

ANZCO Foods Waitara Ltd
Monitoring Programme
Annual Report
2015-2016
Technical Report 2016–42

ISSN: 1178-1467 (Online)
Document: 1731961 (Word)
Document: 1746550 (PDF)

Taranaki Regional Council
Private Bag 713
STRATFORD

November 2016

Executive summary

ANZCO Foods Waitara Ltd. (ANZCO) operates a food (meat) manufacturing complex located on Domett Street at Waitara, in the Waitara River catchment. This report for the period July 2015 to June 2016 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess ANZCO's environmental performance during the period under review, and the results and environmental effects of ANZCO's activities.

ANZCO holds two resource consents, which include a total of 11 conditions setting out the requirements that ANZCO must satisfy. The consents allow the discharge of wastewater and stormwater into the Waitara River.

During the monitoring period, ANZCO demonstrated an overall good level of environmental performance.

The Council's monitoring programme for the year under review included one compliance monitoring inspections and three water samples collected for physicochemical analysis.

The monitoring showed that the site was well operated during the period under review. Elevated concentrations of un-ionised ammonia were recorded in discharge samples collected from both the oil cooling water and evaporate condenser on 19 April 2016. The most likely explanation is due to high levels of un-ionised ammonia in water entering the site. Further discussion is provided within the report.

There were two unauthorised incidents recorded in respect of this consent holder during the period under review. One related to the discharge of ammonia to air and the second to an unconfirmed odour complaint. The company undertook an appropriate response following the ammonia discharge.

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

For reference, in the 2015-2016 year, 71% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 24% demonstrated a good level of environmental performance and compliance with their consents.

This report includes recommendations for the 2016-2017 year.

Table of contents

	Page
1. Introduction	1
1.1 Compliance monitoring programme reports and the Resource Management Act 1991	1
1.1.1 Introduction	1
1.1.2 Structure of this report	1
1.1.3 The Resource Management Act 1991 and monitoring	2
1.1.4 Evaluation of environmental performance	2
1.2 Process description	4
1.3 Resource consents	5
1.3.1 Water discharge permits	5
1.3.2 Air discharge permit	6
1.4 Monitoring programme	6
1.4.1 Introduction	6
1.4.2 Programme liaison and management	7
1.4.3 Site inspections	7
1.4.5 Chemical sampling	7
2. Results	10
2.1 Water	10
2.1.1 Inspections	10
2.1.2 Results of discharge monitoring	10
2.2 Air	11
2.2.1 Inspections	11
2.3 Investigations, interventions, and incidents	11
3. Discussion	12
3.1 Discussion of plant performance	12
3.2 Environmental effects of exercise of consents	12
3.3 Evaluation of performance	12
3.4 Recommendations from the 2014-2015 Annual Report	14
3.5 Alterations to monitoring programmes for 2016-2017	14
3.6 Exercise of optional review of consent	14
4 Recommendations	15
Glossary of common terms and abbreviations	16
Bibliography and references	17
Appendix I Resource consents held by ANZCO Foods Waitara Ltd	

List of tables

Table 1	Water quality, ANZCO Foods Waitara Limited	10
Table 2	Summary of performance for Consent 0845-3	13
Table 3	Summary of performance for Consent 5436-2	13

List of figures

Figure 1	ANZCO site, Domett Street, Waitara	5
-----------------	------------------------------------	---

List of photos

Photo 1	Oil cooling water sampling point at end of blue hose	8
Photo 2	Oil cooling water sampling point	8
Photo 3	Cooling water from evaporative condenser sampling point	9

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 2015 to June 2016 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by ANZCO Foods Waitara Ltd. (ANZCO). ANZCO operates a food (meat) manufacturing complex situated on Domett Street at Waitara, in the Waitara River catchment.

This report covers the results of the monitoring programme implemented by the Council in respect of the consents held by ANZCO. The consents relate to discharges of water (both wastewater and stormwater) within the Waitara River catchment (draining to the Tasman Sea), and the air discharge permit that covers emissions to air from the site.

One of the intents of the *Resource Management Act 1991* (RMA) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of ANZCO's use of water, and air, and is the eighth combined annual report by the Council for ANZCO. Previous reports related to the site have been concerned with different activities and earlier site operators.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the RMA and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by ANZCO in the Waitara catchment, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at ANZCO's site.

