

**DETERMINATION OF A DEVELOPMENT APPLICATION
FOR STATE SIGNIFICANT, DESIGNATED AND INTEGRATED DEVELOPMENT
UNDER SECTION 80 OF THE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979**

I, the Minister for Urban Affairs and Planning, under Section 80 of the *Environmental Planning and Assessment Act 1979* ("the Act"), determine the development application ("the Application") referred to in Schedule 1 by granting consent subject to the conditions set out in Schedule 2.

The reason for the imposition of conditions is to:

- a) minimise any adverse environmental impacts associated with the development;
- b) address the development's contribution to cumulative environmental impacts in the Upper Hunter Valley;
- c) ensure environmental coordination and cooperation with other developments in the Macquarie Generation Industrial Development Strategy Area; and
- d) provide mechanisms for pro-active, informative and transparent community consultation and involvement.

Andrew Refshauge MP
Deputy Premier
Minister for Urban Affairs and Planning
Minister for Aboriginal Affairs
Minister for Housing

Sydney,

12 November 2001

File No. S00/01417

SCHEDULE 1

Application made by:	Sterling Pulp Chemicals Ltd ("the Applicant");
To:	The Minister for Urban Affairs and Planning ("the Minister");
In respect of:	Lot 16 DP 701496 and DP 247944, Parish of Savoy, Muswellbrook local government area;
For the following:	The construction and operation of a sodium chlorate production facility and associated infrastructure ("the development");

Development Application:	Integrated DA No. 71-04-01, lodged with the Department of Urban Affairs and Planning on 17 April 2001, accompanied by <i>Proposed Sodium Chlorate Plant, Muswellbrook, NSW - Environmental Impact Statement</i> prepared by National Environmental Consulting Services and dated April 2001;
State Significant Development	Under Section 76A(7) of the Act, the proposed development is classified as State Significant development because it is a type of development (chemical processing) listed in Schedule 1 of <i>State Environmental Planning Policy No. 34 - Major Employment Generating Industrial Development</i> and has a capital investment in excess of \$20 million.
BCA Classification:	Class 5 - office and maintenance building Class 8 - sodium chlorate plant bag loading building Class 10a - crystal storage building equipment cold storage building
Note:	1) To ascertain the date upon which this consent becomes effective, refer to Section 83 of the Act. 2) To ascertain the date upon which this consent is liable to lapse, refer to Section 95 of the Act. 3) If the Applicant is dissatisfied with this determination, Section 97 of the Act grants him or her a right of appeal to the Land and Environment Court, which is exercisable within 12 months of receiving notice of this determination.

SCHEDULE 2

In this consent, except in so far as the context or subject-matter otherwise indicates or requires, the following terms have the meanings indicated:

Act	<i>Environmental Planning and Assessment Act, 1979</i>
AEMR	Annual Environmental Management Report
Applicant	Sterling Pulp Chemicals Ltd
BCA	Building Code of Australia
CCC	Community Consultative Committee
commissioning	any activity, prior to the commencement of operation of the sodium chlorate plant, with the aim of testing or verifying any component of the plant, but without the production, or intended production, of commercial quantities of sodium chlorate
construction	any activity requiring a Construction Certificate, the laying of a slab or significant excavation work
Council	Muswellbrook Shire Council
Department	NSW Department of Urban Affairs and Planning
Director-General	Director-General of the NSW Department of Urban Affairs and Planning, or delegate
DLWC	NSW Department of Land and Water Conservation
dust	any solid material that may become suspended in air
EIS	Environmental Impact Statement for the sodium chlorate plant entitled <i>Proposed Sodium Chlorate Plant, Muswellbrook, NSW - Environmental Impact Statement</i> (two volumes, including Technical Reports), dated April 2001 and prepared by National Environmental Consulting Services (NECS)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act, 1997</i>
Macquarie Generation	the company or companies that own and/ or operate the Bayswater and Liddell Power Stations
MGIDS Area	Macquarie Generation Industrial Development Strategy Area, being the land owned by Macquarie Generation around the Bayswater and Liddell Power Stations, to which <i>State Environmental Planning Policy No. 67 - Macquarie Generation Industrial Development Strategy</i> applies
Minister	Minister for Urban Affairs and Planning, or delegate
muds	all compounds precipitated from the sodium chlorate production process, which are not beneficial reused in the process, and are to be removed from the site as a slurry or filter-cake
operation	any activity that results in the production, or intended production, of commercial quantities of sodium chlorate
Principal Certifying Authority	the Minister or an accredited certifier, appointed under section 109E of the Act, to issue a Part 4A Certificate as provided under section 109C of the Act
Regulation	<i>Environmental Planning and Assessment Regulation, 2000</i>
POEO Act	<i>Protection of the Environment Operations Act, 1997</i>
settling pond	the depression at the northern boundary of the site to which surface water run-off drains
sodium chlorate plant	the development to which this consent applies
site	the land to which this consent applies

1. GENERAL

Obligation to Minimise Harm to the Environment

- 1.1 The Applicant shall implement all practicable measures to prevent or minimise any harm to the environment that may result from the construction, commissioning, operation and where relevant, the decommissioning of the sodium chlorate plant.

Scope of Development

- 1.2 ¹The Applicant shall carry out the development generally in accordance with:
- a) Development Application No. 71-04-01, lodged with the Department of Urban Affairs and Planning on 17 April 2001;
 - b) *Proposed Sodium Chlorate Plant, Muswellbrook, NSW - Environmental Impact Statement* (two volumes, including Technical Reports), dated April 2001 and prepared by National Environmental Consulting Services (NECS); and
 - c) the conditions of this consent.

In the event of an inconsistency between a condition of this consent and the documents listed under a) and b) above, the condition of consent shall prevail to the extent of the inconsistency.

- 1.3 The production capacity of the sodium chlorate plant shall be limited to 60,000 tonnes per annum of sodium chlorate product.

Statutory Requirements

- 1.4 ² The Applicant shall ensure that all such licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the sodium chlorate plant. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.

Compliance

- 1.5 The Applicant shall ensure that all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent.
- 1.6 ³The Applicant shall be responsible for the environmental impacts resulting from the actions of all persons on the site, including any visitors.
- 1.7 Prior to the commencement of construction of the sodium chlorate plant, the Applicant shall certify in writing, to the satisfaction of the Director-General, that it has complied with all conditions of this consent applicable prior to construction.
- 1.8 Prior to the commencement of operation of the sodium chlorate plant, the Applicant shall certify in writing, to the satisfaction of the Director-General, that it has complied with all conditions of this consent applicable prior to operation.
- 1.9 Notwithstanding conditions 1.7 and 1.8 of this consent, the Director-General may require an update on compliance with all, or any part, of the conditions of this consent. Any such update shall meet the reasonable requirements of the Director-General and be submitted within such period as the Director-General may agree.

¹ Incorporates an EPA General Term of Approval

² Incorporates a DLWC General Term of Approval

³ Incorporates a DLWC General Term of Approval

- 1.10 The Applicant shall meet the requirements of the Director-General in respect of the implementation of any measure necessary to ensure compliance with the conditions of this consent, and general consistency with the EIS. The Director-General may direct that such a measure be implemented in response to the information contained within any report, plan, correspondence or other document submitted in accordance with the conditions of this consent, within such time as the Director-General may agree.

Dispute Resolution

- 1.11 In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter shall be referred by either party to the Director-General, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding on all parties. For the purpose of this condition, "public authority" has the same meaning as provided under section 4 of the Act.

