APPLICATION FOR RESOURCE CONSENT
FORM B: DISCHARGE TO AIR

Waikato REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato

NOTES

- Discharges of contaminants into the air (such as odour, smoke, spray or particulate matter) must meet all the conditions of our permitted activity rules, or resource consent will be required. This activity form will help you apply for a resource consent.
- You must fully complete this activity form and supply the required information. Provide as much detail as you can where the questions are relevant to your activity. We request that, where possible, you provide electronic copies of any supporting information. Doing so may reduce administrative costs charged to you.
- You must also supply completed Forms A and C.
- Unless we advise otherwise, you should also consult with any person or party who may be interested in or affected by your proposal. You should provide details of this consultation, including written approval from these parties if possible.
- You must pay the required initial deposit when you submit this consent application.
- Failure to provide the required information and payment will delay the processing of your application. If you do not provide adequate information then we will not be able to process your application, and will return it to you. If you do not pay the required fees, we may stop processing your application until payment is received.
- If your activity or site is associated with the use of a heating device for an industrial process that burns any fossil fuel you may also need to apply for a resource consent for the emission of greenhouse gas and complete the form "Discharge to Air – Greenhouse Gas from Industrial Process Heat." More information can be found at **waikatoregion.govt.nz/what-needs-a-consent/**
- Remember to sign and date all forms.

FOR OFFICE USE ONLY	
File:	
Client ID:	
Project:	

Please make sure you read and understand the information section at the end of this form. If you need any further help, please phone our Resource Use staff on 0800 800 401.

SITE AND LOCATION

1. If known, please supply map coordinates of the discharge point/s or area (such as Easting/Northing coordinates or NZMS260 grid references). These locations must also be clearly identified on the location map you have supplied with form A

2. Describe the general meteorology and topography of the area

3. **What is the designated land use of the site under the relevant district plan and any district plan requirements?**

4. **Describe the uses of land surrounding the site, for example residential, commercial or dairy farming:**

PROCESSES

5. **Describe the processes that take place on-site, identifying sources of emissions to air. Provide process flow diagrams if appropriate and details of process capacity including raw material used, throughput, heat output, fuel consumption and fuel type as appropriate. Use separate pages if necessary.**

AIR POLLUTION CONTROL

6. **Describe any air pollution control equipment installed or proposed to be installed such as baghouse filters, scrubbers, cyclones. Include information on maintenance procedures and process control information to monitor the performance of such systems.**

7. **Provide information on system design including design air flows and expected or measured efficiency of contaminant removal.**

8. **Provide information on other processes in place to ensure that emissions are controlled and/or minimised.**

AIR MANAGEMENT PLAN

9. **Most activities will require an air management plan before the consent is granted.**

   This plan details the procedures that will be implemented to ensure the operation complies with the conditions of the resource consent. Although this plan is not required at the time of the initial application, it will speed up the application process if a draft plan is provided in advance. This plan should detail proposed procedures and provide complaint response procedures, including contact telephone numbers for operations staff who will be responsible for responding to complaints.

DISCHARGES

10. Identify the contaminants present in the discharge/s. Identify whether the source is a fugitive or a point source. Point sources are discharged via vents or stacks and fugitive emissions may be from sources such as stockpiles stored outside or contaminants discharging through doors or windows for example.

11. Where the discharge is via a stack, provide the stack height and diameter and height relative to the roofline and any other local buildings.

12. Velocity of the discharge in metres per second.

EMISSION INFORMATION

13. Where a contaminant is likely to be present in quantities that could give rise to adverse effects, the applicant needs to quantify the discharge as accurately as possible. This is a very important step in ensuring the accuracy of the assessment.

Provide data that includes predicted or measured normal emissions and predicted or measured abnormal (or worst case) emissions. This information may be obtained using emission factors, experience from similar plants or from emission measurements. The sources of all data used in the assessment should be provided and its use and relevance to the assessment justified. Emission tests should be undertaken using internationally recognised methods such as USEPA test methods or equivalent methods.

