

OMV NZ Production Ltd
Pohokura Production Station
Monitoring Programme
Annual Report
2020-2021

Technical Report 2021-42



Taranaki Regional Council
Private Bag 713
Stratford

ISSN: 1178-1467 (Online)
Document: 2837060 (Word)
Document: 2861368 (Pdf)
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Executive summary

OMV NZ Production Ltd (OMV), previously Shell Exploration NZ Ltd, operates a hydrocarbon production station and associated wellsites, located on Lower Otaraoa Road at Motunui in the Waipapa and Manu catchments. This report for the period July 2020 to June 2021 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess OMV'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 OMV's activities.

During the monitoring period, OMV NZ Production Ltd demonstrated an overall high level of environmental performance.

OMV holds 12 resource consents which were actively monitored during the period under review, including a total of 122 conditions setting out the requirements that OMV must satisfy. OMV holds one consent to allow it to take and use water, three consents to discharge stormwater, two consents to discharge emissions into the air, two consents for various structures, two consents relating to deep well injection, and one consent each to disturb and occupy the coastal marine area.

The Council's monitoring programme for the year under review included five inspections, three water samples collected for physicochemical analysis, and two ambient air quality analyses. The consent holder also collected various data as required by consent conditions and for self-monitoring purposes.

The monitoring showed that the results from stormwater samples complied with the limits prescribed by consents. The results from OMV's stormwater monitoring also complied with consent limits. No adverse effects were noted on the receiving environment as a result of the discharge.

There were no adverse effects on the environment resulting from the exercise of the air discharge consent. Ambient air quality monitoring at the site showed that levels of carbon monoxide, combustible gases, PM₁₀ 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 and there were no complaints in relation to air emissions from the site. Monitoring commissioned by OMV showed that the relevant New Zealand Workplace Exposure Standards for BTEX constituents were complied with.

Ecological assessments voluntarily commissioned by OMV of the intertidal coastal area surrounding the Pohokura site found high species diversity and abundance on two of the three reefs surveyed, indicating a stable and healthy reef environment with high water quality. The third reef had lower species diversity due to high levels of sand inundation (a natural phenomenon) which can decrease both species diversity and abundance. The ongoing ecological surveys have shown that the health of the reefs in the vicinity is comparable to other reefs around the Taranaki coastline that are subjected to periodic sand inundation. OMV's activities in the area do not appear to have had any adverse effect on the coastal environment.

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

For reference, in the 2020-2021 year, consent holders were found to achieve a high level of environmental performance and compliance for 86% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 11% 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 2021-2022 year.

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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 2020 to June 2021 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by OMV NZ Production Limited (OMV). OMV operates a hydrocarbon production station and associated wellsites situated on Lower Otaraoa Road at Motunui, in the Waipapa and Manu catchments.

The report includes the results and findings of the monitoring programme implemented by the Council in respect of the consents held by OMV that relate to discharges of water within Waipapa and Manu catchments and the discharge of wastes to land; consents for the occupation of the coastal marine area and maintenance of offshore structures; and the air discharge permits to cover emissions to air from the sites.

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 OMV's use of water, land and air, and is the thirteenth combined annual report by the Council for the Pohokura site.

1.1.2 Structure of this report

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

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by OMV in the Waipapa and Manu 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 Pohokura Production Station and associated facilities.

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 2021-2022 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 and administrative performance

Besides discussing the various details of the performance and extent of compliance by OMV, 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 OMV'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 2020-2021 year, consent holders were found to achieve a high level of environmental performance and compliance for 86% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 11% of the consents, a good level of environmental performance and compliance was achieved.¹

1.2 Process description

In 2000, Fletcher Challenge Energy drilled the Pohokura-1 exploration well 4.5 km off the coast of Waitara and two additional appraisal wells – one a further four kilometres out to sea and the other on land adjacent to the coastline at Motunui.

The Pohokura field is a low relief anticline at a depth of 3,600 m, approximately 16 km long and five kilometres wide, extending offshore in a northwest direction. In January 2001, 400 km² of 3D marine seismic data helped define the structural configuration of the field, with a detailed bathymetry survey enabling marine data acquisition to come within two kilometres of the shoreline in water depths of 10 m. The survey was followed up with 70 km² of transitional 3D seismic that overlapped and linked with existing onshore seismic data.

¹ The Council has used these compliance grading criteria for more than 17 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018



Photo 1 Pohokura Production Station

In 2002, detailed design and planning of the field, including the resource consenting process began, with construction commencing in 2005. In 2006, the major milestone of commercial gas to market was achieved from the three onshore wells.

Development of the field involved the drilling of four wells from a land-based site at Motunui, and five from an offshore platform located eight kilometres off the coast. A sub-sea pipeline transfers up to 13 million cubic metres of gas per day to the onshore production station at Motunui. The well-stream comprises a mixture of gas, condensate (light crude) and produced water.

The onshore production station situated on Lower Otaraoa Road, Motunui, processes the high-pressure gas flow from the off and onshore wells. Here the hydrocarbons are separated into natural gas and condensate. The natural gas is fed into the North Island gas network and the condensate is piped to storage tanks at Omata near New Plymouth for shipping to refineries. Produced water separated out from the well-stream is disposed of by deepwell injection at the Lower Otaraoa Road wellsite. In 2012, a gas reinjection (GRI) facility was constructed adjacent to the wellsite to allow for increased production of condensate while the associated gas could be reinjected into the Pohokura formation.

All treated stormwater from the Pohokura site is discharged to the 'Duck Pond', a small lake within the Manu catchment. In the 2014-2015 year, the lined stormwater collection pits at the Lower Otaraoa Road wellsite were upgraded to three enclosed in-ground concrete vessels.

1.3 Resource consents

OMV holds 13 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 OMV during the period under review.

Table 1 Resource consents related to the Pohokura Production Station that were actively monitored during the 2020-2021 period

Consent number	Purpose	Granted	Review	Expires
	<i>Discharge permits</i>			
5997-1	To cover the discharge of treated stormwater from an Onshore Production Station to an existing stormwater control system, being a body of water commonly known as 'the Duck Pond' within the Manu Stream catchment	June 2003	June 2027	June 2033
6269-1	To discharge treated stormwater from hydrocarbon exploration and production operations at the Lower Otaraoa Road Wellsite to an existing stormwater control system, being a body of water commonly known as 'The Duck Pond' within the Manu Stream	Nov 2004	June 2027	June 2033
6176-1	To discharge waste drilling fluids, produced water and stormwater from hydrocarbon exploration and production operations by deepwell injection at the Lower Otaraoa Road Wellsite	May 2003	June 2027	June 2033
	<i>Air discharge permits</i>			
6002-1	To discharge contaminants to air as products of combustion from the Pohokura Production Station involving equipment burning natural gas as fuel where the maximum heat release is in excess of 10 megawatts, together with miscellaneous emissions	June 2003	June 2027	June 2033
6003-1	To discharge emissions to air from combustion involving the flaring of petroleum products incidental to the treatment of gas at the Pohokura Production Station	June 2003	June 2027	June 2033
	<i>Coastal permits</i>			
5991-1	To occupy the CMA for a radius of 50 m around up to three offshore wellhead platforms situated at least four kilometres offshore, and also for a distance of 50 m either side of the associated pipelines connecting the three offshore wellhead platforms to the foreshore at mean high water spring	June 2003	June 2027	June 2033
5992-1	To take produced water and associated heat from aquifers in the coastal marine area associated with hydrocarbon exploration and production activities	June 2003	June 2027	June 2033
5993-1	To erect, place, use, reconstruct, alter, extend and maintain within the CMA up to three offshore wellhead platforms, 24 structures (being well casings) situated at least four kilometres offshore, and the associated pipelines connecting the three offshore wellhead platforms by horizontal directional drilling to the shore above mean high water spring, and the related occupation of the seabed	June 2003	June 2027	June 2033

Consent number	Purpose	Granted	Review	Expires
5994-1	To disturb the seabed and foreshore of the CMA by the process of erection, placement, use alteration, extension, maintenance, or removal of up to three offshore wellhead platforms situated at least four kilometres offshore, and the associated pipelines connecting up to three offshore wellhead platforms to the foreshore above mean high water spring by the use of horizontal directional drilling	July 2003	June 2027	June 2033
10096-1	To occupy the CMA with four pipelines (well casings) extending from the Lower Otaraoa Road wellsite for hydrocarbon production purposes	March 2015	June 2027	June 2033
10450-1	To discharge heat and contaminants into land at depth in the coastal marine area, associated with the development, operation/production, maintenance and treatment of wells within the Pohokura Field	Sept 2017	June 2027	June 2033
10477-1	To discharge natural gas into land at depth in the coastal marine area, for the purpose of storage or other hydrocarbon recovery operations	Sept 2017	June 2027	June 2033

1.3.1 Related consents

OMV also holds seven consents in relation to the Pohokura facilities which did not require active monitoring during the period under review. A summary of these consents is provided in Table 2. Deepwell injection consent 6175-1 has not yet been exercised.

Table 2 Additional consents relating to the Pohokura facilities

Consent number	Purpose	Granted	Expiry
5210-2	To discharge uncontaminated stormwater and treated stormwater from hydrocarbon exploration and production operations onto and into land [Pohokura-A wellsite]	March 2017	2033
5485-2	To occupy the coastal marine area with a pipeline (well casing) from the Pohokura-A wellsite for hydrocarbon exploration and production purposes	March 2017	2033
6000-1	To erect, place, use and maintain a bridge over the bed of an unnamed tributary of the Waipapa Stream for vehicle access purposes	June 2006	2033
6005-1	To discharge emissions into the air from the flaring of hydrocarbons, together with miscellaneous emissions, arising from hydrocarbon exploration and production testing operations involving up to 48 zones at the Lower Otaraoa Road wellsite	June 2003	2033
6175-1	To discharge waste drilling fluids, produced water and stormwater from hydrocarbon exploration and production operations by deepwell injection at the Pohokura-A wellsite	May 2003	2033
6254-1	To erect, place and maintain a culvert in an unnamed tributary of the Waipapa Stream for State Highway 3 road widening purposes	December 2003	2033
6577-1	To install, construct and maintain a water bore for horizontal directional drilling purposes	April 2005	2023

Consent number	Purpose	Granted	Expiry
10598-1	To discharge emissions to air from flaring of hydrocarbons and miscellaneous emissions on Pohokura Platform B	September 2018	2033
10683-1	To discharge gas to the coastal marine area via relief valves along the pipeline between Pohokura Platform B and the Pohokura Production Station	November 2018	2033

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 Pohokura Production Station 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

Five inspections were undertaken in relation to the Pohokura Production Station 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 OMV 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 combined stormwater discharge was sampled on three occasions, with the samples analysed for chloride, conductivity, pH, suspended solids and turbidity.

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. 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 Data review

The conditions on various consents require the consent holder to provide information and data to Council, including the results of sampling, flaring logs, produced water records and various reports.

2 Results

2.1 Water

2.1.1 Inspections

Four inspections of the Pohokura Production Station (Photo 3), and one inspection of the Pohokura-A wellsite were undertaken during the 2020-2021 monitoring year. Inspections were undertaken on 21 August and 16 November 2020, and 22 March and 27 May 2021.

The Pohokura Production Station was generally neat and tidy with all fuel, chemical, condensate and produced water tanks appropriately bunded. The stormwater system, including the fire water pond and the wetland were visually clear of contaminants.

Minimal flaring was observed during inspections, with no smoke or odours noted.

The Pohokura-A wellsite was tidy and clean when inspected on 16 November 2020. Skimmer pits contained clear water with tadpoles observed. No sheens were noted anywhere on the site.



Photo 2 Aerial view of Pohokura Production Station

2.1.2 Results of discharge monitoring

Three samples were collected of the combined discharge from the wellsite and production station at the wetland outlet (site STW002075, Figure 1). The results are presented in Table 3 below.