Note: Section 121 of the *Environmental Planning and Assessment Act 1979* provides mechanisms for resolution of disputes between the Department, the Director-General, councils and public authorities.

2. CONSTRUCTION CERTIFICATION

- 2.1 In relation to the construction and occupation of the sodium chlorate plant, the Applicant shall provide to the Director-General and Council the following:
- a) written notification of the appointment of a Principal Certifying Authority;
 - b) copies of all Construction Certificates issued for the sodium chlorate plant;
 - c) written notification of the intention to commence construction work, to be received at least two working days prior to the commencement of construction. In the event that more than one Construction Certificate is issued, notification shall be provided prior to the commencement of construction the subject of each Certificate;
 - d) copies of all Occupation Certificates issued for the sodium chlorate plant; and
 - e) written notification of the intention to occupy the sodium chlorate plant, to be received at least two working days prior to occupation. In the event that more than one Occupation Certificate is issued, notification shall be provided prior to the occupation the subject of each Certificate.
- 2.2 The Applicant shall provide all information necessary for the Principal Certifying Authority to determine that the sodium chlorate plant will comply with the Building Code of Australia, and all relevant provisions of the Act, including the payment of a long service levy under section 34 of the *Building and Construction Industry Long Service Payments Act 1986*.
- 2.3 Prior to the commencement of construction of the sodium chlorate plant, the Applicant shall provide to Council and the Director-General, written certification from an independent, qualified person that the site is geologically stable.

3. ENVIRONMENTAL PERFORMANCE

Air Quality Impacts

- 3.1 ⁴In the event that the Applicant is unable to access data recorded at the existing Macquarie Generation meteorological station, the Applicant shall establish its own meteorological station in the vicinity of the site, to meet the requirements of the EPA. The monitoring station shall be used to undertake the Meteorological Monitoring Program required under condition 4.7 of this consent.

Odour

- 3.2 ⁵The Applicant shall not permit any offensive odour to be emitted from the site. For the purpose of this condition, "offensive odour" has the same meaning as provided by the *Protection of the Environment Operations Act 1997*.

Dust Emissions

- 3.3 ⁶The Applicant shall design, construct, operate and maintain the sodium chlorate plant in a manner that minimises dust emissions from the site.
- 3.4 ⁷The Applicant shall take all practicable measures to ensure that all vehicles entering or leaving the site, carrying a load that may generate dust, are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle at all times.
- 3.5 ⁸All fabric filters installed at the sodium chlorate plant shall be fitted with a bag leak detection system with audible and visual alarms acceptable to the EPA.

Discharge Limits

- 3.6 ⁹The Applicant shall design, construct, operate and maintain the sodium chlorate plant to ensure that for each discharge point listed in Table 1 below, the concentration of each pollutant listed for that discharge point does not exceed the maximum allowable discharge concentration limit for that pollutant at the discharge point specified. All concentration limits specified in the table are based on 101.3 kPa, 273 K, dry reference conditions.

Table 1 - Maximum Allowable Discharge Concentration Limits (Air)

Discharge Point	Pollutant	Maximum Allowable Discharge Concentration Limit
Point 1 - FIBC Bin Baghouse Exhaust	solid particles	100 mgNm ⁻³
Point 2 - Dryer Scrubber Exhaust	solid particles	100 mgNm ⁻³
Point 3 - Transport Baghouse Exhaust	solid particles	100 mgNm ⁻³
Point 4 - Tail Gas Scrubber Exhaust	chlorine	25 mgNm ⁻³
	hydrogen chloride	10 mgNm ⁻³
Point 5 - Vent Scrubber Exhaust	chlorine	15 mgNm ⁻³
	hydrogen chloride	80 mgNm ⁻³

⁴ EPA General Term of Approval

⁵ EPA General Term of Approval

⁶ EPA General Term of Approval

⁷ Incorporates an EPA General Term of Approval

⁸ EPA General Term of Approval

⁹ EPA General Term of Approval

- 3.7 Notwithstanding the maximum allowable discharge concentration limits provided under condition 3.6 of this consent, the Applicant shall generally meet the discharge concentrations and rates for pollutants as indicated in the EIS;

Note: Pollutant concentrations listed under condition 3.6 are based on the highest concentrations that may be discharged from the sodium chlorate plant and still meet the EPA's environmental outcomes for those pollutants outside the MGIDS Area. The maximum pollutant discharge concentration limits must never be exceeded. The EIS indicates that air emissions can be controlled below the maximum allowable concentration limit, and therefore the Applicant is obliged to undertake all reasonable means to minimise air emissions from the site. The imposition of a maximum allowable concentration limit does not permit operation near that limit if the sodium chlorate can be operated to achieve lower discharge concentrations.

Water Quality Impacts

- 3.8 ¹⁰The Applicant shall comply with any direction made by DLWC to cease activities on the site that DLWC considers may damage or detrimentally affect an aquifer, or damage or interfere in any way with a work, as defined by the *Water Act 1912*.
- 3.9 ¹¹All bores constructed for monitoring groundwater shall meet the requirements detailed in *Minimum Construction Requirements for Water Bores in Australia*.
- 3.10 ¹²All bores shall be located and installed to meet the requirements of DLWC. This shall include location and installation to represent the area in space and depths of groundwater likely to be impacted.
- 3.11 ¹³The Applicant shall meet the requirements of DLWC in relation to remediation action(s) should groundwater monitoring indicate that the sodium chlorate plant has caused a degradation in groundwater quality below its beneficial use class, as existing at the time of commencement of construction of the sodium chlorate plant.
- 3.12 ¹⁴Except as may be expressly provided by a licence under the *Protection of the Environment Operations Act 1997* in relation to the sodium chlorate plant, section 120 of that Act (pollution of waters) shall be complied with in, and in connection with, the carrying out of the sodium chlorate plant.
- 3.13 ¹⁵The Applicant shall design, construct, operate and maintain the sodium chlorate plant in a manner that does not significantly damage or interfere in any way with:
- a) vegetation external to the site;
 - b) the stability of adjacent or nearby streams; and
 - c) the quality of water in any stream or watercourse.

¹⁰ DLWC General Term of Approval

¹¹ DLWC General Term of Approval

¹² Incorporates EPA and DLWC General Terms of Approval

¹³ DLWC General Term of Approval

¹⁴ EPA General Term of Approval

¹⁵ DLWC General Term of Approval

- 3.14 ¹⁶All soil and/ or vegetation disturbed or removed from the site shall be disposed of to, or stored at, an appropriate location where it cannot be washed off the site.
- 3.15 ¹⁷The Applicant shall establish, in consultation with Macquarie Generation, measures to exclude or restrict human and livestock access to embankments and land areas downstream of water discharge points from the site (surface and stormwater), the emergency stormwater outlet flume and the northern embankment of the site. These measures shall be implemented and include rehabilitation of any existing unstable soil.
- 3.16 ¹⁸Prior to the commencement of commissioning of the sodium chlorate plant, the Applicant shall submit to each the Director-General and DLWC, a copy of an agreement between the Applicant and Macquarie Generation in relation to water supply and management for the sodium chlorate plant. The agreement shall be consistent with all relevant provisions of the Site Water Management Plan required by Macquarie Generation's Part 9 licence under the *Water Management Act 1912*. The agreement shall detail areas of responsibility assigned to the Applicant and Macquarie Generation in relation to:
- a) volumes of water to be supplied to the sodium chlorate plant, including sources, infrastructure and storage requirements;
 - b) monitoring of water consumption at the sodium chlorate plant;
 - c) storage of process water and tailwater from the sodium chlorate plant;
 - d) any water disposal requirements, including volumes, water quality and disposal systems; and
 - e) monitoring for surface and groundwaters on or under the site, and response and remediation measures in the event that contamination of surface or ground waters occurs.

