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State # 225

WESTERN AUSTRALIA

MINISTER FOR ENVIRONMENT

STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL (PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE ENVIRONMENTAL PROTECTION ACT 1986)

PROPOSAL:	CHLORIDE PROCESS PIGMENT PLANT, KEMERTON AND OPERATIONS AT AUSTRALIND (176-1)
CURRENT PROPONENT:	SCM CHEMICALS LTD
CONDITIONS ORIGINALLY SET ON:	25 AUGUST 1987

Condition 1 has been amended to read as follows:

1. The proponent shall adhere to all the relevant commitments made in the Environmental Review and Management Programme, in the proponent's response to issues raised in the submissions and those raised by the Environmental Protection Authority and in the Notice of Intent for the Kemerton proposal (copy of commitments amended on 8 January 1992, attached).

The following condition is inserted following condition 24:

25. No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

Conditions 3, 4, 5, 6 and 10 have been deleted.

Bob Pearce, MLA
MINISTER FOR THE ENVIRONMENT

5 MAR 1992

Note:

Conditions 2, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24 remain in force.

Published on

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SCM CHEMICALS LTD

ENVIRONMENTAL COMMITMENTS

1. CONSTRUCTION

- During the construction phase of the project, the proponent would liaise with local authorities to ensure that noise, dust and traffic were minimised.

- All construction materials and practices would be in accordance with the relevant Australian or international codes.

2. OPERATION

The proponent has made the following commitments to environmental management during plant operation:

2.1 WASTEWATER

- Surface runoff from the plant would be controlled.

- Regular monitoring of the discharge to the Collie River would be implemented to ensure that the system operated as predicted.

- Waste waters can be appropriately discharged, after suitable treatment, to the Collie River.

- No wastewater will be infiltrated at the site. The proponent will be filtering the thickener underflow to reduce it water content and disposal of the filtrate with the balance of the wastewater.

- The wastewater treatment process would be altered to reduce manganese levels to concentration of the order of (a few) parts per million.

- The alkalinity of the wastewater will be raised to about pH 9.0 in order to precipitate manganese and heavy metals, although the latter are not expected to be present in significant quantities. The pH of the wastewater would then be adjusted to neutral level prior to disposal.

- The lime treatment used to neutralize the wastewater is known to cause effective precipitation of the radionuclides under consideration. The modified wastewater treatment process to remove manganese will further remove radionuclides to levels much less than those discussed in the ERMP.

- The proponent will regularly monitor the wastewater discharge and bed sediments in the Collie River for radionuclides; to assure the relevant authorities that the proposed disposal practice does not cause an unacceptable accumulation of radionuclides.

- Special consideration will be given to controlling the impact of temperature upon marine (aquatic) organisms.

- Commitments have been given to further modify the wastewater treatment should problems be detected. This monitoring will include analysis for heavy metals, even though these are not expected to be present in significant quantities.

- Regular monitoring of the wastewater discharge from the Kemerton site would be implemented to ensure that the system operated as predicted.

2.2 AESTHETICS/NOISE/ODOUR

- On-going control of dust would be implemented.

- Noise levels within the plant would be in accordance with statutory requirements.

- The plant site would be attractively landscaped, and buildings would be aesthetically designed.

- There should be negligible odour impact to surrounding residential areas arising from the proposed development.

- Odours would not originate from the proposed plant during normal operation.

2.3 GENERAL

- The plant would undergo regular preventative maintenance.

- All waste products would be disposed of in an environmentally safe manner and in accordance with statutory requirements.

- A detailed final risk analysis would be undertaken in conjunction with the plant designers to confirm or improve upon the recommendations made in the risk assessment (Cremer & Warner, 1986).

- A full hazards and operability study would be commissioned, and plant personnel would be trained in safe operating practices and emergency procedures. Training would be based upon the extensive experience available to the proponent from the existing Australind operations and chloride-process plants operating in the United States of America and the United Kingdom (see also Sections 5 and 6).

- All wastes would be regularly monitored for radio-nuclides.

- A centralised control policy would be implemented, whereby no changes to plant detail could be made until approved by the proponent's worldwide Central Safety Department.

