Environment Bay of Plenty
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BAY OF PLENTY REGIONAL AIR PLAN

15 December 2003

Amendment 1 (Resource Management (National Environmental Standards for Air Quality) Regulations 2004) incorporated on 1 August 2012

Environment Bay of Plenty
Bay of Plenty Regional Council

RESOURCE MANAGEMENT ACT 1991

ENVIRONMENT BAY OF PLENTY
BAY OF PLENTY REGIONAL COUNCIL

BAY OF PLENTY REGIONAL AIR PLAN

The Bay of Plenty Regional Air Plan was prepared by the Bay of Plenty Regional Council under section 64 and the First Schedule to the Resource Management Act 1991.

The Bay of Plenty Regional Council approved that part of the plan that is not part of the coastal marine area and adopted that part of the plan in the coastal marine area by resolution of the Council on the 25th day of September 2003 in accordance with Clauses 17 and 18 of the First Schedule of the Resource Management Act 1991.

The Common Seal of the **BAY OF PLENTY REGIONAL COUNCIL** was affixed hereto this 25th day of September 2003 in the presence of:

John Cronin
Chairman

Jeff Jones
Chief Executive

The Minister of Conservation approved that part of the Bay of Plenty Regional Air Plan relating to the coastal marine area by signing it in accordance with Clause 19 of the First Schedule to the Resource Management Act 1991.

Chris Carter
Minister of Conservation

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1 Introduction

1.1 Bay of Plenty Regional Air Plan

Para 1 This Bay of Plenty Regional Air Plan has been prepared by Bay of Plenty Regional Council (Environment Bay of Plenty) on behalf of the people of the Bay of Plenty Region. This Plan has been prepared according to the requirements of Schedule 1 of the Resource Management Act 1991. The development of the Plan is outlined in Environment Bay of Plenty's Section 32 record. This includes the "Discussion Draft Regional Air Plan" and "Air Issues – A Regional Policy Statement Discussion Paper".

1.2 Coverage of the Regional Air Plan

Para 1 This regional air plan provides for the sustainable management of discharges of contaminants into air in the whole of the Bay of Plenty Region, including the coastal marine area. This includes all the land of the region and all the coastal water to the outer limits of the territorial sea (Figure 1).

Para 2 This plan is both a regional plan and a regional coastal plan. The Minister of Conservation is the final approval authority for all parts of the plan that apply to the coastal marine area.

Marine Pollution Regulations 1998

Para 3 The Resource Management (Marine Pollution) Regulations 1998 regulate activities involving the discharge of contaminants into air from ships and offshore installations. Incineration of waste in marine incineration facilities is specifically prohibited by regulation deemed to be a rule in this Plan. These regulations also permit some discharges of contaminants arising from scheduled normal operations of ships or offshore installations.

National Environmental Standards

Para 4 The National Environmental Standards (NES) are regulations issued under section 43 of the Resource Management Act 1991 by Government. An NES can prescribe technical standards, methods or requirements for environmental matters. The Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NESAQ) applies nationally from 8 October 2004, this means that in regard to ambient air quality, each local council must enforce the same minimum standards.

Para 5 NESAQ provides ambient air quality standards for five specific contaminants; carbon monoxide, nitrogen dioxide, PM_{10}, sulphur dioxide, and ozone. Environment Bay of Plenty monitors the first four of these. If monitoring shows the standard is exceeded then Environment Bay of Plenty is required to notify the public of the contaminant and its location until such time as the concentration of the contaminant is within acceptable limits of the standard.

Para 6 An airshed is any area in the region where people can be exposed to contaminants. PM_{10} is a contaminant that has been identified under the NESAQ as being of particular concern to health and the environment. PM_{10} includes finely divided material such as smoke, fine powers, vehicle emissions salt spray and the like that remains suspended in the air and can be breathed into the lungs.

Para 7 Where an airshed or a portion of an airshed exceeds the PM_{10} limit set by NESAQ the area is identified as requiring remedial attention. It ~~is~~ is aerial extent is defined on a map and gazetted. This gazetted area is referred to in this plan as a Local Air Management Area (LAMA), a publicly notified airshed, or a polluted airshed.

Para 8 A LAMA is created when monitoring shows that specified contaminants exceed the NESAQ standard. As of 1 September 2005 a LAMA has been designated in terms of particulate matter. PM_{10} concentrations already exceed the NESAQ standard set and are to be reduced to the concentration level set in NESAQ, by the deadline set in the NESAQ. At the time of writing this plan the only LAMA, publicly notified airshed, or polluted airshed, identified within our region is the Rotorua Urban Airshed. This may change in the future as other LAMA may be gazetted.

Para 9 Under the Resource Management Act 1991, NESAQ regulations take precedence over the requirements of a regional plan (for Environment Bay of Plenty this is the Regional Air Plan). Environment Bay of Plenty may set stricter standards for the Bay of Plenty if it considers that it is necessary, however it may not set standards below NESAQ requirements. The NESAQ requirements must be implemented when resource consent decisions are made and through planning documents. NESAQ stipulates the minimum ambient air quality requirements. The standard sets prohibited activities, controls for specified emissions, ambient air quality standards and monitoring.

Review

Para 14 The Plan must be reviewed within 10 years of becoming operative but may be reviewed at any time. A review may be required to update the plan in the light of ongoing legislative and regulatory changes. Any review will be undertaken according to the procedures outlined in Schedule 1 to the Resource Management Act 1991.

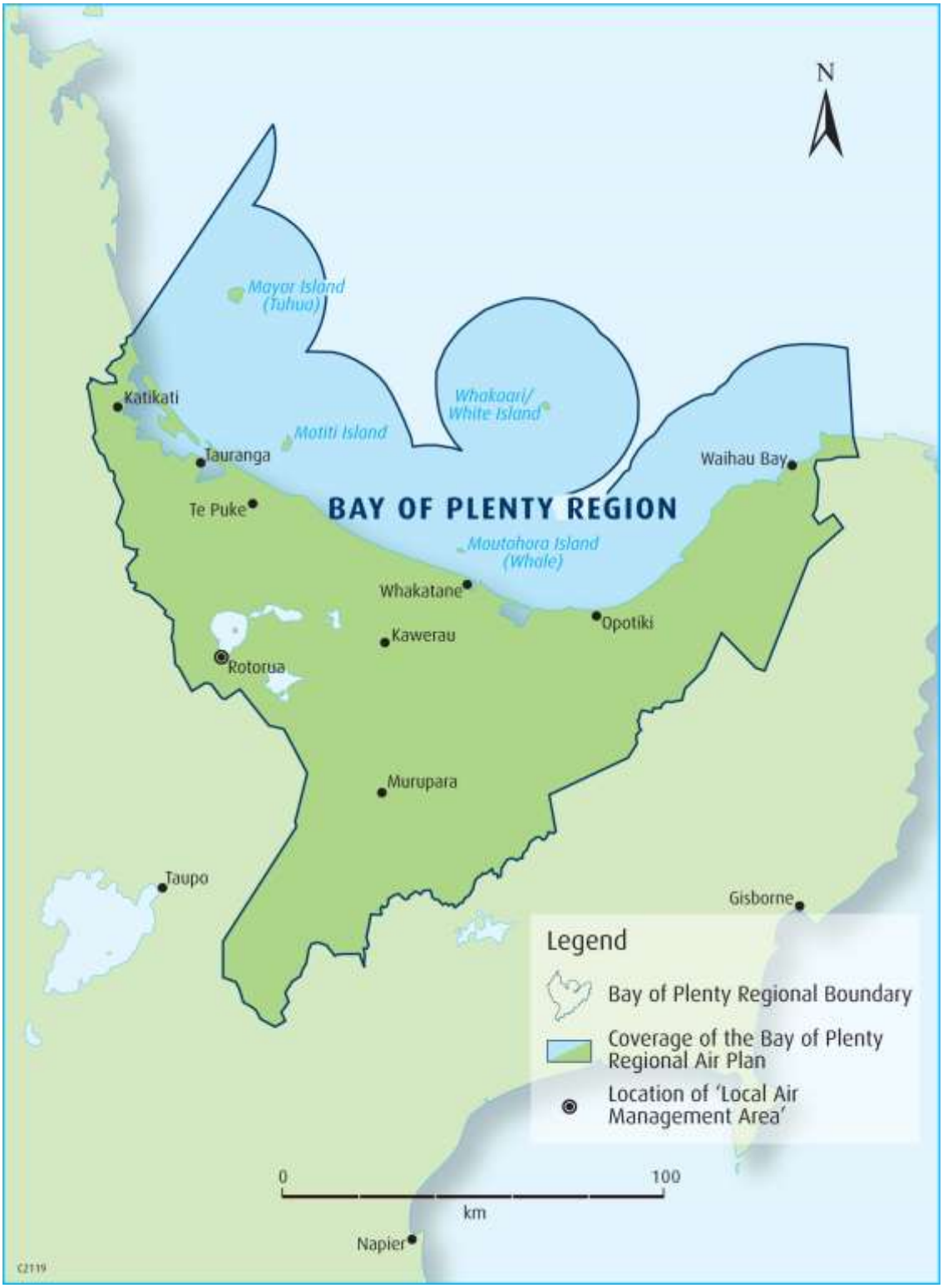

Figure 1 Coverage of the Bay of Plenty Regional Air Plan

1.3 Public Concerns

Para 1 Region wide surveys carried out in 1992 and 2005 identified air issues that people were concerned about. In addition, Environment Bay of Plenty has received from the public, complaints through its Pollution Hotline. These complaints have been an important way of making Environment Bay of Plenty aware of air issues causing concern to people.

Para 2 Issues identified include:

- Odour from industrial processes;
- Odour from sea lettuce around the Tauranga Harbour or lake weed around the Rotorua area;
- Odour from the disposal of liquid waste;
- Smoky vehicles;
- Smoke from chimneys/household fires/forest burnoffs/road seal burning;
- Particulate matter from natural occurrences such as Whakaari/White Island and pollen;
- Fumes from geothermal emissions; and
- The application of agrichemical sprays.

1.4 Air Quality Studies in the Bay of Plenty

Para 1 Environment Bay of Plenty's knowledge of air quality in the Bay of Plenty Region is increasing through monitoring. Studies of air quality in the region to date include:

- Bay of Plenty Local Air Management Areas, Environmental Publication 2005/08 (Environment Bay of Plenty, 2005);
- NERMN Air Monitoring Review, Environmental Publication 2004/03 (Environment By of Plenty, 2004);
- Bay of Plenty Regional Air Emission Inventory (Sinclair Knight Merz, 2003);
- Natural Environment Regional Monitoring Network (NERMN) Air Monitoring Report (Environment Bay of Plenty, 1999);
- Vehicle Emissions Scoping Report (Environment Bay of Plenty, 1998);
- Hydrogen sulphide, carbon monoxide and particulate matter in Rotorua (NIWA Report, 1996);
- Carbon monoxide and particulate matter in Tauranga (NIWA Report, 1996);
- Establishing the level of background nitrogen dioxide in the region using passive samplers (NIWA Report, 1995);
- Identifying levels of fluoride, sulphur dioxide and NO_x in Mount Maunganui (ESR Report, 1995);
- Identifying levels of total reduced sulphur (TRS), nitrogen oxides (NO_x), smoke oxidants and volatile organic compounds in Edgecumbe (ESR Report, 1992).

Para 2 In 1997 and 2003 air emission inventories were produced for Environment Bay of Plenty. These inventories provided estimates of the total quantities of contaminants released into the air from specific groups of sources within the region. The sources covered were transportation, industrial and commercial activities, agriculture, horticulture, forestry and geothermal sources.

1.5 Distinctive Factors Affecting Air Quality in the Bay of Plenty Region

Para 1 Distinctive factors that contribute to the air quality issues of the Bay of Plenty Region are summarised below. They are not ranked in order of significance. Section 2.1 provides a more detailed discussion of the issues.

1.5.1 Largest Export Port

Para 1 The Port of Tauranga Limited is the largest export (by volume) port in New Zealand. Discharges to air arise from shipping, cargo handling, and other export/import and servicing industries located next to the Port.

1.5.2 Large Industry Associated with Primary Sector

Para 1 There are large industrial facilities located in the region. These are mainly associated with processing of forestry and pastoral products (pulp, paper, timber, dairy, and meat), or the supply of inputs (fertiliser, fuel, chemicals, asphalt, and infrastructure). Discharges to air are produced by these facilities and in the servicing of them.

1.5.3 Diesel Fuel Use

Para 1 For the Bay of Plenty region the Opus emissions inventory figures for diesel show an increase in sales of 51% from 1996 to 2004/2005. The Bay of Plenty region diesel use is 9.7% of the total national consumption. The Bay of Plenty region is 'above per capita' for the consumption of diesel. This probably results from the greater than average use of transport (both road and rail) by forestry, agriculture and other productive sectors. Diesel use for transport results in emissions of contaminants including fine particulates (PM_{10}).

1.5.4 High Dairy & Agricultural Production

Para 1 The Bay of Plenty region is a significant producer of dairy products. There are a large number of dairy farms. The farms produce effluent waste, which is increasingly being disposed of by spray irrigation to land as disposal to water is being phased out for environmental reasons. Spray irrigation is a discharge to air.

Para 2 Grasslands release pollen on a seasonal basis.

1.5.5 Large Forestry Plantations

Para 1 Based on the MAF National Exotic Forest Description 2005 the Bay of Plenty Region has 22% of land area in exotic pine forestry plantations. This is second only to the Waikato region. Transport and forest product processing industries give rise to emissions to air. The forests release pollen on a seasonal basis.

1.5.6 High Horticultural Production

Para 1 Intensive horticultural and floricultural production occurs in parts of the region, taking advantage of good soils and favourable climate. A wide variety of agrichemicals, sprays in particular, are used to sustain production. Horticultural areas are often near urban or lifestyle areas. Pollen is released on a seasonal basis.

1.5.7 Natural Emissions to Air

Para 1 Significant odorous natural emissions to air occur in the Bay of Plenty. Examples are geothermal emissions from geothermal fields and volcanoes, emissions from rotting sea lettuce in estuaries and lake weed.

2 Issues

2.1 Introduction

Para 1 This section identifies the contaminants discharged into air in the Bay of Plenty region, describes the effects of these contaminants on the environment and states the particular issues to be addressed by this regional air plan.

Para 2 The quality of air contributes to people's quality of life. If air quality is degraded effects on the environment can be apparent such as health impacts, restrictions on recreation, damage to buildings or property, crop yield reductions, reduced natural biodiversity and impacts on the mauri of air.

Para 3 The discharge of contaminants into air affects air quality in the Bay of Plenty. Contaminants are discharged into air both from natural sources and as a result of human activity.

Para 4 Natural sources of contaminants into air include volcanoes and other areas of geothermal activity, pollen, and odour from decomposing vegetation around coastal and lake margins. Since natural sources are largely beyond human control, natural discharges of contaminants into air are not regulated by this regional air plan.

