

ANZCO Foods Waitara Ltd
Monitoring Programme
Annual Report
2017-2018

Technical Report 2018–88

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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 2017 to June 2018 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess ANZCO'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 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 two site inspections. Cooling water was sampled by a contractor employed by ANZCO on a monthly basis, and additional samples were collected by the Council on 15 March 2018 for an inter-laboratory comparison.

The monitoring showed that the site was mostly well operated during the period under review. Elevated concentrations of un-ionised ammonia were discovered in the cooling tower discharge on three occasions. ANZCO explained that the high results were likely due to ammonia pipework upgrades that were completed around the same time. Despite the elevated concentrations, these discharges likely had little environmental effect, given their low volumes and the point of discharge; which does not drain directly to a waterway. Since the completion of the upgrades, there have been no issues with un-ionised ammonia in the discharge. There were no unauthorised incidents recording non-compliance in respect of this consent holder during the period under review.

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

For reference, in the 2017-2018 year, consent holders were found to achieve a high level of environmental performance and compliance for 76% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 20% 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 was good, but could still be improved further.

This report includes recommendations for the 2018-2019 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 2017 to June 2018 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 that relate to discharges of water (both wastewater and stormwater) in the Waitara River catchment, draining to the Tasman Sea. This is the ninth annual report to be prepared by the Council to cover ANZCO's water discharges and their effects.

1.1.2 Structure of this report

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

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's 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 interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2018-2019 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 *Resource Management Act 1991* (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 socio-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, this report also assigns 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 consent holder'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 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 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 2017-2018 year, consent holders were found to achieve a high level of environmental performance and compliance for 76% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 20% of the consents, a good level of environmental performance and compliance was achieved.

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 refrigeration plant is operated with a set of water-cooled ammonia condensers. Cold ammonia gas leaves the evaporator at low pressure, and is compressed into a hot, high pressure vapour at the compressor. The ammonia vapour is then condensed into a hot liquid in the condenser, which is subsequently cooled as heat is transferred through the pipes and into the cooling water passing through the condenser. The ammonia is contained within the pipes and should not make contact with the cooling water at any stage of the process.

Since the cooling system was first commissioned, plant improvements have meant far more water can be recycled; reducing discharge volumes. Initially, there was a continuous discharge due to the pressure of the town water supply causing a continual overflow from the cooling system. The installation of pressure reducers has since ceased any overflow. Currently, each tower only discharges up to 20-30 L/week, in order to reduce concentrations of total dissolved solids which accumulate from the town supply.