Levels of pH, suspended solids, hydrocarbons, and chloride complied with the limits prescribed by consents 5997-1 and 6269-1 in the samples collected on 21 August and 16 November 2020. An indicative sample was collected from within the wetland on 31 May 2021 as there was no discharge. The wetland had a clear

appearance at the time of sampling, with the high suspended solids result due to sediment being stirred from the reeds.

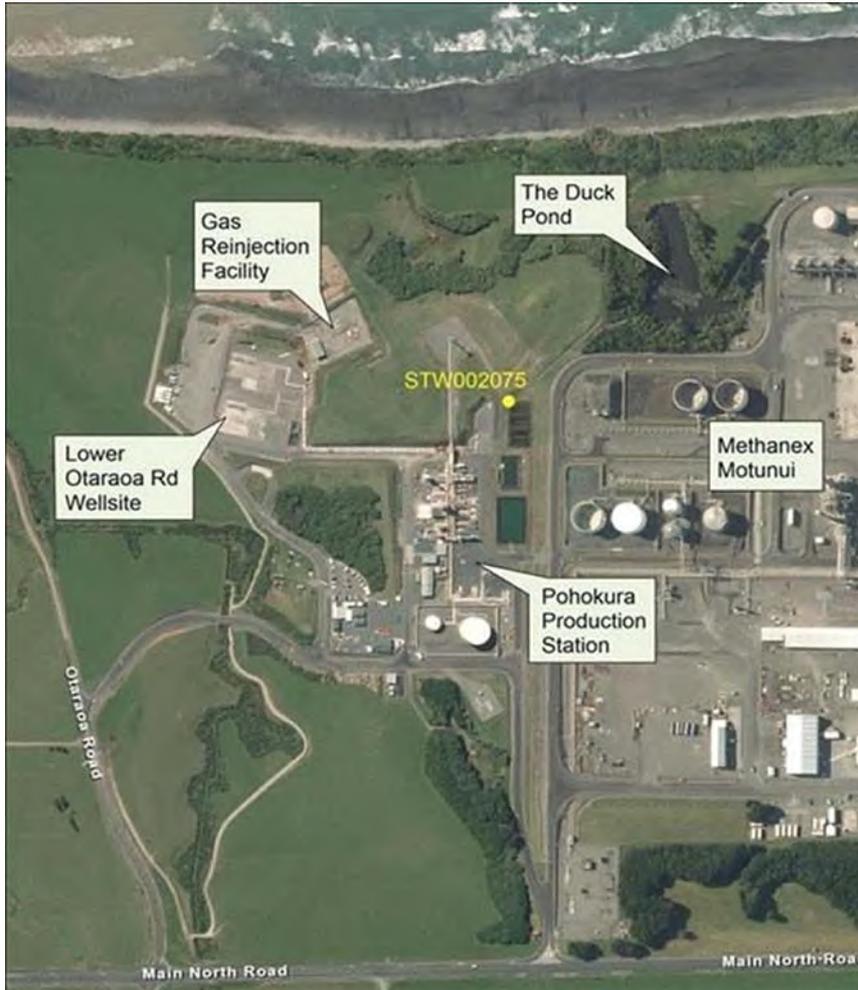


Figure 1 Pohokura onshore facilities and the combined discharge sampling site STW002075

Table 3 Results from the combined discharge from the wellsite and production station

Parameter		21 August 2020	16 November 2020	31 May* 2021	Consent limits (5997 and 6269)
Chloride	g/m ³	14	14	17	300
Conductivity	mS/m	8.6	8.9	11.5	-
Hydrocarbons	g/m ³	< 0.7	< 0.7	< 0.7	15
pH	pH	7.8	6.2	5.1	6.0 – 9.0
Suspended solids	g/m ³	5	84	240	100
Temperature	°C	11.9	17.9	8.5	
Turbidity	FNU	1.8	29	116	-

* No discharge, sample was collected from within wetland and is indicative only

2.1.3 Results of consent holder monitoring

2.1.2.1 Stormwater monitoring by OMV

OMV monitors the combined stormwater discharge from the site, with sampling triggered by rainfall events. Table 4 shows the results obtained during the 2020-2021 monitoring year. In all samples pH, hydrocarbons, suspended solids and chloride levels were all within/below the limits set by consents 5997-1 and 6269-1, and were indicative of a consistently clean discharge. The grab sampler was out of service or no discharge was occurring during March or April 2021 so samples were collected manually from the wetland as an indication only.

Table 4 Results of stormwater samples collected by OMV during the 2020-2021 year

Date	No.	pH		Hydrocarbons g/m ³		Chloride g/m ³		Suspended solids g/m ³	
		Median	Max	Median	Max	Median	Max	Median	Max
July 2020	4	7.4	7.6	BRL	BRL	20	25	21	54
August 2020	4	7.7	7.9	BRL	BRL	24	25	BRL	14
September 2020	5	7.7	8.1	BRL	BRL	26	28	6	11
October 2020	4	7.9	8.0	BRL	BRL	27	29	5	8
November 2020	4	7.6	8.0	BRL	BRL	25	26	2.0	4
December 2020	3	7.2	7.4	BRL	BRL	20	25	3	7
January 2021	3	6.4	6.9	BRL	BRL	-	-	4	9
February 2021	2	6.6	7.0	BRL	BRL	12	18	12	18
March 2021*	4	6.1	6.2	BRL	BRL	20	21	3	144
April 2021*	4	6.2	6.3	BRL	BRL	19	21	11	52
May 2021	4	7.6	7.9	BRL	BRL	23	28	3	14
June 2021	5	7.2	7.9	BRL	BRL	23	27	BRL	5
Consent limit		6.0 - 9.0		15		300		<100	

BRL = Below reporting limit

* Grab sampler out of service or no discharge occurring, sample collected from reed bed as indication only

2.1.2.2 Produced water monitoring and deep well injection by OMV

Produced water is saline water which is inherent in well-stream fluids along with gas and liquid hydrocarbons. It is separated at the production station, stored in a dedicated tank and then pumped intermittently, as volume requires, down the injection well located at the Lower Otaraoa Road wellsite under consent 6176-1.

Deep well injection (DWI) is often utilised as liquid waste disposal technology and provides an alternative to the surface disposal of such material. The DWI process utilises specially designed injection wells to pump liquid waste into deep geological formations, hydrocarbon reservoirs or confined saline aquifers. The receiving formations generally contain water that is too saline to be of any potential use. Impermeable geological seals overlying the injection intervals restrict any potential vertical migration of injected wastes into shallow freshwater aquifers.

Condition 4 of consent 6176-1 requires the consent holder to monitor the injected wastes monthly for a variety of parameters (without setting any limits for these). Table 5 shows the results obtained over the 2020-2021 monitoring year.

Table 5 Pohokura produced water analyses for 2020-2021

Date	Suspended solids g/m ³	Hydrocarbons g/m ³	Dissolved solids g/m ³	pH	Chloride g/m ³
21-Jul-20	7	20	11,620	6.9	6,618
25-Aug-20	106	56	12,280	6.6	5,220
15-Sep-20	7	30	13,050	7.2	5,908
19-Oct-20	13	26	13,290	7.0	6,018
16-Nov-20	4	21	-	7.0	6,045
8-Dec-20	11	37	14,162	-	-
16-Dec-20	3	28	14,412	7.0	6,754
18-Jan-21	4	20	14,450	7.1	6,716
16-Feb-21	8	30	14,400	7.0	6,637
16-Mar-21	7	18	14,140	7.0	6,682
20-Apr-21	8	10	14,500	7.3	7,155
10-May-21	48	82	13,960	7.4	6,527
17-May-21	6	14	27,860	7.0	7,004
15-Jun-21	15	25	13,940	6.8	6,881

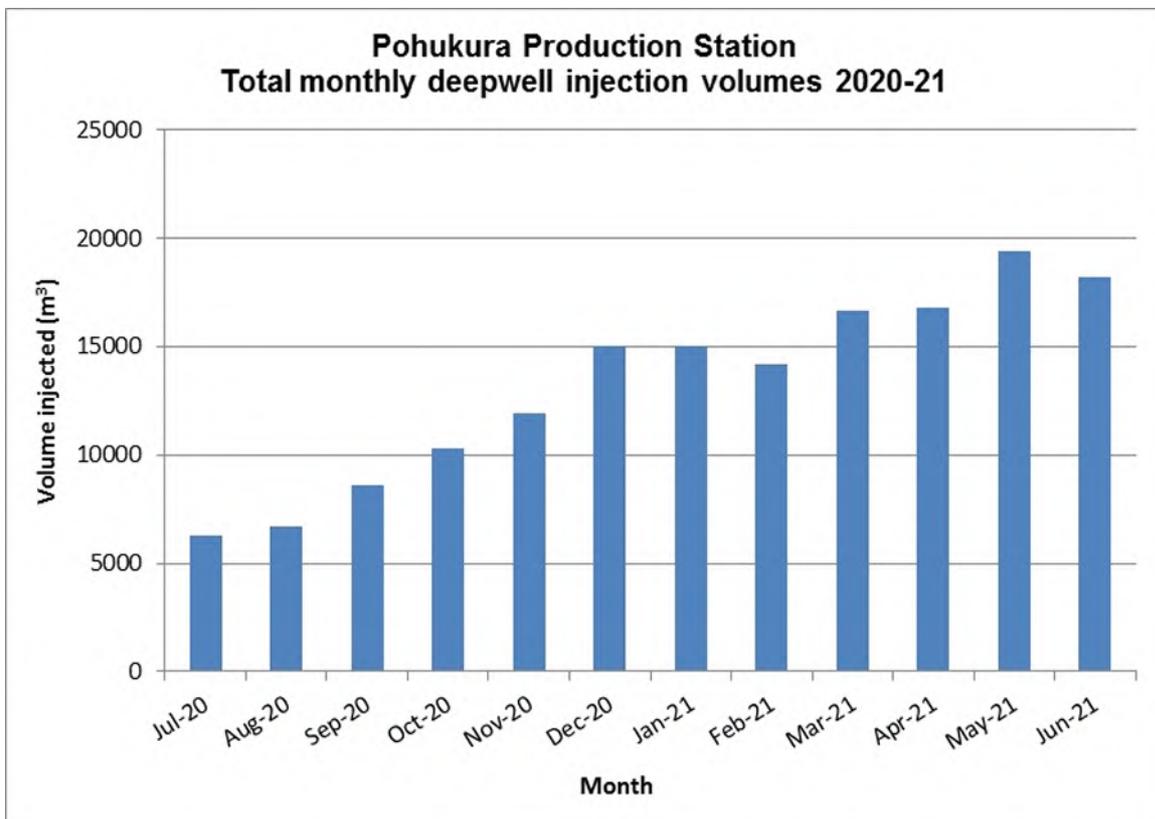


Figure 2 Monthly summary of deepwell injection volumes under consent 6176-1

Condition 3 of consent 6176-1 requires the consent holder to also record the amount of material injected. This data is provided to the Council by OMV and is summarised in Figure 2.

The total volume of produced water disposed of by DWI in the period July 2020 to June 2021 was 159,116 m³.

2.2 Air

2.2.1 Inspections

Inspection notes are included in section 2.1.1 above. No issues regarding air quality were recorded during the monitoring period.

2.2.2 Results of receiving environment monitoring

2.2.2.1 Carbon monoxide and combustible gases

During the monitoring year, a multi-gas meter was deployed on one occasion in the vicinity of the plant. The deployment lasted approximately 48 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). The monitoring sites used in the year under review are shown in Figure 3.

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 6 and the data from the sample run are presented graphically in Figure 4.

