PART 5E - HAZARDOUS FACILITIES

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Plan change annotations - key

Indicates where content is affected by proposed plan modification x. Refer to plan modification folder or website for details.

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Indicates where the content is part of plan modification x, which is subject to appeal.

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PART 5E - HAZARDOUS FACILITIES

5E.1 CONTENT AND STRUCTURE

The Council has a duty through the Plan to control the actual or potential effects of activities on land. This Part recognises that the storage or use of hazardous substances by land users may have adverse effects on the environment, in the broadest sense, if the facilities are not properly managed and controlled. The Plan recognises that:

The Council is charged with a responsibility under Section 31 of the Act to control any actual or potential effects of the use, development or protection of land, including the implementation of rules for the prevention and mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances. A hazardous substance is defined for the purposes of this Plan as any substance which may impair human, plant, or animal health or may adversely affect the health or safety of any person or the environment, and whether or not contained in or forming part of any other substance or thing. This is a broad definition that includes many substances that were not typically covered by previous dangerous goods and toxic substances legislation.

In order to manage the effect of hazardous substances, the rules of the Plan must focus on those facilities and activities which use, store or dispose of hazardous substances, as defined above, rather than on the substances themselves. The provisions of the Plan, therefore, are used to control the location, development and performance of hazardous facilities. These are defined as any activities involving hazardous substances; sites where hazardous substances are stored or handled or which might be contaminated by hazardous substances; and any installations containing hazardous substances, including vehicles parked on site laden with hazardous substances and where necessary their transportation routes. Hazardous activities, on the other hand, are those activities which do not use, store or dispose of hazardous substances but which still pose a risk to the environment or the community (eg earthworks.) PART 4A - GENERAL RULES deals with these hazardous activities.

Provisions applying to the control of hazardous facilities are included in this Part.

This Part is presented as follows -

- **Statutory Context**

  This outlines the statutory obligations and limitations on the various authorities involved in hazardous substance management.

- **Resource Management Issues**

  This outlines the significant resource management issues concerning hazardous facilities in the district.

- **Resource Management Objectives and Policies**

  This outlines how this Part of the Plan intends to deal with the identified hazardous facilities issues.

- **Resource Management Strategy**

  This outlines the strategy for managing hazardous facilities.

- **Implementation**

  This outlines and gives an explanation of the methods adopted to meet the objectives, policies and strategy for hazardous facilities.

- **Rules**

  This specifies the range of controls the Plan adopts to ensure that the actual or potential effects of hazardous facilities do not adversely affect any person, property or the environment.

5E.2 STATUTORY CONTEXT

Reducing the risks posed by hazardous facilities has, in the past, been carried out in a piecemeal fashion. Several different agencies and ad hoc organisations were involved and their responsibilities were not always clearly stated. While this Part deals principally with the location of facilities and presents a hazardous facility screening procedure (HFSP) to rapidly determine consent status of applications, the Plan recognises that many construction details will also be controlled by the provisions of other legislation such as the Dangerous Goods Act and the Toxic Substances Act.

The Council's responsibility in this area has been complicated by uncertainty over the involvement of other agencies and other rules at a national and regional level. Consequently, the Council has taken the initiative and has included in the Plan responsibility for certain issues relating to hazardous facility control. It acknowledges, however, that national legislation and regional policy statements and plans on these matters may occasion the need to alter or modify the Plan.

5E.3 RESOURCE MANAGEMENT ISSUES

The storage, use, disposal and transportation of hazardous substances is a normal part of many industrial activities. However in Auckland the district's natural waters are particularly sensitive to contamination from hazardous substance spillage. All the major industrial areas are located adjoining or in close proximity to the Manukau and Waitemata harbours, or to the Tamaki Estuary. Many are located over highly sensitive groundwater aquifers which, in some instances, are used for water supply. If not properly controlled, hazardous facilities could cause significant environmental damage.

Many of the district's industrial areas are also located in close proximity to residential areas. The industrial areas are also the workplace for a significant number of people. The safety and health of people in the community are at risk if adequate controls are not placed on hazardous facilities.

It is considered, therefore, that the main issue facing the Plan is to develop controls which reduce or avoid risk to the community and the environment. These controls must attend to the needs of both the community and the environment, and these may not always coincide. Community risks concern health, personal and public safety, and property protection. Environmental risks concern environmental degradation, habitat destruction, and water and air pollution. The Plan's strategy on hazardous facilities must reconcile and attend to these two interests.

Within the City there are number of sites which have become contaminated through the discharge or spillage of hazardous substances into the land over a period of time. Such sites present a risk not only to the natural environment in terms of contamination of the land, watercourses and underground aquifers, but also to the health and safety of occupiers on the site and on adjoining properties. Some of these aquifers are used for potable water supply and it is very important that the land uses above them are strictly controlled to avoid contamination. Refer to ANNEXURE 2 of this Plan for maps identifying the location of the groundwater aquifers on the Isthmus, including those used for potable water supply. The Plan must adopt measures which prevent the contamination of land and which require any redevelopment of contaminated sites to remove the effects of the contamination. Contamination of sites that may threaten the foundations of buildings is provided for within the Building Act (1991).