Note: The conditions of this consent, or the conditions of a licence under the *Protection of the Environment Operations Act 1997* or the *Water Act 1912* may assign responsibility for, or affect, the roles of the Applicant and Macquarie Generation in relation to those issues listed under condition 3.16 of this consent. Conditions of this consent, or a relevant licence should be considered in reaching the agreement outlined under condition 3.16 of this consent.

Hazards and Risk Impacts

Bunding and Spill Management

- 3.17 The Applicant shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:
- a) all relevant Australian Standards;
 - b) a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and
 - c) the EPA's Environment Protection Manual Technical Bulletin *Bunding and Spill Management*.

In the event of an inconsistency between the requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

¹⁶ DLWC General Term of Approval

¹⁷ DLWC General Term of Approval

¹⁸ DLWC General Term of Approval

- 3.18 The Applicant shall only store and handle sodium chloride (salt) and dangerous goods, as defined by the Australian Dangerous Goods Code, in areas under which a high density polyethylene (HDPE) liner has been installed. This condition only applies to the land to which this consent applies, and specifically the areas of that land on which salt or dangerous goods may be reasonably predicted to potentially contact the ground.

Emergency Coordination

- 3.19 Prior to the commencement of operation of the sodium chlorate plant, the Applicant shall develop an **Emergency Services Cooperation Agreement** in consultation with the emergency response teams (NSW Fire Brigades, State Emergency Services and local bushfire fighting services, where relevant). The Agreement shall provide, but not necessarily be limited to:
- a) policies and procedures for the on-going supply of hazards information related to the sodium chlorate plant to the emergency response teams, including quantities and locations of dangerous goods inventories and possible hazardous events associated with the sodium chlorate plant;
 - b) policies and procedures for communication with the emergency response teams, and notification in the event of an emergency;
 - c) any agreement for the provision of firefighting/ emergency response equipment from the sodium chlorate plant in the event of a bushfire or emergency;
 - d) any agreement for access to water stores at the development in the event of a bushfire; and
 - e) any agreement for the provision of suitably qualified and appropriately trained employees from the sodium chlorate plant to assist where relevant in the event of a bushfire or emergency.

The Emergency Services Cooperation Agreement shall be consistent with the Emergency Plan required under condition f) of this consent. The Applicant shall supply a copy of the Emergency Services Cooperation Agreement to the Director-General prior to the commencement of operation of the sodium chlorate plant.

Traffic and Transport Impacts

- 3.20 In the event that an intermodal terminal (road-rail), to which the Applicant may gain access, commences operation in or in the vicinity of the MGIDS Area, the Applicant shall undertake to maximise the transport of materials to and from the site by rail.
- 3.21 Notwithstanding condition 3.20 of this consent, the Applicant may seek the Director-General's approval to transport any material by road, regardless of the operation of an intermodal terminal (road-rail), to which the Applicant may gain access, in or in the vicinity of the MGIDS Area. In seeking the Director-General's approval, the Applicant shall demonstrate that the material:
- a) is not permitted to be handled at the intermodal terminal, whether through restrictions placed on the development consent for the terminal or as a result of a legislative restriction; or
 - b) is not able to be handled at the intermodal terminal, due to there being insufficient capacity available at the terminal;
 - c) is to be transported in quantities or at frequencies for which rail transport is not possible or not practical; or
 - d) is to be transported to or from a location for which rail transport is not possible or not practical; or

- e) would place a significant negative commercial restriction on the Applicant if required to be transported by rail; or
- f) is the subject of any other factor that may reasonably preclude the transport of the material by rail.

The Applicant shall notify the Director-General should all of the factors listed from a) to f) above cease to apply to any material for which the Director-General has approved transport by road. In such case, the Director-General may direct that the material be returned to transport by rail.

Noise Impacts

3.22 ¹⁹Construction activities associated with the sodium chlorate plant shall only be conducted between 7:00 am and 6:00 pm from Monday to Saturday inclusive. No construction activity is permitted on a Sunday or a public holiday.

3.23 ²⁰The hours of construction specified under condition 3.22 of this consent may be varied with the prior written approval of the Director-General. Any request to alter the hours of construction specified under condition 3.22 shall be:

- a) considered on a case-by-case basis;
- b) accompanied by details of the nature and need for activities to be conducted during the varied construction hours; and
- c) accompanied by written evidence of the EPA's agreement with the proposed variation in construction times, after providing any information for the EPA to reasonably determine that activities undertaken during the varied construction hours will not adversely impact on the acoustic amenity of residents in the vicinity of the site.

Note: The EIS demonstrated that the sodium chlorate will have negligible noise impacts on land uses surrounding the MGIDS Area. As such, this consent does not impose any noise mitigating requirements over and above those considered in the EIS. However, it is recognised that this does not necessarily permit the Applicant to design, construct, operate or maintain the sodium chlorate plant without due consideration for potential noise emissions.

Socio-Economic Impacts

3.24 The Applicant shall consult with Council to establish an appropriate financial and/ or in kind contribution generally in accordance with Council's *Muswellbrook Section 94 Contributions Plan 2001*. The contribution shall reflect the likely increase in demand for public facilities and services as a result of the sodium chlorate plant and shall take into account any mitigating circumstances to which the Applicant and Council may agree.

3.25 Prior to the payment of any contribution established under condition 3.24 of this consent, the Applicant shall refer details of the contribution for the approval of the Director-General accompanied by written evidence of Council's agreement with the contribution.

Note: It is noted from the EIS that the predicted increase in demand for public facilities as a result of the sodium chlorate plant is low. However, it is recognised that the Applicant and Council may establish an appropriate contribution towards public facilities and services based on the Applicant's role as an active participant in the Muswellbrook community.

¹⁹ Incorporates an EPA General Term of Approval.

²⁰ Incorporates an EPA General Term of Approval

Waste Management Impacts

- 3.26 ²¹The Applicant shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal, or any waste generated at the site to be disposed of at the site, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*. This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the site if it requires an Environment Protection Licence under the *Protection of the Environment Operations Act 1997*.

Note: Off-spec product that is to be recycled or reprocessed within the sodium chlorate plant is not considered a waste and is therefore not the subject of condition 3.26 of this consent.

- 3.27 ²²All wastes generated on the site shall be classified in accordance with the EPA's publication *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* and be disposed of to a facility that may lawfully accept the waste.
- 3.28 ²³All hazardous or industrial wastes, as defined in the EPA's publication *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* shall be stored and disposed of in a manner that minimises the impact of the waste on the environment, including appropriate segregation for storage and separate disposal by a waste contractor appropriately licensed by the EPA.

Flora, Fauna and Visual Amenity Impacts

- 3.29 Lighting on the site shall be directed in such a manner so as not to create a nuisance to surrounding properties or roadways. The use of lighting shall be minimised, consistent with the aims of the Energy Management Plan required under condition 6.5 b) of this consent.
- 3.30 The Applicant shall retain existing *Acacia salicina* trees on and adjacent to the site. In the event that any of those trees is required to be removed, or is damaged during construction, the Applicant shall implement appropriate compensatory measures (replacement with a tree of the same, or other appropriate species) through the Landscape Management Plan required under condition 6.5 j) of this consent.