Para 5 Non-natural sources of contaminants include industrial emissions e.g. timber processing and sewage treatment plants and domestic activities e.g. home fires and vehicle emissions.

Para 6 However, as natural and non-natural discharges do affect air quality in the region, these emissions will be assessed as part of monitoring programmes run by Environment Bay of Plenty and will be taken into account, as appropriate, when applications for air discharge consents are assessed.

Para 7 Contaminants from human activity presently or potentially adversely affecting the region's air quality fit into one or more of the following categories:

- Gases;
- Particulates;
- Products of combustion;
- Odours;
- Agrichemicals;
- Geothermal emissions;
- Spray irrigated liquid waste;
- Electromagnetic radiation;
- Greenhouse gases;
- Ozone-depleting substances;
- Pollen – forestry, agricultural and horticultural.

Para 8 The present and/or potential effects caused by the discharge of these contaminants into air are described below.

2.2 Effects

Para 1 Contaminants may adversely affect the environment including the coastal marine area. Contaminants discharged into air may land on soil or water and be absorbed or mixed, altering the chemical composition. While discharges may contribute to productivity and so enable people to provide for their well-being, the discharges must be managed to control any adverse effects on the environment. These discharges may include fertiliser application and spraying. The contaminated soil and water may then affect plants, animals and people.

Para 2 Plants can be very sensitive to air pollutants. Plants may absorb contaminants from the air or soil, or contaminants may directly deposit on the plants, adversely affecting photosynthesis, pollination, growth and reproduction.

Para 3 Animals can be affected by contaminants discharged into air. Animals may breathe in contaminated air, suffering as a result irritations and respiratory problems. Animals may also consume contaminants which have been absorbed by or deposited on plants. Animals that have absorbed contaminants may be unfit for human consumption.

Para 4 Contaminants discharged into air may adversely affect human health. Problems caused include:

- irritation to the throat, nose and eyes;
- respiratory ailments;
- viral and bacterial ailments;
- cancer;
- stress and anxiety.

Para 5 Disease-causing organisms (including bacteria and viruses) may be transferred into air through spray irrigation of human and animal waste or the spreading of organic fertilisers.

Para 6 Amenity values are the qualities and characteristics of an area that influence how people appreciate that area. Contaminants discharged into air may cause discolouration and affect visibility, interrupting views. From time to time reduced visibility by an event such as rural burn-off/fire may lead to safety problems particularly for traffic. Amenity values may also be diminished through nuisance effects like the soiling of property. Some contaminants discharged into air may deposit on to buildings causing discoloration or corrosion.

Para 7 Offensive or objectionable odours[1] affect amenity values. Such odours may also affect human health, adding to stress and anxiety.

Para 8 The contemporary Maori view is that contaminants discharged into air may adversely affect the mauri of air, lands, waterways and other natural and physical resources important to tangata whenua. Allowing air pollution to occur unabated may cause offence to tangata whenua in their role as kaitiaki.

Para 9 There are two global air quality issues relevant to the Bay of Plenty region and these are greenhouse gases and ozone depleting substances. The adverse effects are on human health, quality of life and the natural environment.

[1] Refer to Section 5.7.5 Interpretation of the Terms Offensive and Objectionable.

Para 10 Cumulative effects occur when an area is affected by contaminants from a number of sources or by contaminants discharged over a period of time. Contaminants may also act synergistically with each other leading to increased adverse effects. For example, sulphur dioxide may be taken into the lungs on fine particulates.

Para 11 The potential effects of some contaminants are unknown, especially those which develop only from persistent exposures over long periods of time.

Para 12 The public is often unaware of the potential effects of some activities (including their own) that may result in discharges into air. This means that the effects may be greater than they need to be, or may occur unnecessarily.

2.3 Issue Statements

Issue 1 **The discharge of gases into air may adversely affect the environment, crops and livestock, human health, amenity values, cultural values, the mauri of natural and physical resources, and the global environment.**

Gases are discharged into air from a wide range of activities in the Bay of Plenty including:

- Common domestic activities e.g. house painting, cleaning;
- Numerous small commercial operations e.g. dry-cleaning;
- Some industries e.g.
  - The commercial use of steam and drying kilns;
  - Synthetic fertiliser manufacture (fluorides);
  - Industrial pulp bleaching (chlorine dioxin);
  - Industrial resin manufacture (formaldehyde);
- Accidental spillage or rupture.

The main sources of carbon monoxide and oxides of nitrogen are transport emissions although residential/commercial carbon monoxide emissions rise to over a third of the total emissions during winter. For sulphur dioxide the major contributors are transport and industrial emissions.

Objectives: 1, 2, 3, 4

Issue 2 **The discharge of particulates[2] into air may adversely affect the environment, crops, livestock, human health, amenity values, cultural values, and the mauri of natural and physical resources.**

Specific activities in the Bay of Plenty that discharge particulates are:

- Timber processes, including pulp and paper manufacture;
- Exposed soils produced by cropping, cultivation and other land development;
- Quarrying, rock crushing, gravel extraction, earthworks, construction and demolition works;
- The use of unsealed roads and yards;
- Abrasive blasting;

[2] Particulates: See Definition of Terms at the back of this plan.

- Paint removal;
- Spray painting;
- The manufacture, storage, transport and use of fertiliser, sawdust and other bulk dry products; and
- Agricultural, horticultural, forestry and other sources of pollen.

Particulate matter comes mainly from industrial activities followed closely by residential/commercial fuel use.

Objectives: 1, 2, 3, 4

Issue 3 **The discharge of the products of combustion into air may adversely affect the environment, human health, amenity values, cultural values, the mauri of natural and physical resources, and the global environment.**

The products of combustion include heat, smoke, toxic gases, greenhouse gases, odours, ash and charred pieces of wood.

Sources of the products of combustion in the Bay of Plenty include:

- Vehicles and other internal combustion engines;
- Combustion processes on trade and industrial premises;
- Burning domestic refuse;
- Domestic heating;
- Open burning;
- Incineration;
- Road burning.

Objectives: 1, 2, 3, 4

Advisory Note:

Discharges to air resulting from trade and industrial combustion activities can be controlled under a discharge permit to address adverse effects on the environment. NESAQ has set ambient air quality standards and monitoring requirements for five contaminants that adversely affect health and the environment. Amongst others NESAQ prohibits the open burning of tyres, oil, coated wire, and bitumen (road maintenance). NESAQ prohibits incinerators at schools and healthcare institutions unless resource consent has been granted for the activity.

Issue 4 **The discharge of odours into air may adversely affect human health, amenity values, cultural values, and the mauri of natural and physical resources.**

Odours are chemicals that cause a sensory response in the human nose. They can be perceived as pleasant or unpleasant depending on people's individual response.

Activities that produce odours include:

- Intensive farming e.g. piggeries, poultry farms;
- Composting operations;
- Silage pits;
- Rendering plants;
- Woolscourering and fellmongering;

- Tanneries;
- Food processing and preparation;
- Sewage and waste treatment operations;
- Bitumen processing;
- Resin manufacture;
- Synthetic fertiliser manufacture;
- Commercial chemical pulping.

Objectives: 1, 2, 3, 4

Issue 5 **The discharge of agrichemicals into air particularly on to non-target areas beyond the boundary of the subject property may adversely affect the environment, crops, human health, amenity values, cultural values, and the mauri of natural and physical resources.**

An agrichemical is any substance, whether inorganic or organic, man-made or naturally occurring, modified or in its original state, that is used in any agriculture, horticulture or related activity, to eradicate, modify or control flora and fauna. For the purposes of this plan, it includes agricultural compounds.

Activities that use agrichemicals include:

- Horticulture;
- Agriculture;
- Forestry;
- Eradication or management of organisms declared unwanted under the Biosecurity Act 1993;
- Park, reserve (including road reserves) and garden maintenance.

Objectives: 1, 2, 3, 4

Issue 6 **Geothermal emissions into air may adversely affect the environment, human health, amenity values, cultural values and safety.**

Human-influenced geothermal emissions from geothermal bores consist of steam and carbon dioxide with other trace gases such as hydrogen sulphide and heavy metals such as mercury.

Objectives: 1, 2, 3, 4

Issue 7 **The spray irrigation of liquid waste may adversely affect the environment, human health, amenity values, cultural values, and the mauri of natural and physical resources.**

Spray irrigation disposes of liquid effluents produced from the treatment of human or animal faecal and urinal wastes and liquid industrial waste by spraying the effluent into air and on to land.

Activities that use spray irrigation of liquid waste include:

- Municipal sewage disposal systems;
- Dairy sheds;
- Dairy factories;
- Other agricultural activities.

Objectives: 1, 2, 3, 4

Issue 8 **The discharge of electromagnetic radiation into air may adversely affect human health.**

Electromagnetic radiation is the emission and transmission of energy in the form of waves. An electromagnetic wave has an electric field component and a magnetic field component.

The sources of electromagnetic radiation may include:

- microwave repeaters, radar, radio and television transmitters; and
- microwave ovens.

Advisory Note:

The Ministry of Health and Ministry for the Environment have written a national standard (NZS 2772.1:1999) for maximum exposure levels to radiofrequency fields. Radio frequency field emissions that comply with this standard or subsequent standards are not considered to adversely affect human health.

Objectives: 2, 3

Issue 9 **The discharge of contaminants into air may have cumulative or synergistic adverse effects.**

The quality of air in the Bay of Plenty Region is dependent on human activities and natural processes. These activities can cause the following effects:

- Cumulative effects caused when a number of discharges add together to result in a larger scale effect. Examples include urban residential domestic fires and/or vehicle emissions causing smog in urban areas;
- Synergistic effects caused by interactions of chemicals causing a greater effect than the sum of the original emissions. For example exposure to both gaseous and particulate discharges together such as sulphur dioxide and particulate matter will increase the health effects of that exposure;
- Past, present, and future effects such as the discharges of greenhouse gases today that are predicted to affect future climatic patterns.

The main discharges are from domestic heating, large industrial trade processes and transport sources.

Objectives: 1, 2, 3, 4

Issue 10 **The discharge of contaminants into air may have adverse effects that are unknown or poorly understood.**

The effects of some contaminants on air quality are not well understood.

Objective: 3

Issue 11 **Insufficient public awareness of the potential adverse effects of the discharge of contaminants into air may allow those adverse effects to continue or worsen.**

The public need access to information for a reasonable understanding of the potential effect on the environment of activities (including their own) that result in discharges of contaminants into air. Raising awareness and changing actions can proactively help to minimise present and future air quality problems that the Region may experience.

Objective: 3

3 Objectives

Objective 1 Maintain and protect high air quality in the Bay of Plenty region and in instances or areas where air quality is degraded, to enhance it by specifically addressing discharges into air of gases, particulates, chemicals, agrichemicals, combustion and odour.

Policies: *1-4, 6-11*
Methods: *1-4, 10, 14, 16, 17, 22, 23, 32, 34-36, 38-41, 43*
Rules: *1 - 20 (all)*

Objective 2 Avoid, remedy or mitigate the adverse effects of all discharges of contaminants into air on the environment which includes the effects on: ecosystems, human health and safety, crops and livestock, amenity values, cultural values, the mauri of natural and physical resources and the global environment.

Policies: *1-12*
Methods: *1-6, 8-10, 12-15, 17-24, 28-33, 43*
Rules: *1-20 (all)*

Objective 3 The community achieves a high level of awareness of the adverse effects on the environment of discharges of contaminants into air.

Policies: *2, 7, 10, 11, 12*
Methods: *1-10, 17-22, 26, 29, 31, 33-39, 41, 44-46*
Rules: *1-20 (all)*

Objective 4 Provide for activities that have predictable and minor effects on the environment as permitted activities subject to compliance with conditions designed to ensure that the effects are avoided, remedied or mitigated.

Policies: *1(a), 3, 6, 10, 11*
Methods: *1-10, 17-22, 40-42, 46*
Rules: *1-17*

3.1 Principal Reasons for Adopting the Objectives

The intent of the objectives is to manage the discharge of contaminants into air to protect the region's generally high ambient air quality from adverse effects and enable people and communities to provide for their well-being. In most parts of the region, air is currently of a high quality which is valued by residents and visitors alike. With appropriate management of sources of contaminants, high air quality throughout the region is achievable.

These objectives enable the plan to focus on the issues that the effects of contaminants may have on the environment, e.g. geothermal emissions, liquid waste disposal by irrigation, electromagnetic radiation and any cumulative and/or synergistic effect.

The objectives will enable the community to be informed and understand adverse effects of discharges including those from their own actions.

4 Policies

Policy 1(a) Significant adverse effects of discharges of contaminants into air should be avoided.

Rule: 20

Policy 1(b) Adverse effects of discharges into air of contaminants that cannot be practicably avoided should be remedied or mitigated.

Methods: 28, 29
Rules: 1-17

Policy 2 When the effects of discharges of contaminants into air are not adequately understood or are unknown, the discharges should be avoided, and if the discharges cannot reasonably be avoided, they should be monitored so that the effects become known, understood and effectively managed.

For the avoidance of doubt, the effects of radio frequency emissions that comply with NZS 2772.1:1999, or subsequent standards, are considered to be adequately known, understood and effectively managed and are not required to be avoided.

Rules: 1-17

Policy 3 Discharges into air of contaminants identified as hazardous air pollutants or carcinogens (Schedule 3 – *Hazardous Air Pollutants*) are to be avoided, or where avoidance is not possible, the quantity of discharge is to be reduced using best management practice to acceptable levels, which are relevant national or international standards or guidelines.

Rules: 17, 29, 20

Policy 4 Promotion of the use of the best practicable option approach including the efficient use of resources e.g. raw materials and energy, whenever it is the most efficient and effective means of preventing or minimising adverse effects on air quality.

Methods: 17, 22

Policy 5 Separation of new activities from existing activities when the activities are incompatible due to sensitivity or reverse sensitivity, to the discharge of contaminants into air.

Methods: 30, 31, 32, 33, 34

Policy 6 Disposal and storage of waste should be undertaken in a manner that avoids, remedies or mitigates adverse effects on air quality.

Method: 22
Rules: 5, 19, 20

Policy 7 Encouragement of other organisations to meet their management responsibilities to reduce the adverse effects on air quality.

Methods: 1-18, 22-25

Policy 8 Cumulative and/or synergistic effects of discharges into air are to be considered when assessing the environmental effects of activities.

Rules: *1-20 (all)*

Policy 9 Encourage the development of land use and transport network design to assist in the promotion of energy efficiency and the reduction of discharges of contaminants into air.

Methods: *1, 12, 13, 14, 26, 27, 35*
Rule: *7*

Policy 10 Research and development by Environment Bay of Plenty of a comprehensive information database on actual or potential effects of discharges into air.

Methods: *19, 35-47*

Policy 11 Adverse effects on air quality that occur as a result of insufficient public awareness are to be reduced.

Methods: *1-10, 35-47*

Policy 12 Provide for the involvement of tangata whenua as kaitiaki (guardians) in the management of the mauri of air.