5E.4 RESOURCE MANAGEMENT OBJECTIVES AND POLICIES

5E.4.1 OBJECTIVE

To prevent or mitigate adverse environmental effects and risks presented by facilities and activities involving the use and/or storage of hazardous substances.

Policies

- By identifying, through an assessment process, those facilities using or storing hazardous substances which pose a risk to the natural environment or to public health and safety.
- By managing hazardous facilities to avoid, remedy, or mitigate adverse effects and unacceptable risks to the environment.
- By controlling hazardous facilities to ensure that the cumulative effect of their operations do not pose unacceptable risks to the environment or the community.
- By requiring, where appropriate, the preparation and operation of site management and emergency plans by operators of hazardous facilities.
- By promoting a clean production ethic appropriate to the environment of the district for all hazardous facilities.

5E.4.2 OBJECTIVE

To protect the community from unacceptable risks from hazardous facilities.

Policy

- By controlling hazardous facilities to ensure that they do not give rise to levels of risk that are incompatible with the levels of risk associated with the surrounding land use activities.

5E.4.3 OBJECTIVE

To minimise the adverse effects of site contamination and to prevent future site contamination.

Policies

- By applying measures which seek to minimise and control the adverse effects of discharges into or onto land.
- By requiring, where appropriate, the remediation of land as a prerequisite to its redevelopment.

5E.5 RESOURCE MANAGEMENT STRATEGY

The Council has developed an approach for the management of hazardous facilities which focuses on screening the potential effects of all hazards including those which affect the environment. Applications will pass through the hazardous facility screening procedure (HFSP) to determine the zone related consent status and the degree of scrutiny that applications should be subject to. This screening assessment will be applied to all new hazardous facilities based on the hazards of each hazardous substance, its physical form, and the manner in which it is used or stored.

The screening assessment of hazardous facilities focuses on the potential effects in three groups, namely effects caused by fire and/or explosion, effects on human health, and environmental effects. Possible adverse effects of hazardous substances can be predicted by the hazard of the substance, and the anticipated consequences of its release to the environment. Adverse effects include:

- contamination of water, soil and air;
- short and long term damage to ecosystems;
- accumulation of persistent substances in the bodies of humans and other animals, resulting in chronic and/or long term damage to their health;
- acute damage to human health through exposure to substances affecting skin, mucous membranes, respiratory and digestive systems; and,
- damage to the environment, human health and property through fire and explosion events.

It is important to distinguish between the hazard of a substance and the risk it poses. The hazard is principally defined by the intrinsic properties of the substance, such as flammability or toxicity. In contrast, the risk presented by the substance is defined by the probability of its release, combined with the potential effects caused by that release.

While the HFSP will apply to all applications, large developments that exhibit significant risk beyond their site boundary may be required to undergo a more formal risk assessment. Such an assessment shall take account of both the probability and effects of potential hazardous substances accidents, and the proposed measures to mitigate and manage risks. The granting of a resource consent will then be considered on the basis that the off-site risks presented by a hazardous facility are adequately managed.

A. Hazardous Facility Screening Procedure

The HFSP is set out in APPENDIX 5. The Plan requires all new facilities which use, store or dispose of, hazardous substances, to be subject to the HFSP. This procedure is used to identify those activities using hazardous substances which require additional assessment work and thus a resource consent, or those which may locate within a particular zone as a permitted activity. To ascertain this, the Plan identifies three broad groups of effects to be managed, effects caused by fire and/or explosion, effects on human health, and environmental effects. The levels of risk for these three groups of effects is used to determine what is acceptable for permitted activities in a particular activity zone and the levels where a controlled or discretionary activity resource consent is necessary prior to operation. Consideration of any application will focus on risk mitigating, emergency planning and performance assurance procedures. Management and operational practices will also be assessed so as to identify where risks may be avoided or reduced.

B. Existing Facilities

Existing hazardous facilities will not be subject to the HFSP unless they expand or alter their operations. However the Council will monitor these facilities through other regulatory powers. Where it is considered that an existing facility is operating at a level of risk which has or may have a significant adverse effect on the environment of the area, the Council may use its enforcement powers under the Act to ensure that no adverse effect on the environment occurs.