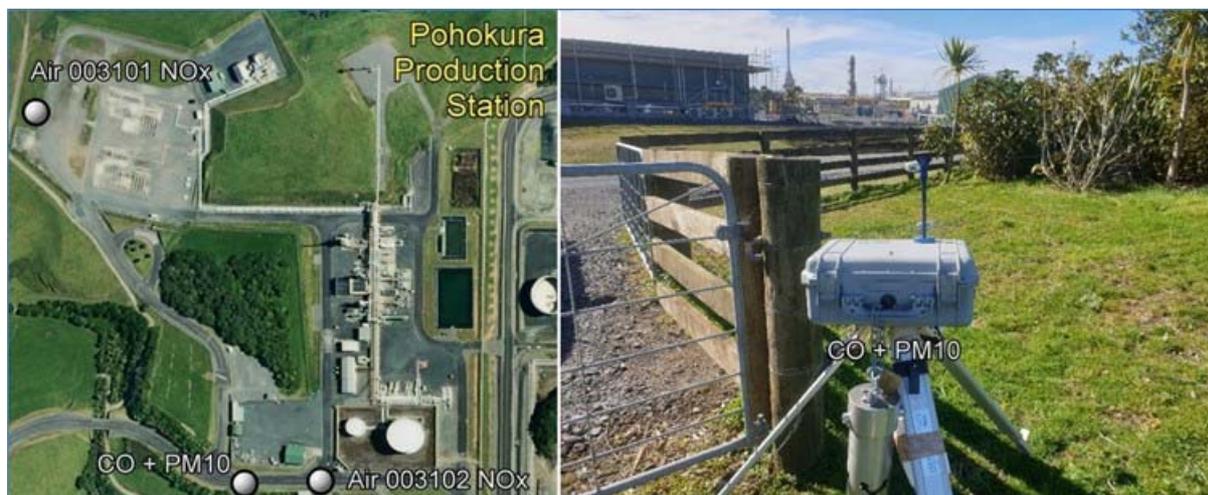


Figure 3 Air monitoring sites at Pohokura Production Station for 2020-2021

The consents covering air discharges from the Pohokura production station have specific limits related to particular gases. Special condition 14 of consent 6002-1 and special condition 17 of consent 6003-1 set limit on the carbon monoxide concentration at or beyond the production station's boundary. The limit is expressed as 10 mg/m³ for an eight hour average or 30 mg/m³ for a one hour average exposure. The maximum concentration of carbon monoxide found during the monitoring run was 4.7 mg/m³ with an average concentration for the entire dataset of 0.16 mg/m³ which comply with consent conditions.

Lower Explosive Limit (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 Pohokura Production Station reach any more than a trivial level.

Table 6 Results of carbon monoxide and LEL monitoring at Pohokura Production Station

Period		28 to 30 August 2020 (48 hours)
Max	CO(ppm)	4.10 ⁽¹⁾
	LEL(%)	0.10
Mean	CO(ppm)	0.14 ⁽¹⁾
	LEL(%)	0.00
Min	CO(ppm)	0.00
	LEL(%)	0.00

Notes: (1) the instrument records in units of ppm. At 25°C and 1 atm, 1ppm CO = 1.145 mg/m³
 (2) 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.

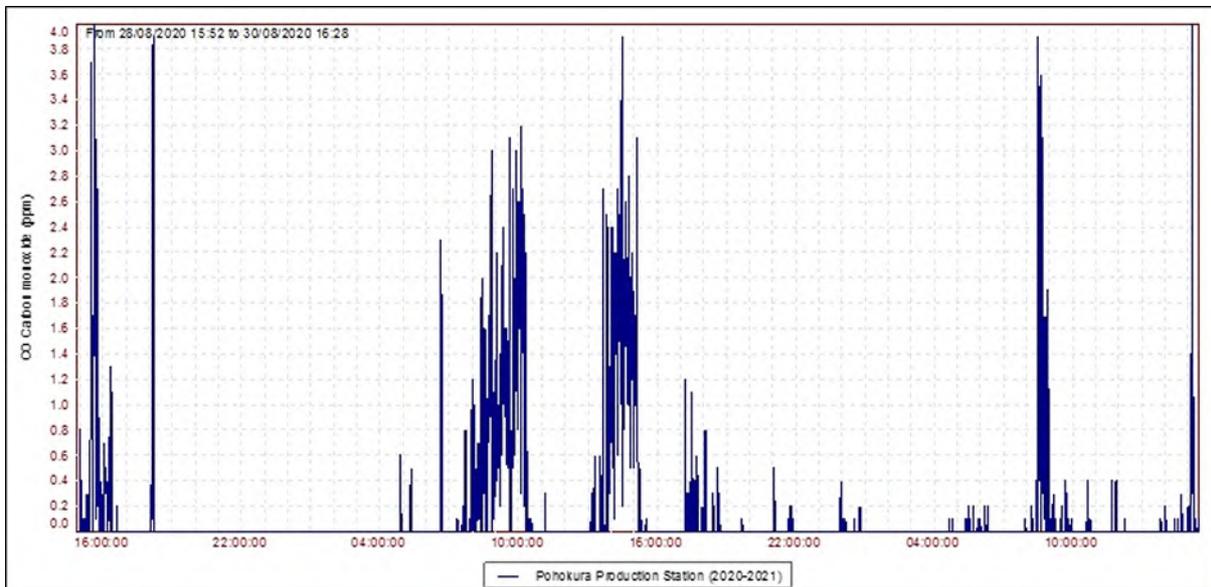


Figure 4 Ambient CO levels in the vicinity of Pohokura Production Station 2020-2021

2.2.2.2 PM₁₀ particulates

In September 2004 the Ministry for the Environment enacted National Environmental Standards (NESs) relating to certain air pollutants. The NES for PM₁₀ particulates is 50 µg/m³ (24 hour average).

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 Pohokura Production Station. The deployment lasted approximately 46 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 3. The results of the sample run are presented in Figure 5 and Table 7.

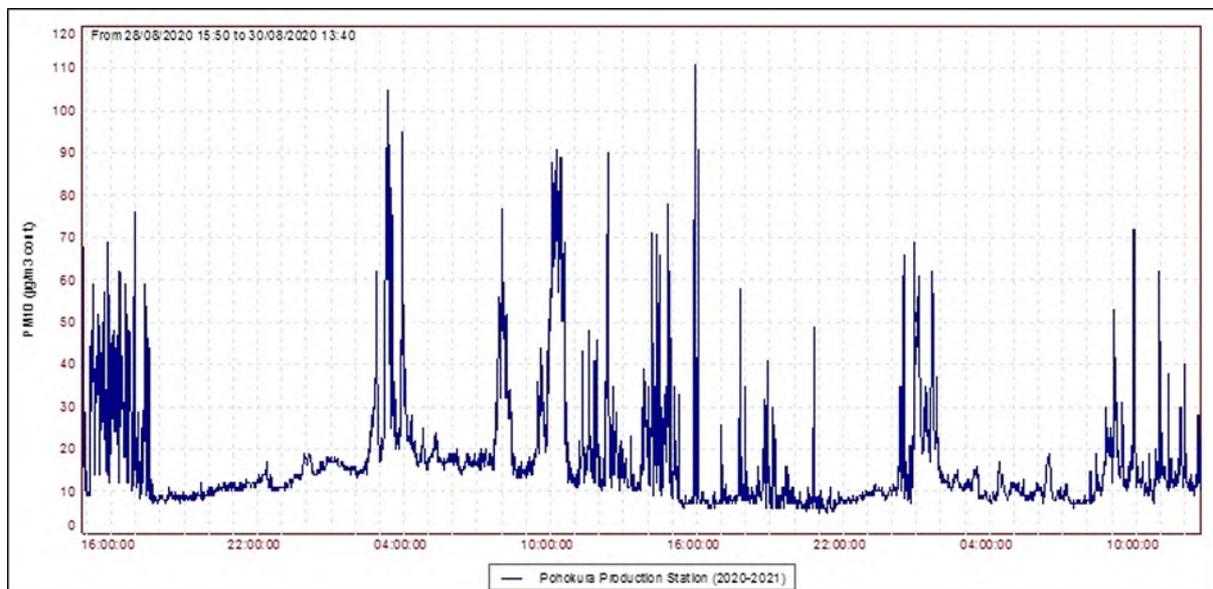


Figure 5 PM₁₀ concentrations (µg/m³) at Pohokura Production Station

Table 7 Daily averages of PM₁₀ results from monitoring at Pohokura Production Station

	28 to 30 August 2020 (46 hours)	
24 hr. set	Day 1	Day 2
Daily average	20.8 µg/m ³	13.4 µg/m ³
NES	50µg/m ³	

During the 46 hour run, from 28 to 30 August 2020, the average recorded PM₁₀ concentration for the first 24 hour period was 20.8 µg/m³ and 13.4 µg/m³ for the second 24 hour period. This daily mean equates to 42% and 27% of the 50 µg/m³ value that is set by the NES. Background levels of PM₁₀ in the region have been found to be typically around 11 µg/m³.

2.2.2.3 Nitrogen oxides

From 2014 onwards, the Council implemented a coordinated region-wide compliance monitoring programme to measure nitrogen oxides (NO_x). The programme involves deploying measuring devices at 30 NO_x monitoring sites (including two sites in the vicinity of Pohokura Production Station) on the same day,

with retrieval three weeks later. This approach assists the Council in further evaluating the effects of local and regional emission sources and ambient air quality in the region.

The consents covering air discharges from the Pohokura Production Station have specific limits related to particular gases. Special condition 15 of consent 6002-1 and special condition 18 of consent 6003-1 set limits on the nitrogen dioxide concentration at or beyond the production station's boundary. The limits are expressed as 200 $\mu\text{g}/\text{m}^3$ for a one hour average or 100 $\mu\text{g}/\text{m}^3$ for a 24 hour average exposure.

NO_x passive adsorption discs were placed at two locations in the vicinity of the Pohokura Production Station on one occasion during the year under review. The discs were left in place for a period of 21 days. The calculated one hour and 24 hour theoretical maximum NO_x concentrations found at the Pohokura Production Station during the year under review equate to 15.4 $\mu\text{g}/\text{m}^3$ and 8.1 $\mu\text{g}/\text{m}^3$, respectively. The results show that the ambient ground level concentration of NO_x is well below the limits set out by consents 6002-1 and 6003-1.

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

2.2.3 Flaring and fuel gas use reported by OMV

In December 2004 the New Zealand Parliament passed the Resource Management (Energy and Climate Change) Amendment Act, which relieved regional councils from the obligation to consider the effects on climate change of discharges into air of greenhouse gases. Holders of resource consents to discharge emissions to air were no longer required to provide any information on greenhouse gas emissions, and consents were amended accordingly. However, some consent holders, including OMV, are still required to provide reports on emissions from gas combustion, as indicative of any potential for local concern over such emissions.

There are a number of products of flaring that are of interest because of their potential effects upon local air quality. Combustion processes that are well controlled release nitrogen oxides, while incomplete combustion will emit carbon monoxide and volatile or semi-volatile organic compounds that cause smoke and odour, and these can be highly injurious to health in concentrated form. Information on volumes of gas combusted in the Taranaki region assists the Council and consent holders in determining whether this is a significant issue in the region.

Condition 4 of consents 6002-1 and 6003-1 requires OMV to submit a report in August each year regarding emissions and flaring, while condition 11 of consent 6003-1 requires OMV to keep a log of all flaring incidents. Emission data for the Pohokura Production Station were provided to the Council by OMV on a monthly basis, expressed as total gas flared and total fuel gas used over a one day period. A summary of these datasets is graphically presented in Table 6.

The total volume flared during the monitoring period was 1,407,900 m³, an increase compared with previous monitoring periods. The majority of flaring was attributed to a well intervention campaign and associated flaring undertaken in August and early September 2020, as shown in Figure 6.

OMV has an internal requirement to reduce flaring and it is no longer permitted to have continuous flaring in new installations. As natural gas is one of the products sold by OMV from the Pohokura Production Station it is commercially sensible to recover as much gas as possible. The flare has been installed in case the plant needs to be shut down or depressurised in an emergency situation. The gas reinjection facility also allows OMV to increase condensate production without necessitating increased flaring of surplus gas.