Methods *7, 20, 21, 38*

4.1 Explanation and Principal Reasons for Adopting the Policies

The policies are to guide decision-making. A number of policies (e.g. 1, 2, 6, 7, 9 and 10) address the discharge of contaminants into air by focusing on the source of the discharge and the location of that source. Failing to address the source of the problem and its location inevitably leads to unsatisfactory reactive measures.

After discharges of contaminants into air have occurred, their adverse effects may be difficult or impossible to remedy or mitigate. Therefore the policies require that discharges of contaminants causing significant adverse effects are avoided. However, since avoiding all discharges of contaminants is impracticable, the adverse effects from those discharges that cannot reasonably be avoided will need to be remedied or mitigated.

This approach of avoiding discharges of contaminants is continued in the policies promoting the use of the best practicable option approach, and encouraging energy efficiency.

Where discharges of contaminants cannot practicably be avoided, the policies recognise that their adverse effects should be remedied or mitigated. An important policy tool is the separation of incompatible activities – this does not avoid the discharge of contaminants but does reduce the adverse effects of those discharges. Reverse sensitivity is a term that describes the incompatibility of new activities with established activities. The concept implies a need to consider the 'sensitivity' of proposed activities to those that already exist in the area and avoid that incompatibility where possible. This concept recognises the importance of land use planning that ensures activities discharging significant or objectionable levels of contaminants into air are kept separate from sensitive land use activities such as residential use or vice versa.

Avoiding, remedying or mitigating adverse effects with the participation of tangata whenua as kaitiaki to protect the mauri of air.

Encouraging other organisations to meet their air quality management responsibilities ensures there are no overlaps and avoids Environment Bay of Plenty taking on tasks which are appropriate to the other organisations.

The policies recognise the need to gather information to assist decision making on air quality issues and increase public awareness of how to avoid adverse effects on air quality from the discharge of contaminants.

For Environment Bay of Plenty to adequately maintain and enhance air quality, a comprehensive information base on both air quality and those areas where problems are perceived or known, is necessary. To obtain the required information, a comprehensive air quality monitoring programme is needed. The policies recognise this and create a framework for establishing such a monitoring programme.

5 Methods of Implementation

5.1 Introduction

The regional air plan uses the following methods to implement the objectives and policies:

- Education;
- Advocacy;
- Land use planning;
- Air monitoring; and
- Rules.

Section 15(1)(c) of the Resource Management Act 1991 provides that discharges into air from any industrial or trade premises, are allowed only if authorised by a resource consent or by a rule in this plan or regulation under the Resource Management Act 1991. This means that unless a specific rule in this section of the plan provides otherwise, then it will be necessary for any discharge into air from a particular industrial or trade premises to be authorised by a resource consent obtained through the full application and assessment process set out within Part 6 of the Resource Management Act 1991.

Section15(2) of the Resource Management Act 1991 provides that discharges into air from any place or any other source, whether moveable or not, must not contravene a rule in a plan unless the discharge is expressly allowed by a resource consent, or regulations. This means that any discharges into air from any place or source that are not an industrial or trade premise are allowed, unless a rule in this plan provides otherwise.

Notwithstanding section 15(2) Resource Management Act 1991, section 15A(1)(b) Resource Management Act 1991 addresses incineration of waste in the coastal marine area, and section 15B(1)(a), 15B(1)(c), 15B(3), 15B(4), 15B(5) Resource Management Act 1991 address the discharge of harmful substances from ships or offshore installations.

The regional air plan contains rules which allow those discharges into air from trade and industrial premises or elsewhere which are likely to cause minor adverse effects or adverse effects which can be predicted and therefore avoided, remedied or mitigated by compliance with the permitted activity conditions.

Discharges into air where the adverse effects are likely to be significant or difficult to predict are deemed by the plan to be discretionary activities and will be considered on a case by case basis through the resource consent application process.

NESAQ are regulations (section 43 Resource Management Act 1991) that are to be implemented by each regional council. These include specific monitoring requirements, development of actions to improve ambient air quality, enforcing prohibited activities and implementing criteria to control how discretionary activities are accessed.

5.2 Education

Environment Bay of Plenty will:

Method 1 Set up a programme of voluntary vehicle emission testing to encourage vehicle owners to be aware of their vehicle emissions and keep their vehicles well tuned.

Method 2 Provide information on avoiding, remedying or mitigating adverse effects of the discharge of dusts and other particulates.

Method 3 Produce guidelines on measures to prevent or achieve efficient open burning. (Also refer Schedule 1 - Guideline 1: Good Management Practices to Prevent or Minimise the Discharges from Open Burning).

Method 4 Provide information on avoiding, remedying or mitigating adverse effects of the discharge of odorous contaminants.

Method 5 Provide information on the appropriate use of agrichemicals to ground based application contractors and operators, and domestic users, and as appropriate promote the GROWSAFE® training system or equivalent.

Method 6 Provide information on avoiding or mitigating adverse effects of the discharge of greenhouse gases and ozone depleting substances.

Method 7 Assist iwi to promote public awareness and understanding of air quality issues within iwi management plans.

Method 8 Work with the energy efficiency agencies to provide information on energy efficiency and energy conservation.

Method 9 Provide information on avoiding, remedying or mitigating adverse effects of the discharge of contaminants into air from spray irrigation of liquid waste.

Method 10 Provide information on avoiding, remedying or mitigating adverse effects of geothermal emissions into air.

Advisory Note:

Lack of understanding or awareness is often a primary reason an activity is being carried out in a manner that causes adverse effects on air quality. For example, people may not be aware of the effects a particular activity is having on the health and well-being of people and the environment, or they might not be aware of ways to achieve a better result. Many adverse effects can be addressed by talking the issue through with the persons and industries including agriculture discharging contaminants and making them aware of ways that those effects could be reduced.

5.3 Advocacy

Environment Bay of Plenty will:

Method 11 Advocate to central government the development of national air quality standards and guidelines.

Method 12 Advocate to central government the development of national policies to reduce motor vehicle emissions.

Method 13 Advocate to central government and relevant agencies the development and implementation of appropriate infrastructure and financial incentives to encourage the use of modes of transport, and fuels, which would help to minimise the emission of greenhouse gases.

Method 14 Advocate research into the human health effects of airborne pollen.

Method 15 Advocate research into the effects on health of community exposure to agrichemicals.

Method 16 Support initiatives aimed at better targeting and more efficient use of agrichemicals, including the development of alternative methods and the adoption of integrated pest management systems.

Method 17 Advocate to central government the development of national initiatives, policies and standards that avoid, remedy or mitigate the emission of greenhouse gases and ozone depleting substances.

Method 18 Quantify and report on its own discharges of greenhouse gases and ozone depleting substances and implement steps to avoid, remedy or mitigate such discharges.

Method 19 Work with iwi to develop air quality components of iwi management plans.

Method 20 Consider the air quality issues identified in iwi management plans when considering resource consent applications.

Method 21 Advocate the adoption of activities which have the opportunity to: use energy and resources more efficiently; avoid or reduce the amount of wastes produced; produce environmentally sound products and services and achieve less waste, fewer costs and higher profits.

Method 22 Actively promote the development of industry codes of practice in order to avoid, remedy or mitigate adverse effects on air quality from their operations. Where industry codes of practice are developed and they involve environmental management practices that are relevant to environmental protection, Environment Bay of Plenty will consider the code of practice when processing resource consent applications.

Method 23 Advocate to central government research into the health effects of electromagnetic radiation.

Method 24 Encourage other organisations to meet their air quality management responsibilities.

District/City Councils will:

Method 25 Consider air quality issues when prioritising roads in sealing programmes.

Advisory Note:

Advocacy involves actively supporting ideas and initiatives. Where an aspect of air quality management is another agency or central government responsibility, the advocacy method will be employed by lobbying the appropriate agency or central government to meet their responsibilities.

Environment Bay of Plenty wishes to have co-ordination and involvement with other organisations e.g. Ministry of Agriculture, Ministry of Health, Ministry for the Environment, Transit New Zealand, Conservancies etc. to acknowledge their roles, responsibilities, Acts and relevant legislation.

5.4 Land Use Planning

Environment Bay of Plenty will:

Method 26 Make submissions as appropriate on all draft and proposed district plans, advocating the consideration of fuel efficiency and energy use in urban planning and design.

Method 27 Negotiate with district councils to transfer to them under section 33 of the Resource Management Act 1991 requirements of effective dust management programmes in their consents for demolition, construction and small scale earthworks.

Method 28 Negotiate with district councils to transfer to them under section 33 of the Resource Management Act 1991 the management of discharges from waste disposal by burning on residential properties and burning in domestic fires.

Method 29 Make submissions as appropriate on all draft and proposed district plans, advocating the separation of activities likely to be incompatible due to sensitivity or reverse sensitivity to the discharge into air.

Method 30 Make comments or submissions as appropriate on subdivision or land use consent applications received from district councils for comment, advocating the separation of activities likely to be incompatible due to sensitivity or reverse sensitivity to the discharge into air.

Method 31 Provide information on discharges of contaminants to air requested by prospective property purchasers and encourage, where appropriate, district councils to provide any relevant air discharge information held by them on the subject property (e.g. Land Information Memorandum).

District/City Councils will:

Method 32 Consider air quality issues with efficiency of fuel and energy use in urban and transport planning and design.

Method 33 Use provisions in district plans to separate new activities likely to be incompatible due to sensitivity or reverse sensitivity to the discharge of contaminants into air.

Method 34 Consider potential incompatibilities due to sensitivity or reverse sensitivity to the discharge of contaminants into air, when considering applications for subdivision or land use consents.

Advisory Note:

Many air quality issues are directly related to incompatible neighbouring land uses. Through the land use planning methods of implementation, Environment Bay of Plenty will require district councils to take into account the effects on air quality of their land use decisions. It is important that the effects on air quality from land use activities are recognised when determining whether land use consents should be required for certain activities, or whether provisions should be made to encourage the separation of, or aggregation of, activities of similar or dissimilar effect.

These methods also recognise the important role that district councils have in land use planning and transport planning to help reduce the adverse effects of transport sources on air quality.

5.5 Air Monitoring

Environment Bay of Plenty will:

Method 35 Work with district councils to assess the impacts of transport planning on localised air quality.

Method 36 Develop by June 2000 and maintain a compliance monitoring programme for air discharge permits and permitted activities.

Method 37 Ensure that conditions on resource consents set out how assessment of compliance is to be measured in terms of the performance standards for each type of contaminant.

Method 38 Consult with tangata whenua to ensure that kaitiakitanga is recognised and provided for in monitoring programmes by June 2002.

Method 39 Identify the major sources, locations and characteristics of air emissions in the region by means of an emissions inventory which estimates the total quantities of contaminants released into the air in the region, by June 1998 and on a 5 yearly basis or as appropriate.

Method 40 Develop by June 1998 and review as required a "State of the Environment" air quality monitoring programme for the Bay of Plenty region.

Method 41 Collate information on the existing air quality of the region, identifying where information is required and the types of information required by June 1999.

Method 42 Develop and implement by July 1999 air quality impact monitoring programmes as appropriate and compare these results with recognised standards including the NESAQ and Ministry for the Environment's Ambient Air Quality Guidelines where possible.

Method 43 Consider incorporating relevant information on air quality received from the Ministry of Health and other organisations, into its reports.

Method 44 Work with the Bay of Plenty community and industries to share information on air quality monitoring.

Method 45 Ensure where appropriate that conditions on resource consents (permits to discharge into air) contain a clear programme for self monitoring by the consent holder, recognising that Environment Bay of Plenty will audit that monitoring.

Method 46 Provide the public with an effective method of communication of complaints which includes the Pollution Hotline.

Method 47 Evaluate information from all air quality monitoring programmes along with other tools such as public opinion surveys and feedback through the Pollution Hotline, to monitor the effectiveness of the regional air plan.

Advisory Note:

Clean Air Act and Resource Management Act 1991

The Bay of Plenty Regional Air Plan would ideally have been prepared based on a comprehensive understanding of air quality in the region. Previous air quality management legislation namely the Clean Air Act 1972 focussed on individual emission sources. To obtain the required information Environment Bay of Plenty has established a comprehensive air quality monitoring programme. This is a requirement under Section 35 of the Resource Management Act 1991 and is continually under review.

5.6 Rules

Advisory Note:

The rules apply to the discharge of contaminants into air from activities on land as well as in the coastal marine area. Readers of this plan are advised that as this plan also includes the coastal marine area, they should refer to relevant sections of the Resource Management (Marine Pollution) Regulations 1998.

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5.6.1 Permitted Activities

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5.6.5 Interpretation of the Terms Offensive and Objectionable

5.6.1 Permitted Activities

The Resource Management Act 1991 defines a permitted activity as an activity that is allowed by a plan without resource consent if it complies in all respects with any conditions (including any conditions in relation to any matter described in section 108 or section 220) specified in the plan.

Under section 77B(1) Resource Management Act 1991 a resource consent is not required for an activity permitted by a rule in a plan provided the activity complies with the standard, terms or conditions specified in the rule.

For the purpose of the rules of this plan, the "boundary of the subject property" for the Port of Tauranga Limited, extends into the coastal marine area to include that part subject to a coastal permit under section 384A of the Resource Management Act 1991 (in which the occupation of the coastal marine area shall be no more than 60 metres from the face of the wharves at the time the permit was granted.

Rule 1 **Permitted Activity – Abrasive Blasting (Permanent or Mobile)**

The discharge of particulates into air from permanent or mobile abrasive blasting operations is a permitted activity provided the following conditions are complied with:

(a) The surface to be blasted must not contain any toxic substances or heavy metal substances including but not limited to lead, zinc, arsenic, chromium, cadmium, copper, mercury, tributyl tin or thorium based compounds. This shall be determined before abrasive blasting takes place;

(b) When dry abrasive blasting is undertaken on an article that can fit into an abrasive blasting booth in its entirety, it shall be blasted in a sealed abrasive blasting booth with the air extracted from the booth cleaned of particulates with a maintained filtering system. When the article is going to be blasted in stages, the opening of the booth shall be screened and sealed to contain the discharge of particulate matter from the booth so the discharge is treated through the maintained filter;

(c) When dry abrasive blasting is undertaken on articles that cannot be moved to, or fit within an abrasive blasting booth, the particulate matter discharged from the abrasive blasting operation shall be contained by the best practicable option approach such as screening, wet nozzle attachments or vacuum blasting;

(d) There must be no objectionable or offensive levels of particulates or any harmful concentrations of contaminants beyond the boundary of the subject property or into water (refer to section 5.6.5(a));

(e) Material used for abrasive blasting must not contain more than 5% free silica on a dry weight basis;

(f) When mobile dry abrasive blasting techniques are used, the owner/occupier or agent must notify the occupier of any adjoining property when the abrasive blasting will be undertaken within 200 metres of that adjoining property. Notification shall include:

(a) An estimated date, time and duration of abrasive blasting; and

(ii) Be given at least 24 hours and not more than 2 weeks before the commencement of the work.