C. Contaminated Sites

The Plan indicates in ANNEXURE 8 certain contaminated and potentially contaminated sites on the Isthmus. Not all of the Isthmus' contaminated sites have at present been identified. It is intended however, that this Annexure will be amended as additional information is available. Any activity which seeks to remediate a particular site will be assessed as a controlled activity so as to ensure that proper and safe measures are being undertaken and that remediation practices will not lead to further degradation of the site or surrounding area. Prior to new activities, subdivision or development on identified sites, owners may be required to take steps to make the sites safe. Generally in such instances compliance with the *"Australian and New Zealand Guidelines for Assessment of Contaminated Sites"* will be required. A discharge consent from the Regional Council may also be required. In any event, for sites which exhibit contamination problems, the Council may use its enforcement powers under the Act to ensure that no adverse effect on the environment occurs.

D. Monitoring

An important component of the Plan's hazardous facilities strategy is an increased emphasis on the monitoring of such facilities. Monitoring of these facilities will determine whether the Plan's provisions are effective in reducing the risks posed to the environment and the community by these facilities. It should also signal where improved provisions are needed.

E. Expected Outcomes

The Plan's provisions should have the greatest effect on environmental quality. The controls on hazardous facilities are expected to result, over time, in a reduction of the number of accidents related to hazardous facilities. The requirement for new facilities to undergo the HFSP is expected to raise the level of consciousness and understanding of hazardous substance users of the risks their operations generate. This will lead to the adoption of better operational practices. These measures will also result in fewer newly contaminated sites and progressive remediation of existing ones.

5E.6 IMPLEMENTATION

INTERPRETATIONS AND DEFINITIONS

Accident

A sudden event causing harm to people, property or the natural environment.

Acute Toxicity

Adverse effects caused by a toxic agent occurring within a short time following exposure to that agent.

Adjusted Threshold

The amount (mass in kg, or m^3 for compressed gases) of a substance that has been assessed as generating no or limited off-site effects when released, after taking into account site and substance specific considerations.

Adjustment Factor

The product of the individual factors for each *Effects Group* (FF for *Fire/Explosion Effects Group*, FH for *Human Health Effects Group*, and FE for *Environmental Effects Group*) that increase or decrease the likelihood and consequences of the release of a hazardous substance.

Base Threshold

The amount (mass in kg, or m^3 for compressed gases) of a substance that has been assessed as posing limited off-site effects when released.

Bioaccumulation

The process that results in increased concentrations of contaminants in organisms through increasing levels in the food chain. Measures of bioaccumulation include the octanol-water coefficient (K_{ow} = predictor of bioaccumulation in the oils of fish and in the fat of animals), or the Bioconcentration Factor (BCF = the ratio of a concentration of a contaminant in the organisms in relation to the concentration in the surrounding environment).

BOD_5

Five day biochemical oxygen demand is a measure of the amount of oxygen required by organisms to consume organic matter over a five day period.

Bund

A spill containment system comprising a sealed area that is fully enclosed by a perimeter wall.

Chronic Toxicity

Adverse effects caused by a toxic agent which occur either after prolonged exposure or an extended period after initial exposure.

COD

A measure of the oxygen equivalent of the organic matter content of a sample that is able to be oxidised by a strong chemical oxidant. This measure is often used in industry instead of BOD_5 because it is easier and quicker to measure. For domestic sewage the relationship between COD and BOD_5 is approximately 1 to 1. However, some toxic chemicals can have a BOD_5 of zero but a very high COD.

Cleaner Production

The employment of techniques to reduce the need for raw materials, energy and the amount of wastes generated. These techniques may include the use of recyclable materials, the use of less hazardous substances, and the use of renewable resources.

Cumulative Effects

The aggregation of environmental effects from multiple hazardous substances on the same site.

EC_{50}

The effective toxicant concentration resulting in a 50% response of a given parameter at a specific time of exposure (for example, reduced reproduction rate). This may include mortality effects, expressed as lethal concentration (LC).

Effects Groups

The effects generated when a hazardous or environmentally damaging substance is released:

Fire/Explosion Effects Group - concerned with damage to property, the built environment and people.

Human Health Effects Group - concerned with the wellbeing, health and safety of people.

Environmental Effects Group - concerned with damage to ecosystems and natural resources.

Effects Ratio

The proposed quantity of a substance or group of substances to be used or stored, in relation to the *Adjusted Threshold*.

Effects Ratio Trigger Level

The value of the *Effects Ratio* (R) which is used in the *Consents Status Matrix* to define whether a proposed development requires a land use resource consent. The *Effects Ratio Trigger Level* differs for different land uses to account for the difference in acceptable levels of risk.

Environmentally Damaging Substance

Any substance which is able to damage an aquatic ecosystem (for example, milk, oil or some pesticides).

Ecotoxicity

Adverse toxic effects on ecosystems or ecological communities.

Environmentally Persistent Substance

The resistance of a hazardous substance to the natural breakdown in the environment. The measure used for environmental persistence in this document is the BOD_5/ COD ratio.

Environmentally Sensitive Areas

Areas judged by the local community and/or regulatory authorities that need to be subjected to low risks, or requiring additional safeguards when undertaking activities exceeding the specified low risk. Environmentally sensitive areas may include, water ways, wetlands, coastal environments, special ecosystems or species habitats.