OMV maintains a Greenhouse Gas Management Plan for the site in order to forecast, monitor and improve emissions. Opportunities to reduce emissions are identified during this process, and feasible opportunities implemented. For example the IP compressors now have automated switchover between the duty and standby compressors.

There were no complaints received by OMV or the Council relating to air emissions at Pohokura Production Station during the period under review.

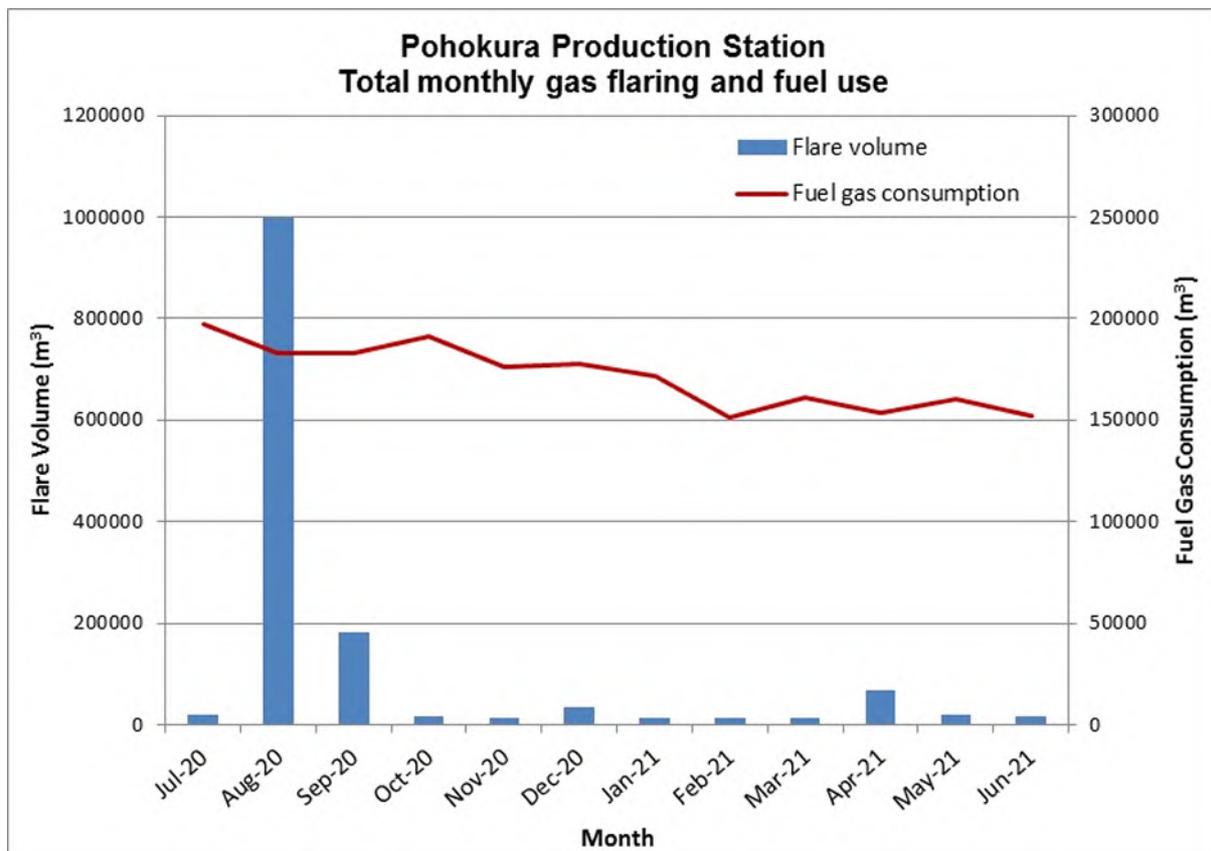


Figure 6 Monthly flare volumes and fuel gas consumption for July 2020 to June 2021

2.2.4 Results of receiving environment monitoring by OMV

Ambient air quality monitoring at a number of sites around the boundary of the Pohokura Production Station has been undertaken by OMV since June 2012 to assess offsite BTEX (benzene, toluene, ethylbenzene and xylenes) levels.

In 2013, AECOM was contracted to carry out continuous real-time monitoring for BTEX at four sites around the production station. The results of this work showed that there were no exceedances of the relevant New Zealand Workplace Exposure Standards for BTEX constituents at any of the monitored locations.

In 2019 AECOM was commissioned to undertake an investigation to determine whether BTEX monitoring was meeting its objective in providing an appropriate indication of the benzene concentrations emitted.

Minor exceedances of the Workplace Exposure Standard (8-hour average) have been found in previous monitoring periods and the elevated results were considered to reflect a combination of the predominantly westerly winds and the proximity of the monitoring locations to the two principal benzene sources on site, which are the condensate and produced water storage tanks. Areas where there are elevated benzene levels are limited to unoccupied industrial land, inaccessible to the public.

Monitoring has indicated that the presence of ambient benzene is mainly due to periodic emissions from the condensate tank, as well as tank filling operations. A tank pressure control system was implemented in September 2016 to reduce emissions from the condensate tank (T-6001), limiting the volume of vapours exiting the tank vents by adjusting the volume of liquid in the tank. Since this tank pressure control system was implemented the majority of the results of benzene monitoring have been below the 2018 Workplace Exposure Standards.

A project was undertaken in late 2020 to reroute the BTEX steam from the glycol regeneration system to the condensate tank instead of the produced water tank. This has reduced the amount of outbreathing of BTEX vapours from the produced water tank.

Data is available for May and June 2021 only, with both months well under applicable limits (Table 8).

Table 8 Results of boundary ambient air quality monitoring for benzene 2020-2021

Month	15 minute maximum	8 hour maximum	% of month exceeded
Jul-20	-	-	-
Aug-20	-	-	-
Sep-20	-	-	-
Oct-20	-	-	-
Nov-20	-	-	-
Dec-20	-	-	-
Jan-21	-	-	-
Feb-21	-	-	-
Mar-21	-	-	-
Apr-21	-	-	-
May-21	0.36	0.06	0
Jun-21	0.34	0.07	0
WES limit (2018)	2.5 ppm	1.0 ppm	-
Consent limit*	30 ppm	0.33 ppm	-

* Consent limit based on previous 1992 WES

^ Exceeded for a period of 30 minutes

2.3 Offshore

2.3.1 Marine and coastal monitoring by OMV

OMV has committed to undertaking ongoing ecological assessments of the coastal area surrounding the Pohokura site to monitor the natural health of surrounding reefs as a means of operator and environmental best practise. These surveys will establish a data history and knowledge of the reefs as well as gaining an insight into how the reefs are affected by sand inundation.

During November 2020, a qualitative intertidal ecological survey was undertaken at three reefs during low tide. The reefs were: Nikorima Reef at the end of Otaraoa Road on the western boundary of the Pohokura gas field consented area; Epiha Reef on the eastern boundary of the consented area; and Turangi Reef, which is 1.5 km east of Epiha Reef and is used as a control site for routine monitoring. The SLR Consulting NZ Ltd report concluded:

There has now been ten years of qualitative ecological surveys along the three north Taranaki reefs, and it is apparent that sand inundation influences intertidal species diversity and abundance for both marine fauna and flora. The north Taranaki coastline is a high energy environment due to the prevailing onshore winds, and the subsequent waves that are generated by this wind. Transportation of sand along the coast from the natural littoral drift is a common occurrence and pockets of sand can settle for a short duration (i.e. days to weeks) before continuing up the coast.

From the time series data collected as part of this monitoring programme, it is apparent that the intertidal species which inhabit this coastline are resilient to sand inundation events, with most species exhibiting some form of adaptive response when the sand settles and recedes. Opportunistic intertidal species can quickly recolonise an area once sand levels recede, and from previous observations, reef communities can typically recover within six months. The underlying purpose of these qualitative surveys for species diversity and abundance is to gain an understanding of how these north Taranaki reefs change over time, how they respond to natural events (i.e. sand inundation), and how quickly they can recover over time.

The qualitative intertidal ecological survey undertaken in 2020 found a high species diversity and species abundance across Epiha and Turangi reefs, with a much lower species diversity at Nikorima reef. The observations from Epiha and Turangi reefs indicate a very healthy reef environment which is helped by low levels of sand across the reef. Whereas at Nikorima Reef, sand levels were much higher, and this resulted in a much lower species diversity compared with Epiha and Turangi reefs, but also lower than what was observed in 2019.

The pacific oysters that were present at Nikorima Reef and Epiha Reef in 2018 have now all disappeared, including the dead sheels that were observed in 2019. This is beneficial for the reef environments as this species can compete with native species due to competition for space.

Based on the authors' experience working on the intertidal reefs around the Taranaki coastline, Nikorima, Epiha and Turangi reefs are comparable, in terms of species diversity and species abundance, with other intertidal reefs around the Taranaki coastline, especially those that are exposed to sand inundation events.

2.4 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 OMV. 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 2020-2021 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with OMV's conditions in resource consents or provisions in Regional Plans.

3 Discussion

3.1 Discussion of site performance

Monitoring of the Pohokura Production Station during the period under review found that the site was well managed. A highly proactive approach to environmental stewardship and best practice continues to be demonstrated by OMV.

3.2 Environmental effects of exercise of consents

The results of stormwater samples complied with the limits prescribed by the consents, while regular stormwater samples collected by OMV also complied with consent conditions and no adverse effects were noted on the receiving environment as a result of the discharge.

There were no adverse effects on the environment resulting from the exercise of the air discharge consent. The ambient air quality monitoring at the site showed that levels of carbon monoxide, combustible gases, PM₁₀ 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 and there were no complaints in relation to air emissions from the site. Monitoring commissioned by OMV found no exceedances of the consent limits for benzene, while the relevant New Zealand Workplace Exposure Standards for BTEX constituents were also complied with.

Ecological assessments voluntarily commissioned by OMV of the intertidal coastal area surrounding the Pohokura site found high species diversity and abundance on two of the three reefs surveyed, indicating a stable and healthy reef environment with high water quality. The third reef had lower species diversity due to high levels of sand inundation (a natural phenomenon) which can decrease both species diversity and abundance. The ongoing ecological surveys have shown that the health of the reefs in the vicinity is comparable to other reefs around the Taranaki coastline that are subjected to periodic sand inundation. OMV's activities in the area do not appear to have had any adverse effect on the coastal environment.

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 9-20.