- Groundwater extraction from any superficial aquifers would be conducted in such manner to avoid significant environmental impact on wetlands and their associated vegetation.

3. SAFETY FEATURES

The newly proposed plant will still contain tried and proven control technology and will still remain a very modern safe plant, equivalent to the latest installations effected elsewhere in the world by SCM.

The safety features that would be incorporated into the plant are summarised as follows:

3.1 CHLORIDE-PROCESS PLANT

- Design and operation of titanium tetrachloride vaporiser and oxygen preheater in accordance with the British Standard BS 5885 (British Standards Institution, 1980), or the equivalent Australian Standard.

- Duplication and frequent replacement of temperature and pressure-sensing instrumentation in the chlorination section.

- Careful process control, accurate temperature and pressure monitoring, even water-cooling of chlorinator and prevention of solids build-up in the overhead mains.

- Maintenance and cleaning of heat exchangers will be done in a well-ventilated open area on a concrete pad whose run-off is directed to the wastewater treatment plant.

- Duplication and frequent routine replacement of sensors in the oxidation section.

- Reliable logic system to control reactor trip system.

- Provision of an on-line scrubbing system for the 'hygiene snake' system (proprietary equipment), and scrubbing system stacks to be 46 metres high.

3.2 LAYOUT

- Location of air separation plant away from titanium tetrachloride storage areas.

- Location of titanium tetrachloride pipelines away from the bottom rung on pipe tracks, particularly across roads.

- Protection of storage vessel areas by traffic barriers (kerbing).

- Design of layout such that cranes may remove items for maintenance without having to lift over storage vessels.

- Design of plant such that close coupling of each section to minimise chlorine inventory is ensured.

3.3 MAINTENANCE

- Preventative maintenance scheme to replace vulnerable equipment before a failure becomes likely.

- Regular and frequent maintenance and testing of all sensors as required by service duty.

3.4 GENERAL

- Use of a non-explosive grade of coke.

- Use of corrosion monitoring techniques such as ultra-sonic thickness surveys.

- Design of fuel management system in accordance with BS 5885 (British Standards Institution, 1980) on prevention of explosions, or the equivalent Australian Standard.

- Ability to operate plant from the control room for sufficient time to enable safe shut-down from there.

4. EMERGENCY PLAN

- The proponent's emergency plan and procedures will be integrated with the proposed State Emergency Services' Bunbury Regional Counter Disaster Plan.

- The proponent will afford all practical co-operation in the formulation of public emergency and contingency plans.

5. MONITORING AND AUDITING

- Regular safety audits would be conducted to monitor the effectiveness of the proponent's commitments to safeguard people and property, and to ensure that they were being completely executed.

- Hazard and risk management programmes are in place at all sites and are monitored and audited currently by the Manager - Loss Prevention in Baltimore. A similar comprehensive programme is being developed for Bunbury, modelled substantially on the well-proven Stallingborough system.

- Significant interchange of appropriate personnel will be required during development of the programmes. Performance thereafter will be audited by Baltimore on a regular basis for hazard, safety and industrial hygiene management standards, as for existing sites.

- A further external audit on operations will take place via a system of "Permission for Change" which operates already on our existing plant, whereby all significant process changes are notified formally to Stallingborough, prior to implementation, for technical and hazard review. No changes are implemented without formal approval from the Hazard and

Risk Manager at Stallingborough.

6. TRAINING

- Overseas training will take place at all levels down to, and including, Supervisor/Foreman.

- Senior operator and Shift Supervisor training has commenced locally, utilising 27 and 18 week courses specifically designed in conjunction with Bunbury TAFE.

- Standard operating, process control, maintenance and safety procedures are being developed in conjunction with our Stallingborough and Baltimore site personnel. Full procedure manuals are available from all existing sites and a set of Bunbury specific manuals will be developed well prior to start up, to facilitate training.

7. DECOMMISSIONING

Unlike a mineral development project whose life-span is limited to the period over which a particular resource can be exploited, the proposed plant does not have a planned operational life, although the proponent estimates this to be at least fifty years.

Decommissioning might simply involve the plant being used for other purposes, in which case another environmental impact study would be required; or could involve dismantling and removal of the facilities from the site.