Emergency Plans

A document serving as an emergency response guide by identifying the elements required to respond to an emergency, and defines the responsibilities and specific tasks of key personnel in an emergency.

Hazard

Any intrinsic property of a substance which makes it capable of causing adverse effects to people, the environment or property.

Hazardous Substance

A substance or mixture of substances with one or more of the following intrinsic properties, and includes a substance that evolves substances with one or more of these properties on release into the environment:

- an explosive nature;
- an oxidising nature;
- a corrosive nature;
- flammability;
- acute and chronic toxicity;
- ecotoxicity with or without bioaccumulation.

and includes the definition given for environmentally damaging substances

Incident

A sudden event that is prevented from resulting in an accident by mitigating circumstances.

LC_{50}

The concentration/dose of a substance required to kill 50% of a target population in a given time period.

Network Utility Operator Rules

Any bylaws, terms or conditions prescribed by a network utility operator which control the use of and the means of connecting to its drainage or sewage network utility service.

Off-Site Effects

Effects on people, property, and the natural environment outside of the boundary of a hazardous facility.

Process

Has the same meaning as “use”.

Proximity

A development that is within 100m of environmentally sensitive areas.

Risk

The likelihood of occurrence of an adverse effect from a substance combined with the magnitude of the consequence of that adverse effect.

Recognised Carcinogen

A carcinogenic substance causes a statistically significant increase in the incident of tumours.

Recognised Mutagen

A mutagenic substance causes heritable change in genetic material.

Recognised Teratogen

A teratogenic substance causes non-transmissible changes in offspring.

Separation Distance

The distance from the edge of the storage area or process area to the nearest site boundary. The edge for building enclosures or unbunded storage tanks is the nearest wall to

the nearest boundary. The edge for outside storage areas is the nearest curb or bund wall to the nearest boundary.

Site Management System

The means of ensuring the ongoing safety of a hazardous facility through sound management. A site management system includes safety policy, provides a description of organisational structure and responsibilities, including operating, emergency and monitoring procedures, and includes performance auditing.

Spill Containment System

A permanent structure which will contain hazardous substances in the event of a spill, and prevent them from entering the stormwater drainage utility system, any water body or land.

Storage

The keeping of a substance or mixture of substances in a container, either above ground or underground.

Unintentional

Unplanned or unwanted releases of hazardous substances that may not be detected over time.

Use

The manufacturing, processing or handling of a substance or mixture of substances for a particular activity without necessarily changing the physical state or chemical structure of the substance involved. This includes mixing, blending and packaging operations, but does not include the filling of or drawing off of substances from bulk storage tanks unless any processing plant is permanently connected to the bulk storage.

The following provisions set out the rules and other measures designed to give effect to the Plan's hazardous facilities' objectives and policies.

5E.6.1 PLAN METHODS

The rules for hazardous facilities apply to any activity or development in all of the Plan's activity zones and must be complied with when using land for a hazardous facility or where a contaminated site is to be remediated or used.

5E.6.1.1 ACTIVITIES

The HFSP set out in Appendix 5 provides for the calculation of the '*Effects Ratios*' for any particular proposal for each of the effect groups (fire/explosion, human health, environmental). These ratios are used to determine if a proposal is a permitted activity in the relevant zone or if it requires a resource consent. Hazardous facilities are permitted in a particular zone where:

- the Plan's development controls for hazardous facilities can effectively control any potential effects; and
- where the potential level of risk is limited; and
- the health and safety of the surrounding community or the quality of the environment of the area will not be adversely affected. In determining this, the objectives of the particular zone, its characteristics and its location are taken into account.

A list of exemptions from the HFSP is given in Clause 5E.7.5 EXEMPT ACTIVITIES.