(g) Any abrasive media not in use or waste material should be kept covered or stored so that it cannot be blown around by wind. All debris and used

blasting material from mobile abrasive blasting operations must be removed from the site when operations are completed.

Advisory Note:

Discharges from coating surfaces (including spray painting) associated with this activity is permitted provided it complies with Rule 17 "Permitted Activity - General Activities" except for those subject to Rule 19(t).

Rule 2 **Permitted Activity – Paint removal, by methods other than abrasive blasting**

The discharge of particulates into air from the removal of lead, zinc, arsenic and chromium based paint by methods other than abrasive blasting is a permitted activity provided the following conditions are complied with:

(b) The paint removal must comply with Chapter 6 of the *Guidelines for the Management of Lead-based Paint* (Department of Labour, May 1995);

(c) The discharge must not result in any objectionable or offensive levels of particulates or odour or any harmful concentrations of contaminants beyond the boundary of the subject property or into water (refer Section 5.6.5(a)).

Rule 3 **Permitted Activity – Small Combustion Sources**

The discharge of any contaminant into air from fuel burning equipment (excluding vehicles which are covered in Rule 7) which generates a gross heat energy output within the combustion chamber of up to:

1) 500kW gross heat energy output from the combustion of clean oil, coal or untreated wood; or

2) 1MW gross heat energy output from the combustion of natural or liquefied petroleum gas,

is a permitted activity provided the following conditions are complied with:

(a) For equipment generating a gross heat energy output, within the combustion chamber, of less than 40kW, the discharge from a vent or chimney must not be restricted in a way that would:

(a) cause or increase the emission of particulates including smoke; or

(b) restrict the dispersion of particulates including smoke away from the site.

(c) For equipment generating a gross heat energy output within the combustion chamber of between:

1) 40kW and 500kW, from the combustion of clean oil, coal or untreated wood; or

2) 40kW and 1MW from the combustion of natural or liquefied petroleum gas,

the discharge must be an unimpeded vertical discharge from a chimney. In addition, all chimneys constructed after the date this regional air plan becomes operative must rise at least:

(i) 6m above the ground; and
(ii) 3m above the highest roofline on the roof of any building less than 20 m from the chimney.

(d) With the exception of the first 15 minutes from start-up, the visible emissions released from the top of the stack must not exceed an opacity of 20 % (equivalent to R1 on Ringelmann Chart New Zealand Standard 5201C:1975) for longer than 2 minutes continuously or for 4 minutes in any 60 minute period.

(e) The discharge must not result in any objectionable or offensive particulate deposition, smoke or odour, or any harmful concentrations of gases beyond the boundary of the subject property or into water (refer Section 5.6.5(a)).

(f) The sulphur content of fuel must not exceed 1 % by weight

(g) The discharge is not prohibited by the NESAQ.

Advisory Notes:

1. From 1 September 2005 the NESAQ prohibits the discharge from woodburners installed on certain properties. The regulation prohibits the installation of new woodburners on properties less than 2 hectares that do not meet thermal efficiency and discharge standards. See Regulations 22, 23 and 24 of the NESAQ.

2. From 1 December 2010 the Rotorua Air Quality Control Bylaw imposes additional restrictions on solid-fuel burning appliances used for domestic heating in the Rotorua Urban Airshed. See the Rotorua District Council – Rotorua Air Quality Control Bylaw.

3. From 1 June 2011 the NESAQ prohibits the discharge of particulates from certain open fires. The standard prohibits the discharge from new installations of domestic solid-fuel burning open fires in publicly notified airsheds. See Regulation 24A of the NESAQ.

Rule 4 **Permitted Activity – Medium Combustion Sources**

The discharge of any contaminant into air from fuel burning equipment, which generates a gross heat energy output within the combustion chamber of between:

1) 500kW and 5MW from the combustion of clean oil, coal or untreated wood; and

2) 1MW and 10MW from the combustion of natural or liquefied petroleum gas,

is a permitted activity provided the following conditions are complied with:

(a) The discharge must be an unimpeded vertical discharge from a chimney designed so that the minimum velocity of the discharge as it leaves the chimney exit at full load is 7m/s.

(b) For fuel burning equipment generating a gross heat energy output within the combustion chamber of between:

1) 500kW and 2MW from the combustion of clean oil, coal or untreated wood; or

2) 1MW and 4MW from the combustion of natural or liquefied petroleum gas,

all chimneys constructed after the date this regional air plan has become operative must rise at least:

(i) 12m above ground level and including;

(ii) at least 3m above the highest ridge line on the roof or any other roof within 20m.

(c) For equipment generating a gross heat energy output within the combustion chamber of between:

1) 2MW and 5MW from the combustion of clean oil, coal or untreated wood; or

2) 4MW and 10MW from the combustion of natural or liquefied petroleum gas,

all chimneys constructed after the date this regional air plan becomes operative must rise at least:

(i) 15m above ground level and including;

(ii) at least 3m above the highest ridge line on the roof or any other roof within 20m.

(d) With the exception of the first 15 minutes from start-up, the visible emissions released from the source shall not exceed an opacity of 20 % (equivalent to R1 on Ringelmann Chart New Zealand Standard 5201C:1975) for longer than 2 minutes continuously or for 4 minutes in any 60 minute period;

(e) The concentration of particulate matter shall not exceed 400 milligrams per cubic metre corrected to 0 degrees Celsius dry gas basis, 1 atmosphere pressure and 8 % oxygen;

(f) The mass discharge of particulate matter shall not exceed 2.5 kilograms per hour;

(g) Any suspended particulate arising from the activity shall not exceed the standard set in section 5.6.5(c)4;

(h) The discharge shall not result in any objectionable level of particulate deposition, smoke or odour, or any harmful concentrations of gases beyond the boundary of the subject property or into water (refer Section 5.6.5(a));

(i) The sulphur content of fuel shall not exceed 1 % by weight.

Advisory Note:

Refer to the Resource Management Act (Marine Pollution) Regulations 1998 which apply to ships and offshore installations.

Rule 5 **Permitted Activity – Open Burning**

The discharge of contaminants into air from combustion in the open air is a permitted activity provided the following conditions are complied with:

(a) The discharge must not result in any objectionable or offensive particulate deposition, smoke or odour, or any harmful concentrations of gases beyond the boundary of the subject property or into water (refer to section 5.6.5(a)).

(b) All reasonable measures must be taken to ensure good management practice when burning. Schedule 1 contains information on good management practices to prevent or minimise the discharges from open burning).

(c) Fires must not be lit when there is a likelihood of an inversion layer i.e. in cool (less than 5 degrees Celsius) and calm (wind speed below 1 knot/1.85 km per hour) conditions.

(d) The following materials must not be burnt in the open air:

(i) chlorinated organic chemicals including but not limited to dioxins, furans, polychlorinated biphenyls (PCB);

(ii) contaminated material from contaminated sites and buildings;

(iii) elemental materials that can produce toxic gases, including but not limited to boron, halides, phosphorus, sulphur;

(iv) food waste;

(v) heavy metals including but not limited to lead, zinc, arsenic, chromium, cadmium, copper, mercury, thorium;

(vi) material associated with the recovery of metal from insulated electrical cables;

(vii) materials or metals used in motor vehicles;

(viii) mineral fibres including but not limited to asbestos;

(ix) paint and other surface protective coatings;

(x) pathological waste excluding animal carcasses on production land;

(xi) pesticides, pesticide waste (excluding cardboard pesticide containers);

(xii) plastic including but not limited to polyvinylchloride (PVC), polystyrene, nylon, styrofoam;

(xiii) tyres and other rubber;

(xiv) treated timber or timber treatment chemicals;

(xv) waste oil or other waste petroleum products.

Note: 1 The Operative Bay of Plenty Regional Land Management Plan may require an application for a land use consent to burn vegetation.

2 The burning of vegetation may be subject to the provisions of the Forest and Rural Fires Act 1977 and a fire permit may be required from:

- The Department of Conservation (when burning occurs within 1 kilometre of any land administered by the Department);
- A district or city council acting as a rural fire authority;
- A forestry company that is a rural fire authority.

3 Vegetation burning on Crown land requires consent under the Land Act 1948 from the Commissioner of Crown lands.

Rule 6 **Permitted Activity – Commercial Aircraft**

The discharge of products of combustion into air from aircraft that conform to the operation and maintenance requirements of the Civil Aviation Act 1990 and amendments is a permitted activity.

Rule 7 **Permitted Activity – Vehicles and Small Internal Combustion Sources**

The discharge of contaminants into air from vehicles including but not limited to cars, trucks, ships, trains, micro lights, amateur built aircraft, boats, and small combustion sources including but not limited to chainsaws and lawnmowers, is a permitted activity provided that at least one of the following conditions is complied with:

(a) The discharge must not result in smoke continuously visible for 10 seconds or more; or

(b) The discharge for 2-stroke engines complies with the manufacturers specification.

Rule 8 **Permitted Activity – Emergency Disposal of Animal Carcasses**

The discharge of contaminants into air from the emergency burning in the open of dead diseased marine mammals and dead diseased livestock is a permitted activity provided the following conditions are complied with:

(a) Disposal must be carried out under the direction of either the Ministry of Agriculture and Forestry for dead diseased livestock or the Department of Conservation for dead diseased marine mammals.

(b) Environment Bay of Plenty must be notified a minimum of 1 hour before burning begins.

Rule 9 **Permitted Activity – Spray Irrigation of Liquid Waste**

The discharge of contaminants into air from the spray irrigation of liquid wastes is a permitted activity provided the following conditions are complied with:

(a) The discharge must not result in objectionable or offensive odour or particulates, beyond the boundary of the subject property;

(b) The discharge must not result in harmful concentrations of contaminants beyond the boundary of the subject property or into water;

(c) spray irrigation of liquid waste must not be carried out within 20 metres of the boundary of the subject property (or properties) or within 20 metres of any surface water body.

Rule 10 **Permitted Activity – Use of agrichemicals for the eradication or management of organisms declared unwanted under Sections 143 and 144 of the Biosecurity Act 1993.**

The discharge of agrichemical into air for the eradication or management of organisms declared unwanted under Sections 143 and 144 of the Biosecurity Act 1993 is a permitted activity provided the following conditions are complied with:

(a) Any contractor using or applying any agrichemical by ground based application methods shall hold a minimum of a current GROWSAFE® Registered Chemical Applicators Certificate or equivalent.

(b) Any person, other than any contractor provided for in (a) above, using or applying an agrichemical identified either on its product label, or in the First or Second Schedule of the Toxic Substances Regulations 1983 as containing a compound rated as either a:

"DANGEROUS POISON"; or

"DEADLY POISON",

shall hold a minimum of a current GROWSAFE® Introductory Certificate or equivalent.

(c) Any person, other than any contractor provided for in (a) above, using or applying an agrichemical identified on its product label as containing a compound rated as either a:

- "POISON"; or
- "CAUTION",

or is listed in the Third or Fourth Schedules to the Toxic Substances Regulations 1983 as a:

- "STANDARD POISON"; or
- a "HARMFUL SUBSTANCE",

shall hold a minimum of a current GROWSAFE® Introductory Certificate or equivalent or be under the direct supervision of a person holding a current GROWSAFE® Applied Certificate or equivalent.

(d) The agrichemical must be used under the direction of the Department whose responsibilities are adversely affected by the unwanted organism or Environment Bay of Plenty where unwanted organisms are managed.

(e) There must be no harmful concentrations of agrichemical beyond the boundary of the subject property or into water.

(f) When ground based application methods are used the occupier of any adjoining properties must be notified of the agrichemical use. Notification must be no earlier than 20 days and no later than 12 hours before the agrichemical use unless agreement on an alternative manner of notification can be reached with the adjoining occupier.

(g) Agrichemical use from aircraft must be publicly notified not earlier than 20 days and no later than 12 hours before the agrichemical use.

(h) Notwithstanding the requirements of this rule any person applying agrichemicals from an aircraft shall comply with Rule 13 of this plan.

Rule 11 Permitted Activity – Use of Agrichemicals – Non-Motorised Hand-held Application

The discharge of contaminants into air from the non-motorised hand-held application of agrichemical is a permitted activity provided the following conditions are complied with:

(a) (i) Any contractor using or applying any agrichemical by ground based application methods shall, within twelve months of this plan becoming operative (15 December 2003), hold a current GROWSAFE® Registered Chemical Applicators Certificate or equivalent.

(ii) Any person using or applying agrichemicals for commercial purposes (other than a contractor provided for in (a)(i) above) when using or applying an agrichemical identified on its product label, or in the First or Second Schedule of the Toxic Substances Regulations 1983 as containing a compound rated as either a:

- "DANGEROUS POISON"; or
- "DEADLY POISON",

shall within twelve months of this plan becoming operative (15 December 2003), hold a minimum of a current GROWSAFE® Introductory Certificate or equivalent or be under the direct supervision of a person holding a current GROWSAFE® Introductory Certificate or equivalent.

(b) All persons discharging agrichemicals under this rule shall ensure that:

(i) The agrichemical is discharged in a manner that does not contravene any requirement specified in the manufacturer's instructions.

(ii) The commercial application of agrichemicals, complies with NZS 8409: 1999 Code of Practice For The Management of Agrichemicals.

(c) The agrichemical use must not result in any harmful concentration of agrichemical beyond the boundary of the subject property or into water.

Note: Extra care should be exercised when applying any phenoxy based herbicide. In particular, 2, 4-D butyl ester herbicide sprays have the potential to travel long distances through the air. Although butyl ester herbicide has not been manufactured since 1997, existing stocks can still legally be applied. Further information on spray drift hazard is included in Appendix Y of NZS 8409: 1999 Code of Practice for the Management of Agrichemicals.

(d) Where agrichemical is applied on public land, public roads or railways, notification of that agrichemical use must comply with the requirements of Schedule 2.

Rule 12 Permitted Activity – Use of Agrichemicals from Aircraft

The discharge of contaminants into air from the use of agrichemicals from aircraft is a permitted activity provided the following conditions are complied with:

(a) The discharge must not result in any harmful concentration of agrichemical beyond the boundary of the subject property or into water.

(b) The applicator must hold a minimum of a:

(i) Pilot Chemical Rating (Civil Aviation Authority) (aerial application) and;

(ii) GROWSAFE® Pilots Agrichemical Rating Certificate or equivalent.

(c) The agrichemical must be used in a manner complying with NZS 8409:1999 Code of Practice for the Management of Agrichemicals.

(d) The owner/occupier or agent must notify the occupier of any adjoining properties within 200m of that agrichemical use. If an agreed form of notification has not been reached, such as an annual spray or application plan and individual notification of certain chemicals to be used, notification must be no earlier than 20 days and no later than 12 hours before the agrichemical use. This condition does not apply to agrichemical use on public land or land used for road or rail purposes. The property owner or agent acting on behalf of the property owner must advise the aerial applicator that notification has occurred before the aerial application of any agrichemical is undertaken. Notification must include the following:

(i) the site of proposed application;

(ii) the date of proposed application;

(iii) name and type of agrichemical to be applied;

(iv) name, address, phone number and registration number of applicator.