²¹ EPA General Term of Approval

²² EPA General Term of Approval

²³ EPA General Term of Approval

4. ENVIRONMENTAL MONITORING AND AUDITING

General Monitoring Requirements

4.1 ²⁴The results of all monitoring required under this consent shall be

- a) in a legible form, or in a form that can readily reduced to a legible form;
- b) kept for at least four years after the monitoring or event to which the results relate took place; and
- c) produced in a legible form to any authorised officer of the EPA or the Director-General, upon request; and
- d) kept with the following details for each sample required to be collected:
 - i) the date(s) on which the sample was collected;
 - ii) the time(s) at which the sample was collected;
 - iii) the point at which the sample was collected; and
 - iv) the name of the person who collected the sample.

Air Quality Monitoring

4.2 ²⁵All monitoring for the concentration of pollutants emitted to the air required to be conducted under this consent in relation to the sodium chlorate plant shall be performed in accordance with:

- a) any methodology which is required by or under the *Protection of the Environment Operations Act 1997* to be used for the testing of the concentration of the pollutant; or
- b) if no such requirement is imposed by or under the *Protection of the Environment Operations Act 1997* any methodology which a condition of an Environment Protection Licence or a local calculation protocol (as the case may be) requires to be used for that testing; or
- c) if no such requirement is imposed by or under the *Protection of the Environment Operations Act 1997*, or a condition of an Environment Protection Licence, or a local calculation protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Clean Air (Plant and Equipment) Regulation 1997* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

4.3 ²⁶The Applicant shall periodically determine the pollutant concentrations and emission parameters specified in Table 2 below, at the discharge points indicated and employing the sampling and analysis method specified. All pollutant concentrations and emission parameters for each discharge point shall be determined concurrently at the frequency indicated in the table.

²⁴ EPA General Term of Approval

²⁵ EPA General Term of Approval

²⁶ EPA General Term of Approval

Table 2 - Discharge Point Pollutant and Parameter Monitoring (Air)

Pollutant/ Parameter	Discharge Point	Method	Frequency
solid particles	Point 1 - FIBC Bin Baghouse Exhaust Point 2 - Dryer Scrubber Exhaust Point 3 - Transport Baghouse Exhaust	TM-15	Annual
chlorine	Point 4 - Tail Gas Scrubber Exhaust Point 5 - Vent Scrubber	TM-7 and TM-8	Annual
hydrogen chloride	Point 4 - Tail Gas Scrubber Exhaust Point 5 - Vent Scrubber	TM-7 and TM-8	Annual
velocity and volumetric flow rate	Point 1 - FIBC Bin Baghouse Exhaust Point 2 - Dryer Scrubber Exhaust Point 3 - Transport Baghouse Exhaust Point 4 - Tail Gas Scrubber Exhaust Point 5 - Vent Scrubber	TM-2	Annual
temperature	Point 1 - FIBC Bin Baghouse Exhaust Point 2 - Dryer Scrubber Exhaust Point 3 - Transport Baghouse Exhaust Point 4 - Tail Gas Scrubber Exhaust Point 5 - Vent Scrubber	TM-2	Annual
moisture content	Point 1 - FIBC Bin Baghouse Exhaust Point 2 - Dryer Scrubber Exhaust Point 3 - Transport Baghouse Exhaust Point 4 - Tail Gas Scrubber Exhaust Point 5 - Vent Scrubber	TM-22	Annual
dry gas density and molecular weight	Point 1 - FIBC Bin Baghouse Exhaust Point 2 - Dryer Scrubber Exhaust Point 3 - Transport Baghouse Exhaust Point 4 - Tail Gas Scrubber Exhaust Point 5 - Vent Scrubber	TM-23	Annual

- 4.4 ²⁷The Applicant shall periodically determine the dust deposition parameters specified in Table 3 below, at the locations indicated and employing the sampling and analysis method specified. All parameters for each location shall be determined concurrently at the frequency indicated in the table.

Table 3 - Dust Deposition Parameter Monitoring

Parameter	Monitoring Location	Method	Frequency
dust deposition rate, measured as gm ⁻² per month	Point 6 - Dust Deposition Gauge at South East Site Point 7 - Dust Deposition Gauge at North West Site	AM-19	Monthly
sodium chlorate, measured as % of total deposited matter	Point 6 - Dust Deposition Gauge at South East Site Point 7 - Dust Deposition Gauge at North West Site	US EPA Method 300.0 - Determination of Inorganic Anions by Ion Chromatography	Monthly

- 4.5 The Applicant may seek the approval of the Director-General to alter the frequency of the parameter determination required under condition 4.4 of this consent. Any request for approval shall only be made provided:

²⁷ EPA General Term of Approval

- a) parameter determination has been undertaken for a period of no less than 24 months (measured from the commencement of operation of the sodium chlorate plant);
- b) there has been no exceedence of any limit placed on the subject parameter, through this consent within the preceding 12-month period;
- c) there has been no reasonable complaint received from the public in relation to the subject parameter within the preceding 12-month period (refer to condition 5.3 of this consent);
- d) the Vegetation Monitoring Program (refer to condition 4.6 of this consent) has not identified any adverse impacts related to the deposition of sodium chlorate dust on vegetation in the preceding 12-month period; and
- e) the request is accompanied by written agreement of the EPA with the proposed alteration to the frequency of parameter determination.

4.6 The Applicant shall prepare and implement a **Vegetation Monitoring Program** to monitor the impacts of the emission and deposition of sodium chlorate dust on vegetation in the vicinity of the site. The Program shall meet the requirement of the EPA, should there be any. The Program shall include, but not necessarily be limited to:

- a) locations at which vegetation shall be monitored. In identifying monitoring locations, the Applicant shall include:
 - i) locations within one kilometre of the sodium chlorate plant; and
 - ii) locations along relevant boundaries of the MGIDS Area; and
 - iii) locations down-wind from the sodium chlorate plant, taking into consideration prevailing wind directions for each season;
- b) procedures for inspection of vegetation for indicators of a sub-lethal dose of sodium chlorate, including characteristic mottling, chlorosis and/ or stunted growth;
- c) details of at least one background survey of vegetation health prior to the commencement of operation of the sodium chlorate plant; and
- d) a periodic schedule for the inspection of vegetation at the monitoring locations, at a frequency of at least every three months.

Note: Sodium chlorate is a recognised defoliant. Periodic inspection of local vegetation is an indirect means of monitoring the sodium chlorate plant's performance with respect to air quality. Vegetation monitoring may also identify if sodium chlorate dust deposition occurs outside the area predicted in the EIS, and thereby act as a trigger for any necessary remedial action.

4.7 ²⁸In the event that the Applicant is unable to access data recorded at the existing Macquarie Generation meteorological station, the Applicant shall prepare and implement a **Meteorological Monitoring Program** to monitor meteorological conditions in the vicinity of the sodium chlorate plant. The Program shall meet the requirements of the EPA, should there be any. The Program shall include, but not be limited to:

- a) details of how meteorological data will be recorded and stored; and
- b) procedures for measuring wind speed and direction, temperature and rainfall.

²⁸ Incorporates an EPA General Term of Approval

Water Quality Monitoring

4.8 ²⁹The Applicant shall prepare and implement a **Groundwater Monitoring Program** to monitor the effects of the sodium chlorate plant on groundwater. The Program shall meet the requirements of the EPA and DLWC, should there be any. The Program shall include, but not necessarily be limited to:

- a) locations of monitoring bores both up gradient and down gradient of the sodium chlorate plant;
- b) parameters/ pollutants to be monitored, including procedures and protocols for sampling and testing;
- c) a program for periodic monitoring of groundwater quality, at a frequency of no less than once every six months;
- d) details of a background survey to establish groundwater quality prior to the commencement of operation of the sodium chlorate plant; and
- e) details of groundwater quality limits that would indicate contamination from the sodium chlorate plant and a contingency plan in the event that contamination occurs.