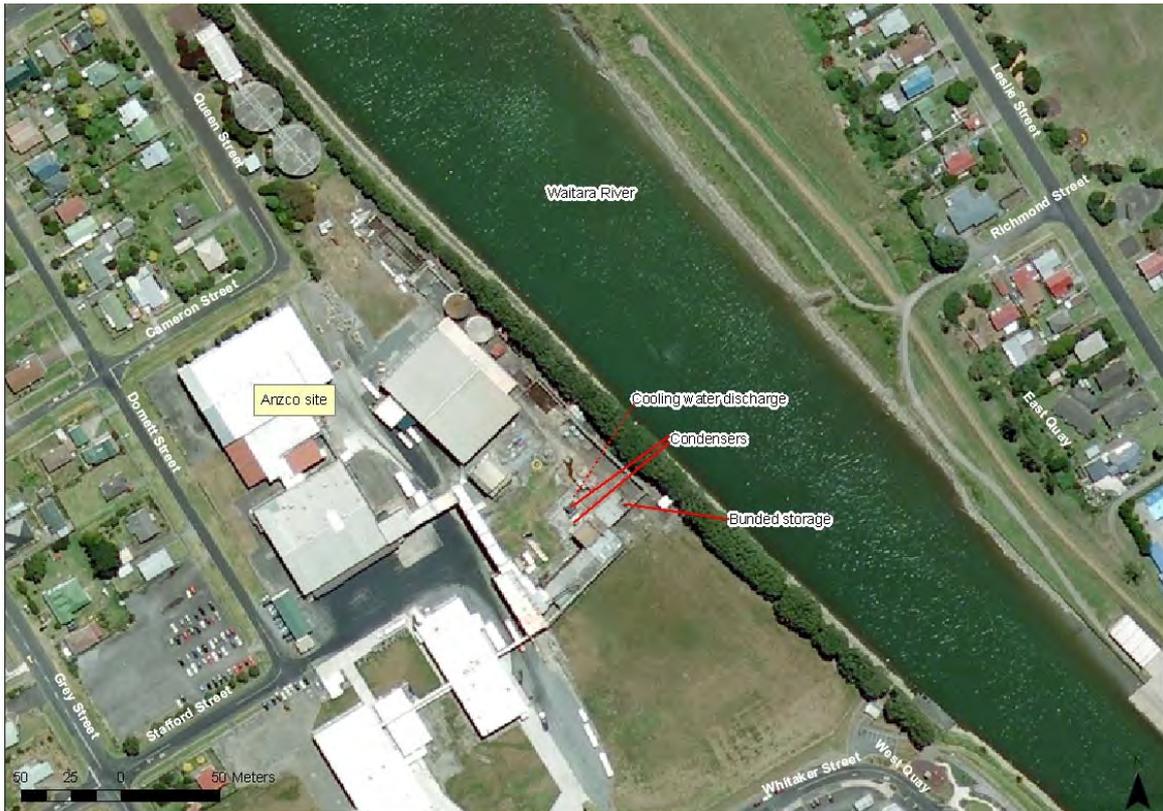


Figure 1 ANZCO site, Domett Street, Waitara

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. Disposal of processing wastewater 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. New Plymouth District Council (NPDC) tests the pH and Biochemical Oxygen Demand (BOD) of the effluent every three months.

The stormwater catchment area at ANZCO includes meat processing buildings, cool stores and delivery areas. Although the stormwater is not treated prior to entering the river, the stormwater being discharged is predominantly clean rainwater and thawed freezer water.

With regard 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

The Company holds two resource consents; the details of which are summarised in the table below and outlined in sections 1.3.1 to 1.3.2.

Table 1 Resource consent summary

Consent number	Purpose	Granted	Review	Expires
0845-3	To discharge up to 18,000 m ³ /day of wastewater from the cooling of ammonia condensers at a cold storage facility into the Waitara River	7 Nov 2002	None remaining	1 June 2021
5436-3	To discharge stormwater from facilities for food manufacturing and associated activities into the Waitara River	2 May 2017	June 2021	1 June 2033

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 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.

Condition 3 deals with review of the consent.

ANZCO held water discharge permit **5436-2** to discharge up to 800 L/s of stormwater from facilities for food manufacturing and associated activities into the Waitara River. The consent expired and was replaced by **5436-3** on 2 May 2017.

There are eight special conditions attached to consent 5436-2 and 5436-3.

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.

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consents which are appended to this report.

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 was not 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 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 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 consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.4.3 Site inspections

The ANZCO site was inspected twice during the monitoring period. 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 cooling wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions.

1.4.4 Chemical sampling

ANZCO arranged for an external contractor, Spirax Sarco, to collect discharge samples from the cooling tower and evaporate condensers, and samples from the site's water supply connection, on a monthly basis. These samples were analysed by Eurofins ELS Ltd. for un-ionised ammonia, ammoniacal nitrogen, pH and temperature.

Inter-laboratory comparisons between Eurofins ELS Ltd. and the Council's laboratory were carried out on one occasion during the current monitoring year, where samples from all four sites were analysed by each laboratory for the same suite of parameters for validation purposes.

No stormwater samples were collected during the monitoring period as there were no discharges occurring from the site during either inspection.

2 Results

2.1 Inspections

Two site inspections were carried out over the monitoring period, on 27 February 2018 and 15 March 2018. There were no stormwater or wastewater discharges occurring from the ANZCO site into the Waitara River during either occasion, although a discharge did occur from the coolers during the first inspection. The processing plant did not appear to be adversely affecting the receiving environment, and no odours or dust was detected beyond the site boundary.

2.2 Results of discharge monitoring

Water supply and discharge samples were collected for analysis on 11 separate occasions during the monitoring period, and were analysed by Eurofins ELS Ltd. (Table 2). Samples collected by the Council on 15 March 2018 are also presented (shown in brackets), to provide an inter-laboratory comparison.