Note: Extra care should be exercised when applying any phenoxy based herbicide. In particular, 2, 4-D butyl ester herbicide sprays have the potential to travel long distances through the air. Although butyl ester herbicide has not been manufactured since 1997, existing stocks can still legally be applied. Further information on spray drift hazard is included in Appendix Y of NZS 8409: 1999 Code of Practice for the Management of Agrichemicals.

(e) Where agrichemicals are applied to land adjoining public roads and places, signs must be placed on the road boundary 24 hours before the time of application and removed by the applicator when safe for re-entry. The signs must include the following information:

(i) The agrichemical used;

(ii) The time of application;

(iii) The time for safe re-entry;

(iv) The name and contact details of the applicator.

(f) The applicator must notify Environment Bay of Plenty immediately in the event of any discharge of agrichemical beyond the boundary of the subject property.

Rule 13 Permitted Activity – Use of Agrichemicals – Other Application Techniques (Excluding Non-Motorised Hand-held and Aerial Application)

The discharge of contaminants into air from the use of agrichemicals, excluding non-motorised hand-held or aerial application, is a permitted activity provided the following conditions are complied with:

(a) The discharge must not result in any harmful concentration of agrichemical beyond the boundary of the subject property or into water.

(b) (i) Any contractor using or applying any agrichemical by ground based application methods shall, within twelve months of this plan becoming operative (15 December 2003) hold a current GROWSAFE® Registered Chemical Applicators Certificate or equivalent.

(ii) Any person using or applying agrichemicals for commercial purposes (other than a contractor provided for in (b)(i) above) when using or applying an agrichemical identified on its product label, or in the First or Second Schedule of the Toxic Substances Regulations 1983 as containing a compound rated as either a:

"DANGEROUS POISON" or

"DEADLY POISON",

shall within twelve months of this plan becoming operative (15 December 2003) hold a minimum of a current GROWSAFE® Introductory Certificate or equivalent or, be under the direct supervision of a person holding a current GROWSAFE® Applied Certificate or equivalent.

(c) All persons discharging agrichemicals under this rule shall ensure that the agrichemical is used in a manner that complies with NZS 8409:1999 Code of Practice for the Management of Agrichemicals.

(d) The owner/occupier or agent must notify the occupier of any adjoining properties within 50m of that agrichemical use. Except that where agrichemicals are applied using a motorised boom, which meets the following design conditions, notification is only required when the agrichemical application occurs within 10m of an adjoining property. The design conditions are:

(i) the liquid pressure through the boom is less than 3 bar;

(ii) the height of the discharge point on the boom is less than 1 metre from the ground;

(iii) the nozzles point down;

(iv) the nozzles are designed to create coarse droplets of greater than 250 microns in diameter.

If an agreed form of notification has not been reached, such as an annual spray or application plan and individual notification of certain chemicals to be used, notification must be no earlier than 20 days and no later than 12 hours before the agrichemical use. This condition does not apply to agrichemical use on public land, or land used for road or rail purposes (see Rule 13 condition (e)). Notification must include the following:

(v) the site of proposed application;

(vi) the date of proposed application;

(vii) name and type of agrichemical to be applied;

(viii) name, address and phone number of applicator.

Note: Extra care should be exercised when applying any phenoxy based herbicide. In particular, 2, 4-D butyl ester herbicide sprays have the potential to travel long distances through the air. Although butyl ester herbicide has not been manufactured since 1997, existing stocks can still legally be applied. Further information on spray drift hazard is included in Appendix Y of NZS 8409: 1999 Code of Practice for the Management of Agrichemicals.

(e) Where agrichemical is applied on public land, public roads, or railways, notification of that agrichemical use must comply with the requirements of Schedule 2.

(f) Where agrichemicals are applied to land adjoining public roads and places, signs must be placed on the road boundary 24 hours before the time of application and removed by the applicator when the land is safe for re-entry. Where agrichemicals are applied using a boom the signs are only required when the application occurs within 6m of a public road or place, or if the boom does not meet the following design features:

(i) the liquid pressure through the boom is less than 3 bar;

(ii) the height of the discharge point on the boom is less than 1 metre from the ground;

(iii) the nozzles point down;

(iv) the nozzles are designed to create coarse droplets of greater than 250 microns in diameter.

The signs must include the following information:

(v) The agrichemical used;

(vi) The time of application;

(vii) The time for safe re-entry;

(viii) The name and contact details of the applicator.

Note: There are statutes that must be complied with when considering the use of agrichemicals. Compliance with the rules for the use of agrichemicals in the Bay of Plenty Regional Air Plan should not be construed as absolving users from complying with relevant statutes.

Environment Bay of Plenty strongly recommends that any person using or applying any agrichemical under this Rule, other than either a "dangerous poison" or a "deadly poison", should hold a minimum of a current GROWSAFE® Introductory Certificate or equivalent or be under the direct supervision of a person holding a current GROWSAFE® Introductory Certificate or equivalent. Any person using or applying either a "dangerous poison" or a "deadly poison" must comply with the certification requirements of Rule 13(b).

Rule 14 Permitted Activity – Unsealed Roads

The discharge into air of particulates from unsealed roads is a permitted activity. The definition of an unsealed road excludes road works on sealed roads.

Rule 15 Permitted Activity – Ventilation of Liquid Storage Tanks and Tankers

The discharge of contaminants into the air from the ventilation and displacement of liquids in storage tanks and tankers is a permitted activity provided the following conditions are complied with:

(a) The discharge must not result in objectionable or offensive odour or particulates beyond the boundary of the subject property or into water;

(b) There must be no harmful concentrations of contaminants beyond the boundary of the subject property or into water.

Rule 16 Permitted Activity – Venting of Geothermal Gas and Steam

The discharge of geothermal gases and steam into air from any bore or soakage hole subject to a permission to take or discharge geothermal heat or water from a geothermal source with water temperatures of equal to or more than 70 degrees Celsius, is a permitted activity, provided the following conditions are complied with:

(a) The gas or steam must discharge vertically upwards;

(b) All vents constructed after the date this regional air plan became operative must have sufficient height to ensure that the plume is unaffected by downdraft. , and at a minimum must rise at least 6m above ground level including 3m above the highest ridge line on any roof within 30m;

(c) The discharge must not result in objectionable or offensive odour or particulates beyond the boundary of the subject property or into water;

(d) There must be no harmful concentrations of contaminants beyond the boundary of the subject property or into water;

(e) The take or discharge of geothermal heat or water is less than 1000 tonnes per day.

For the purpose of this rule permission to take or discharge geothermal water or heat or energy means any one of the following:

(i) A take or use permitted by section 14(3)(c) of the Resource Management Act 1991.

(ii) A take or discharge of geothermal water expressly described as a permitted activity in a regional plan.

(iii) A resource consent granted under the Resource Management Act 1991, to take or discharge geothermal water.

Rule 17 **Permitted Activity – General Activities**

All other discharges of contaminants into air which are not subject to an express rule in this regional air plan shall be a permitted activity subject to compliance with the following conditions. If the conditions cannot be complied with the activity shall be a discretionary activity.

(a) The discharge of smoke or water vapour must not adversely affect traffic safety, aircraft safety, boat safety or visibility beyond the boundary of the subject property. The opacity of any smoke must be less than 20% which is equivalent to R1 on Ringelmann Chart New Zealand Standard 5201C:1975;

(b) The discharge must not result in objectionable or offensive odour or particulates beyond the boundary of the subject property or into water;

(c) There must be no harmful concentrations of contaminants beyond the boundary of the subject property or into water;

(d) Any emissions of hazardous air pollutants (listed in Schedule 3 – Hazardous Air Pollutants of this plan must be minimised and in any event must be no more than 1 kilogram per hour except that:

(i) For category 1, 2A and 2B carcinogens listed in Schedule 3, or any heavy metals listed in Schedule 3, the maximum emission rate must not exceed 0.01 kilograms per hour. If a substance is listed as both a hazardous air pollutant and a carcinogen in Schedule 3, the 0.01 kilograms per hour rate applies.

(ii) For dioxins the maximum emission rate must not exceed 0.02 grams toxic equivalents per year. For the purpose of this rule dioxins include polychlorinated dibenzodioxins, polychlorinated dibenzofurans and other chemicals such as polychlorinated biphenyls, which are known to have dioxin-like effects.

(e) Any dust arising from an activity should meet the requirements of section 5.6.5(c)4 of this plan.

Advisory Note:

1. The emission of furans and dioxins can be determined from the maximum emission factors given in the New Zealand inventory of dioxin emissions (Ministry for the Environment, March 2000).

5.6.2 Controlled Activities

If an activity is described in the Resource Management Act 1991, regulations, or a plan or proposed plan as a controlled activity –

(aa)a resource consent is required for the activity; and

(a) *the consent authority must grant the resource consent; unless it has insufficient information to determine whether or not the activity is a controlled activity; and*

(b) the consent authority must specify in the plan or proposed plan matters over which it has reserved control; and

(c) the consent authority's power to impose conditions on the resource consent is restricted to the matters that have been specified under paragraph (b); and

(d) the activity must comply with the standards, terms, or conditions, if any, specified in the plan or proposed plan.

Advisory Notes:

1. This definition is from Section 2 of the Resource Management Act 1991 (s.77B(2)) and may change as a result of future amendments to the Act.

2. Under section 93(1)(a) of the RMA an application for a controlled activity will not be notified.

Rule 18 **Controlled Activity – Intensive Farming**

The discharge of contaminants into air from intensive farming is a non-notified controlled activity for which applications will be considered without the need to obtain the written approval of affected persons, subject to compliance with the following condition:

The discharge is from a permanent intensive farming operation established prior to 1 January 2001.

For the purpose of imposing conditions, Environment Bay of Plenty reserves control over the following matters:

- setting conditions to control odour, and particulates including but not limited to any matter contained in relevant industry codes of practices;
- duration of consent;
- compliance monitoring;
- review of the conditions of the consent and the timing and purpose of the review; and
- payment of administrative charges.

5.6.3 Discretionary Activities

If an activity is described in the Resource Management Act 1991, regulations, or plan or proposed plan as a discretionary activity –

(a) a resource consent is required for the activity; and

(b) the consent authority may grant the resource consent with or without conditions or decline the resource consent; and

(c) the activity must comply with the standards, terms, or conditions, if any, specified in the plan or proposed plan.

Advisory Note:

This definition is from Section 2 of the Resource Management Act 1991 (s.77B(4)) and may change as a result of future amendments to the Act.

Rule 19 **Discretionary Activity – Specified Activities**

The discharge of contaminants into air from the following activities is a discretionary activity:

(a) Aluminium smelters;

(b) Animal rendering and by-product processing plants;

(c) Asphalt or bitumen manufacture or processing;

(d) Combustion sources (excluding powered vessels) which generate a gross heat energy output within the combustion chamber greater than:

(i) 5 megawatt using as a fuel clean oil, coal or untreated wood; or

(ii) 10 megawatt using as a fuel natural or liquefied petroleum gas;

(e) Commercial breweries;

(f) Commercial distilling operations including but not limited to petroleum refining;

(g) Commercial fellmongering;

(h) Commercial foundries and metallurgical processing;

(i) Commercial glass making;

(j) Galvanising of steel;

(k) Enclosed incineration of the following materials:

(i) chlorinated organic chemicals including but not limited to dioxins, furans, polychlorinated biphenyls (PCB);

(ii) contaminated material from contaminated sites and buildings;

(iii) elemental materials some of which can produce toxic gases, including but not limited to boron, halides, phosphorus, sulphur;

(iv) heavy metals including but not limited to lead, zinc, arsenic, chromium, cadmium, copper, mercury, thorium;

(v) material associated with the recovery of metal from insulated electrical cables and wire coated with any material;

(vi) materials or metals used in motor vehicles;

(vii) mineral fibres including but not limited to asbestos;

(viii) paint and other surface protective coatings;

(ix) pathological waste excluding animal carcasses on production land;

(x) pesticides, pesticide waste (excluding cardboard pesticide containers);

(xi) plastic including but not limited to polyvinylchloride (PVC), polystyrene, nylon, styrofoam;

(xii) tyres and other rubber;

(xiii) treated timber or timber treatment chemicals;

(xiv) waste oil or other waste petroleum products.

(l) Industrial resin or glue manufacture;

(m) Intensive farming established on or after 1 January 2001;

(n) Milk powder or milk based powder manufacture;

(o) Commercial paint manufacture;

(p) Processing of radioactive substances;

(q) Commercial kraft and chemical pulping or reconstituted wood panel manufacture;

(r) Pyrolysis or gasification of carbonaceous material;

(s) Rubber manufacture;

(t) Spray painting with di-isocyanates;

(u) Steel mills;

(v) Synthetic fertiliser manufacture;

(w) (i) Refuse transfer stations, or landfills (excluding untreated wood waste and clean fill), municipal sewage treatment plants but excluding sewage pumping stations and on-site effluent treatment systems permitted under the On-site Effluent Treatment Regional Plan;

(ii) Commercial composting, treatment or disposal of waste, but excluding sewage pumping stations and on-site effluent treatment systems permitted under the On-site Effluent Treatment Regional Plan;

(x) Woolscourers and dag crushing plants;

(y) The operation of an incinerator at a school or a healthcare institution;

(z) Any activity that cannot comply with the conditions set out in Permitted Activity Rules 1-17 and which is not a controlled activity or a prohibited activity

Advisory Notes:

1. Rule 19(y): NESAQ has qualified that incinerators are not school or hospital boilers. Waste should not be used as fuel source or disposed of in boilers. All schools and hospitals with existing waste incineration must obtain resource consent by 1 October 2006.

2. From 1 June 2011 Regulation 17 of the NESAQ requires the Regional Council to decline resource consents for new discharges, and some existing discharges of particulate matter, in polluted airsheds, unless offsets are provided. See Section 7 – Resource Consent Applications.

5.6.4 Prohibited Activities

The Resource Management Act 1991 defines a prohibited activity as an activity which no application may be made for that activity and a resource consent must not be granted for it.

Advisory Note:

This definition is from Section 2 of the Resource Management Act 1991 (s.77B(7)) and may change as a result of future amendments to the Act.

Rule 20 Prohibited Activity – Open Burning of Specified Material

The discharge of contaminants into air from the combustion in the open air of the following materials is prohibited:

(i) chlorinated organic chemicals including but not limited to dioxins, furans, polychlorinated biphenyls (PCB);

(ii) contaminated material from contaminated sites and buildings;

(iii) elemental materials some of which can produce toxic gases, including but not limited to boron, halides, phosphorus, sulphur;

(iv) commercial food waste;

(v) heavy metals including but not limited to lead, zinc, arsenic, chromium, cadmium, copper, mercury, thorium;

(vi) material associated with the recovery of metal from insulated electrical cables or the burning of wire coated with any material;

(vii) materials or metals used in motor vehicles;

(viii) mineral fibres including but not limited to asbestos;

(ix) paint and other surface protective coatings;

(x) pathological waste excluding animal carcasses on production land;

(xi) pesticides, pesticide waste (excluding cardboard pesticide containers);

(xii) plastic including but not limited to polyvinylchloride (PVC), polystyrene, nylon, styrofoam;

(xiii) tyres and other rubber;

(xiv) treated timber or timber treatment chemicals;

(xv) oil, waste oil or other waste petroleum products.;

(xvi) lighting fires and burning of waste at landfills;

Advisory Note:

In addition to the materials in this rule, Regulations 4 and 8 of the NESAQ prohibit the discharge of a contaminant to air from the burning of bitumen on a road.