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

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

Section 4 presents recommendations to be implemented in the 2016-2017 monitoring year.

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

1.1.3 The Resource Management Act 1991 and monitoring

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

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

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

1.1.4 Evaluation of environmental performance

Besides discussing the various details of the performance and extent of compliance by the consent holder/s during the period under review, this report also assigns a rating as to each Company's environmental and administrative performance.

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year.

Administrative performance is concerned with the Company's approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (i.e. 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 significant 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 in response to unauthorised incident reports, 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 in response to unauthorised incident reports. 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 in response to unauthorised incident reports. 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 compliance

- **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 2015-2016 year, 71% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 24% demonstrated a good level of environmental performance and compliance with their consents.

1.2 Process description

Prior to ANZCO purchasing the site in 2004, Aotearoa Coolstores Ltd used the site for the purpose of cold storage of chilled and frozen meats, including beef and poultry. Prior to this the site was operated as a meat slaughter and processing plant by both Affco NZ and Borthwicks.

ANZCO has developed the site into a food manufacturing 'complex', with facilities for the manufacture and cold storage of beef jerky, beef patties, sausage (salami), and other similar food products.

The majority of wastewater generated on site is made up of hygienic wash water from processing areas. The high strength wastewater streams typical of a traditional meat processing plant are not generated at this site.

The evaporative condenser is self-supporting, using only make up water to replace that lost to evaporation, and as a consequence cooling water discharged to the river is kept to a minimum. New Plymouth District Council (NPDC) tests the pH and Biochemical Oxygen Demand (BOD) of the effluent every three months.

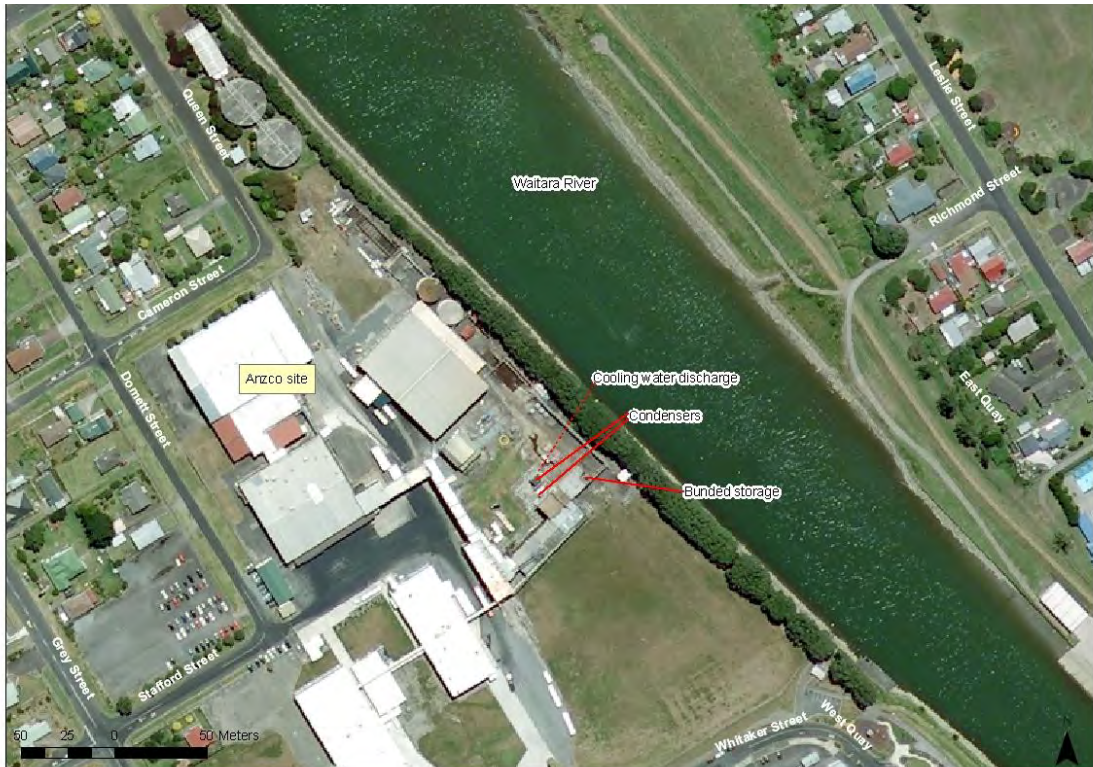


Figure 1 ANZCO site, Domett Street, Waitara

Disposal of processing wastewater from the site now takes place via the New Plymouth Wastewater Treatment Plant (NPWWTP). As the volume of discharge is only in the order of 100 m³/day, ANZCO have chosen to discharge as a trade wastewater customer rather than use the outfall to the Tasman Sea directly.