4.9 ³⁰The Applicant shall prepare and implement a **Surface Water Monitoring Program** to monitor the effects of the sodium chlorate plant on surface water. The Program shall meet the requirements of the EPA, DLWC and Council, should there be any. The Program shall include, but not necessarily be limited to:

- a) locations of monitoring sites both upstream and downstream of the site, with sites to include the settling pond at the northern side of the site and Tinkers Creek;
- b) parameters/ pollutants to be monitored, including procedures and protocols for sampling and testing;
- c) a program for periodic monitoring of surface water quality, at a frequency of no less than once every three months;
- d) details of a background survey to establish surface water quality prior to the commencement of operation of the sodium chlorate plant; and
- e) details of surface water quality limits that would indicate contamination from the sodium chlorate plant and a contingency plan in the event that contamination occurs.

Auditing

4.10 Twelve months after the commencement of operation of the sodium chlorate plant, or within such period as otherwise agreed by the Director-General, the Applicant shall commission an independent, qualified person or team to undertake a Hazard Audit of the sodium chlorate plant. The independent person or team shall be approved by the Director-General prior to the commencement of the Audit. A **Hazard Audit Report** shall be submitted for the approval of the Director-General no later than one month after the completion of the Audit. Further Hazard Audits shall be undertaken every three years, or as required by the Director-General. Hazard Audits shall be carried out in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 5 - Hazard Audit Guidelines*.

4.11 Within three years from the commencement of operation of the sodium chlorate plant, and every three years thereafter, or as otherwise required by the Director-General, the Applicant shall commission an independent person or team to undertake an Environmental Audit of the sodium chlorate plant. The independent person or team shall be approved by the Director-General prior to the commencement of the Audit. An **Environmental Audit Report** shall be submitted

²⁹ Incorporates EPA and DLWC General Terms of Approval

³⁰ Incorporates an EPA General Term of Approval

for comment to the Director-General, the EPA, the CCC and Council within one month of the completion of the Audit. The Audit shall:

- a) be carried out in accordance with *ISO 14010 - Guidelines and General Principles for Environmental Auditing* and *ISO 14011 - Procedures for Environmental Auditing*;
- b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the sodium chlorate plant;
- c) assess the sodium chlorate against the predictions made and conclusions drawn in the EIS; and
- d) review the effectiveness of the environmental management of the sodium chlorate plant, including any environmental impact mitigation works.

The Director-General may, having considered any submission made by the EPA, the CCC or Council in response to the Environmental Audit Report, require the Applicant to undertake works to address the findings or recommendations presented in the Report. Any such works shall be completed within such time as the Director-General may agree.

5. COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT

- 5.1 Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection on request.

Complaints Procedure

- 5.2 Prior to the commencement of construction of the sodium chlorate plant, the Applicant shall ensure that the following are available for community complaints:

- a) a telephone number on which complaints about the sodium chlorate plant may be registered;
- b) a postal address to which written complaints may be sent; and
- c) an email address to which electronic complaints may be transmitted.

The telephone number, the postal address and the email address shall be advertised on at least one occasion in at least one appropriate local newspaper prior to the commencement of construction of the sodium chlorate plant. These details shall also be provided on the Applicant's internet site, should one exist.

- 5.3 The Applicant shall record details of all complaints received through the means listed under condition 5.2 of this consent in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:

- a) the date and time, where relevant, of the complaint;
- b) the means by which the complaint was made (telephone, mail or email);
- c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
- d) the nature of the complaint;
- e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.

The Complaints Register shall be made available for inspection by the EPA or the Director-General upon request. The Applicant shall also make summaries of the Register, without details of the complainants, available for public inspection.

Community Consultation

- 5.4 The Applicant shall establish a Community Consultative Committee (CCC) to liaise with the community for the life of the sodium chlorate plant on matters affecting the local community and the environmental performance of the sodium chlorate plant, particularly matters relating to compliance with conditions of this consent. The Applicant shall make provisions for meeting facilities and other reasonable expenses of the Committee. The Applicant shall arrange to document and circulate minutes of CCC meetings within 21 days of each meeting. The minutes shall also be made available to the EPA and DLWC upon request.
- 5.5 The Community Consultative Committee required under condition 5.4 of this consent shall comprise:
- a) representative(s) of the Applicant, at least one being the Environmental Officer (refer to condition 6.1 of this consent);
 - b) a representative of Council;
 - c) community representatives living within the Muswellbrook or Singleton local government areas that may be interested in the environmental performance of the sodium chlorate plant, within the capacity of the meeting facilities;
 - d) occasional representation by the Department, the EPA, DLWC and Singleton Shire Council, to discuss issues related to the areas of regulation, operation or interest to these parties; and
 - e) other community representatives and government bodies, not the subject of a) to d) above, where appropriate.
- 5.6 The first meeting of the Community Consultative Committee shall occur prior to the submission of the Construction Environmental Management Plan (refer to condition 6.2 of this consent) for the approval of the Director-General. At the first meeting, a Charter for the CCC shall be prepared, addressing, but not necessarily limited to:
- a) arrangements for the annual election of a Chairperson to direct the meetings;
 - b) definitions of the roles and responsibilities of the Applicant and the CCC members in relation to the functioning of the CCC;
 - c) details of the location of meetings, including any specific access arrangements that may be required;
 - d) frequency of meetings, having consideration of the different meeting requirements during construction, commissioning and operation of the sodium chlorate plant;
 - e) general details of the information to be provided by the Applicant at each meeting, including the format and depth of that information;
 - f) a mechanism for dissolution of the Committee, including the triggers and timing for any such dissolution.

A copy of the Charter for the CCC shall be provided to the Director-General and all members of the CCC as part of the minutes for the first CCC meeting.

- 5.7 The Applicant may seek the Director-General's approval to satisfy conditions 5.4, 5.5 and 5.6 of this consent with representation by the Applicant on the existing Macquarie Generation Community Consultative Committee. In seeking the Director-General's approval, the Applicant shall provide:
- a) a demonstration that the goals and objectives of conditions 5.4, 5.5 and 5.6 of this consent will be met or exceeded through representation on the Macquarie Generation Community Consultative Committee, that is:

- i) the community will be adequately represented;
 - ii) the Applicant will be available to provide information to the community, answer any questions in relation to the sodium chlorate plant and address any community concerns;
 - iii) community consultation will be undertaken in an open, transparent, considered manner;
 - iv) the community will be provided with an avenue for input and comment on the environmental performance of the sodium chlorate plant, including all management plans required under this consent; and
 - v) appropriate avenues are provided for representation by Council, Singleton Shire Council, the Department, the EPA and DLWC should it be required.
- b) written evidence of the agreement of Macquarie Generation for the Applicant to be represented on its existing Community Consultative Committee.

Note: It is recognised that considerable advantages exist in the combination of Community Consultative Committees for developments within the MGIDS Area. Apart from a reduction in the resource-intensiveness of the Committees for the community representatives and companies involved, it provides an appropriate forum for addressing cumulative impacts associated with the MGIDS Area.