5.6.5 Interpretation of the Terms Offensive and Objectionable

Several rules in this Plan use the terms "offensive" and "objectionable". These terms are also included in Section 17(3)(a) of the Resource Management Act 1991. They are not, however, defined in the Resource Management Act 1991 and this means that they bear their natural and ordinary meaning as applied by common English usage.

The terms are not defined in the "Definition of Terms" to this Plan because of the need to take account of case law precedents as they develop. This is because the Plan cannot override interpretations decided by the judiciary. However, the following is intended to provide some guidance for interpreting these terms and how Environment Bay of Plenty will determine whether or not an operation is complying with the permitted criteria or condition of a resource consent.

Advisory Note:

That the boundary for discharges into the air arising from port operations shall be in accordance with the coastal permit under Section 384A of the Resource Management Act 1991 (in which the occupation of the coastal marine area shall be no more than 60m from the face of the wharves at the time the permit was granted).

5.6.5(a) Offensive, Objectionable

"Offensive" is defined as "…giving or meant to give offence…disgusting, foul smelling, nauseous, repulsive…". "Objectionable" is defined as "open to objection, unpleasant, offensive". Case law has established that what may be offensive or objectionable under the Resource Management Act 1991 cannot be defined or prescribed except in the most general of terms. Each case will depend upon its own circumstances. Key considerations include:

1 *Location of an activity and sensitivity of the receiving environment* – What may be considered offensive or objectionable in an urban area may not necessarily be considered offensive or objectionable in a rural area;

2 *Reasonableness* – Whether or not an activity is offensive or objectionable should be determined by an ordinary person who is representative of the community at large, deciding whether the activity is disgusting, nauseous, repulsive or otherwise objectionable. This assessment will mainly involve Council Officers;

3 *Existing uses* – It is important to consider what lawfully established activities exist in the area, i.e. if a new activity requires a permit, the effect of existing discharges of contaminants into air should be considered (sensitivity or reverse sensitivity).

Each investigation of a complaint concerning offensive or objectionable discharges will depend upon the specific circumstances.

5.6.5(b) Odour

Odour as defined under Issue 4 of this plan. Every person has an individual response to smells and the perception of an odour is often related to the individual's background, experience and sensitivity. For example the smell of silage may remind someone of his or her farming background but to another person the smell may be very offensive. These factors make odour a contentious and subjective issue and difficult to measure.

For odour, the approach will be as follows:

1 A Council Officer who has experience in odour complaints will make an assessment of the situation. This assessment will take into account the FIDOL factors which are:

- **Frequency** of occurrence;
- **Intensity** of the odour;
- **Duration** of exposure to the odour;
- **Offensiveness** of the odour; and
- **Location** of the discharge (refer 5.6.5(a)1).

2 If the discharge is deemed to be offensive or objectionable by the Council Officer, the discharger will be asked to take whatever action is necessary to avoid, remedy or mitigate the effects of the discharge on the environment.

3 If the discharger disputes the Council Officer's assessment or the problem is ongoing, then a number of approaches may be taken, including one of more of the following:

- An assessment by another Council Officer;
- Asking people living and working in the subject area to keep a diary which notes details of any offensive or objectionable odours;
- Promoting the use of community working groups and other means of consultation between the affected community and the discharger;
- Using the services of an independent consultant to carry out an investigation and/or community survey;
- Undertaking an odour assessment using an olfactometer, or other appropriate technology.

5.6.5(c) Particulate Matter

Particulate matter effects relate to the size of particles. Smaller particles stay suspended for longer periods than larger particles. The smaller particles can be inhaled and possibly cause health effects whereas the larger particles tend to fall out close to the source and deposition on surfaces. The techniques for measuring particulate concentrations change for the two particle size groupings. Environment Bay of Plenty has chosen to use total suspended particulate as this covers more of the health effects. The nuisance guideline for deposition has an averaging period of a month that does not take account of peak discharges, which are likely to cause offensive and objectionable levels of particulate beyond the source boundary. Deposition measurements may be used at times for assessing peak discharges of deposited material.

For particulate matter, the approach will be as follows:

1 A Council Officer who has experience in particulate complaints will make an assessment of the situation. This assessment will take into account the FIDOL factors which are:

- **Frequency** of the occurrence;
- **Intensity** of the particulate matter event;
- **Duration** of exposure to the particulate matter;
- **Offensiveness** of the particulate matter; and
- **Location** of the discharge (refer 5.6.5(a)1).

2 If the discharge is deemed to be offensive or objectionable by the Council Officer, the discharger will be asked to take whatever action is necessary to avoid, remedy or mitigate the effects of the discharge on the environment.

3 If the discharger disputes the Council Officer's assessment or the problem is ongoing, then further evaluation may be required. This evaluation could include:

- An assessment by another Council Officer;
- Monitoring of particulate matter beyond the boundary will be compared with the following standard. Discharges into air in excess of the following standards will be considered to be objectionable, offensive or harmful.

4 Any particulate matter arising from the activity should not result in levels of suspended particulate matter greater than 350 $\mu g/m^3$ averaged over 10 minutes or 250 $\mu g/m^3$ over 1 hour or 150 $\mu g/m^3$ averaged over 24 hours, at any point beyond the boundary of the subject property. (Derived from the USEPA (United States Environmental Protection Agency) National Ambient Air Quality Standards).

If the discharge into air continues to be offensive or objectionable, then enforcement action may be taken. This could be in the form of an infringement notice, abatement notice, enforcement order or prosecution, pursuant to the Resource Management Act 1991. In the case of a permitted activity, failure to comply with the conditions could result in enforcement and would also mean that the activity was no longer permitted and would thus require a resource consent application to be lodged if the person wished to continue with an activity.

5.7 Principal Reasons for Adopting these Methods of Implementation

The intent of these methods is to ensure an appropriate mix of ways to achieve sound air quality management.

Education is often used as the first method of addressing air quality issues. The Bay of Plenty community believes that raising awareness of issues and ways to deal with those issues can be more effective than other methods.

Advocacy by Environment Bay of Plenty to encourage other organisations to meet their air quality management responsibilities is preferred to assuming they will meet those responsibilities.

Land use planning is promoted as an important way to avoid air quality problems occurring. Avoiding problems is preferred to allowing potentially incompatible activities to locate together leading to future air quality problems which can be difficult to resolve.

Requiring major emitters of greenhouse gases and ozone-depleting substances to consider how those emissions may be reduced is preferred to setting emission standards or guidelines based on inadequate information.

The intent of the rules is to permit activities likely to cause minor adverse effects or adverse effects which can be predicted and therefore avoided, remedied or mitigated by compliance with the conditions. Resource consents are required for only those activities with the potential to cause significant adverse effects.

The above methods are preferred to the do-nothing option which would fail to meet the objectives or to an approach which would impose additional costs on users for no additional environmental benefits.

To be consistent with NESAQ and HSNO regulations.

6 Anticipated Environmental Results

(a) Better understanding of the region's air resource enabling action to be taken to maintain or enhance air quality in particular areas.

(b) Management of the adverse effects of the discharge of contaminants into air.

(c) Improved environmental practices due to increased knowledge and awareness of air quality issues and effects.

(d) Adverse effects on the environment are avoided, remedied or mitigated as a result of land use planning which recognises the need to separate activities that are incompatible (because of sensitivity or reverse sensitivity) due to discharges of contaminants into air.

(e) Greater awareness of the effects of local and regional activity on the global environment.

(f) Maintenance and enhancement of the quality of air in the Bay of Plenty region.

7 Resource Consent Applications

7.1 Applying for Resource Consent

Each application for resource consent must contain sufficient specific information to allow any person to understand what activity is proposed and to ensure that Environment Bay of Plenty is able to assess the application adequately.

The information requirements are set out in section 88 of the Resource Management Act 1991.

In addition, every consent application must be accompanied by an assessment of environmental effects. This assessment should consider which of the matters specified in Schedule 4 to the Resource Management Act 1991 are relevant and need to be assessed. The greater the effects, the more detailed and thorough the assessment of environmental effects must be (section 88(2)(b) Resource Management Act 1991). Among matters that should be considered are any iwi management plans relating to air and recognised by an iwi authority who may be affected. As part of the assessment of effects applicants should consider consultation with potentially affected parties including but not limited to:

- District/City Councils
- Tangata whenua
- The Civil Aviation Authority
- Airport authorities.

Consent applications should be submitted on the application form available from Environment Bay of Plenty. Guidelines on completing the application form are also available.

Advisory Note:

That trades listed in the Third Schedule to the Health Act 1956 (offensive trades) require written consent from the Medical Officer of Health before any new offensive trade can be established.

7.2 Financial Contributions

Section 108 of the Resource Management Act 1991 allows the setting of conditions including financial contributions for resource consents. A financial contribution may be required as a condition of grant of a consent.

The purpose of applying financial contributions is to ensure that any adverse effects that cannot be avoided or remedied can be mitigated by the creation of positive effects on the environment. Financial contributions shall be for the purpose of mitigating adverse effects on natural and physical resources.

Financial contributions must be used to avoid, remedy or mitigate adverse effects of the same type as those caused or potentially caused by the activity for which consent is sought.

Preference shall be given to the use of financial contributions at, or close to, the site of the activity for which consent is sought. This shall not prevent the use of financial contributions at other locations when appropriate.

Financial contributions will only be required when:

- Avoidance, remedy or mitigation of adverse effects could not be achieved by another condition of consent; or
- A financial contribution would be more efficient and effective in achieving the avoidance, remedy or mitigation of adverse effects.

The maximum amount of the financial contributions will be the full cost of the mitigation measures required to offset the adverse effects that are unable to be avoided or remedied. Financial contributions shall be in the form of money and/or land. The value of the contribution will be the fair and reasonable cost of achieving, in full or in part, the mitigation of adverse effects on natural and physical resources caused by the activity.

When a financial contribution is to be paid to a person or agency other than a local authority, there must be an enforceable contract which provides for the purpose of the contribution to be achieved.

7.3 Industrial Offsets

From 1 June 2011 Regulation 17 of the NESAQ states that the Regional Council must decline an application for a resource consent to discharge PM10 if the discharge is likely to increase the concentration of PM10 in polluted airsheds, unless the applicant provides offsets for the discharge. An activity is offset when it removes at least as much PM_{10} from other sources in the airshed as it puts into the same airshed when operating.

The Rotorua Urban Airshed is currently the only polluted airshed in the Bay of Plenty region. Other airsheds may become polluted and will be publicly notified according to the NESAQ.

Any consent applicant applying for resource consent to discharge PM_{10} into a polluted airshed (whether the activity is existing or new) will be assessed against guidelines for offset requirements. These guidelines are available from the Regional Council.

8 Cross Boundary Issues

There are potential overlaps in the management of air quality between Environment Bay of Plenty, district and city councils and neighbouring regional councils. Such overlaps will be addressed through:

- Liaison between Environment Bay of Plenty and district and city councils and between Environment Bay of Plenty and neighbouring regional councils;

- The transfer of certain functions from Environment Bay of Plenty to district and city councils. Environment Bay of Plenty may transfer functions to public authorities under section 33 of the Resource Management Act 1991. Any transfer of functions, powers or duties will be made by agreement between the authorities concerned and on such terms and conditions as are agreed (section 33(6) of the Resource Management Act 1991);

- Operational procedures agreed through a memorandum of understanding or contract for services. Operational procedures for resource consents for discharge into air will be handled in the following way:

  (a) Any resource consent application or request for a plan change received by Environment Bay of Plenty will be assessed for potential cross-boundary effects, to see whether any resource consent is required from a territorial local authority within the region;

  (b) A resource consent application or request for a plan change must include an explanation of any consultation undertaken with any adjoining regional council, the relevant district councils and potentially affected persons within an adjoining region;

  (c) When consultation has not been undertaken by the applicant, Environment Bay of Plenty will notify an adjoining authority and potentially affected persons within an adjoining region if there is potential for a cross-boundary effect arising from a proposal;

  (d) When applications for resource consents or any other matters relating to the same proposal have been made to more than one consent authority, the joint hearings provisions of section 102 of the Resource Management Act 1991 will be followed (except when the applications are sufficiently unrelated and the applicant agrees that a joint hearing is not necessary).

  The particular overlaps to be addressed include but are not limited to the following:

  (a) Managing the discharge of contaminants to air from transport sources (Methods 25 and 32);

  (b) Definition of roles and responsibilities and consideration of transfer of powers for air quality (Methods 27 and 28);

  (c) Land use planning tools that control adverse effects of land use on air quality (Methods 26, 29 and 30);

  (d) Managing the dust to air from small scale earthworks (Method 28).

Schedule 1 – Guideline 1: Good Management Practices to Prevent or Minimise the Discharges from Open Burning

(a) Dry, seasoned material only should be burned. Increased moisture content affects the heat of combustion and increases the likelihood of smoke. Two days' fine weather should be allowed prior to burning.

(b) Fires should not be lit in wind speeds greater than 10 knots i.e. Beaufort scale 3. This can be judged by leaves and the smallest twigs moving in the wind. The ash produced on the fire is more likely to be blown about and the discharges will travel further in high wind conditions.

(c) Where possible material to be burned should be stacked to allow plenty of airflow into the base of the fire to aid efficient burning.

(d) Fires shall not be lit when there is likelihood of an inversion layer i.e. when the air is cool and still such as in the evening or early in the morning. The dispersion of smoke is restricted when inversion conditions exist. The smoke will tend to hang about and not rise.

(e) The place of combustion should be at least 50 m from any road other than a highway and 100 m from any highway or dwelling house on an adjoining property or National Park boundary.

Schedule 2 – Notification of Agrichemical Use in Public Places

This appendix is based on information contained in NZS 8409: 1999 Code of Practice for the Management of Agrichemicals.

Agrichemical use in public places (public land, public roads or railways) must be notified at least 1 week before application by a public notice in the local newspaper and/or other recommended methods including letter drops stating:

- The area the agrichemical will be used;
- The agrichemical to be used;
- The reason for the use (e.g. weed control);
- The duration of the use;
- The time after agrichemical use before safe re-entry.

The site of the agrichemical use or the public places beside the agrichemical use must be sign posted with the following information:

- The agrichemicals used;
- The time of application;
- The time for safe re-entry; and
- The name and contact details of the applicator.

The signs must remain in place until the site is safe for public re-entry.