With regards to air discharges, all manufacturing areas are graded for edible food handling, and as such completely sealed from the exterior environment for hygiene control. Any potential odours are thus contained within manufacturing areas.

1.3 Resource consents

1.3.1 Water discharge permits

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant or water into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national environmental standard or other regulations.

ANZCO holds water discharge permit **0845-3** to discharge up to 18,000 m³/day of wastewater from the cooling of ammonia condensers at a cold storage facility into the Waitara River. This permit was issued by the Council on 7 November 2002 under Section 87(e) of the RMA. It is due to expire on 1 June 2021.

There are three special conditions attached to the consent and are summarised as follows:

Condition 1 states that the temperature of the discharge shall not exceed ambient river water temperature by more than 3°C beyond a mixing zone of 50 m.

Condition 2 requires that no chemicals, including un-ionised ammonia, be discharged in the cooling wastes and condition 3 deals with review of the consent.

ANZCO holds water discharge permit **5436-1** to discharge up to 800 L/s of stormwater from facilities for food manufacturing and associated activities into the Waitara River. This permit was issued by the Council on 26 March 1999 under Section 87(e) of the RMA. Changes to conditions of the consent were made on 30 June 2004. The consent expired on 1 June 2015 and was replaced by **5436-2** on 13 November 2015.

There are eight special conditions attached to consent **5436-2**.

Condition 1 relates to best practicable option.

Condition 2 stipulates the area of discharge.

Condition 3 stipulates the chemical concentration limits in the stormwater discharges.

Condition 4 relates to the mixing zone and effects of discharge.

Condition 5 requires a stormwater and washdown Water Management Plan be prepared.

Conditions 6 and 7 relate to training of staff and Contingency Planning.

Condition 8 is a review provision.

Copies of the permits are attached to this report in Appendix I.

1.3.2 Air discharge permit

Previously, ANZCO held air discharge permit **4061-2** to discharge emissions to the air arising from food manufacturing and associated activities. This permit was issued by the Council on 6 December 1995 under Section 87(e) of the RMA. Changes to conditions of the consent were made on 30 June 2004. The consent expired on 1 June 2015 and has not being renewed based on the decision that the discharge could be undertaken as a permitted activity under Rule 13 of the Regional Air Quality Plan.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets out an obligation for the Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising within the Taranaki region.

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 ANZCO site consisted of three primary components.

1.4.2 Programme liaison and management

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

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

1.4.3 Site inspections

The ANZCO site was visited once during the period under review. With regard to consents for the 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.

1.4.5 Chemical sampling

Samples of cooling water from the oil cooling water discharge point were collected and analysed for chlorine, un-ionised ammonia, ammoniacal nitrogen, pH, chlorine, conductivity and turbidity. Photographs of sampling points are shown in Photos 1 to 3).



Photo 1 Oil cooling water sampling point at end of blue hose



Photo 2 Oil cooling water sampling point



Photo 3 Cooling water from evaporative condenser sampling point

2. Results

2.1 Water

2.1.1 Inspections

One site inspection was carried out over the monitoring period on 19 April 2016.

The site was found to be tidy during the inspection, with no issues noted. The receiving water was checked and was visually satisfactory.

2.1.2 Results of discharge monitoring

In conjunction with the inspection, one sample of water discharging from the oil cooling water system and two samples of water discharging from the evaporate condenser were taken for analysis. The results of the water quality analyses are presented in Table 1.