Table 2 Water quality of wastewater discharges, ANZCO Foods Waitara Limited (2017-2018)

Date	Sample	Ammonia-unionised g/m ³	Ammonia Nitrogen g/m ³	pH	Temperature °C
27 June 2018	Raw water	<0.01	<0.01	8.50	14.5
	Small cooling tower	<0.01	0.04	8.60	19.8
	New evaporate condenser	<0.01	<0.01	9.10	19.4
	Large evaporate condenser	<0.01	0.03	9.10	16.7
22 May 2018	Raw water	<0.01	<0.01	8.40	16.8
	Small cooling tower	<0.01	<0.01	8.90	26.0
	New evaporate condenser	<0.01	0.01	9.00	24.5
	Large evaporate condenser	<0.01	<0.01	9.00	22.8
23 April 2018	Raw water	<0.01	<0.01	8.00	17.3
	Small cooling tower	<0.01	0.08	8.40	23.6
	New evaporate condenser	<0.01	0.04	8.40	21.9
	Large evaporate condenser	<0.01	<0.01	8.40	21.9
15 March 2018	Raw water	<0.01 (<0.01)	<0.01 (<0.01)	8.10	18.2
	Small cooling tower	0.01 (0.024)	0.04 (0.052)	8.90	27.7
	New evaporate condenser	<0.01 (<0.01)	0.02 (0.026)	8.90	23.1
	Large evaporate condenser	<0.01 (<0.01)	0.01 (0.01)	8.90	23.4
20 February 2018	Raw water	<0.01	<0.01	8.40	20.9
	Small cooling tower	<0.01	<0.01	8.67	30.5
	New evaporate condenser	<0.01	0.02	8.88	24.8
	Large evaporate condenser	<0.01	0.01	8.83	24.7
	Raw water	<0.01	<0.01	8.16	20.6
	Small cooling tower	<0.01	<0.01	8.77	30.5

Date	Sample	Ammonia-ionised g/m ³	Ammonia Nitrogen g/m ³	pH	Temperature °C
23 January 2018	New evaporate condenser	<0.01	0.02	8.80	25.1
	Large evaporate condenser	<0.01	0.02	8.83	24.2
19 December 2017	Raw water	<0.01	<0.01	8.24	20.6
	Small cooling tower	<0.01	<0.01	8.87	26.7
	New evaporate condenser	<0.01	0.02	8.93	23.3
	Large evaporate condenser	<0.01	0.02	8.95	22.8
28 November 2017	Raw water	<0.01	<0.01	8.14	19.1
	Small cooling tower	<0.01	<0.01	8.92	28.8
	New evaporate condenser	<0.01	0.03	8.99	23.6
	Large evaporate condenser	<0.01	<0.01	8.97	22.9
17 October 2017	Raw water	<0.01	<0.01	8.45	14.8
	Small cooling tower	0.09	0.55	8.67	20.0
	New evaporate condenser	0.01	0.09	8.67	18.2
	Large evaporate condenser	0.01	0.07	8.74	21.0
19 September 2017	Raw water	<0.01	<0.01	8.31	13.9
	Small cooling tower	0.18	0.68	8.84	24.1
	New evaporate condenser	<0.01	0.07	8.43	20.8
	Large evaporate condenser	0.01	0.07	8.64	23.1
8 August 2017	Raw water	<0.01	<0.01	8.10	12.0
	Small cooling tower	<0.01	0.02	8.57	24.0
	New evaporate condenser	<0.01	<0.01	8.70	19.4
	Large evaporate condenser	<0.01	0.02	8.63	21.6
11 July 2017	Raw water	<0.01	<0.01	8.21	12.6
	Small cooling tower	0.04	0.27	8.32	29.0
	New evaporate condenser	<0.01	0.02	8.06	20.0
	Large evaporate condenser	<0.01	0.05	8.34	23.7

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 enforce as small amounts of un-ionised ammonia occur naturally in waterbodies; hence, raw water is also analysed for un-ionised ammonia, prior to factory processing. Rule 23 of the Regional Fresh Water Plan requires non-consented stormwater discharges that are liable to enter surface water to not exceed an un-ionised ammonia concentration of 0.025 g/m³. Despite being a consented discharge, this threshold is applied here.

Earlier in the year under review, three discharges (all from the cooling tower) exceeded the 0.025 g/m³ un-ionised ammonia concentration limit specified in the Regional Fresh Water Plan (Table 2). The un-ionised ammonia concentration of the raw water was found to be below detection on all three occasions, indicating that ammonia from the plant had leached into the cooling water. The ammonia concentrations in the remaining discharges were low (mostly below the detection limit).

In general, there was close agreement in un-ionised ammonia concentrations measured by the Council (shown in brackets, Table 2) and Eurofins ELS Ltd. in the samples collected on 15 March 2018.

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 2017-2018 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with ANZCO's conditions in resource consents or provisions in Regional Plans.

3 Discussion

3.1 Discussion of plant performance

Overall the site was found to be well managed during the period under review. No odours or dust were present beyond the site boundary during inspections.