Note:

Extra care should be exercised when applying any phenoxy based herbicide. In particular, 2, 4-D butyl ester herbicide sprays have the potential to travel long distances through the air. Although butyl ester herbicide has not been manufactured since 1997, existing stocks can still legally be applied. Further information on spray drift hazard is included in Appendix Y of NZS 8409:1999 Code of Practice for the Management of Agrichemicals.

Schedule 3 – Hazardous Air Pollutants

The table below lists the hazardous air pollutants described by the Ministry for the Environment in their publication Ambient Air Quality Guidelines (1994) as either being known or suspected to cause:

- Acute human health effects; cancer or teratogenic effects; or serious or irreversible effects-reproductive dysfunction's, neurological disorders, heritable genetic mutations, or other chronic health effects; or

- Significant adverse effects on the environment due to their toxicity, persistence in the environment, tendency to bioaccumulate, or any combination of these.

The table also indicates those pollutants which the International Agency for Research on Cancer (1994) identify either being a confirmed or suspected carcinogen. The classification system is described in the general notes that follow the table.

Number	Pollutant	Carcino-genic Category
75-07-0	Acetaldehyde	2B
60-35-5	Acetamide	2B
75-05-8	Acetonitrile	
98-86-2	Acetophenone	
53-96-3	2-Acetylaminofluorene	
107-02-8	Acrolein	
79-06-1	Acrylamide	2A
79-10-7	Acrylic acid	
107-13-1	Acrylonitrile	
107-05-1	Allyl chloride	
92-67-1	4-Aminobiphenyl	
62-53-3	Aniline	
90-04-0	o-Anisidine	2B
1332-21-4	Asbestos	1
71-43-2	Benzene	1
92-87-5	Benzidine	1
98-07-7	Benzotrichloride	
100-44-7	Benzyl chloride	
92-52-4	Biphenyl	
117-81-7	Bis(2-ethylhexyl)phthalate (DEHP)	
542-88-1	Bis(chloromethyl) ether	1
75-25-2	Bromoform	
106-99-0	1,3-Butadiene	
156-62-7	Calcium cyanamide	
105-60-2	Caprolactam	
133-06-2	Captan	

Number	Pollutant	Carcino-genic Category
63-25-2	Carbaryl	
75-15-0	Carbon disulfide	
56-23-5	Carbon tetrachloride	2B
463-58-1	Carbonyl sulfide	
120-80-9	Catechol	
133-90-4	Chloramben	
57-74-9	Chlordane	
7782-50-5	Chlorine	
79-11-8	Chloroacetic acid	
532-27-4	2-Chloroacetophenone	
108-90-7	Chlorobenzene	
510-15-6	Chlorobenzilate	
67-66-3	Chloroform	2B
107-30-2	Chloromethyl methyl ether	1
126-99-8	Chloroprene	
1319-77-3	Cresol/cresylic acid (mixed isomers)	
95-48-7	o-Cresol	
108-39-4	m-Cresol	
106-44-5	p-Cresol	
98-82-8	Cumene	
	2,4-D (2,4-Dichlorophenoxyacetic acid) (including salts and esters)	

Number	Pollutant	Carcino-genic Category
72-55-9	DDE (1,1-dichloro-2,2-bis (p-chlorophenyl) etherylene)	
334-88-3	Diazomethane	
132-64-9	Dibenzofuran	
96-12-8	1,2-Dibromo-3-chloropropane	
84-74-2	Dibutyl phthalate	
106-46-7	1,4-Dichlorobenzene	
91-94-1	3,3'-Dichlorobenzidine	
111-44-4	Dichloroethyl ether (bis[2-chloroethyl] ether)	
542-75-6	1,3-Dichloropropene	
62-73-7	Dichlorvos	
111-42-2	Diethanolamine	
64-67-5	Diethyl sulfate	
119-90-4	3,3'-Dimethoxybenzidine	2B
60-11-7	4-Dimethylaminoazobenzene	2B
121-69-7	N,N-Dimethylaniline	
119-93-7	3,3'-Dimethylbenzidene	
79-44-7	Dimethylcarbamoyl chloride	2A
68-12-2	N,N-Dimethylformamide	
57-14-7	1,1-Dimethylhydrazine	
131-11-3	Dimethyl phthalate	
77-78-1	Dimethyl sulfate 4,6-Dinitro-o-cresol (include salts)	
51-28-5	2,4-Dinitrophenol	
121-14-2	2,4-Dinitrotoluene	
123-91-1	1,4-Dioxane (1,4-Diethyleneoxide)	2B
122-66-7	1,2-Diphenylhydrazine	
106-89-8	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	2A
106-88-7	1,2-Epoxybutane	
140-88-5	Ethyl acrylate	2B
100-41-4	Ethylbenzene	
51-79-6	Ethyl carbamate (Urethane)	
75-00-3	Ethyl chloride (Chloroethane)	
106-93-4	Ethylene dibromide (Dibromoethane)	2A
107-06-2	Ethylene dichloride (1,2-Dichloroethane)	
107-21-1	Ethylene glycol	
151-56-4	Ethyleneimine (Aziridine)	
75-21-8	Ethylene oxide	
96-45-7	Ethylene thiourea	2B
75-34-3	Ethylidene dichloride (1,1-Dichloroethane)	
50-00-0	Formaldehyde	2A
76-44-8	Heptachlor	2B
118-74-1	Hexachlorobenzene	2B
87-68-3	Hexachlorobutadiene 1,2,3,4,5,6-Hexachlorocyclohexane (all stereo isomers, including lindane)	2B
77-47-4	Hexachlorocyclopentadiene	
67-72-1	Hexachlororethane	
822-06-0	Hexamethylene diisocyanate	
680-31-9	Hexamethylphosphoramide	2B
110-54-3	Hexane	
302-01-2	Hydrazine	2B
7647-01-0	Hydrochloric acid (Hydrogen chloride [gas only])	
7664-39-3	Hydrogen fluoride (Hydrofluoric acid)	
123-31-9	Hydroquinone	
78-59-1	Isophorone	
108-31-6	Maleic anhydride	
67-56-1	Methanol	
72-43-5	Methoxychlor	
74-83-9	Methyl bromide (Bromomethane)	
74-87-3	Methyl chloride (Chloromethane)	
71-55-6	Methyl chloroform (1,1,1-Trichloroethane)	
78-93-3	Methyl ethyl ketone (2-Butanone)	
60-34-4	Methylhydrazine	
74-88-4	Methyl iodide (Iodomethane)	
108-10-1	Methyl isobutyl ketone (Hexone)	
624-83-9	Methyl isocyanate	
80-62-6	Methyl methacrylate	
1634-04-4	Methyl tert-butyl ether	
101-14-4	4,4'-Methylenebis (2-chloroaniline)	

Number	Pollutant	Carcino-genic Category
75-09-2	Methylene chloride (Dichloromethane)	
101-68-8	4,4'-Methylenediphenyl diisocyanate (MDI)	
101-77-9	4,4'-Methylenedianiline	
91-20-3	Naphthalene	
98-95-3	Nitrobenzene	
92-93-3	4-Nitrobiphenyl	
100-02-7	4-Nitrophenol	
79-46-9	2-Nitropropane	
684-93-5	N-Nitroso-N-methylurea	
62-75-9	N-Nitrosodimethylamine	2A
59-89-2	N-Nitrosomorpholine	
56-38-2	Parathion	
82-68-8	Pentachloronitrobenzene (Quintobenzene)	
87-86-5	Pentachlorophenol	
108-95-2	Phenol	
106-50-3	p-Phenylenediamine	
75-44-5	Phosgene	
7803-51-2	Phosphine	
7723-14-0	Phosphorus	
85-44-9	Phthalic anhydride	
1336-36-3	Polychlorinated biphenyls (Aroclors)	2A
1120-71-4	1,3-Propane sultone	
57-57-8	beta-Propiolactone	
123-38-6	Propionaldehyde	
114-26-1	Propoxur (Baygon)	
78-87-5	Propylene dichloride (1,2-Dichloropropane)	
75-56-9	Propylene oxide	2B
75-55-8	1,2-Propylenimine (2-Methylaziridine)	
91-22-5	Quinoline	
106-51-4	Quinone (p-Benzoquinone)	
100-42-5	Styrene	
96-09-3	Styrene oxide	
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	2B
79-34-5	1,1,2,2-Tetrachloroethane	
127-18-4	Tetrachloroethylene (Perchloroethylene)	2B
7550-45-0	Titanium tetrachloride	
108-88-3	Toluene	
95-80-7	Toluene-2,4-diamine	
584-84-9	2,4-Toluene diisocyanate	
95-53-4	o-Toluidine	2B
8001-35-2	Toxaphene (chlorinated camphene)	2B
120-82-1	1,2,4-Trichlorobenzene	
79-00-5	1,1,2-Trichloroethane	
79-01-6	Trichloroethylene	
95-95-4	2,4,5-Trichlorophenol	
88-06-2	2,4,6-Triclorophenol	
121-44-8	Trithylamine	
1582-09-8	Trifluralin	
540-84-1	2,2,4-Trimethylpentane	
108-05-04	Vinyl acetate	
593-60-2	Vinyl bromide	2A
75-01-4	Vinyl chloride	1
75-35-4	Vinylidene chloride (1,1-Dichloroethylene)	
1330-20-7	Xylene (mixed isomers)	
95-47-6	o-Xylene	
108-38-3	m-Xylene	
106-42-3	p-Xylene	

Number	Contaminant	Carcino-genic Category
	Antimony Compounds	
	Arsenic Compounds (inorganic including arsine)	1
	Beryllium Compounds	1
	Cadmium Compounds	1
	Chromium Compounds	1
	Cobalt Compounds	
	Coke Oven Emissions	1
	Cyanide Compounds1	
	Glycol ethers2	
	Lead Compounds	2B
	Manganese Compounds	
	Mercury Compounds	
	Fine mineral fibers3	
	Nickel Compounds	1
	Polycyclic Organic Matter4	
	Radionuclides (including radon)5	
	Selenium Compounds	

General Notes:

1 The numbers referred to are Chemical Abstracts Service Number. This service provides a source of additional information on the substance.

2 The classification system used by the International Agency For Research on Cancer in terms of confirmed or suspected carcinogens is as follows:

Carcinogenic Category	Explanation
1 (confirmed human carcinogen)	Substances for which there is sufficient evidence for a causal relationship with cancer in humans.
2A (probable human carcinogen)	Substances for which there is a lesser degree of evidence in humans but sufficient evidence in animal studies, or degrees of evidence considered appropriate to this category; e.g. unequivocal evidence of mutagenicity in mammalian cells.
2B (possible human carcinogen)	Substances for which there is sufficient evidence in animal tests, or degrees of evidence considered appropriate to this category.

Technical Notes:

For all listings above which contain the word "Compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e. antimony, arsenic, etc) as part of that chemical's infrastructure.

[1] X'CN where X = H' or any other group where a formal dissociation may occur. For example, KCN or Ca $(CN)_2$.

[2] $R\text{-}(OCH_2CH_2)_n\text{-}OR'$

Where:

n = 1,2 or 3

R = alkyl C7 or less

or R = phenyl or alkyl

substituted phenyl

R'= H, or alkyl C7 or less

or ester, sulphate, phosphate, nitrate, sulphonate

[3] Includes mineral fibre emissions from facilities manufacturing or processing glass, rock, or slag fibres (or other mineral derived fibres) of average diameter 1 micrometre or less.

[4] Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocyclic compounds, with two or more fused rings, at least one of which is benzenoid (i.e. containing six carbon atoms and is aromatic) in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals. Polycyclic Organic Matter is generally formed or emitted during thermal processes including:

(1) incomplete combustion;

(2) pyrolysis;

(3) the volatilisation, distillation or processing of fossil fuels or bitumens; or

(4) the distillation or thermal processing of non-fossil fuels.

[5] A type of atom which spontaneously undergoes radioactive decay.

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER OF THE WORLD HEALTH ORGANISATION CARCINOGEN LIST

The table below lists three categories of substances and processes regarded as carcinogenic by the International Agency for Research on Cancer of the World Health Organisation. It is important to note that this list conveys a weight-of-evidence approach and can–not incorporate information on risk. While such an approach is supported, risk assessments must include considerations of exposure, dose and biochemical relevance.

Category 1

Aflatoxins
Alcoholic beverages
Aluminium production
4-aminobiphenyl
Arsenic and arsenic compounds
Asbestos
Manufacture of auramine
Azathioprine
Benzene
Benzidine
Beryllium and compounds (upgraded from 2A)
Betel quid with tobacco
Bis (chloromethyl) ether and chloromethyl methyl ether (technical grade)
Boot and shoe manufacture and repair (occupational exposure)
1,4 Butanediol dimethanesulphonate (Myleran)
Cadmium and compounds (upgraded from 2A)
Chlorambucil
Chlornaphazine
1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1 nitrosourea
Chloromethyl methyl ether (technical)
Chromium compounds (hexavalent)
Coal gasification
Coal tar pitches
Coal tars
Coke production
Cyclophosphamide
Erionite
Ethylene oxide
Furniture and cabinet making
Iron and steel founding

Isopropyl alcohol manufacture (strong acid process)
Manufacture of megenta (see also magenta, 2B)
Melphalan
8-Methoxypsoralen (Methoxsalen) plus ultravoilet radiation
Mineral oils - untreated and mildly-treated oils
MOPP and other combined chemotherapy for cancer
Mustard gas (sulphur mustard)
2-Naphthylamine
Nickel and nickel compounds (essentially sulphate and sulphide)
Nonsteroidal oestrogens (not necessarily all in group); includes diethylstilboestr
Oestrogen replacement therapy and combined oral contraceptives and sequential oral contraceptives
Steroidal oestrogens (not all in group)
Painter (occupational exposure as a painter)
Phenacetin (analgesic mixtures containing)
Rubber industry
Salted fish, Chinese style
Solar radiation
Shale oils
Soots
Sulphuric acid (occupational exposures to strong-inorganic-acid mists of sulphuric)
Talc containing asbestiform fibres
Thiotepa
Tobacco products (smokeless)
Tobacco smoke
Treosulphan
Underground haematite mining with exposure to radon
Vinyl chloride

Category 2A

Acrylamide
Acrylonitrile
Adriamycin
Anabolic steroids
Azacitidine
Benzanthracene
Benzidine-based dyes (technical grade) Direct Black 38 Direct Blue 6 Direct Brown 95
Benzopyrene
1,3-Butadiene
Captafol
Bischloroethyl nitrosourea (BCNU)
1-(2-Chloroethyl) –3-cyclohexyl-1-nitrosourea (CCNU)
para-Chloro-ortho-toluidine and its strong acid salts
Chlorozotocin
Cisplatin
Creosotes
Dibenzanthracene
Diesel engine exhaust
Diethyl sulphate
Dimethylcarbamoyl chloride
Dimethyl sulphate
Epichlorohydrin
Ethylene dibromide
N-ethyl-N-nitrosourea
Formaldehyde