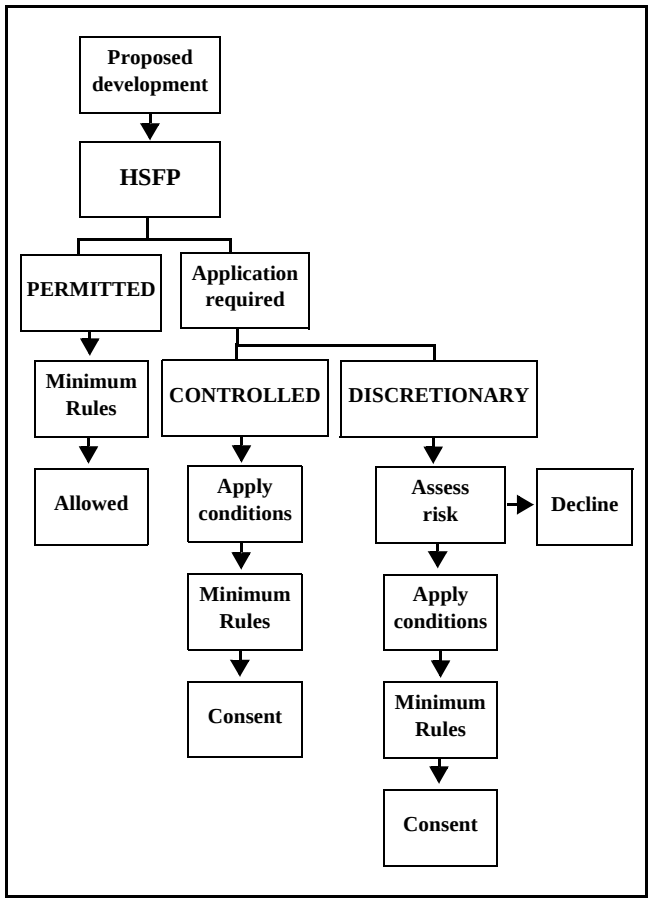
5E.6.1.2 DEVELOPMENT CONTROLS

The development controls of this Part are designed to ensure better operational and managerial practice of the hazardous facility so that any adverse effects are avoided or mitigated.

5E.6.2 OTHER METHODS

The Act requires the Council to consider alternative methods of achieving the purpose of the Act in addition to Plan rules. For these alternative methods see ANNEXURE 1.

Figure 1 Consent procedure



See key on page 1 of this section

5E.7 RULES : ACTIVITIES

"Hazardous Facility" means any activity involving a hazardous substance; sites where the hazardous substance is stored or handled or which might be contaminated by a hazardous substance; and any installations containing a hazardous substance, including vehicles parked on site laden with hazardous substances and where necessary their transportation routes.

"Hazardous Facility" does not include:

- The incidental use and storage of hazardous substances in minimal domestic scale quantities;
- Fuel in motor vehicles, boats and small engines;
- Retail outlets for domestic scale usage of hazardous substances (ie supermarkets, hardware shops, pharmacies, home garden centres);
- Gas and oil pipelines;
- Trade waste sewers and waste treatment and disposal facilities;
- Hazardous activities not involving hazardous substances (refer Clause 5E.1 CONTENT AND STRUCTURE);
- Any installation where the combined transformer oil capacity of the electricity transformers is less than 1,000 litres.

Consent Status Matrix Table

5E.7.1 ACTIVITIES

A. Determination of Consent Status

The HFSP provides a mechanism for assessing whether a proposed hazardous facility or activity requires a resource consent, or can be carried out as a permitted activity. Hazardous facilities must be assessed in accordance with the HFSP procedure of Appendix 5 in order to establish its '*Effects Ratio'*. The Consent Status Matrix Table lists the different '*Effects Ratio'* trigger level values for each zone that are intended to ensure that proposed facilities or activities that are not permitted are subject to a higher degree of scrutiny.

Any new hazardous facility or any existing hazardous facility which substantially alters its operation must comply with the provisions of this Consent Status Matrix Table.

B. Buffer for Sensitive Land Uses

Any hazardous facility proposed in a Business 4, 5, 5a, 6 or 7 zone that is located within 50m of any Business 1, 2, 3, or 8 zone, Open Space 1 to 5 zone, Special Purpose 1 to 4 zone, and any Residential zone will be subjected to the trigger level that is one level higher than the most sensitive land use zone that is potentially affected by the development proposal in Business 4, 5, 5a, 6 or 7 zone.

Zone	Permitted activity effects ratio	Controlled activity effects ratio	Discretionary activity effects ratio
Business 6	≤1	1 - 2	>2
Business 5, 5a, 7	≤0.75	0.75 - 1.5	>1.5
Business 4	≤0.5	0.5 - 1	>1
Business 1 - 3 Mixed Use Open Space 5 Special Purpose 1-3	≤0.2	0.2 - 0.4	>0.4
Open Space 1-4 All Residential zones Special Purpose 4	≤0.05	-	>0.05

Explanation

The HFSP will act as a signal for hazardous facility operators as to the most appropriate zones for their activity. The procedure will also indicate to operators an acceptable risk level required in the various zones. These indications or signals are seen to offer operators some certainty over the regulatory requirements they face and the likely outcome of any application. In addition, the community will be given some certainty over where hazardous facilities are likely to be established and the level of public participation invited.

C. Contaminated Site Consents

- Any activity which remediates an identified contaminated site is a controlled activity.
- Any activity that proposes to locate on a contaminated or potentially contaminated site identified in ANNEXURE 8 is a discretionary activity.

Explanation

The risk to both the environment and the community posed by contaminated sites means that proper consideration must be given to proposals to re-use such sites to ensure that measures are taken so that the site is safe for the proposed activity. In addition, because remediation measures can, in some instances, do further damage to the environment, the Council wishes to assess any such proposal to ensure that the remediation of a particular site is undertaken in accordance with stated guidelines, and in such a way as to achieve an appropriately higher level of environmental quality and public safety.