Table 9 Summary of performance for consent 5991-1

Purpose: To occupy the CMA for a radius of 50 m around up to three offshore wellhead platforms situated at least four kilometres offshore, and also for a distance of 50 m either side of the associated pipelines connecting the three offshore wellhead platforms to the foreshore at mean high water spring		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Survey and map position of completed platforms and pipeline within 90 days of completion of construction	Information supplied	Yes
2. Exercise of consent shall not limit public access to the CMA	Inspections and liaison with consent holder	Yes
3. Restriction of public access to Motunui foreshore during construction or maintenance kept to a minimum	Inspections and liaison with consent holder	Yes

Purpose: To occupy the CMA for a radius of 50 m around up to three offshore wellhead platforms situated at least four kilometres offshore, and also for a distance of 50 m either side of the associated pipelines connecting the three offshore wellhead platforms to the foreshore at mean high water spring		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. BPO to prevent or minimise adverse environmental effects	Inspections and liaison with consent holder	Yes
5. Notification to Council and hapu of maintenance works	No maintenance during period under review	Yes
6. Lapse of consent	Consent exercised within lapse period	N/A
7. Optional review provision re environmental effects	Next option for review in June 2027	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 5992-1

Purpose: To take produced water and associated heat from aquifers in the CMA associated with hydrocarbon exploration and production activities		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Activity undertaken in accordance with application	Inspections and liaison with consent holder	Yes
2. Consent lapse	Consent exercised within lapse period	N/A
3. Review of consent	Next option for review in June 2027	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 Summary of performance for consent 5993-1

Purpose: To erect, place, use, reconstruct, alter, extend and maintain within the CMA up to three offshore wellhead platforms, 24 structures (being well casings) situated at least four kilometres offshore, and the associated pipelines connecting the three offshore wellhead platforms by horizontal directional drilling to the shore above mean high water spring, and the related occupation of the seabed		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Written plans required at least one month prior to exercise of consent	Plans received	Yes
2. Schedule of proposed works provided to Council and hapu	Schedule received	Yes

Purpose: To erect, place, use, reconstruct, alter, extend and maintain within the CMA up to three offshore wellhead platforms, 24 structures (being well casings) situated at least four kilometres offshore, and the associated pipelines connecting the three offshore wellhead platforms by horizontal directional drilling to the shore above mean high water spring, and the related occupation of the seabed		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
3. Contingency plan provided	Plan received	Yes
4. Structures constructed and maintained in accordance with application	Inspections and liaison with consent holder	Yes
5. Plans of proposed burial depth of pipelines	Plans received	Yes
6. Re-burial of pipelines if exposed	Pipeline surveys	N/A
7. Survey and map of location of platforms and pipelines	Provided to relevant parties	Yes
8. Notification to Council and hapu of maintenance works	Notifications received	Yes
9. BPO to avoid or minimise adverse environmental effects	Inspections and liaison with consent holder	Yes
10. Compliance with noise standards	Inspections	Yes
11. Removal of structures and reinstatement of site	Structures still operational	N/A
12. Lapse of consent	Consent exercised within lapse period	N/A
13. Optional review of consent	Next option for review in June 2027	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 12 Summary of performance for consent 5994-1

Purpose: To disturb the seabed and foreshore of the CMA by the process of erection, placement, use, alteration, extension, maintenance, or removal of up to three offshore wellhead platforms situated at least four kilometres offshore, and the associated pipelines connecting up to three offshore wellhead platforms to the foreshore above mean high water spring by the use of horizontal directional drilling		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Written plans required at least one month prior to exercise of consent	Plans received	Yes
2. Recover and relocate kaimoana	No excavation work required along shoreline	N/A
3. Contingency plan provided	Plan received	Yes

Purpose: To disturb the seabed and foreshore of the CMA by the process of erection, placement, use, alteration, extension, maintenance, or removal of up to three offshore wellhead platforms situated at least four kilometres offshore, and the associated pipelines connecting up to three offshore wellhead platforms to the foreshore above mean high water spring by the use of horizontal directional drilling		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Preparation of wildlife management plan	Plan received	Yes
5. Artificial substrate for kelp re-seeding	Use of HDD under foreshore did not result in large area of kelp disturbance	N/A
6. Plan of proposed works to Council and hapu	Plan received	Yes
7. No refuelling of land based machinery within the CMA	No excavation work required along shoreline	N/A
8. Notification to Council and hapu of maintenance works	Notifications received	Yes
9. Disturbance undertaken in accordance with application	Inspections and liaison with consent holder	Yes
10. BPO to avoid or minimise adverse environmental effects	Inspections, contingency plans, wildlife plan, intertidal and subtidal surveys	Yes
11. Foreshore and seabed disturbance kept to a minimum	Inspections, intertidal and subtidal surveys	Yes
12. No adverse ecological effects outside of disturbance corridor	Intertidal and subtidal surveys	Yes
13. Compliance with noise standards	Inspections	Yes
14. Works to cease if archaeological remains discovered	Liaison with consent holder - no remains discovered	N/A
15. Hapu to have access in event of a significant archaeological find	Liaison with consent holder - no remains discovered	N/A
16. Time limits for archaeological requirements	Liaison with consent holder - no remains discovered	N/A
17. Works to recommence when advised by Council	Liaison with consent holder - no remains discovered	N/A
18. Temporary structures removed and area reinstated when no longer required	Liaison with consent holder - no temporary structures	N/A
19. Lapse of consent	Consent exercised within lapse period	N/A

Purpose: To disturb the seabed and foreshore of the CMA by the process of erection, placement, use, alteration, extension, maintenance, or removal of up to three offshore wellhead platforms situated at least four kilometres offshore, and the associated pipelines connecting up to three offshore wellhead platforms to the foreshore above mean high water spring by the use of horizontal directional drilling		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
20. Review of consent	Next option for review in June 2027	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 13 Summary of performance for consent 5997-1

Purpose: To discharge treated stormwater from an Onshore Production Station to an existing stormwater control system, being a body of water commonly known as 'The Duck Pond' within the Manu Stream catchment		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Contingency plan submitted prior to exercise of consent	Received and approved 15 April 2005	Yes
2. Details of stormwater planning submitted within one month of completion of site	Received and approved 27 January 2006	Yes
3. Exercised in accordance with application information, special condition 2, and to ensure consent conditions met at all times	Inspection, sampling and provision of information	Yes
4. Best practicable option to prevent or minimise adverse effects	Inspection and liaison with consent holder	Yes
5. Above ground hazardous substance storage areas drained to recovery systems not stormwater	Inspection and liaison with consent holder	Yes
6. Limits on contaminants in discharge	Sampling and results of self-monitoring	Yes
7. Limits on temperature and BOD increase below the mixing zone	Not assessed during period under review	N/A
8. Effects on receiving water below the mixing zone	Inspection	Yes
9. Lapse of consent	Consent exercised within lapse period	N/A
10. Review of consent	Next option for review in June 2027	N/A

Purpose: To discharge treated stormwater from an Onshore Production Station to an existing stormwater control system, being a body of water commonly known as 'The Duck Pond' within the Manu Stream catchment		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 14 Summary of performance for consent 6002-1

Purpose: To discharge contaminants to air as products of combustion from an Onshore Production Station involving equipment burning natural gas as fuel where the maximum heat release is in excess of 10 megawatts, together with miscellaneous emissions		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option to prevent or minimise adverse effects	Inspections and liaison with consent holder	Yes
2. Selection, operation and maintenance of equipment and processes to minimise emissions and impacts	Inspections and liaison with consent holder	Yes
3. Analysis of gas/condensate/crude stream	Analysis not requested	N/A
4. Annual reporting during August of each year	Report received	Yes
5. Emission abatement equipment operated appropriately and well maintained at all times	Inspection and self-monitoring	Yes
6. Consultation on alterations	Inspection and liaison with consent holder	Yes
7. Provision of final site lay-out plan	Received	Yes
8. Provision of report on BTEX abatement within six months of granting consent	Included in design documents and annual reports	Yes
9. Notification and reporting on incidents or potential incidents	No incidents during monitoring period	N/A
10. Records kept of smoke, relief valve and complaints and made available to Council	Records viewed at inspection and in annual reports	Yes
11. Dangerous levels of airborne contaminants not permitted	Inspection, Council monitoring and self-monitoring	Yes

Purpose: To discharge contaminants to air as products of combustion from an Onshore Production Station involving equipment burning natural gas as fuel where the maximum heat release is in excess of 10 megawatts, together with miscellaneous emissions		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
12. No objectionable odour, dust or smoke	Inspection and received complaints	Yes
13. No toxic contaminants beyond boundary	Inspection, Council monitoring and self-monitoring	Yes
14. Ground level carbon monoxide limit	Air quality monitoring by Council	Yes
15. Ground level nitrogen oxides limit	Air quality monitoring by Council	Yes
16. Ground level limit for any other contaminant	Results of self-monitoring for BTEX compounds	Yes
17. Lapse of consent	Consent exercised within lapse period	N/A
18. Review of consent	Next option for review in June 2027	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 15 Summary of performance for consent 6003-1

Purpose: To discharge emissions to air from combustion involving the flaring of petroleum products incidental to the treatment of gas at an Onshore Production Station		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option to prevent or minimise adverse effects	Inspection and liaison with consent holder	Yes
2. Selection, operation and maintenance of equipment and processes to minimise emissions and impacts	Inspection and liaison with consent holder	Yes
3. Analysis of gas/condensate/crude stream	Analysis not requested	N/A
4. Annual reporting during August of each year	Report received	Yes
5. Emission abatement equipment operated appropriately and well maintained at all times	Inspection and liaison with consent holder	Yes
6. Consultation on alterations	Inspection and liaison with consent holder	Yes

Purpose: To discharge emissions to air from combustion involving the flaring of petroleum products incidental to the treatment of gas at an Onshore Production Station		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
7. Provision of final site lay-out plan	Received	Yes
8. Notification of neighbours prior to commissioning	Plant commissioned	Yes
9. Notification and reporting on incidents or potential incidents	No incidents during monitoring period	N/A
10. Records kept of smoke, relief valve and complaints and made available to TRC	Records viewed at inspection and in annual reports	Yes
11. Maintenance of a flaring log	Monthly electronic log emailed to Council	Yes
12. Practicable steps to minimise flaring	Inspection and liaison with consent holder	Yes
13. Prevention of dense black smoke	Inspection and received complaints	Yes
14. Notification to Council of extended flaring	Notifications received	Yes
15. No objectionable odour, dust or smoke	Inspection and received complaints	Yes
16. No toxic contaminants beyond boundary	Inspection and monitoring	Yes
17. Ground level carbon monoxide limit	Air quality sampling	Yes
18. Ground level nitrogen oxides limit	Air quality sampling	Yes
19. Ground level limit for any other contaminant	Results of self-monitoring for BTEX compounds	Yes
20. Lapse of consent	Consent exercised within lapse period	N/A
21. Review of consent	Next option for review in June 2027	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 16 Summary of performance for consent 6176-1

Purpose: To discharge waste drilling fluids, produced water and stormwater from hydrocarbon exploration and production operations by deepwell injection at the Lower Otaraoa Road Wellsite		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Provision of well log and management plan prior to commencement	Received June 2005	Yes
2. Activity not to contaminate actual or potential freshwater aquifers	Inspection and sampling	Yes
3. Record keeping and reporting	Records received	Yes
4. Reporting of chemical analysis of wastes	Results for 2020-2021 received	Yes
5. Annual reporting during August of each year	Report received	Yes
6. Lapse of consent	Consent exercised within lapse period	N/A
7. Review of consent	Option for review in June 2027	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 6269-1

Purpose: To discharge treated stormwater from hydrocarbon exploration and production operations at the Lower Otaraoa Road Wellsite to an existing stormwater control system, being a body of water commonly known as 'The Duck Pond' within the Manu Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option to prevent or minimise adverse effects	Inspection and liaison with consent holder	Yes
2. Exercised in line with application information	Inspection, monitoring and reporting	Yes
3. Contingency plan submitted prior to exercise of consent	Received	Yes
4. Seven days' notice prior to commencement of work and of drilling	Notifications received	Yes
5. Limit on stormwater catchment area	Inspection	Yes
6. Treatment of all stormwater prior to discharge	Inspection and monitoring	Yes

Purpose: To discharge treated stormwater from hydrocarbon exploration and production operations at the Lower Otaraoa Road Wellsite to an existing stormwater control system, being a body of water commonly known as 'The Duck Pond' within the Manu Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
7. Above ground hazardous substance storage areas drained to recovery systems not stormwater	Inspection and liaison with consent holder	Yes
8. Limits on contaminants in discharge	Sampling and results of self-monitoring	Yes
9. Limits on temperature and BOD increase below the mixing zone	Not assessed during period under review	N/A
10. Effects on receiving water below the mixing zone	Inspection	Yes
11. Lapse of consent	Consent exercised within lapse period	N/A
12. Review of consent	Next option for review in June 2027	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 18 Summary of performance for consent 10096-1

Purpose: To occupy the CMA with six pipelines (well casings) extending from the Lower Otaraoa Road wellsite for hydrocarbon production purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. As-built trajectory plots to be provided within 4 weeks of completion	New wells have not yet been established	N/A
2. Activity undertaken in accordance with application	Inspections and liaison with consent holder	Yes
3. Review of consent	Option for review in June 2027	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 19 Summary of performance for consent 10450-1