Table 1 Water quality, ANZCO Foods Waitara Limited

Parameter	Unit	19 April 2016		
		Cooling water from oil cooling	Cooling water from evaporate condenser Sample 1	Cooling water from evaporate condenser Sample 2
Ammoniacal nitrogen	g/m ³	4.53	0.763	0.694
Chlorine - free	g/m ³	<0.1	<0.1	<0.1
Chlorine - total	g/m ³	<0.1	<0.1	<0.1
Conductivity	mS/m	45.4	56.8	56.9
pH		8.5	8.4	8.3
Turbidity	NTU	0.26	3.1	2.9
Un-ionised ammonia	g/m ³	0.63887	0.09117	0.06909
Temperature	°C	20.7	21.3	21.7

Condition 2 of consent 0845-3 stipulates that “no chemicals, including un-ionised ammonia shall be discharged in the cooling waters”. This condition is difficult to assess as small amounts of un-ionised ammonia are found in most rivers and streams, and hence could have been present in the intake water. Rule 23 of the Regional Fresh Water Plan regarding stormwater discharges requires that ‘*discharge that will, or is liable to enter surface water, shall not exceed the following: un-ionised ammonia 0.025 g/m³*’. This rule relates to non-consented stormwater discharges, and this discharge is a wastewater discharge which is consented.

The levels found in both the oil cooling water and evaporate condenser discharge samples were above the 0.025 g/m³ concentration limit specified in the Regional Fresh Water Plan. It is unusual for elevated concentrations of un-ionised ammonia to occur in the discharge samples taken at ANZCO Foods Waitara Limited (e.g. TRC 2013, 2014, 2015). Samples were reanalysed at the Council laboratory to determine if the high concentrations had resulted from a laboratory error. Re-testing confirmed this not to be the case, providing confirmation of the original results. Further discussion of these elevated concentrations is provided in Section 3.1.

2.2 Air

2.2.1 Inspections

No odours were detected beyond the site boundary during either inspection.

2.3 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. 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 courses of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The incident register includes events where the Company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

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 company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2015-2016 period, the Council was required to undertake significant additional investigations and interventions, or record incidents, in association with the ANZCO's conditions in resource consents or provisions in Regional Plans.

Notification was received concerning a discharge of ammonia to air from ANZCO Waitara at approximately 12:20 on 15 August 2015. The emergency services were called by an off duty ANZCO employee. The leak was clearly visible and had a distinct ammonia odour. ANZCO engineers estimated that approximately 200 kg of ammonia was dispersed into the air. The area was cordoned off for approximately two and a half hours while the gas dispersed. A site visit was carried out by Council officers where it was confirmed and observed that ammonia was being released to air. The site investigation revealed that a fault in the processing system caused ammonia to be redirected to two containment/venting cells allowing ammonia to be released to air. The flow of ammonia to the cells was shut off and the discharge ceased. No environmental effects were observed as a result of the discharge and no further enforcement action was undertaken by the Council. A report was received by the Council from ANZCO outlining the series of events that had resulted in the spill and preventative measures that would be implemented in order to prevent reoccurrence.

At 09:30 on 22 August 2015 the Council received a complaint concerning an ammonia odour emanating from ANZCO Waitara. An odour survey was undertaken on Leslie Street, Waitara. The wind was light and southerly. At the time of investigation no odour was detected. No further action was required.

3. Discussion

3.1 Discussion of plant performance

Overall the site was found to be well managed during the period under review.

Elevated concentrations un-ionised ammonia were recorded in discharge samples collected from both the oil cooling water and evaporate condenser on 19 April 2016. Discharge samples were above the 0.025 g/m³ concentration limit specified in the Regional Fresh Water Plan. It is unusual for elevated concentrations of un-ionised ammonia to occur in the discharge samples taken at ANZCO Foods Waitara Limited (e.g. TRC 2013, 2014, 2015) and ANZCO staff were consulted to provide further explanation.

The service engineer checked the records and confirmed there were no works on the condensers over this period. The only activity was the air purging on the 8 April 2016.

The service engineer provided two possible explanations for the elevated results:

- **Purging:** Purged ammonia might have caused the un-ionised ammonia levels to rise. The service engineer considered this to be unlikely but still a possibility. The manual purging process is common in most ammonia refrigeration plants. The purged ammonia is trapped in a water container where it will naturally return to the atmosphere over time. It can occasionally be associated with a strong ammonia odour. The possibility of both condensers and cooling tower being affected at the same time would be unlikely.
- **Elevated un-ionised ammonia in the water entering site:** Given the high un-ionised ammonia concentrations in samples taken from both the oil cooling water and evaporate condenser it is likely that elevated concentrations were already in the water prior to entering the site. The condenser and oil cooling water temperatures can rise above 23°C and for every 9°C water temperature rise the un-ionised ammonia concentrations can double.