D. Radioactive Material Consents

- Any use or storage of radioactive material with an activity below that specified as an exempt activity in the Radiation Protection Regulations 1982 is a permitted activity.
- Any use or storage of radioactive material with an activity in excess of that specified in the Radiation Protection Regulations 1982 and below 10 terabecquerel is a discretionary activity.
- Any facility using radioactive material with an activity in excess of 1,000 terabecquerel (1×10^{15}) is prohibited.
- Except that any use of radioactive material in smoke detectors is exempt from the requirements of these controls.

Explanation

Radioactivity has been deliberately excluded from the preliminary risk assessment procedures for two reasons. Firstly, the type and degree of risk that is posed by radioactive material is different from and additional to that of other chemical compounds. Secondly, the use, storage and transport of radioactive material is controlled and licensed by the Ministry of Health through the National Radiation Laboratory. However, while the licensing of uses and users is properly the responsibility of Central Government, the Council will still control the location of these activities in order to ensure the protection of neighbouring residents and workers.

5E.7.1A PERMITTED ACTIVITIES

When any activity is determined to be a permitted activity after screening under the HFSP procedures in Appendix 5 it must also comply with the following:

1. All other relevant rules in the Plan; and
2. The development controls in Clause 5E.8 RULES : DEVELOPMENT CONTROLS.

5E.7.2 CONTROLLED ACTIVITIES

5E.7.2.1 ASSESSMENT CRITERIA

All controlled activities for hazardous facilities shall be assessed against the following criteria:

1. Whether the activity meets both the standard zone provisions in the Plan, and the relevant controls for hazardous facilities (Clause 5E.8 RULES : DEVELOPMENT CONTROLS); and
2. Whether the objectives and policies for the zone are met; and
3. Whether the risks associated with the proposal are able to be avoided or mitigated.

Conditions

Conditions may be imposed on particular proposals in relation to the following matters:

- Hazards and exposure pathways;
- The surrounding natural and physical environment eg. aquifers (refer to ANNEXURE 2 of this Plan for maps identifying the location of the groundwater aquifers on the Isthmus, including those used for potable water supply), streams, wetlands, habitats;
- The separation distances from neighbouring activities and number of people potentially at risk from the facility;
- Managing risks to adjacent property;
- Cumulative effects of hazardous facilities in the area;
- Site drainage and off-site infrastructure (eg stormwater, sewer type and capacity);

- Transport of hazardous substances on and off the site;
- Site layout and design;
- Fire safety and fire water management; and
- Spill contingency and emergency planning, monitoring and maintenance schedules.

Other conditions may be imposed to ensure that particular measures are undertaken so that any risk posed by the proposal is avoided or satisfactorily mitigated.

5E.7.3 DISCRETIONARY ACTIVITIES

5E.7.3.1 ASSESSMENT CRITERIA

In addition to the items listed in Clause 5E.7.2 CONTROLLED ACTIVITIES, an application for discretionary activity for a hazardous facility shall be accompanied by an assessment of the environmental effects of the proposed hazardous facility in terms of PART 4 - GENERAL PROVISIONS AND PROCEDURES. This shall be provided in such detail as corresponds with the scale and significance of the actual or potential effects (particularly risk) of the project. Any application shall be assessed having regard to the following matters -

1. Whether the proposal is consistent with the objectives and policies of the relevant zone.
2. Whether the proposal is acceptable after a risk assessment as described below.

   Risk assessment

   A qualitative or quantitative risk assessment identifying any risk to the environment may be required depending upon the scale or potential effects of the proposed activity with emphasis on the following issues:

   - Separation distance to people sensitive activities (particularly activities such as schools, rest homes, hospitals, shopping centres etc);
   - Location in relation to nearest aquifer, stream or the coast (refer to ANNEXURE 2 of this Plan for maps identifying the location of the groundwater aquifers on the Isthmus, including those used for potable water supply);
   - Nature of subsoil and site geology;
   - Distance to sensitive habitats in the area or water catchment;
   - Cumulative and synergistic effects, and bio accumulation of hazardous substances used or stored;
   - Fire safety and fire water management;
   - Adherence to health, safety and environmental management systems. Council considers the use of any one of the following systems, such as the NZCIC Responsible Care Management System, the DNV International Safety Rating System, appropriate ISO 14000 series system, or other recognised and accepted system will satisfy this requirement if included in the resource consent. The Council will give consideration to any other alternative site management system which will achieve the same intent of any of the above systems;
   - Spill contingency and emergency planning, monitoring and maintenance schedules;
   - Site drainage and off-site infrastructure (eg. stormwater, sewer type and capacity); and,
   - The transportation of hazardous substances, especially for large proposals.
3. Whether appropriate site management systems are proposed.