The information should state the normal duration of the discharge and any expected variation in emission levels. Both the concentration of contaminants in the discharge and the discharge rate of contaminants should be provided.

Modelling may be necessary for investigating the potential effects of various contaminants. You should consult the Waikato Regional Council in the early stages of preparing your consent application to determine whether dispersion modeling is required for the assessment.

14. Did the Waikato Regional Council require a modelling assessment with your application?

◯ Yes ◯ No

15. If yes, provide modelling data that includes predicted or measured normal emissions and predicted or measured abnormal (or worst case) emissions.

This information may be obtained using emission factors, experience from similar plants or from emission measurements. The sources of all data used in the assessment should be provided and its use and relevance to the assessment justified. Emission tests should be undertaken using internationally recognised methods such as USEPA test methods or equivalent methods.

A range of models are available which will be relevant depending on the particular dispersion situation. Models include AUSPLUME, ISCST3, AERMOD, CTDMPLUS, CALPUFF and TAPM[1].

You should model contaminant levels that result in predicted ground level concentrations which would be a magnitude of probable concern. The Waikato Regional Council considers that the use of dispersion modeling is particularly relevant for evaluating various upgrade scenarios, such as investigating the effects as a result of installing air pollution control equipment.

Applicants should model the expected normal emissions as well as the likely worst case emissions. If the worst case assessment is well within accepted criteria then there should be no need for any further assessment.

The Waikato Regional Council requires the following specific information to be submitted with a modelling assessment:

- a discussion of the model and the justification for the use of the particular model
- how particular model settings were used and other model assumptions were made
- the influence of terrain and other local effects such as sea breezes
- a description of the contaminants in the discharge
- the source emission data used in the model and other model input data such as stack and building dimensions
- a description of the meteorological data used
- consideration of whether atmospheric chemistry and or deposition is important and should be included in the model
- tables and graphical presentations of the predicted maximum ground level concentrations for each contaminant at regular and appropriate intervals from the discharge points, such as worst case receptors located at a residential dwelling with a time series plot or table
- model output tables as an appendix
- a comparison of the predicted maximum ground level concentrations with the appropriate guideline or other criteria
- an interpretation with reference to relevant ambient guidelines and other criteria.

[1] "Good Practice Guide for Atmospheric Dispersion Modelling" Ministry for the Environment, June 2004.

16. Provide a discussion of relevant guidelines or other ambient air quality criteria.

As a starting point reference documents could include:

- National Environmental Standards for Air Quality[2]
- the Ministry for the Environment's Ambient Air Quality Guidelines[3]
- Regional Ambient Air Quality Guidelines in the Waikato Regional Plan (refer Appendix 1)
- the Ministry for the Environment's Odour Guideline[4]
- Guidelines for assessing odour and particulate matter in the Waikato Regional Plan
- other relevant information sources from overseas.

Be aware that some ambient guidelines may be limited in the effects that they are protecting for, and that other effects may need to be considered. You should explain the basis of the guideline that you are using and justify its use in the particular circumstance and considering the particular receiving environment. There is also a changing body of international evidence on which guidelines are based. This may need to be considered when selecting an appropriate guideline and discussing the potential effects of the discharge.

2 "Updated Users Guide to Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and Other Toxics) Regulations 2004 (Including Amendments 2005)", Ministry for the Environment, October 2005.

3 "Ambient Air Quality Guidelines", Ministry for the Environment, May 2002.

4 "Good Practice Guide for Assessing and Managing Odour in New Zealand", Ministry for the Environment, June 2003.