6. ENVIRONMENTAL MANAGEMENT

Environmental Officer

6.1 Prior to the commencement of construction of the sodium chlorate plant, the Applicant shall nominate a suitably qualified and experienced Environmental Officer. The Applicant shall employ an Environmental Officer on a full-time basis during the operation of the sodium chlorate plant. The Environmental Officer shall be:

- a) the primary contact point for the Department, the EPA, DLWC and Council in relation to the environmental performance of the sodium chlorate plant;
- b) responsible for all Management Plans and Monitoring Programs required under this consent;
- c) responsible for considering and advising on matters specified in the conditions of this consent, and all other licences and approvals related to the environmental performance and impacts of the sodium chlorate plant;
- d) responsible for receiving and responding to complaints in accordance with condition 5.3 of this consent;
- e) required to facilitate an induction and training program for relevant persons involved with the operation of the sodium chlorate plant; and
- f) given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.

The Applicant shall notify the Director-General, the EPA, DLWC and Council of the name and contact details of the Environmental Officer upon appointment, and any changes to that appointment that may occur from time to time.

Construction Environmental Management Plan (CEMP)

6.2 The Applicant shall prepare and implement a **Construction Environmental Management Plan (CEMP)** to outline environmental management practices and procedures to be followed during the construction of the sodium chlorate plant. The Plan shall be generally consistent with the outline provided in Appendix D of the EIS and include, but not necessarily limited to:

- a) a description of all activities to be undertaken on the site during construction of the sodium chlorate plant, including an indication of stages of construction, where relevant;
- b) statutory and other obligations that the Applicant is required to fulfil during construction, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
- c) specific consideration of measures to address any requirements of the Department, the EPA, DLWC and Council during construction;
- d) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;
- e) a description of the roles and responsibilities for all relevant employees involved in the construction of the sodium chlorate plant;
- f) the Management Plans listed under condition 6.3 of this consent;
- g) arrangements for community consultation and complaints handling procedures during construction.

The CEMP shall be submitted for the approval of the Director-General no later than one month prior to the commencement of construction of the sodium chlorate plant, or within such period otherwise agreed by the Director-General. Construction shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the CEMP to Council, the EPA, DLWC and the CCC as soon as practicable.

6.3 As part of the CEMP for the sodium chlorate plant, required under condition 6.2 of this consent, the Applicant shall prepare and implement the following Management Plans:

- a) a **Fire Safety Study** for the sodium chlorate plant, covering all aspects detailed in the Department's publication *Hazardous Industry Planning Advisory Paper No. 2 - Fire Safety Guidelines* and the New South Wales Government's *Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*. The Study shall include a strict maintenance schedule for essential services and other safety measures. The Study shall be submitted for the approval of the Commissioner of the NSW Fire Brigades prior to inclusion in the CEMP;
- b) a **Hazard and Operability Study** of the sodium chlorate plant chaired by an independent, qualified person or team. The independent person or team shall be approved by the Director-General. The Study shall be carried out in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 8 - HAZOP Guidelines*;

Note: Condition 6.3 b) of this consent does not necessary require the HAZOP chair to be independent of the Applicant. Rather, it requires the HAZOP chair to be independent of the design process for the sodium chlorate plant the subject of this consent.

- c) a **Construction Safety Study** for the sodium chlorate plant, prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 7 - Construction Safety Study Guidelines*; and
- d) an **Erosion and Sedimentation Management Plan** to detail measures to minimise erosion during construction of the sodium chlorate plant. The Plan shall address the requirements of the EPA, DLWC and Council, should there be any. The Plan shall include, but not necessarily be limited to:
 - i) results of investigations into soils associated with the site, in particular the stability of the soil and its susceptibility to erosion;
 - ii) details of erosion, sediment and pollution control measures and practices to be implemented during construction of the sodium chlorate plant;
 - iii) demonstration that erosion and sediment control measures will conform with, or exceed, the relevant requirements and guidelines provided in DLWC's publication *Urban Erosion and Sedimentation Handbook*, the EPA's publication *Pollution Control Manual for Urban Stormwater* and the Department of Housing's publication *Soil and Water Management for Urban Development*;
 - iv) design specifications for diversionary works, banks and sediment basins;
 - v) an erosion monitoring program during construction of the sodium chlorate plant; and
 - vi) measures to address erosion, should it occur, and to rehabilitate/stabilise disturbed areas of the site.

Operation Environmental Management Plan (OEMP)

6.4 The Applicant shall prepare and implement an **Operation Environmental Management Plan (OEMP)** to detail an environmental management framework, practices and procedures to be followed during the operation of the sodium chlorate plant.

- a) identification of all statutory and other obligations that the Applicant is required to fulfil in relation to operation of the sodium chlorate plant, including all consents, licences, approvals and consultations;
- b) a description of the roles and responsibilities for all relevant employees involved in the operation of the sodium chlorate plant;
- c) overall environmental policies and principles to be applied to the operation of the sodium chlorate plant;
- d) standards and performance measures to be applied to the sodium chlorate plant, and a means by which environmental performance can be periodically reviewed and improved;
- e) procedures for environmental coordination with other developments in the MGIDS Area;
- f) management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent;
- g) the Management Plans listed under condition 6.5 of this consent;
- h) the environmental monitoring requirements outlined under conditions 4.1 to 4.9 of this consent, inclusive.

The OEMP shall be submitted for the approval of the Director-General no later than one month prior to the commencement of operation of the sodium chlorate plant, or within such period otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the OEMP to Council, the EPA, DLWC and the CCC as soon as practicable.

6.5 As part of the OEMP for the sodium chlorate plant, required under condition 6.4 of this consent, the Applicant shall prepare and implement the following Management Plans:

- a) an **Air Quality Management Plan** to outline measures to minimise impacts from the sodium chlorate plant on local and regional air quality. The Plan shall address the requirements of the EPA and Council, should there be any. The Plan shall include, but not necessarily be limited to:
 - i) identification of all major sources of particulate and gaseous air pollutants that may be emitted from the sodium chlorate plant, being both point-source and diffuse emissions, including identification of the major components and quantities of these emissions;
 - ii) monitoring for gaseous and particulate emissions from the sodium chlorate plant, in accordance with any requirements of the EPA;
 - iii) procedures for the minimisation of gaseous and particulate emissions from the sodium chlorate plant, and the reduction of these emissions over time, where appropriate;
 - iv) protocols for regular maintenance of process equipment to minimise the potential for leaks and fugitive emissions;
 - v) a contingency plan should an incident, process upset or other initiating factor lead to elevated air quality impacts, whether above normal operating conditions or environmental performance goals/ limits; and
 - vi) mechanisms to consider and address cumulative air quality impacts in the context of development in the MGIDS Area.
- b) an **Energy Management Plan**. The Plan shall include, but not necessarily be limited to:
 - i) design features of all equipment and buildings to reduce energy consumption (for heating, cooling and lighting etc);
 - ii) procedures and methods for monitoring energy consumption by the development;
 - iii) protocols for monitoring heat exchanger efficiency and fouling, including procedures for cleaning and maintenance of all heat exchangers;
 - iv) protocols for monitoring the efficiency of pumps and all other electrically-driven process equipment, including procedures for maintenance of these items;
 - v) consideration of the insulation requirements of all pipes and vessels containing process fluids other than at ambient temperature, and procedures for the maintenance of such insulation material;
 - vi) consideration of electrolytic cell parameters, including solution concentration/ quality, pH, solution temperature and electrode condition, that may affect energy consumption through the cells, and procedures for addressing such issues; and
 - vii) mechanisms to consider and address cumulative energy consumption and associated greenhouse gas emissions in the context of development in the MGIDS Area.
- c) a **Hydrogen Substitution Strategy** with an aim to investigate and pursue options for the use of hydrogen gas produced at the sodium chlorate plant as an alternative to carbon-based energy generation to supply the plant.