ANZCO staff on site are continuing to investigate this issue and will analyse water samples collected both before entering the condensers and after leaving the condensers when samples are next due in October 2016. These results will be made available to the Council.

No odours were present beyond the site boundary during inspection.

3.2 Environmental effects of exercise of consents

There was no evidence found during the inspections to indicate any adverse environmental effects as a result of activities at the ANZCO site. It is unlikely that the ammonia spill recorded on 15 August 2015 had any significant environmental effects.

3.3 Evaluation of performance

A summary of ANZCO's compliance record for the year under review is set out in Tables 2 and 3.

Table 2 Summary of performance for Consent 0845-3

Purpose: To discharge up to 18,000 m³/day of wastewater from the cooling of ammonia condensers at a cold storage facility into the Waitara River		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limits on temperature of the discharge	Not monitored	N/A
2. No chemicals to be discharged into the cooling waters	Discharge water samples collected	Yes, no evidence to indicate elevated results were due to chemical discharge into the cooling waters
3. Optional review provision re environmental effects	No more scheduled review dates. The consent will expire 1 June 2021	N/A
Overall assessment of environmental performance and compliance in respect of this consent		Good
Overall assessment of administrative performance in respect of this consent		High

Table 3 Summary of performance for Consent 5436-2

Purpose: To discharge up to 800 L/s of stormwater from facilities for food manufacturing and associated activities into the Waitara River		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Inspection	Yes
2. Discharge area	Inspection	Yes
3. Limits on pH, suspended solids, oil and grease, chlorides	Sampling	Yes
4. After mixing, discharge not to effect receiving water	Site inspection and sampling	Yes
5. Consent holder to prepare Contingency Plan	October 2010	Yes
6. Consent holder to prepare Management Plan	October 2010	Yes
7. Document changes to process or operations	No changes	N/A
8. Option for Council to review consent conditions	Consent expires June 2017	N/A
Overall assessment of environmental performance and compliance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

During the year, ANZCO demonstrated a good level environmental performance and a high level administrative compliance with the resource consents as defined in Section 1.1.4.

3.4 Recommendations from the 2014-2015 Annual Report

In the 2014-2015 Annual Report, it was recommended:

1. THAT monitoring of air emissions from ANZCO in the 2015-2016 year continues at the same level as in 2014-2015.
2. THAT monitoring of other discharges from ANZCO in the 2015-2016 year continues at the same level as in 2014-2015.
3. THAT the option for a review of resource consent 0845-3 in June 2015, as set out in condition 3 of the consent, not be exercised, on the grounds that the current conditions are adequate to deal with any potential environmental effects.

These recommendations were implemented.

3.5 Alterations to monitoring programmes for 2016-2017

In designing and implementing the monitoring programmes for air and water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring emissions and discharges and effects, and subsequently reporting to the regional community, 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 emitting to the atmosphere and discharging to the environment.

The ANZCO monitoring programme for 2015-2016 was unchanged from that for 2014-2015. Similarly, it is proposed that for 2016-2017, the programme remains unchanged. Recommendations to this effect are attached to this report.

3.6 Exercise of optional review of consent

Of the two resource consents held by ANZCO, none provide for a review of conditions in June 2016. Consents 5436-2 is due to expire on 17 June 2017. Consent 0845-3 is due to expire on 1 June 2021.

4 Recommendations

1. THAT monitoring of air emissions from ANZCO in the 2016-2017 year continues at the same level as in 2015-2016.
2. THAT monitoring of other discharges from ANZCO in the 2016-2017 year continues at the same level as in 2015-2016.

Glossary of common terms and abbreviations

The following abbreviations and terms are used within this report:

Condy	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m.
g/m ³	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident
L/s	Litres per second.
mS/m	Millisiemens per metre.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
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.
NPWWTP	New Plymouth Waste Water Treatment Plant.
Physicochemical	Measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	Resource Management Act 1991 and subsequent amendments.
Turb	Turbidity, expressed in NTU.
WWWTP	Waitara Waste Water Treatment Plant.

For further information on analytical methods, contact the Council's laboratory.