17. **Provide a summary of any available ambient air quality data for the locality. Refer to the Waikato Regional Council's website for monitoring data. This includes information on background air quality for a new application and any impact monitoring undertaken for existing operations. Ambient monitoring will be more important for large-scale operations.**

MONITORING

18. **Describe any current, ongoing and proposed methods and/or monitoring regimes for stack and/or ambient air quality, such as stack testing, dust deposition testing, site boundary odour assessments.**

CONSIDERATION OF ALTERNATIVES

19. **Describe any alternative locations or methods for the discharge and any alternative receiving environments. Provide details on whether these are being implemented, and if not, then why not.**

RESULTS AND INTEPRETATION

20. Describe the actual and potential effects of your activity on humans, animals or plants, aircraft safety, the global atmosphere, areas of historic or cultural value, public amenity areas and places of public assembly.

21. Provide copies of any additional information you may have about the effects of your activity on the receiving environment, such as photographs, monitoring data or recent compliance reports. If possible, we would prefer this information to be submitted in an electronic format, such as CD.

CONSULTATION

Unless the Waikato Regional Council has indicated otherwise, you should identify and consult with any parties that may be potentially affected by or interested in your discharge activity.

- This generally involves at the very least your neighbours and local community.
- It may also include local health authorities, district councils, iwi and interest groups such as local recreational and care groups.
- Other forms of community information should be used to support the application if available, such as community surveys and/or summaries of any complaints received that relate to air discharges from the operation.
- If you are in doubt about who you should be talking to, then call the Waikato Regional Council's staff.

Make sure you provide everyone with sufficient information so that they can fully understand what it is you want to do and how they may be affected by it. This could include a copy of this application form once it is completed and/or any plans or maps. Make sure you make yourself available to explain the application, answer any questions and discuss options for resolving any concerns.

22. Identify the parties that may be potentially affected by or interested in your discharge activity and consent application

Party details/relationship *(such as neighbour, local iwi, interest group)*		
Contact person		
Postal address		
Email address		
Phone number/s	Home:	Business:
	Mobile:	

Party details/relationship *(such as neighbour, local iwi, interest group)*		
Contact person		
Postal address		
Email address		
Phone number/s	Home:	Business:
	Mobile:	

Party details/relationship *(such as neighbour, local iwi, interest group)*		
Contact person		
Postal address		
Email address		
Phone number/s	Home:	Business:
	Mobile:	

23. Other affected or interested parties

24. Provide details of your consultation

Provide details about the consultation you have undertaken, or explain why consultation was not considered necessary. If possible you should provide written comment or approval from those you have identified. A consultation form is provided at the end of this form that will help you with this. Photocopy off a separate form for each party identified. Otherwise, make sure you let us know:

- who you consulted with
- how we can contact these people
- their relationship to you (for example, neighbour, local iwi, interest group)
- any concerns they may have about your activity, and how you intend to avoid or mitigate (lessen) these effects.

FINAL CHECKLIST

25. Have you? *(Please tick)*

- ◯ Filled in all parts of this form (Form B) that are relevant to your activity, provided all the information required, and completed and attached any other related activity forms.
- ◯ You must also supply completed Forms A and C.
- ◯ Applied for any district council consents that are also required for your proposal.
- ◯ Consulted with all interested and affected parties, and included their comments and/or written approval (if possible).
- ◯ Included or paid the required deposit fee for this application.

APPENDIX 1 – REGIONAL AMBIENT AIR QUALITY GUIDELINES (RAAQG) (TABLE 6-5 OF THE WAIKATO REGIONAL PLAN)

CONTAMINANT	AVERAGING TIME	WAIKATO REGION LEVELS
Carbon monoxide (CO)	1 hour	30 mg/m3
	8 hours	10 mg/m3
Nitrogen dioxide (NO2)	1 hour	200 g/m3
	24 hours	100 g/m3
	Annual	30 g/m3
Particulate matter (PM10)	24 hours	50 g/m3
	Annual	20 g/m3
Sulphur dioxide (SO2)	1 hour	350 g/m3
	24 hour	120 g/m3
Agricultural crops	Annual and winter average	30 g/m3
Forest and natural vegetation	Annual and winter average	20 g/m3
Lichen	Annual	10 g/m3
Ozone (O3)	1 hour	150 g/m3
	8 hours	100 g/m3
Forests	6 months	21,400 g/m3 - h
Semi-natural vegetation	3 months	6,420 g/m3 - h
Crops (yield)	3 months	6,420 g/m3 - h
Crops (visible injury) mean daytime vpd below 1.5kPa	5 days	428 g/m3 - h
Crops (visible injury) mean daytime vpd above 1.5kPa	5 days	1,070 g/m3 - h
Hydrogen sulphide (H2S)	1 hour	7 g/m3
Lead content of PM10	3 month moving average	0.2 g/m3
Benzene (current)	Annual	10 g/m3
Benzene (2010)	Annual	3.6 g/m3