Given changes on site and the intermittent nature of the wastewater discharges it was decided in 2016-2017 that ANZCO staff were best placed to undertake the wastewater sampling required under the monitoring programme. The new sampling procedure again worked well in the year under review and resulted in increased monitoring compared with previous years. The inter-laboratory comparison mostly demonstrated close agreement in un-ionised ammonia concentrations between laboratories.

Most samples collected during the July 2017 to June 2018 monitoring period had low concentrations of un-ionised ammonia (below the 0.025 g/m³ threshold referred to in the Regional Freshwater Plan). However, the concentration of un-ionised ammonia recorded in the cooling tower discharge was found to be elevated on three occasions, in July, September and October 2017. Around this time ANZCO were completing some major ammonia pipework upgrades which, despite containment efforts, likely released trace amounts of ammonia into the cooling water. Since the completion of these upgrades, the concentrations of un-ionised ammonia have remained low (at, or below the limit of detection).

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.

Elevated concentrations of un-ionised ammonia were discovered in the cooling tower discharge on three occasions. However, the tower only discharges up to 20-30 L/week and the release valve directs the water onto a grassed area adjacent to the tower (rather than discharging directly to the river). Therefore, the potential for adverse effects on the receiving environment was deemed to be low.

3.3 Evaluation of performance

A tabular summary of ANZCO's compliance record for the year under review is set out in Tables 3 and 4.

Table 3 Summary of performance for consent 0845-3

<i>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</i>		
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	No three samples contained elevated un-ionised ammonia
3. Optional review provision re environmental effects	No more scheduled review dates. The consent will expire 1 June 2021	N/A

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	
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 4 Summary of performance for consent 5436-3

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	Site inspection	Yes
2. Discharge area	Site inspection	Yes
3. Limits on pH, suspended solids, oil and grease, chlorides	Stormwater not discharging during inspections	N/A
4. After mixing, discharge not to affect receiving water	Site inspection	Yes
5. Consent holder to prepare Contingency Plan	Received November 2016	Yes
6. Consent holder to prepare Management Plan	Received November 2016	Yes
7. Document changes to process or operations	Outlined within application and AEE for consent 5436-3	Yes
8. Option for Council to review consent conditions	Next optional review June 2021	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 of environmental performance and a high level of administrative compliance with the resource consents as defined in Section 1.1.4.

Table 5 Summary of environmental performance

Year	Consent no	High	Good	Improvement req	Poor
2010	0845-3	1			
	5436-1	1			
	4061-2	1			
2011	0845-3			1	
	5436-1	1			
	4061-2	1			

Year	Consent no	High	Good	Improvement req	Poor
2012	0845-3		1		
	5436-1	1			
	4061-2	1			
2013	0845-3	1			
	5436-1	1			
	4061-2	1			
2014	0845-3	1			
	5436-1	1			
	4061-2	1			
2015	0845-3	1			
	5436-1	1			
	4061-2	1			
2016	0845-3		1		
	5436-2	1			
2017	0845-3	1			
	5436-2	1			
2018	0845-3		1		
	5436-3	1			
Totals		20	3	1	0

3.4 Recommendations from the 2016-2017 Annual Report

In the 2016-2017 Annual Report, it was recommended:

1. THAT monitoring of water discharges from ANZCO in the 2017-2018 year continues at the same level as in 2016-2017.

3.5 Alterations to monitoring programmes for 2018-2019

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

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

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

It is proposed that for 2018-2019, the programme remains unchanged.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the sites 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 2018-2019.

4 Recommendations

1. THAT in the first instance, monitoring of consented activities at ANZCO in the 2018-2019 year continue at the same level as in 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, 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:

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.
WWWTP	Waitara Waste Water Treatment Plant.

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

Bibliography and references

- Taranaki Regional Council, 1992: Regional Policy Statement Working Paper. Aggregate extraction in Taranaki. TRC Report.
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- 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 2014-2015. Technical Report 15-80.
- Taranaki Regional Council, 2016: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2015-2016. Technical Report 16-42.
- Taranaki Regional Council, 2017: Anzco Foods Waitara Ltd Monitoring Programme Annual Report 2016-2017. Technical Report 16-42.

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

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 and any amended versions shall be provided to the Chief Executive of the Taranaki Regional Council.

Consent 5436-3.0

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:
- a) during the month of June 2021 and/or June 2027; and/or
 - b) 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 2 May 2017

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