   Consideration will be given to specific spill contingency plans, emergency procedures, stormwater management, treatment and disposal procedures for hazardous waste, fire safety, transportation, and monitoring and maintenance procedures.
4. Whether there are reasonable alternatives to the proposal.

   A description of any possible alternative locations or methods for undertaking the activity shall be submitted, where it is likely that an activity will result in any significant adverse effects on the environment.
5. Whether there will be any unacceptable effects on traffic safety.

   No significant adverse effect on the safety of the operation of the adjoining road network caused by the proposal will be accepted. Generally it must be demonstrated that vehicles transporting hazardous substances will not utilise local roads in residential areas. Conditions may be imposed which require access along specified routes.
6. Whether the proposal will comply with all other relevant controls in the Plan and the development controls of Clause 5E.8 RULES : DEVELOPMENT CONTROLS.

5E.7.4 CONTAMINATED SITES

The following shall apply to applications in relation to remediation or redevelopment of contaminated sites.

5E.7.4.1 CONTROLLED ACTIVITIES

Applications to remediate and restore a contaminated site.

A controlled activity application to remediate and restore a contaminated site must contain an assessment of the extent to which the site is contaminated, a health and safety plan

covering the intended work, and indicate the measures by which the site will be remediated and restored. This application must demonstrate that the site is safe for the intended use of the site, and that any adverse effects on the environment will be avoided or mitigated. An application which complies with the *"Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites"* published in January 1992 jointly by the Australian and New Zealand Environmental and Conservation Council and the National Health and Medical Research Council will be deemed to meet these requirements.

5E.7.4.2 DISCRETIONARY ACTIVITIES

An application to redevelop or use a contaminated site on land zoned Mixed Use Zone: Orakei Point will be considered as a restricted discretionary activity.

Applications to redevelop or use a contaminated site.

A discretionary activity application to redevelop a known contaminated site will be assessed in terms of the requirements of the *"Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites"* and must demonstrate that there are no off-site adverse effects from the contaminated land and that measures will be taken to ensure the safe operation of the proposal on the contaminated site.

5E.7.5 EXEMPT ACTIVITIES

Hazardous facilities that comply with approved codes of practice may be exempted from the HFSP. Activities that have satisfactorily avoided, remedied, or mitigated their adverse environmental effects as an industry group shall be regulated in accordance with the general zone provisions, and where a resource consent is required their storage or use of hazardous substances shall be assessed in accordance with the controlled use criteria set out in Clause 5E.7.2 CONTROLLED ACTIVITIES. The following activities are deemed to comply with this exemption:

- The retail sale of petrol (up to 100,000 litres storage in underground tanks) and diesel (up to 50,000 litres storage in underground tanks) provided that the Code of Practice for '*Design, Installation and Operation of Underground Petroleum System'*, published by the Department of Labour, OSH, is adhered to.
- Retail LPG outlets (up to 6 tonnes, single vessel storage) provided that the Australian Standard *'LP Gas Storage and handling - Siting of LP Gas automotive retail outlets' (supplement to AS1596-1989)"* is adhered to.
- The use including the manufacture for use of explosives (UN Class 1.1) in the Business 7 zone provided that the provisions of the Health and Safety in Employment Act 1992 and the Explosives Act 1957 (or any substituted legislation) and all relevant regulations and Codes of Practice are complied with.

5E.8 RULES : DEVELOPMENT CONTROLS

The following controls relate to all hazardous facilities. These controls are in addition to the standard development controls of the relevant zone.

5E.8.1 SITE DESIGN AND MANAGEMENT

The following site design and management performance standards apply to the manufacturing, mixing, packaging, storing, loading, unloading, using or handling of hazardous substances which are ***contaminants*** as specified in the Resource Management Act 1991.

1. The site or part(s) of the site immediately involved in the manufacturing, mixing, packaging, storing, loading, unloading, using or handling of hazardous substances, which are ***contaminants*** will be designed, constructed and managed, taking ***all practicable steps*** to enable -

   (a) That any spillage, release or otherwise:

   (i) will not contaminate land, ground water, any water body, or potable water supply; and

   (ii) will not enter or be discharged into any drainage or sewerage utility system, contrary to the network utility operator's rules.

   (b) That any stormwater originating on site or collected on site:

   (i) will not contaminate land, ground water, any water body, or potable water supply by acting as a carrier or transport medium for hazardous substances which are contaminants; and

   (ii) will not enter or be discharged into any drainage or sewerage utility system contrary to the network utility operator's rules.

   (c) That any hazardous substance where the intended function requires that it is placed in or on, ground or water, is managed in such a way that:

   (i) the effects of the intended function are not manifested outside the intended or target area contrary to the manufacturer's specified limits or accepted industry standards; and

   (ii) the hazardous substance will not contaminate land, ground water, any water body, or potable water supply outside the intended area; and

See key on page 1 of this section

(iii) the hazardous substance will not enter or be discharged into any drainage or sewerage utility system contrary to the network utility operator's rules.