Purpose: To discharge heat and contaminants into land at depth in the coastal marine area, associated with the development, operation/production, maintenance and treatment of wells within the Pohokura Field		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option to prevent or minimise adverse effects	Inspections and liaison with consent holder	Yes
2. Lapse of consent	Consent exercised within lapse period	N/A
3. Review of consent	Option for review in June 2027	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 20 Summary of performance for consent 10477-1

Purpose: To discharge natural gas into land at depth in the coastal marine area, for the purpose of storage or other hydrocarbon recovery operations		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option to prevent or minimise adverse effects	Inspections and liaison with consent holder	Yes
2. Post-injection pressure not to exceed original reservoir pressure	Liaison with consent holder	Yes
3. Injection pressure to be continuously recorded	Liaison with consent holder	Yes
4. Lapse of consent	Consent exercised within lapse period	N/A
5. Review of consent	Option for review in June 2027	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 21 Evaluation of environmental performance over time

Year	Consent number	High	Good	Improvement req.	Poor
2006-2010	6002-1, 6003-1, 6176-1, 6364-1	4	-	-	-
	5997-1, 6269-1	-	2	-	-
2010-2012	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 6364-1	10	-	-	-

Year	Consent number	High	Good	Improvement req.	Poor
2012-2013	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 6364-1	10	-	-	-
2013-2014	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 6364-1	10	-	-	-
2014-2015	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 6364-1	10	-	-	-
2015-2016	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 10096-1	10	-	-	-
2016-2017	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 10096-1	10	-	-	-
2017-2018	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 10096-1, 10450-1, 10477-1	12	-	-	-
2018-2019	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6176-1, 6269-1, 10096-1, 10450-1, 10477-1, 10535-1	12	-	-	-
	6003-1	-	1	-	-
2019-2020	5991-1, 5992-1, 5993-1, 5994-1, 5997-1, 6002-1, 6003-1, 6176-1, 6269-1, 10096-1, 10450-1, 10477-1, 10535-1	13	-	-	-
Totals		101	3		

During the period under review, OMV demonstrated a high level of both environmental performance and administrative compliance with the resource consents as defined in Section 1.1.4

3.4 Recommendations from the 2019-2020 Annual Report

In the 2019-2020 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of consented activities at the Pohokura Production Station and associated facilities in the 2020-2021 year continue at the same level as in 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.
3. THAT the option for a review of various resource consents in June 2021, as set out in conditions of the consents, not be exercised, on the grounds that the current conditions are adequate.

Recommendations one and three were implemented, while it was not considered necessary to carry out additional monitoring as per recommendation two.

3.5 Alterations to monitoring programmes for 2021-2022

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

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;

- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

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

No changes have been made to the 2021-2022 monitoring programme.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2021-2022.

4 Recommendations

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

Glossary of common terms and abbreviations

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

Bund	A wall around a tank to contain its contents in the case of a leak.
BRL	Below reporting limit.
BTEX	Benzene toluene, ethylbenzene and total xylenes.
CMA	Coastal Marine Area.
Conductivity	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 25°C and expressed in mS/m.
DWI	Deep Well Injection.
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.
GRI	Gas Reinjection.
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.
MfE	Ministry for the Environment.
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.
mS/m	Millisiemens per metre.
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.

Pipeline pigging	Using devices known as “pigs” to perform various maintenance operations (such as cleaning and inspecting the pipeline). This is done without stopping the flow of the product in the pipeline.
RCP	Regional Coastal Plan.
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.
ROV	Remotely operated underwater vehicle. An ROV is a tethered underwater mobile device. ROV's are unoccupied, highly manoeuvrable, and operated by crew aboard a vessel/floating platform or on proximate land.
SS	Suspended solids.
SQMCI	Semi quantitative macroinvertebrate community index.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.
WES	Workplace Exposure Standards

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

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- Taranaki Regional Council (2008): Shell Pohokura Offshore Annual Report 2006-2007. Technical Report 2007-58.
- Worksafe New Zealand (2018): Worksafe Exposure Standards and Biological Exposure Indices (10th Edition), November 2018.

Appendix I

Resource consents held by OMV NZ Production Station

(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.

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

Name of
Consent Holder: OMV NZ Production Limited
Private Bag 2035
New Plymouth 4340

Decision Date 16 June 2003

Commencement Date 16 June 2003

Conditions of Consent

Consent Granted: To occupy the coastal marine area within a corridor defined by the co-ordinates as WGS84 degrees, minutes, and seconds: 38 50 49.38 - 174 15 2175; 38 51 45.50 - 174 12 59.67; 38 56 54.42 - 174 19 32.96; 38 56 57.28 - 174 16 32.98; 38 59 1.19 - 174 17 47.02; 38 59 12.30 - 174 16 15.30; for a radius of 50 metres around up to three offshore wellhead platforms situated at least 4 kilometres offshore, and also for a distance of 50 metres either side of the associated pipelines connecting the three offshore wellhead platforms to the foreshore at mean high water spring

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Offshore platforms, Coastal marine area from mean high water spring between Otaraoa Road, Waipapa, and Epiha Road, Motunui, Waitara, and extending up to 15 km offshore within a corridor defined by co-ordinates as above

Grid Reference (NZTM) 1710900E-5683960N

Catchment: Tasman Sea

*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 survey and map the position of the platform[s] and the pipeline[s], within 90 days of the completion of their construction, and shall provide a copy of the plan showing the precise location [to within plus or minus 5 metres] of the structure[s] on the seabed, and the location of the occupied areas to the Taranaki Regional Council, the Hydrographic Office, Royal New Zealand Navy, and the Maritime Safety Authority.
2. With the exception a 50 metre radius of any platform, or as required for safety purposes during: construction, inspection, maintenance or removal, of the structure[s] licensed by coastal permit 5993; construction, use, inspection, maintenance or removal of the structure[s] licensed by coastal permit 6052; or the disturbance licensed by coastal permit 5994, the exercise of this consent shall not prevent the free passage of any member of the public through the coastal marine area.
3. The restriction of public access to the foreshore at Motunui shall be limited in time and space to the minimum required for the purpose of safety requirements related to: construction, inspection, maintenance or removal, of the structure[s] licensed by coastal permit 5993; construction, use, inspection, maintenance or removal of the structure[s] licensed by coastal permit 6052; or the disturbance licensed by coastal permit 5994. In any case the restriction shall be limited to a distance of 100 metres from the pipeline route and/or construction zone. When practicable provision will be made for public access through/past the construction zone with respect to the foreshore.
4. 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 the occupation of the coastal marine area.

Consent 5991-1

5. The consent holder shall notify the Chief Executive and the Ngati Rahiri Hapu in writing at least 48 hours prior to commencement and upon completion of any subsequent maintenance works which would involve restriction of public access within the coastal marine area.
6. This consent shall lapse on the expiry of five years after the date of commencement 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.
7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2004 and/or June 2009 and/or June 2015 and/or June 2021 and/or June 2027, 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 29 December 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of
Consent Holder: OMV Taranaki Limited
Private Bag 2035
New Plymouth 4340

Decision Date 16 June 2003

Commencement Date 16 June 2003

Conditions of Consent

Consent Granted: To take produced water and associated heat from aquifers in the coastal marine area associated with hydrocarbon exploration and production activities

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Offshore platforms, Coastal marine area from mean high water spring between Otaraoa Road, Waipapa, and Epiha Road, Motunui, Waitara, and extending up to 15 km offshore within a corridor defined by the co-ordinates as WGS84 degrees, minutes and seconds:
38 50 49.38 – 174 15 21.75; 38 51 45.50 – 174 12 59.67;
38 56 54.42 – 174 19 32.96; 38 56 57.28 – 174 16 32.98;
38 59 1.19 – 174 17 47.02; 38 59 12.30 – 174 16 15.30

Grid Reference (NZTM) 1710900E-5683960N

Catchment: Tasman Sea

*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 activity authorised by this consent shall be undertaken in general accordance with the documentation submitted in support of application 1782.
- 2. This consent shall lapse on the expiry of five years after the date of commencement 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.
- 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 2003 and/or June 2009 and/or June 2015 and/or June 2021 and/or June 2027, 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 29 December 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Condition 1 - changed

1. At least one month prior to the exercise of this consent the consent holder shall provide, to the written satisfaction of the Chief Executive, detailed plans of the activity to confirm that the proposal is generally in accordance with the application and supporting documentation and will comply with all of the conditions of this consent. In addition (in the event of open trenching, but not for Horizontal Directional Drilling) the route of the pipeline bundle shall lie between 10 to 15 degrees east of true north from the position that it crosses Mean High Water Spring to the 5 metre depth contour. If Horizontal Directional Drilling is used the route of the pipeline shall lie between 28 to 36 degrees east of true north from the position that it crosses Mean High Water Spring to about the 10 metre depth contour.

Conditions 2 to 13 – unchanged

2. At least 10 working days prior to the commencement of works the consent holder shall provide the Taranaki Regional Council and the Ngati Rahiri Hapu with a programme for the installation/construction of the platform(s) and pipeline(s) including: a schedule of proposed start dates and an estimation of the duration of the works, and details of the contractor including contact information for the project manager.
3. Prior to the exercise of this consent the consent holder shall provide, to the satisfaction of the Chief Executive, a written construction contingency plan, outlining measures to be undertaken in the event of a spill as a result of works authorised by this consent. Further, prior to the exercise of this consent the consent holder shall provide to the Chief Executive, written confirmation of the acceptance by the Maritime Safety Authority of a New Zealand Offshore Installation Site Marine Oil Spill Contingency Plan. A copy of the approved written contingency plan shall be provided to the Ngati Rahiri Hapu within 5 working days.

Consent 5993-1

4. The structures licensed by this consent shall be constructed and maintained in general accordance with the information submitted in support of the application, special condition 1 above, and to ensure that the conditions of this consent are met at all times.
5. At least one month prior to the exercise of this consent, the consent holder shall provide, to the written satisfaction of the Chief Executive, detailed plans of the proposed burial depth of the pipelines between Mean High Water Spring and the 5 metre depth contour, including any other sufficient technical information to demonstrate that the buried pipelines will not be exposed by erosion of the seabed.
6. If the pipeline(s) become exposed between Mean High Water Spring and the 5 metre depth contour, the consent holder shall immediately notify the Chief Executive and the Maritime Safety Authority. The consent holder shall rebury the pipeline(s) in accordance with the information supplied under special condition 5 above as soon as is practicable, and in any case within 30 days, unless this requirement is waived in writing by the Chief Executive.
7. The consent holder shall survey and map the position of the platform(s) and the pipeline(s), (including details of the pipeline(s) position in relation to the seabed), within 90 days of the completion of their construction, and shall provide a copy of the plan showing the precise location (to within plus or minus 5 metres) of the structure(s) on/in the seabed, to the Taranaki Regional Council, the Hydrographic Office, Royal New Zealand Navy, and the Maritime Safety Authority.
8. The consent holder shall notify the Chief Executive and the Ngati Rahiri Hapu in writing at least 48 hours prior to commencement and upon completion of any subsequent maintenance works which would involve significant disturbance of, or deposition, or discharge to, the coastal marine area.
9. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise the discharge of any contaminants into coastal water or onto the foreshore or seabed and to avoid or minimise any adverse effects on coastal water quality or ecosystems.
10. The construction, use, maintenance and removal of the structure(s) authorised by this consent shall comply with the noise standards as outlined within section 4.4.3 of the Regional Coastal Plan for Taranaki.
11. Except with the written agreement of the Chief Executive, all structures (with the exception of well casings within the seabed), authorised by this consent shall be removed and the area(s) reinstated, if and when the structure(s) are no longer required. The consent holder shall notify the Chief Executive and the Ngati Rahiri Hapu in writing at least 1 month prior to any structure(s) removal. Reinstatement shall be to the satisfaction of the Chief Executive.
12. This consent shall lapse on the expiry of five years after the date of commencement 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.