- The RAAQG have been adopted as maximum acceptable levels of priority contaminants for managing ambient air quality in the Waikato region. The RAAQG are not standards. The acceptable level of these contaminants in air in any given situation will depend upon a site specific analysis in accordance with the policies in Section 6.1.3 of the Waikato Regional Plan.
- The application and interpretation of the guideline values shall be in accordance with Chapter 3 of the Ambient Air Quality Guidelines, Ministry for the Environment, May 2002.
- In the absence of a regional guideline value regard shall be had to relevant national and/or international criteria as appropriate.
- The specific monitoring methods to be used will, as a matter of preference, be those specified in the most recent version of the Ministry for the Environment's Ambient Air Quality Guidelines. Where those guidelines are not specific, or are out of date, the monitoring method to be used will be determined on a case by case basis having regard to best practice.
- In some circumstances, such as discharges from the mineral processing industry, PM10 may not be the appropriate indicator of air quality effects from particulate matter. In those circumstances measures such as total suspended particulate and/or dust deposition may be more appropriate.
- These guidelines are not to be used as 'pollute up to' levels in the region.
- The levels in the guidelines are concerned with the cumulative impacts of discharges into air from human activities and natural processes.
- When using the guidelines to calculate allowable emission standards for single sources consideration should be given to the proportion of the available air quality increment that should be allocated to that single source. Consideration also needs to be given to background levels of contaminants so that the guideline values are not exceeded.
- Critical levels for nitrogen dioxide assume that either O3 or SO2 are also present at near guideline levels. Critical levels for ozone are expressed as a cumulative exposure over a concentration threshold referred to as AOT40 values (accumulative exposure over a threshold of 85.6 g/m3, at OC), calculated as the sum of the difference between hourly ambient ozone concentrations and 85.6 g/m3, when ozone concentrations exceed 85.6 g/m3. Ozone is only measured during daylight hours with a clear global radiation of 50Wm-2 or greater; vpd = vapour pressure deficit.
- The hydrogen sulphide value is based on odour nuisance and may be unsuitable for use in geothermal areas.

CONSULTATION FORM

PHOTOCOPY THIS FORM FOR EACH PERSON OR GROUP TO BE CONSULTED

Applicant		
Description of proposal		
Name of contact person		Contact number:
Name of group *(if appropriate)*		
Postal address		
Street address		
Email address		
Fax		

Consulted party's views on the proposal (to be completed by person/group consulted)

If you would like the Waikato Regional Council to know your views on the applicant's proposal, and/or if you consider you may be adversely affected, please indicate your views below (attach additional pages if necessary). Consider the following: How do you consider you will be affected? How would you like the applicant's proposal to be modified to take account of your views? What other comments do you have on the proposal that you would like the Waikato Regional Council to consider in making a decision on these resource consent applications?

Applicant's response to views of consulted parties (to be completed by applicant)

Please indicate how your proposal can be modified to take account of the views of the party you have consulted with (or why the proposal may not be able to be modified to take account of those views).

Consulted party's response to the proposal (to be completed by person/group consulted) *Please tick one only*

◯ I/We give my/our approval for the proposal

◯ I/We do not give my/our approval for the proposal

◯ I/We are not affected by this proposal

Signed _____ **Date** _____