Glass manufacturing industry (occupational exposure) art glass, glass containers and pressed ware
Hairdresser or barber (occupational exposure, probably dyes)
Insecticide use (occupational)
IQ (2-Amino-3-methylimidazo [4,5-f] quinoline)
Mate drinking (hot)
5-Methoxypsoralen
4,4'-Methylenebis (2-chloroaniline) (MOCA)
N-Methyl-N-nitro-N-nitrosoguanidine (MNNG)
N-Methyl-N-nitrosourea
Nitrogen mustard
N-Nitrosodiethylamine
N-Nitrosodimethylamine
Petroleum refining (occupational refining exposures)
Phenacetin
Polychorinated biphenyls
Procarbazine hydrochloride
Silica (crystalline)
Styrene-7,8-oxide
Tris (1-azaridinyl) phosphine sulphide (Thiotepa)
Tris (2,3-dibromopropyl) phosphate
Ultraviolet radiation: A, B and C including sunlamps and sunbeds
Vinyl bromide

Category 2B

A-C (2-Amino-9H-pyrido [2,3-b] indole)
Acetaldehyde
Acetamide
AF-2[2-(2-Furyl)-3-(5-nitro-2-furyl) acrylamide
para-Aminoazobenzene
ortho-Aminoazobenzene
2-Amino-5-(5-nitro-2-furyl)-1, 3, 4-thiadiazole
Amitrole
ortho-Anisidine
Antimony trioxide
Aramite
Atrazine
Attapulgite
Azaserine
Benzo [b] fluoranthene
Benzo [j] fluoranthene
Benzo [k] fluoranthene
Benzyl violet
Bitumens (extracts of steam-refined and air-refined bitumens)
Bleomycins
Bracken ferns

Bromodichloromethane
Butylated hydroxyanisole (BHA)
a-Butyrolactone
Caffeic acid
Carbon black extract
Carbon tetrachloride
Carrageenan (degraded)
Ceramic fibres
Chloramphenicol
Chlordane
Chlordecone
Chlorendic acid
Chlorinated paraffins of average carbon-chain length C12 and average degree of chlorination approx 60%
alpha-Chorinated toluenes (not necessarily all in group) Benzotrichloride
para-Chloroaniline
Chloroform
Chlorophenols Pentachlorophenol 2, 4, 6-Trichlorophenol

Chlorophenoxy herbicides (not necessarily all in group)
4-Chloro-ortho-phenylenediamine
CI Acid Red 114
CI Basic Red 9
CI Direct Blue No.2
CI Direct Blue 15
Citrus Red No.2
Cobalt and cobalt compounds
Coffee (bladder)
para-Cresidine
Cycasin
Dacarbazine
Dantron (1, 8-dihydroxyanthraquinone)
Daunomycin
DDT
N,N'-Diacetylbenzidine
4, 4'-Diaminodiphenyl ether
2, 4-Diaminotoluene
Dibenz [a, h] acridine
Dibenz [a, j] acridine
7H-Dibenzo [c, g] carbazole
Dibenzo [a, e] pyrene
Dibenzo [a, h] pyrene
Dibenzo [a,i] pyrene
Dibenzo [a,l] pyrene
1,2-Dibromo-3-chloropropane
para-Dichlorobenzene
3, 3'-Dichlorobenzene
3, 3'-Dichloro-4, 4'-diaminodiphenyl ether
1, 2-Dichloroethane
Dichloromethane
1, 3-Dichloropropene (technical grade)
Dichlorvos
Diepoxybutane
Diesel fuel (marine)
Di (2-ethylhexyl) phthalate
1, 2-Diethylhydrazine
Diglycidyl resorcinol ether
Dihydrosafrole
Diisopropyl sulfate
3, 3'-Dimethoxybenzidine
para-Dimethylaminoazobenzene
trans-2-[(Dimethylamino) methylimino]-5-[2-(5-nitro-2-)
2, 6-Dimethylaniline (2, 6-Xylidene)
3, 3'Dimethylbenzidine (ortho-tolidine)
Dimethylformamide
1, 1-Dimethylhydrazine
1, 2-Dimethylhydrazine
1, 6-Dinitropyrene
1, 8-Dinitropyrene
1, 4-Dioxane
Disperse Blue 1
Ethyl acrylate
Ethylene thiourea
Ethyl methanesulphonate
2- (2-Formylhydrazino)-4-(5-nitro-2-furyl) thiazole
Fuel oils (residual, heavy)

Fusarium moniliforme (toxins derived from) Fumonisin B1; Fumonisin B2; Fusarin C
Gasoline
Gasoline engine exhausts
Glasswool
Glu-P-1 (2-Amino-6-methyldipyrido[1, 2-a:3'2'-d] imidazole)
Glu-P-2 (-Aminodipyrido[1, 2-a:3'2'-d] imidazole)
Glycidaldehyde
Griseofulvin
HC Blue No 1
Heptachlor
Hexachlorobenzene
Hexachlorocyclohexanes Technical grades alpha isomer gamma isomer (lindane)
Hexamethylphosphoramide
Hydrazine
Indeno [1, 2, 3-cd] pyrene
Iron-dextran complex
Isoprene
Lasiocarpine
Lead and lead compounds (inorganic)
Magenta (containing CI Basic Red 9)
Man-made mineral fibres (see glasswool, rockwool, slagwool and cermamic fibres)
MeA-a-C (2-Amino-3-methyl-9H-pyrido [2, 3-b] indole)
MeIQ (2-Amino-3, 4-dimethylimidazo [4, 5-f]-quinolone)
MeIQx (2-Amino-3, 4-dimethylamidazo [4, 5-f] quinoxaline)
Methylmercury compounds (methylmercuric chloride)
Merphalan
2-Methylaziridine
Methylazoxymethanol and its acetate
5-Methylchrysene
4, 4'-Methylenebis (2-methylaniline)
4, 4'-Methylenedianiline
Methylmethanesulphonate
2-methyl-1-nitroanthraquinone (uncertain purity)
N-methyl-N-nitrosourethane
Methylthiouracil
Metronidazole
Mirex
Mitomycin
Monocrotaline
5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene) amino]-2-oxazolidinone
Nafenopin
Niridazole
5-Nitroacenaphthene
6-Nitrochrysene
Nitrofen (technical grade)
2-Nitrofluorene
1-[(5-Nitrofurfurylidene) amino]-2-imidazolidinone

N-[4-(5-Nitro-2-furyl)-2-thiazolyl] acetamide
Nitrogen mustard N-oxide
Nitrolotriacetic acid and its salts
2-Nitropropane
1-Nitropyrene
4-Nitropyrene
N-Nitrosodi-n-butylamine
N-Nitrosodiethanolamine
N-Nitrosodi-n-propylamine
3-(N-Nitrosomethylamino) propionitrile
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
N-Nitrosomethylethylamine
N-Nitrosomethylvinylamine
N-Nitrosomorpholine
N-Nitrosonornicotine
N-Nitrosopiperidene
N-Nitrosopyrrolidine
N-Nitrososarcosine
Ochratoxin A
Oil Orange
Panfuran S (containing dihydroxymethylfuratzine)
Phenazopyridine hydrochloride
Phenobarbital
Phenoxybenzamine hydrochloride
Phenyl glycidyl ether
Phenytoin
PhIP (2-Amino-1-methyl-6-phenylimidazo [4, 5-b] pyridine
Pickled vegetables, traditional Asian
Polybrominated biphenyls
Ponceau MX
Ponceau 3R
Potassium bromate
1, 3-Propane sultone
Propylene oxide (downgraded from 2A)
Progestins Medroxyprogesterone acetate
a-Propiolactone
Propylthiouracil
Rockwool
Saccharin
Safrole
Slagwool
Sodium ortho-phenylphenate
Sterigmatocystin
Streptozotocin
Styrene
Sulfallate
2, 3, 7, 8-Tetrachlorodibenzo-para-dioxin (TCDD)
Tetrachloroethylene
Textile manufacturing (occupational exposures)
Thiocetamide
4, 4'- Thiodianiline
Thiourea
Toluene diisocyanates
ortho-Toluidine

Toxaphene (polychlorinated camphenes)
Trichlormethine (trimustine hydrochloride)
Trp-P-1 (3-Amino-1, 4-dimethyl-5-H-pyrido [4, 3-b] indole)
Trp-P-2 (3-Amino-1-methyl-5H-pyrido [4, 3-b] indole)
Trypan blue
Uracil mustard
Urethane
4-Vinylcyclohexene
4-Vinylcyclohexene diepoxide
Welding fumes
Wood industries
Carpentry and joinery

Definition of Terms

For the purpose of interpreting this *Bay of Plenty Regional Air Plan*, in addition to the words defined in this *Definition of Terms*, the definitions of words and terms contained in Section 2 of the Resource Management Act 1991, as amended from time to time, shall apply.

Agrichemical – any substance, whether inorganic or organic, man-made or naturally occurring, modified or in its original state, that is used in any agriculture, horticulture or related activity, to eradicate, modify or control flora and fauna. For the purposes of this plan, this definition excludes any fertiliser.

Agricultural Compound – any substance, mixture of substances, or biological compound, excluding any fertiliser, used or intended for use in the direct management of plants and animals, or to be applied to the land, place, or water on or in which the plants and animals are managed. For fuller explanation see definition in the Agricultural Compounds and Veterinary Medicines Act 1997.

Adjoining – where used in relation to a property, means next to and includes adjacent properties separated by a road (public or private driveway/roadway).

Airshed – is an area defined by parameters including topography, meteorology, demography and human activities, where people may be exposed to an airborne contaminant. A portion of an airshed can become a Local Air Management Area (LAMA). An airshed may have poor ambient air quality as defined by the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NESAQ).

Clean fill – natural materials such as clay, soil, rock and such other materials as concrete, brick or demolition products that are free of:

(a) combustible or putrescible components apart from up to 10 percent by volume untreated timber in each load,

(b) hazardous substances or materials (such as municipal waste) likely to create leachate by means of biological or chemical breakdown,

(c) any products or materials derived from hazardous waste treatment, stabilisation or disposal processes.

Commercial – In relation to agrichemical use includes the use of agrichemicals by any person, group or organisation in the course of their business activities. For example, this includes:

(h) any agricultural, horticultural, forestry or recreational undertaking;

(i) contractors operating for hire or reward; and

(j) any local authority managing the use of agrichemicals in public amenity areas, places or public assembly or waterways.

Contractor – any person or organisation who by financial agreement (contract) with the owner, occupier or manager of land, applies or causes to be applied, any agrichemical for hire or reward. This does not include the owner, occupier or manager of that land, or their employee.

Dioxins – refers to the group of chemicals known as polychlorinated dibenzodioxins and polychlorinated dibenzofurans, and other chemicals such as polychlorinated biphenyls, which are known to have dioxin-like effects.

Fertiliser –

(a) *means a substance or mix of substances that is described as, or held out to be for, or suitable for, sustaining or increasing the growth, productivity, or quality of plants or, indirectly, animals through the application to plants or soil of —*

(i) nitrogen, phosphorus, potassium, sulphur, magnesium, calcium, chlorine, and sodium as major nutrients; or

(ii) manganese, iron, zinc, copper, boron, cobalt, molybdenum, iodine, and selenium as minor nutrients; or

(iii) fertiliser additives; and

(b) *includes non-nutrient attributes of the materials used in fertiliser; but*

(c) *does not include substances that are plant growth regulators that modify the physiological functions of plants; and*

(d) does not include substances that are plant growth regulators containing the active ingredient hydrogen cyanamide.

Note: The part of the "Fertiliser" definition in italics above is from Clause 3 (Interpretation) of the Agricultural Compounds and Veterinary Medicines Regulations 2001.

Ground based application contractor – a contractor who applies agrichemical using ground based equipment.

Harmful Concentration – a concentration of contaminants that causes or is likely to cause injury to the health of humans or animals, or adversely affect water, soil or plants.

Health – in relation to human health, a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.

Intensive farming – agricultural production carried out primarily within buildings or closely fenced outdoor runs where the stocking density precludes the maintenance of pasture or ground cover and, the primary purpose of the activity being the commercial production of livestock for sale or slaughter. Intensive farming includes but is not limited to poultry farming (other than free-range poultry), rabbit farming, fitch farming, piggeries (other than free-range piggeries) and mushroom production.

Iwi – tribe, people.

kilowatt – having an energy level of 1,000 watts.

LAMA (Local Air Management Area) – An area defined by Government Gazette where the ambient air quality concentration for a contaminant e.g. PM_{10}, exceeds the standard set in a NESAQ. A LAMA can be a portion of an air shed.

Mauri – the essential life force or principle.

megawatt – having an energy level of 1,000,000 watts.

mg/m^3 – abbreviation for milligrams per cubic metre.

m/s – abbreviation for metres per second.

NERMN – Natural Environmental Regional Monitoring Network

NES - National Environmental Standards.

NESAQ - The Resource Management (National Environmental for Air Quality) Regulations 2004.

Objectionable – refer to Section 6.6.5 Interpretation of the Terms Offensive and Objectionable.

Offensive – refer to Section 6.6.5 Interpretation of the Terms Offensive and Objectionable.

Oil –

(a) means petroleum in any form; and

(b) includes crude oil, fuel oil sludge, oil refuse, and refined oil products (for example, diesel fuel, kerosene, and motor gasoline)

Particulates – finely divided material including smoke (particle size less than 10 μm in diameter), dust (10-100 μm in diameter), grit (greater than 100 μm in diameter) and aerosols (airborne droplets of less than 10 μm in diameter).

Pathological waste – waste materials that are offensive to the senses or hazardous to public health including anatomical wastes such as human tissue and organs or animal tissue, organs and carcasses and materials that may be subject to contamination by highly infectious organisms.

PM_{10} – is particulate matter where the particle size is equal to or less than 10 μm in diameter.

Polluted airshed – an airshed that has become polluted according to Regulation 17 of the NESAQ.

Pollution Hotline – the Environment Bay of Plenty telephone number for the public to alert Environment Bay of Plenty to instances of pollution. Phone 0800 73 83 93.

Publicly notified airshed – an airshed that has been publicly notified according to Regulation 16 and/or Regulation 24A of the NESAQ.

Rotorua Urban Airshed – the area of Rotorua that is:

(a) gazetted as a LAMA; and

(b) a polluted airshed for the purposes of Regulation 16 and/or 24A of the NESAQ; and

(c) a publicly notified airshed for the purposes of Regulation 17 of the NESAQ.

Toxic equivalents (TEQ) – refers to toxic equivalents and is a measure of the relative toxicities of the range of dioxins.

μm – one millionth of a metre (10^{-6}) is a measurement of length of a substance in air.

$\mu g/m^3$ – micrograms per cubic metre is a mass per volume measurement of concentration of a substance in air. A microgram is one millionth (10^{-6}) of a gram.

Woodburner – means a domestic heating appliance that burns wood; but does not include an open fire; or a multifuel heater, a pellet heater, or a coal-burning heater; or a stove that is designed and used for cooking and heated by burning wood.

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