Consent 5993-1

13. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete, or add to the conditions of this resource consent by giving notice of review during the month of June 2004 and/or June 2009 and/or June 2015 and/or June 2021 and/or June 2027, 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 29 December 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of Consent Holder:	OMV NZ Production Limited Private Bag 2035 New Plymouth 4340	
Decision Date (Change):	18 March 2005	
Commencement Date (Change):	18 March 2005	(Granted: 12 July 2003) (by the Minister of Conservation)

Conditions of Consent

Consent Granted:	To disturb the seabed and foreshore of the coastal marine area by the process of erection, placement, use, alteration, extension, maintenance, or removal of up to three offshore wellhead platforms situated at least 4 kilometres offshore, and the associated pipelines connecting up to three offshore wellhead platforms to the foreshore above mean high water spring by the use of horizontal directional drilling
Expiry Date:	1 June 2033
Review Date(s):	June 2021, June 2027
Site Location:	Coastal marine area from mean high water spring between Otaraoa Road, Waipapa, and Epiha Road, Motunui, Waitara, and extending up to 15 kilometres offshore within a corridor defined by the co-ordinates as WGS84 degrees, minutes and seconds: 38 50 49.38 – 174 15 21.75; 38 51 45.50 – 174 12 59.67; 38 56 54.42 – 174 19 32.96; 38 56 57.28 – 174 16 32.98; 38 59 1.19 – 174 17 47.02; 38 59 12.30 – 174 16 15.30
Grid Reference (NZTM)	1710900E-5683960N
Catchment:	Tasman Sea

*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. At least one month prior to the exercise of this consent the consent holder shall provide, to the written satisfaction of the Chief Executive, detailed plans of the activity to confirm that the proposal is generally in accordance with the application and supporting documentation and will comply with all of the conditions of this consent.
2. Prior to the exercise of this consent the consent holder in conjunction with the Taranaki Regional Council and tangata whenua shall endeavour as far as is practicable to recover and relocate all paua, kina, and other kaimoana from the area to be disturbed.
3. Prior to the exercise of this consent the consent holder shall provide to the satisfaction of the Chief Executive a written disturbance contingency plan outlining measures to be undertaken in the event of a spill as a result of works authorised by this consent. A copy of the approved written contingency plan shall be provided to the Ngati Rahiri Hapu within 5 working days.
4. Prior to the exercise of this consent the consent holder shall prepare, in consultation with the Department of Conservation and tangata whenua a wildlife management plan to the satisfaction of the Chief Executive setting out the mitigation and restoration methods proposed to minimise adverse effects on wildlife and blue penguin in particular.
5. Prior to the exercise of this consent the consent holder shall establish artificial substrate, so as to encourage the seeding of kelp onto the said substrate, to assist with kelp relocation and reinstatement.
6. At least 10 working days prior to the commencement of works the consent holder shall provide the Taranaki Regional Council and the Ngati Rahiri Hapu with a programme for the disturbance associated with installation/construction, (or removal), of the platform(s) and pipeline(s) including: a schedule of proposed start dates and an estimation of the duration of the works, and details of the contractor including contact information for the project manager.
7. There shall be no refuelling of land based machinery within the coastal marine area.

Consent 5994-1

8. The consent holder shall notify the Chief Executive and the Ngati Rahiri Hapu in writing at least 48 hours prior to commencement and upon completion of any subsequent maintenance works which would involve disturbance of, or deposition, or discharge to, the coastal marine area.
9. The disturbance licensed by this consent shall be undertaken in general accordance with the information submitted in support of the application, special condition 1 above, and to ensure that the conditions of this consent are met at all times.
10. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise the discharge of silt, sediments or any other contaminants into coastal water or onto the foreshore or seabed and to avoid or minimise the disturbance of the foreshore or seabed and any adverse effects on coastal water quality or ecosystems.
11. The consent holder shall ensure that the duration, area and volume of foreshore and seabed disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as is practicable, be reinstated to the satisfaction of the Chief Executive.
12. Outside of the disturbance corridor extending 50 metres either side of the pipeline the exercise of this consent shall not give rise to any significant adverse ecological effects including effects to kaimoana.
13. The disturbance authorised by this consent shall comply with the noise standards as outlined within section 4.4.3 of the Regional Coastal Plan for Taranaki.
14. In the event that any archaeological remains are discovered as a result of the exercise of this consent, the works shall cease immediately at the affected site. The on-site Ngati Rahiri Hapu representative, the on-site archaeologist and the Chief Executive of the Taranaki Regional Council shall be notified immediately, and be invited to inspect the site. The consent holder shall ensure that access is provided to the Ngati Rahiri Hapu representative and the archaeologist to carry out field work.
15. In the event of any find of significance, the Ngati Rahiri Hapu shall have all reasonable access to the site to carry out their specific requirements in terms of that find.
16. Unless otherwise agreed with the consent holder, the Ngati Rahiri Hapu shall complete their activities within the following times:
 - i) In areas where the seabed and foreshore has previously been disturbed as a result of previous works, the Ngati Rahiri Hapu shall have a maximum of two days to undertake their specific requirements in terms of the find;
 - ii) In areas where the seabed and foreshore has not previously been disturbed as a result of previous works, and there is a find of koiwi, the Ngati Rahiri Hapu shall have a maximum of 10 days to undertake their specific requirements in terms of that find; and
 - iii) In areas where the seabed and foreshore has not previously been disturbed as a result of previous works, and where there is a find of taonga other than koiwi, the Ngati Rahiri Hapu shall have a maximum of five days to carry out their specific requirements in terms of that find.

Consent 5994-1

17. Works may recommence at the affected area when advised to do by the Chief Executive. Such advice shall be given after the Chief Executive has considered: tangata whenua interest and values, the consent holder's interests, the interests of the public generally, and any archaeological or scientific evidence. The New Zealand Police, Coroner, and Historic Places Trust shall also be contacted as appropriate, and the work shall not recommence in the affected area until any necessary statutory authorisations or consents have been granted.
18. All temporary structure(s) including sheet piling and the like associated with the disturbance authorised by this consent shall be removed and the area(s) reinstated, if and when the structure(s) are no longer required. The consent holder shall notify the Chief Executive and the Ngati Rahiri Hapu in writing at least 48 hours prior to any structure(s) removal. Reinstatement shall be to the satisfaction of the Chief Executive.
19. This consent shall lapse on the expiry of five years after the date of commencement 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.
20. 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 2004 and/or June 2009 and/or June 2015 and/or June 2021 and/or June 2027, 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 29 December 2018

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: OMV NZ Production Limited
Private Bag 2035
New Plymouth 4340

Decision Date
(Change): 16 February 2017

Commencement Date
(Change): 16 February 2017 (Granted Date: 16 June 2003)

Conditions of Consent

Consent Granted: To discharge treated stormwater from an Onshore
Production Station to an existing stormwater control system,
being a body of water commonly known as 'The Duck Pond'
within the Manu Stream catchment

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Pohokura Production Station, Lower Otaraoa Road,
Motunui, Waitara

Grid Reference (NZTM) 1710824E-5683712N

Catchment: Manu

*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. Prior to the exercise of this consent, the consent holder shall provide for the written approval of the Chief Executive, Taranaki Regional Council, site specific details relating to contingency planning for the site.
2. Within one month of the completion of the development of the site the consent holder shall provide, to the 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.
3. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of the original application and any subsequent applications to change conditions. In the case of any contradiction between the documentation submitted in support of previous applications and the conditions of this consent, the conditions of this consent shall prevail.
4. 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.
5. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not to the stormwater catchment.
6. 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	300 gm ⁻³

This condition shall apply prior to the entry of the treated stormwater into the body of water known as 'The Duck Pond' at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

7. After allowing for reasonable mixing, within a mixing zone extending to the downstream end of the body of water known as 'The Duck Pond' the discharge shall not give rise to any of the following effects in the receiving waters of the Manu Stream:
 - a) an increase in temperature of more than 2 degrees Celsius;
 - b) an increase in biochemical oxygen demand of more than 2.00 gm⁻³.

Consent 5997-1.3

8. After allowing for reasonable mixing, within a mixing zone extending to the downstream end of the body of water known as 'The Duck Pond' the discharge point the discharge shall not give rise to any of the following effects in the receiving waters of the Manu 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.
9. This consent shall lapse on the expiry of five years after the date of commencement 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 2009 and/or June 2015 and/or June 2021 and/or June 2027, 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 29 December 2018

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: OMV NZ Production Limited
Private Bag 2035
New Plymouth 4340

Decision Date
(Change): 9 August 2013

Commencement Date
(Change): 9 August 2013 (Granted Date: 16 June 2003)

Conditions of Consent

Consent Granted: To discharge contaminants to air as products of combustion from an Onshore Production Station involving equipment burning natural gas as fuel where the maximum heat release is in excess of 10 megawatts, together with miscellaneous emissions

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Onshore Production Station, Lower Otaraoa Road, Motunui, Waitara

Grid Reference (NZTM) 1710605E-5683459N

*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 effect on the environment associated with the discharge of contaminants into the environment arising from the emissions to air from the site.
2. 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.
3. The consent holder shall make available to the Chief Executive upon request an analysis of a typical gas and/or condensate and/or crude oil stream from the Pohokura field, covering sulphur compound content and the content of carbon compounds of structure C₆ or higher number of compounds
4. The consent holder shall provide to the Taranaki Regional Council during August of each year, for the duration of this consent, a report:
 - a) detailing gas combustion at the production station;
 - b) detailing any measures that have been undertaken by the consent holder to improve the energy efficiency of the production station;
 - c) detailing any measures to reduce smoke emissions;
 - d) detailing any measures to reduce flaring,
 - e) addressing any other issue relevant to the minimisation or mitigation of emissions from the production station; and
 - f) detailing any complaints received and any measures undertaken to address complaints.

Consent 6002-1

5. All equipment used to avoid, remedy or mitigate any effect on the environment from the discharge of emissions into the air shall be maintained in good condition and shall be operated within design parameters at all times that the plant is in operation.
6. 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 and shall obtain any necessary approvals under the Resource Management Act 1991.
7. Prior to the commencement of production, the consent holder shall supply to the Chief Executive, a final site lay-out plan, demonstrating configuration of the facilities and equipment so as to avoid or mitigate the potential effects of air emissions.
8. The consent holder shall within 6 months of the granting of this consent provide to the Chief Executive a report on options for the treatment and/or reduction of BTEX emissions from the production station.
9. Any incident having an environmental impact or potential environmental impact which has caused or is liable to cause substantiated complaint or a hazardous situation beyond the boundary of the property on which the production station is located, shall be notified to the Taranaki Regional Council, as soon as possible, followed by a written report to the Chief Executive within one week of the incident, with comment about the measures taken to minimise the impact of the incident and to prevent re-occurrence.
10. The consent holder shall keep and make available to the Chief Executive, upon request, a record of all smoke emitting incidents and all relief valve releases, noting time, duration and cause. The consent holder shall also keep, and make available to the Chief Executive, upon request, a record of all complaints received as a result of the exercise of this consent.
11. 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, 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.
12. 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, give rise to any levels of odour or dust or smoke that are offensive or obnoxious or objectionable at or beyond the boundary of the property on which the production station is located in the opinion of an enforcement officer of the Taranaki Regional Council.
13. 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, is or is liable to be hazardous or toxic or noxious at or beyond the boundary of the property where the production station is located, or at any dwellinghouse.