Bibliography and references

- Taranaki Regional Council, 1992: Regional Policy Statement Working Paper. Aggregate extraction in Taranaki. TRC Report.
- Taranaki Regional Council, 2008: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2007-2008. Technical Report 08-70.
- Taranaki Regional Council, 2009: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2008-2009. Technical Report 09-21.
- Taranaki Regional Council, 2009a: Taranaki Where We Stand – State of the Environment Report 2009.
- Taranaki Regional Council, 2010: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2009-2010. Technical Report 10-76.
- Taranaki Regional Council, 2011: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2010-2011. Technical Report 11-59.
- Taranaki Regional Council, 2012: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2011-2012. Technical Report 12-76.
- Taranaki Regional Council, 2013: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2012-2013. Technical Report 13-73.
- Taranaki Regional Council, 2014: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2013-2014. Technical Report 14-74.
- Taranaki Regional Council, 2015: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2013-2014. Technical Report 15-80.

Appendix I

Resource consents held by ANZCO Foods Waitara Ltd

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

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

Name of
Consent Holder: Anzco Foods Waitara Limited
P O Box 39-145
CHRISTCHURCH

Consent Granted
Date: 7 November 2002

Conditions of Consent

Consent Granted: To discharge up to 18,000 cubic metres/day of wastewater from the cooling of ammonia condensers at a cold storage facility into the Waitara River at or about GR: Q19:171-444

Expiry Date: 1 June 2021

Review Date(s): June 2009, June 2015

Site Location: Stafford Street, Waitara

Legal Description: Lot 29 DP 4670 Waitara Township

Catchment: Waitara

Consent 0845-3

General conditions

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

Special conditions

1. The temperature of the discharge shall not exceed ambient river water temperature by more than 3 degrees Celsius beyond a mixing zone of 50 metres.
2. No chemicals, including un-ionised ammonia, shall be discharged in the cooling waters without prior permission of the Chief Executive, Taranaki Regional Council.
3. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2009 and/or June 2015, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 9 March 2004

For and on behalf of
Taranaki Regional Council

Director-Resource Management

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

Name of
Consent Holder: Anzco Foods Waitara Limited
Riverlands Limited
P O Box 124
ELTHAM

Change To
Conditions Date: 30 June 2004 [Granted: 26 March 1999]

Conditions of Consent

Consent Granted: To discharge up to 800 litres/second of stormwater from facilities for food manufacturing and associated activities into the Waitara River at or about GR: Q19:172-444

Expiry Date: 1 June 2015

Review Date(s): June 2003, June 2009

Site Location: Queen Street, Waitara

Legal Description: 40-odd titles generally at Waitara West bounded by Whitaker, Dommet & Cameron Streets Blk I Waitara SD

Catchment: Waitara

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. That the discharge shall not exceed the following parameters:

Component	Concentration
pH [range]	6 - 9
Total recoverable hydrocarbons	15 gm ⁻³
suspended solids	100 gm ⁻³

This condition shall apply prior to the entry of the discharge into the receiving water at designated sampling point[s] approved by the Chief Executive, Taranaki Regional Council.

- 2. That after allowing for reasonable mixing, within a zone extending 25 metres from the discharge point[s], the discharge shall not give rise to any of the following effects in the receiving water:
 - i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - ii) any conspicuous change in the colour or visual clarity;
 - iii) any emission of an objectionable odour;
 - iv) the rendering of fresh water unsuitable for consumption by farm animals;
 - v) any significant adverse effects on aquatic life, habitats, or ecology.
- 3. That the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2003 and/or June 2009, for the purpose of ensuring that the conditions adequately deal with any environmental effects arising from the exercise of this consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 30 June 2004

For and on behalf of
Taranaki Regional Council

Director-Resource Management

General condition

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

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from an area not exceeding 7 ha.
3. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm ⁻³
oil and grease	Concentration not greater than 15 gm ⁻³
chloride	Concentration not greater than 50 gm ⁻³

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

4. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point(s), the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
5. The consent holder shall maintain and regularly update a 'Contingency Plan' that details measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent. The plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.

Consent 5436-2.0

6. The site shall be operated in accordance with a 'Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and shall include as minimum:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems; and
 - c) general housekeeping.

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

7. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act 1991. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review within 3 months of receiving a notification under special condition 7 above; for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 13 November 2015

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

