in accordance with the Riparian Management Plan for the property (RMP 90346) before 1 October 2014 along 2.16 kilometres of stream bank (i.e. 1.08 kilometres on each side of the stream).
10. This consent shall lapse on 31 December 2016, 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.
11. 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 2016 and/or June 2021 and/or June 2026; and/or
 - within 3 months of receiving a notification under special condition 8 above;
- 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 30 April 2019

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of Consent Holder: Todd Generation Taranaki Limited
PO Box 8358
New Plymouth 4340

Decision Date (Change): 30 April 2019

Commencement Date (Change): 30 April 2019 (Granted Date: 12 October 2011)

Conditions of Consent

Consent Granted: To discharge emissions to air from the combustion of natural gas and other miscellaneous emissions from the McKee Power Plant and Organic Rankine Cycle Plant

Expiry Date: 1 June 2031

Review Date(s): June 2021, June 2026

Site Location: McKee Production Station, 1444 Otaraoa Road, Tikorangi

Grid Reference (NZTM) 1715521E-5671616N
1715507E-5671577N
1715520E-5671620N

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

General condition

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

Special conditions

1. The consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants into the environment from the property.
Note: With respect to this consent, the consent holder's property is defined as the area shown in the map attached.
2. By 31 October 2013 and every six years thereafter, the consent holder shall provide to the Council a written report that demonstrates compliance with condition 1 above. The report shall include but not necessarily be limited to:
 - a) A review of any of technological advances in the reduction or mitigation of emissions, how these might be applicable and/or implemented at the power station, and the costs and benefits of these advances; and
 - b) An inventory of emissions from the site of such contaminants as the Chief Executive, Taranaki Regional Council, may from time to time specify following consultation with the consent holder; and
 - c) Documentation showing that emissions of contaminants is the minimum that can be reasonably achieved; and
 - d) Details of any measures that have been taken by the consent holder to improve the energy efficiency of the power station.
3. The consent holder shall control all emissions of carbon monoxide, nitrogen dioxide, fine particles (PM₁₀) and sulphur dioxide to the atmosphere from the site, in order that the maximum ground level concentration of any of these contaminants arising from the exercise of this consent measured under ambient conditions does not exceed the relevant ambient air quality standard as set out in the Resource Management (National Environmental Standards for Air Quality Regulations, 2004) at or beyond the boundary of the property.
4. The consent holder shall control all emissions to the atmosphere from the site of contaminants other than those expressly provided for under special condition 3, in order that they do not individually or in combination with other contaminants cause a hazardous, noxious, dangerous, offensive or objectionable effect at or beyond the boundary of the property.
5. The minimum height of discharge of the products of combustion from the turbines shall be 14.5 metres above ground level.
6. The discharges authorised by this consent shall not give rise to any direct significant adverse ecological effect on any ecosystems in the Taranaki region, including but not limited to habitats, plants, animals, microflora and microfauna.