Note: For Part 5E ***all practicable steps,*** in relation to achieving any purpose in any circumstances, means all steps to achieve the purpose that it is reasonably practicable to take in the circumstances, having regard to:

(a) the nature and severity of the contamination that may be suffered if the purpose is not achieved; and

(b) the current state of knowledge about the likelihood that contamination of that nature and severity will be suffered if the purpose is not achieved; and

(c) the current state of knowledge about contamination of that nature; and

(d) the current state of knowledge about the means available to achieve the purpose, and about the likely efficacy of each; and

(e) the availability and cost of each of those means.

2. The Council considers the following approaches will satisfy the requirements of Rule 1 of Clause 5E.8.1 SITE DESIGN AND MANAGEMENT, but will give consideration to any alternative proposal which will achieve the same intent -

(a) That part(s) of the site, referred to in Rule 1 of Clause 5E.8.1 SITE DESIGN AND MANAGEMENT, shall be protected by a spill containment system. The spill containment system shall be:

(i) constructed from impervious materials that are resistant to the hazardous substances involved;

(ii) able to contain the maximum volume of the largest tank used. Where drums or other containers are used the spill containment system shall be able to contain half of the maximum volume of substances stored or 5,000 litres whichever is the lesser; and

(iii) designed, constructed and managed so that any spill or release of any hazardous substance and any stormwater that may have entered and become contaminated in the spill containment system, is:

- prevented from entering the stormwater drainage system; and
- prevented from discharging into or onto land or ground water, any water body, or potable water supply.

(b) Underground storage tanks shall be designed and constructed to contain any leakage. A leak detection system shall be integral to the design of the tank backed up with an effective monitoring program. For petroleum products, compliance with the Code of Practice for "Design, Installation and Operation of Underground Petroleum Systems," by the Department of Labour, OSH, 1992 is deemed to meet this requirement.

(c) All stormwater grates shall be clearly marked to ensure that hazardous substances are not inadvertently released into the stormwater system.

(d) That part of the site where vehicles, equipment or containers, that are or may have become contaminated with hazardous substances, are washed shall be designed and constructed so that any contaminated effluent from the wash down area or washing down facility cannot be discharged to the stormwater drainage system, to land, to groundwater, to any water body, or to potable water supply unless a resource consent to discharge or appropriate permit allows otherwise.

Explanation

Hazardous substances spillage can occur through accidental or deliberate discharge of hazardous substances to land or water. This usually occurs when they are improperly managed or stored. These rules are intended not only to reduce the number of spills, but also to reduce the impact of the spills that do occur.

5E.8.2 WASTE MANAGEMENT

1. Any waste or any waste containing hazardous substances will be managed so that they are not:

(a) discharged into any drainage or sewerage utility system contrary to the network utility operator rules; or

(b) discharged into or onto land, ground water, any water body, or potable water supply unless a resource consent allows otherwise.

2. The storage of any waste or any waste containing hazardous substances will comply at all times with Clause 5E.8.1 SITE DESIGN AND MANAGEMENT.

3. The Council considers the following approaches will satisfy the requirements of Rule 1, of Clause 5E.8.2 WASTE MANAGEMENT, but will give consideration to any alternative proposal which will achieve the same intent.

(a) At all times, sites which generate any waste, or waste containing hazardous substances, shall either use collection and disposal methods that meet recognised and accepted environmental standards for such waste, or be regularly serviced by reputable waste disposal service companies.

(b) On every site where any waste is collected into containers, the containers shall be:

(i) suitably designed for such waste; and

(ii) protected so that any stormwater can not enter and cause the containers to overflow.

Explanation

If wastes and particularly hazardous wastes are improperly managed there is a high potential for environmental harm. The aim should be to provide for integrated waste management with the highest practical rate of waste reduction, re-utilisation and recycling, and the application of the principles of cleaner production engineering. Hazardous waste includes all materials that are, or contain considerable quantities of hazardous substances that cannot be used in a particular site, plant or process. Wherever possible less harmful substitutes should be considered in preference to hazardous materials so as not to generate hazardous waste. The evaluation of options for Clean Production as outlined in the Auckland Regional Council's Tradewaste Bylaw 1991 is recommended to eliminate, prevent or reduce the generation of all hazardous waste.

5E.8.3 SIGNAGE

1. All hazardous facilities shall have adequate signage for the hazardous substances used.
2. Compliance with the Code of Practice for "*Warning Signs for Premises Storing Hazardous Substances*" published by the New Zealand Chemical Industry Council October 1988 will be deemed to satisfy this requirement but consideration will be given to any alternative proposal which will achieve the same intent.

Explanation

It is important that in the case of any accident or fire the emergency services are able to determine what materials are on, or could be expected, to be on the site.