14. The consent holder shall control all emissions of carbon monoxide to the atmosphere from the production station, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent, 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 mg m^{-3} (eight-hour average exposure), or 30 mg m^{-3} (one-hour average exposure) at or beyond the boundary of the property on which the production station is located.
15. The consent holder shall control all emissions of nitrogen oxides to the atmosphere from the production station, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent, 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 $200 \text{ } \mu\text{g m}^{-3}$ (one-hour average exposure) or $100 \text{ } \mu\text{g m}^{-3}$ (24-hour average exposure) or $30 \text{ } \mu\text{g m}^{-3}$ (annual average exposure) at or beyond the boundary of the property on which the production station is located.
16. The consent holder shall control emissions to the atmosphere from the production station 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, in order that the maximum ground level concentration for any particular contaminant arising from the exercise of this consent, measured under ambient conditions 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 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 and Biological Exposure Indices for New Zealand, 1992, 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 and Biological Exposure Indices for New Zealand, 1992 Department of Labour).
17. This consent shall lapse on the expiry of five years after the date of commencement 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.

Consent 6002-1

18. Subject to the provisions of this condition, the Council may within six months of receiving a report prepared by the consent holder pursuant to condition 4 of this consent, or in June 2009 and/or June 2015 and/or June 2021 and/or June 2027 serve notice that it intends to review the conditions of this resource consent in accordance with section 128(1)(a) of the Resource Management Act 1991 for the purposes of:
- 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 the best practicable option to remove or reduce any adverse effect on the environment caused by the discharge; and/or
 - c) to alter, add or delete limits on mass discharge quantities or discharge or ambient concentrations of any contaminant or contaminants; and/or
 - d) taking into account any Act of Parliament, regulation, national policy statement or national environmental standard which relates to limiting, recording, or mitigating emissions of carbon dioxide and/or nitrogen dioxide, and which is relevant to the air discharge from the Pohokura Production Station.

Transferred at Stratford on 29 December 2018

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: OMV NZ Production Limited
Private Bag 2035
New Plymouth 4340

Decision Date
(Change): 9 August 2013

Commencement Date
(Change): 9 August 2013 (Granted Date: 16 June 2003)

Conditions of Consent

Consent Granted: To discharge emissions to air from combustion involving the flaring of petroleum products incidental to the treatment of gas at an Onshore Production Station

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Onshore Production Station, Lower Otaraoa Road, Motunui, Waitara

Grid Reference (NZTM) 1710605E-5683459N

*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 effect on the environment associated with the discharge of contaminants into the environment arising from the emissions to air from the flare.
2. The consent holder shall minimise the emissions and impacts of air contaminants discharged from the flare 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.
3. The consent holder shall make available to the Chief Executive upon request an analysis of a typical gas and/or condensate and/or crude oil stream from the Pohokura field, covering sulphur compound content and the content of carbon compounds of structure C₆ or higher number of compounds
4. The consent holder shall provide to the Taranaki Regional Council during August of each year, for the duration of this consent, a report:
 - a) detailing gas combustion at the production station flare;
 - b) detailing any measures that have been undertaken by the consent holder to improve the energy efficiency of the production station;
 - c) detailing any measures to reduce smoke emissions;
 - d) detailing any measures to reduce flaring,
 - e) addressing any other issue relevant to the minimisation or mitigation of emissions from the production station flare; and
 - f) detailing any complaints received and any measures undertaken to address complaints.

Consent 6003-1

5. All equipment used to avoid, remedy or mitigate any effect on the environment from the discharge of emissions into the air shall be maintained in good condition and shall be operated within design parameters at all times that the flare is in operation.
6. Prior to undertaking any alterations to the plant equipment, processes or operations, which may substantially alter the nature or quantity of flare emissions other than as notified in this consent application, the consent holder shall first consult with the Chief Executive and shall obtain any necessary approvals under the Resource Management Act 1991.
7. Prior to the commencement of production, the consent holder shall supply to the Chief Executive a final site lay-out plan, demonstrating configuration of the facilities and equipment so as to avoid or mitigate the potential effects of air emissions.
8. At least 3 days before the commissioning of the plant, the consent holder shall undertake all practicable measures to notify owners or occupiers of properties within 1 kilometre of the boundary of the property on which the production station flare is located, of the possibility of flaring and smoke emissions. The consent holder shall include in the notification a 24-hour contact telephone number for a representative of the consent holder.
9. Any incident having an environment effect or potential effect which has caused or is liable to cause substantiated complaint or a hazardous situation beyond the boundary of the property on which the production station flare is located, shall be notified to the Taranaki Regional Council, as soon as possible, followed by a written report to the Chief Executive within one week of the incident, with comment about the measures taken to minimise the impact of the incident and to prevent re-occurrence.
10. The consent holder shall keep and make available to the Chief Executive, upon request, a record of all smoke emitting incidents, noting time, duration and cause. The consent holder shall also keep, and make available to the Chief Executive, upon request, a record of all complaints received as a result of the exercise of this consent.
11. The consent holder shall keep and maintain a log of all continuous flaring incidents longer than 5 minutes and any intermittent flaring lasting for an aggregate of 10 minutes or longer in any 60-minute period. Such a log shall contain the date, the start and finish times, the quantity and type of material flared, and the reason for flaring. This log shall be made available to the Chief Executive upon request, and summarised annually in the report required under condition 4.
12. All practicable steps shall be taken to minimise flaring.
13. Other than in emergencies, depressurisation of the plant, or sections of the plant, shall be carried out over a sufficient period of time to prevent dense black smoke from being discharged from the flare.

Consent 6003-1

14. The consent holder shall, whenever practicable, notify the Chief Executive whenever the continuous flaring of hydrocarbons (other than purge gas) is expected to occur for more than five minutes in duration.
15. 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, give rise to any levels of odour or dust or smoke that are offensive or obnoxious or objectionable at or beyond the site boundary in the opinion of an enforcement officer of the Taranaki Regional Council.
16. 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 combination with other contaminants, is or is liable to be hazardous or toxic or noxious at or beyond the boundary of the property where the production station is located, or at any dwelling house
17. The consent holder shall control all emissions of carbon monoxide to the atmosphere from the flare, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent, 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 mg/m³ (eight-hour average exposure), or 30 mg/m³ (one-hour average exposure) at or beyond the boundary of the property on which the production station flare is located.
18. The consent holder shall control all emissions of nitrogen oxides to the atmosphere from the flare, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent, 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 µg m⁻³ (one-hour average exposure) or 100 µg m⁻³ (24-hour average exposure) or 30 µg m⁻³ (annual average exposure) at or beyond the boundary of the property on which the production station flare is located.
19. The consent holder shall control emissions to the atmosphere from the flare of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides from the flare, whether alone or in conjunction with any other emissions from the site arising through the exercise of any other consent, 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 flare 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 and Biological Exposure Indices for New Zealand, 1992, 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 and Biological Exposure Indices for New Zealand, 1992 Department of Labour).

Consent 6003-1

20. This consent shall lapse on the expiry of five years after the date of commencement 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.
21. Subject to the provisions of this condition, the Council may within six months of receiving a report prepared by the consent holder pursuant to condition 4 of this consent, or during the month of June 2009 and/or June 2015 and/or June 2021 and/or June 2027, serve notice that it intends to review the conditions of this resource consent in accordance with section 128(1)(a) of the Resource Management Act 1991 for the purposes of:
- 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 the best practicable option to remove or reduce any adverse effect on the environment caused by the discharge; and/or
 - c) to alter, add or delete limits on mass discharge quantities or discharge or ambient concentrations of any contaminant or contaminants; and/or
 - d) taking into account any Act of Parliament, regulation, national policy statement or national environmental standard which relates to limiting, recording, or mitigating emissions of carbon dioxide and/or nitrogen dioxide, and which is relevant to the air discharge from the Pohokura Production Station.

Transferred at Stratford on 29 December 2018

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:	OMV NZ Production Limited Private Bag 2035 New Plymouth 4340	
Decision Date (Change):	9 August 2013	
Commencement Date (Change):	9 August 2013	(Granted Date: 23 May 2003)

Conditions of Consent

Consent Granted:	To discharge waste drilling fluids, produced water and stormwater from hydrocarbon exploration and production operations by deepwell injection at the Lower Otaraoa Road Wellsite	
Expiry Date:	1 June 2033	
Review Date(s):	June 2021, June 2027	
Site Location:	Lower Otaraoa Road Wellsite, Lower Otaraoa Road, Motunui	
Grid Reference (NZTM)	1710305E-5683659N	
Catchment:	Waipapa	

*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. Prior to the exercise of this consent for each individual well to be used for deep well injection, the consent holder shall submit, to the written satisfaction of the Chief Executive, a log of the injection well, and an injection well operation management plan, to demonstrate that special condition 2 of this consent can be met. The report shall:
 - a) identify the injection zone, including a validated bore log and geophysical log,
 - b) detail the results of fluid sampled from wastes to be injected for maximum and mean concentrations of pH, suspended solids, total dissolved solids, salinity, chlorides, and total hydrocarbons;
 - c) demonstrate the integrity of well casing; and
 - d) outline design and operational procedure to isolate the zone.
2. The resource consent holder shall ensure that injection will not contaminate or endanger any actual or potential useable freshwater aquifer.
3. The consent holder shall keep monthly records of the nature and amounts of all material injected, including injection pressure and rate, and shall make the records available to the Taranaki Regional Council on a 3 monthly basis, and when there has been a significant pressure change event.
4. The consent holder shall monitor the injected wastes monthly for maximum and mean concentrations of suspended solids, total dissolved solids, salinity, chlorides, and total hydrocarbons and shall make the records available to the Taranaki Regional Council every two months.
5. The consent holder shall provide to the Taranaki Regional Council during the month of August of each year, for the duration of the consent, a written report on all matters required under special conditions 1, 2, 3 and 4 above.

Consent 6176-1

6. This consent shall lapse on the expiry of five years after the date of commencement 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(b) of the Resource Management Act 1991.
7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent, by giving notice of review during the month following receipt of information required under special condition 5 above, and the month of June 2009 and/or June 2015 and/or June 2021 and/or June 2027 required 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 29 December 2018

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: OMV NZ Production Limited
Private Bag 2035
New Plymouth 4340

Decision Date
(Change): 16 February 2017

Commencement Date
(Change): 16 February 2017 (Granted Date: 10 November 2004)

Conditions of Consent

Consent Granted: To discharge treated stormwater from hydrocarbon exploration and production operations at the Lower Otaraoa Road Wellsite to an existing stormwater control system, being a body of water commonly known as 'The Duck Pond' within the Manu Stream

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Lower Otaraoa Road wellsite, Lower Otaraoa Road,
Motunui, Waitara

Grid Reference (NZTM) 1710824E-5683712N

Catchment: Manu

*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 exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of the original application and any subsequent applications to change conditions. In the case of any contradiction between the documentation submitted in support of previous applications and the conditions of this consent, the conditions of this consent shall prevail.
3. Prior to the exercise of this consent, the consent holder shall provide for the written approval of the Chief Executive, Taranaki Regional Council, site specific details relating to contingency planning for the wellsite.
4. The Chief Executive, Taranaki Regional Council, shall be advised in writing at least seven days prior to any site works commencing, and again in writing at least seven days prior to any well drilling operation commencing.
5. The maximum stormwater catchment area shall be no more than 25,000 square metres.
6. All site stormwater to be discharged under this consent shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this permit.
7. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not to the stormwater catchment.
8. 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	300 gm ⁻³

This condition shall apply prior to the entry of the treated stormwater into the body of water known as 'The Duck Pond' at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

Consent 6269-1.2

9. After allowing for reasonable mixing, within a mixing zone extending to the downstream end of the body of water known as 'The Duck Pond' the discharge shall not give rise to any of the following effects in the receiving waters of the Manu Stream:
 - a) an increase in temperature of more than 2 degrees Celsius;
 - b) an increase in biochemical oxygen demand of more than 2.00 gm⁻³.

10. After allowing for reasonable mixing, within a mixing zone extending to the downstream end of the body of water known as 'The Duck Pond' the discharge shall not give rise to any of the following effects in the receiving waters of the Manu 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 the expiry of five years after the date of issue of this resource consent, unless the resource 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 2009 and/or June 2015 and/or June 2021 and/or June 2027, 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 29 December 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management