Note: Options for the use of hydrogen gas considered as part of the Hydrogen Substitution Strategy may be the subject of a separate approvals process.

- d) a **Groundwater Management Plan** to outline measures to minimise impacts on groundwater. The Plan shall meet the requirements of the EPA, DLWC and Council, should there be any. The Plan shall include, but not necessarily be limited plant.
- i) details of baseline groundwater quality, as present prior to the commencement of construction of the sodium chlorate plant;
 - ii) identification of materials and activities associate with the sodium chlorate plant that have the potential to impact on groundwater quality, and how these materials and activities are to be managed to prevent those impacts;
 - iii) monitoring of groundwater quality, including parameters to be monitored and frequency of monitoring;
 - iv) a response plan in the event that a spill of material at the site, or as result of a transport incident in the MGIDS Area associated with the sodium chlorate plant, poses a risk of groundwater contamination;
 - v) a contingency plan should monitoring of groundwater quality indicate that the sodium chlorate plant has had, or is having, an adverse effect on groundwater quality;
 - vi) policies and mechanisms to consider and address cumulative groundwater quality impacts in the context of development in the MGIDS Area.
- e) ³¹a **Water Management Plan** to outline measures to control and manage surface water (including erosion and sedimentation), stormwater and process water associated with the sodium chlorate plant. The Plan shall address the requirements of the EPA, DLWC and Council, should there be any. The Plan shall include, but not necessarily be limited to:

surface water, erosion and sedimentation management

- i) measures to be implemented to minimise the potential for erosion from the site, and adjacent slopes associated with the site, during the operation of the sodium chlorate plant and measures to maintain all erosion mitigating works;
- ii) demonstration that erosion and sedimentation control measures will conform with, or exceed, the relevant requirements and guidelines provided in DLWC's publication *Urban Erosion and Sedimentation Handbook*, the EPA's publication *Pollution Control Manual for Urban Stormwater* and the Department of Housing's publication *Soil and Water Management for Urban Development*;
- iii) measures to rehabilitate erosion-affected areas and areas the subject of excavation, including tree, shrub and/ or cover crop species and implementation (consistent with the Landscape Management Plan required under condition j) of this consent);
- iv) mechanisms to consider and address cumulative run-off, erosion and sedimentation impacts in the context of development in the MGIDS Area;

stormwater management

- i) demonstration that all relevant stormwater control infrastructure is capable of handling a one-in-ten year, one hour storm event and minimising stormwater peak flows and peak pollutant concentrations;
- ii) procedures for planting and maintaining vegetation along all stormwater channels and detention systems, to minimise the potential for erosion;

³¹ DLWC General Term of Approval

- iii) procedures for the installation and maintenance of gross pollutant traps to screen run-off from the site;
- iv) a demonstration of consistency with the stormwater management plan for the catchment, should one exist, or with the EPA's publication *Managing Urban Stormwater: Council Handbook* should a stormwater management plan for the catchment not exist;
- v) mechanisms to consider and address cumulative stormwater impacts in the context of development in the MGIDS Area;

process water management

- i) details of how site water consumption will be minimised through water reuse and recycling;
 - ii) details of all process water treatment systems for the sodium chlorate plant, including procedures for maintenance of the systems and water quality monitoring regimes, where relevant;
 - iii) a program to monitor consumption of water at the site;and
 - iv) mechanisms to consider and address cumulative water consumption and process water impacts in the context of development in the MGIDS Area;
- f) an **Emergency Plan** for the sodium chlorate plant. The Plan shall be consistent, and integrated in so far as practical, with any existing emergency plans or procedures for the Bayswater Power Station. Consideration shall be given to the development of mutual aid agreements with Macquarie Generation and other developments in the MGIDS Area. The Plan shall be prepared in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 1 - Industry Emergency Planning Guidelines*.
- g) a **Safety Management System**, covering all operations at the sodium chlorate plant and associated transport activities involving hazardous materials. The System shall clearly specify all safety-related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to safety procedures. The System shall be developed in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 9 - Safety Management*.
- h) a **Transport of Hazardous Materials Study**, outlining arrangements for the transport of hazardous materials including routes to be used for the movement of vehicles carrying hazardous materials to and from the sodium chlorate plant. The Study shall be carried out in accordance with the Department's draft *Route Selection* guidelines.
- i) a **Transport Code of Conduct** to outline management of traffic impacts associated with the sodium chlorate plant and minimum requirements for the movement of heavy vehicles to and from the site. The Code shall meet the requirements of Council, Singleton Shire Council and the RTA, should there be any. The Code shall include, but not necessarily be limited to:
 - i) restrictions to routes (consistent with the Transport of Hazardous Materials Study required under h) above, where relevant);
 - ii) restrictions to the hours of transport operations to avoid travelling through Singleton, Muswellbrook or any other built-up areas late at night or at times of high traffic flows in those areas;
 - iii) speed limits to be observed along routes to and from the site, in particular through Singleton, Muswellbrook and other built-up areas;
 - iv) minimum requirements for vehicle maintenance to address noise and exhaust emissions;
 - v) load coverage requirements;

- vi) behaviour requirements for vehicle drivers;
 - vii) arrangements for access to the MGIDS Area, having consideration of the cumulative traffic impacts associated with development in the MGIDS Area.
- j) a **Landscape Management Plan** to outline measures to ensure appropriate development and maintenance of landscaping on the site. The Plan shall meet the requirements of Council, should there be any. The Plan shall be based on Figure 5.5 of the EIS and include, but not necessarily be limited to:
- i) details of all landscaping to be undertaken on the site;
 - ii) maximisation of flora species endemic to the locality in landscaping the site, and general consistency with any landscaping works undertaken elsewhere in the MGIDS Area;
 - iii) details of car parking and measures to prevent vehicle encroachment onto landscaped areas; and
 - iv) a program to ensure that all landscaped areas on the site are maintained in a tidy, healthy state.

Note: The EIS indicates that the sodium chlorate plant will have negligible impacts on the visual amenity of surrounding public areas. As such, the Landscape Management Plan does not aim to mitigate the visual amenity impacts of the sodium chlorate plant. Rather, it aims to ensure consistency and appropriate maintenance of landscaping across the MGIDS Area and to maximise the use of native species for landscaping purposes.

- k) The Applicant shall prepare and implement a **Waste Management Plan** to outline measures to minimise the production and impact of waste produced at the sodium chlorate plant during commissioning and operation, through the implementation of waste reduction, reuse and recycling principles. The Plan shall meet the requirements of the EPA and Council, should there be any. The Plan shall include, but not necessarily limited to:
- i) identification of the types and quantities of waste materials produced on the site during commissioning and operation of the sodium chlorate plant;
 - ii) programs aimed at minimising the production of waste at the site through the implementation of operational and management measures;
 - iii) details of potential reuse and recycling avenues for waste materials produced on the site, including collection and handling procedures;
 - iv) a strategy for investigation of beneficial reuses for muds, whether on the site or external to the site;
 - v) details of appropriate disposal routes in the event that reuse and recycling avenues are not available or are not practicable; and
 - vi) programs for involving and encouraging employees and contractors to minimise domestic waste production on the site and reuse/ recycle where appropriate.