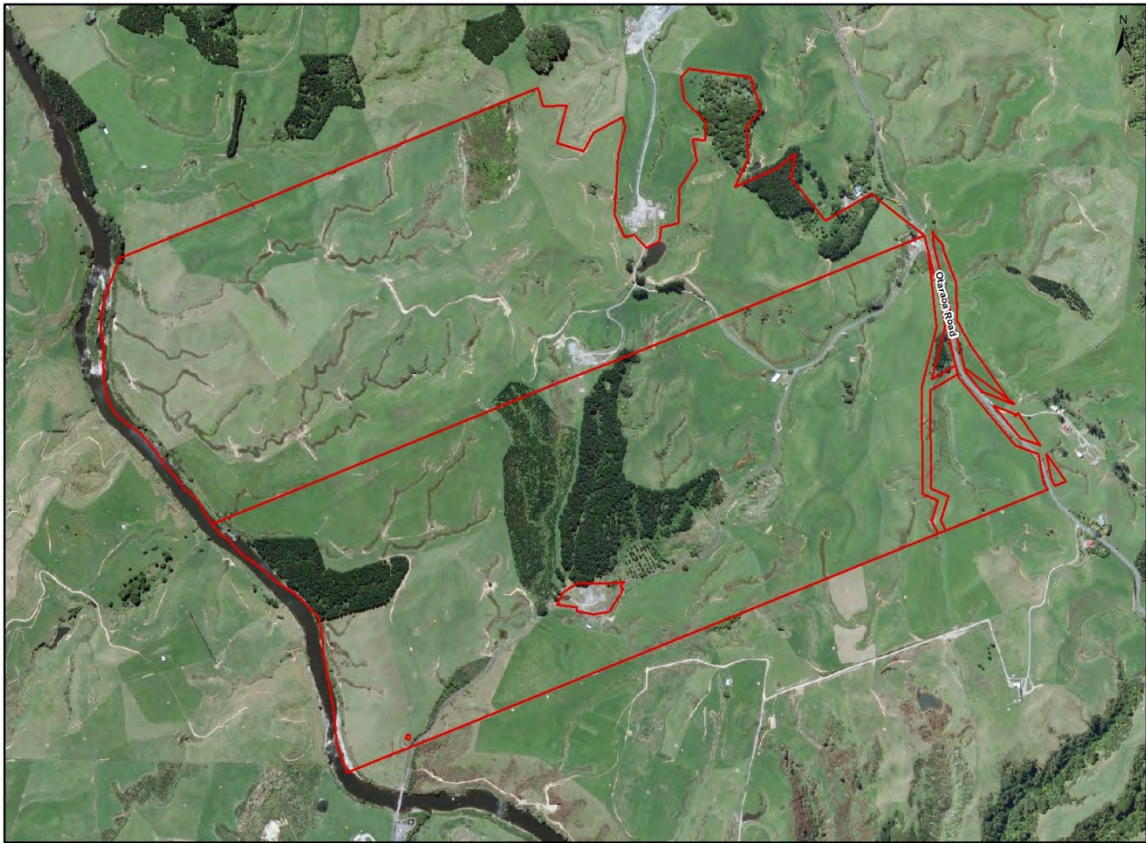
Consent 7921-1.2

7. This consent shall lapse on 31 December 2016, 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.
8. 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 2016 and/or June 2021, and/or June 2026 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; and/or
 - b) requiring the consent holder to adopt specific practices in order to achieve the best practicable option to remove or reduce any adverse effect on the environment caused by the discharge.

Signed at Stratford on 30 April 2019

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management



Map showing the property boundary

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 Generation Taranaki Limited
PO Box 10141
Wellington 6143

Decision Date 12 October 2011

Commencement Date 12 October 2011

Conditions of Consent

Consent Granted: To install and use a stormwater and wastewater outlet structure in an unnamed tributary of the Mangahewa Stream associated with the McKee Power Plant

Expiry Date: 1 June 2031

Review Date(s): June 2021, June 2026

Site Location: McKee Production Station, Otaraoa Road, Tikorangi

Grid Reference (NZTM) 1715548E-5671506N

Catchment: Onaero

Tributary: Mangahewa

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

General condition

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

Special conditions

1. The structure shall be constructed in accordance with drawing 5/2665/1/7424 sheet 2 dated 3/08/2011 and a plan view drawing dated 29/09/2011-01, and provided to the Taranaki Regional Council on 29/08/2011 and 29/09/2011 respectively. In the case of any contradiction between the drawing[s] and the conditions of this consent, the conditions of this consent shall prevail.
2. The outlet pipe shall have a diameter no less than 525 mm.
3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 48 hours prior to the commencement and upon completion of the initial installation. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.
4. The consent holder shall ensure that the area and volume of streambed disturbance is, as far as practicable, minimised and any areas that are disturbed are, as far as practicable, reinstated.
5. The consent holder shall take all reasonable steps to:
 - a. minimise the amount of sediment discharged to the stream;
 - b. minimise the amount of sediment that becomes suspended in the stream; and
 - c. mitigate the effects of any sediment in the stream.

Undertaking work in accordance with *Guidelines for Earthworks in the Taranaki region*, by the Taranaki Regional Council, will achieve compliance with this condition.

6. Except with the written agreement of the Chief Executive, Taranaki Regional Council, the structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure is no longer required. A further resource consent may be required to authorise the removal of the structure, and the consent holder is advised to seek advice from the Council on this matter.
7. The exercise of this consent shall not alter the natural flow of the river or restrict the passage of fish.
8. This consent shall lapse on 31 December 2016, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 7922-1

9. 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 2016 and/or June 2021 and/or June 2026, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 6 December 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management