MGIDS Area Environmental Coordination

- 6.6 The Applicant shall consult with Macquarie Generation, and other parties granted consent for development in the MGIDS Area, with the aim of establishing a MGIDS Area Environmental Coordination Committee. The aim of the Committee shall be to facilitate coordinated management of environmental issues associated with development in the MGIDS Area. Should a Committee be established, the Applicant shall cooperate with Macquarie Generation, and other parties granted consent for development in the MGIDS Area, in the formulation of a Charter for the Committee.

6.7 The Applicant may seek the Director-General's approval to combine any document or action required under this consent with any similar document or action required under a separate consent for a development(s) in the MGIDS Area. In seeking the Director-General's approval, the Applicant shall provide:

- a) details of the conditions in the relevant consents for which approval to combine an action or a document is sought;
- b) details of how combination of an action or document will lead to greater consistency in environmental management for the MGIDS Area, improved environmental performance (including cumulative impacts) for development in the MGIDS Area or increased effectiveness in community consultation/interaction;
- c) details of how the goals and outcomes of the relevant conditions will be maintained through the combined action or document;
- d) written evidence of the agreement of all holders of the relevant consents; and
- e) written evidence of the agreement of the relevant integrated approval body should any of the conditions for which an action or document is to be combined represents a General Term of Approval for that approval body.

In the event that an agreement under d) or e) above ceases to exist, the combined action or document the subject of the Director-General's approval shall return to the actions or documents required prior to that approval.

Note: Conditions 6.6 and 6.7 of this consent aim to provide mechanisms through which environmental issues for the MGIDS Area, including cumulative impacts, can be considered, managed, undertaken and reported in a consistent and coordinated manner. It is recognised that cooperative action in respect of the environmental management of developments in the MGIDS Area will:

- a) permit greater consistency in environmental management and reporting for developments in the MGIDS Area;
- b) provide consistent, easily comparable environmental information, including cumulative impacts, for consideration by the Department, the EPA, DLWC and other agencies having an interest or a role in relation to the sodium chlorate plant; and
- c) provide consistent and concise public information for consideration by interested members of the community.

7. ENVIRONMENTAL REPORTING

Incident Reporting

7.1 The Applicant shall notify the EPA and the Director-General of any incident with actual or potential significant off-site impacts on people or the biophysical environment as soon as practicable after the occurrence of the incident. The Applicant shall provide written details of the incident to the EPA and the Director-General within seven days of the date on which the incident occurred.

7.2 The Applicant shall meet the requirements of the Director-General to address the cause or impact of any incident, as it relates to this consent, reported in accordance with condition 7.1 of this consent, within such period as the Director-General may agree.

Note: Condition 7.2 of this consent does not limit or preclude the EPA from requiring any action to address the cause or impact of any incident, in the context of the EPA's statutory role in relation to the sodium chlorate plant.

Annual Performance Reporting

7.3 ³²The Applicant shall submit an **Annual Return** to the EPA in relation to the sodium chlorate plant, as defined and required by any licence issued under the *Protection of the Environment Operations Act 1997*. In the Return, the Applicant shall:

- a) report on the annual monitoring undertaken (where the activity has resulted in pollutant discharges);
- b) provide a summary of complaints relating to the sodium chlorate plant;
- c) report on compliance with licence conditions; and
- d) provide a calculation of licence fees (administrative fees and, where relevant, load-based fees) that are payable. If load-based fees apply, the Applicant shall be required to submit load-based fee calculation worksheets with the Return.

7.4 The Applicant shall, throughout the life of the sodium chlorate plant, prepare and submit for the approval of the Director-General, an **Annual Environmental Management Report** (AEMR). The AEMR shall review the performance of the sodium chlorate plant against the Operation Environmental Management Plan (refer to condition 6.4 of this consent), the conditions of this consent and other licences and approvals relating to the sodium chlorate plant. The AEMR shall include, but not necessarily be limited to:

- a) details of compliance with the conditions of this consent;
- b) a copy of the Complaints Register (refer to condition 5.3 of this consent) for the preceding twelve-month period (exclusive of personal details), and details of how these complaints were address and resolved;
- c) a comparison of the environmental impacts and performance of the sodium chlorate plant against the environmental impacts and performance predicted in the EIS;
- d) results of all environmental monitoring required under this consent and other approvals, including interpretations and discussion by a suitably qualified person;
- e) a list of all occasions in the preceding twelve-month period when environmental performance goals for the sodium chlorate plant have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident;
- f) identification of trends in monitoring data over the life of the sodium chlorate plant to date;
- g) a list of variations obtained to approvals applicable to the sodium chlorate plant and to the site during the preceding twelve-month period;
- h) environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results.

The Applicant shall submit a copy of the AEMR to the Director-General, the EPA, DLWC and Council every year, with the first AEMR to be submitted no later than twelve months after the commencement of operation of the sodium chlorate plant.

³² EPA General Term of Approval

- 7.5 The Director-General may require the Applicant to address certain matters in relation to the environmental performance of the sodium chlorate plant, in response to review of the Annual Environmental Report and any comments received from the EPA, DLWC or Council. Any action required to be undertaken shall be completed within such period as the Director-General may agree.

Note: The AEMR does not aim to satisfy any requirement of the EPA with regard to any Annual Return (refer to condition 7.3 of this consent), required under any licence issued for the sodium chlorate plant under the *Protection of the Environment Operations Act 1997*. It is noted, however, that the Applicant may consult with the Directors-General of the Department of Urban Affairs and Planning and the Environment Protection Authority with the aim of combining the reporting requirements of the AEMR and the Annual Return. These reporting requirements shall only be combined with the agreement of both Directors-General.

ATTACHMENT No. 1 - MANDATORY CONDITIONS FOR ALL EPA LICENCES

Note: Attachment No. 1 does not form part of this consent. Rather, it provides an indication of mandatory conditions that will be imposed through an Environment Protection Licence (EPL) for the sodium chlorate plant, if issued by the EPA. Conditions listed in this Attachment do not necessarily represent the full scope of conditions that may be imposed by the EPA through an EPL and should be used for no other purpose than a guidance note to be read in conjunction with this consent.

Operating Conditions

Activities must be carried out in a competent manner

Licensed activities must be carried out in a competent manner. This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

Maintenance of plant and equipment

All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

Monitoring and recording conditions

Recording of pollution complaints

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

- a) the date and time of the complaint;
- b) the method by which the complaint was made;
- c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) the nature of the complaint;
- e) the action taken by the licensee in relation to the complainant, including any follow-up contact with the complainant; and
- f) if no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made.

The record must be produced to any authorised officer of the EPA who asks to see them.

Telephone complaints line

The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to the activities conducted on the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

This condition does not apply until 3 months after this condition takes effect.

Reporting conditions

Annual Return documents

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- a) a Statement of Compliance; and
- b) a Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Where this licence is transferred from the licensee to a new licensee,

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or

- b) in relation to the revocation of the licence - the date from which the notice revoking the licence operates.

Deadline for Annual Return

The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence, not later than 60 days after the date the transfer was granted (the 'due date').

Licensee must retain copy of Annual Return

The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or
- b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

A person who has been given written approval to certify a Statement of Compliance under a licence issued under the *Pollution Control Act 1970* is taken to be approved for the purpose of this condition until the date of the first review of this licence.

Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Written report

Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
- b) where this licence applies to vehicles to mobile plants, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off the premises to which the licence applies), the authorised officer may request a written report of the event.

The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;

- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
- g) any other relevant matters.

The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General Conditions

Copy of licence kept at the premises

A copy of this licence must be kept at the premises to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises.