

30 August 2002



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File No. -82-5090

U.S Securities Exchange Commission  
Attn: Filing Desk  
450 Fifth Street  
Washington DC 20549  
USA

SUPPL



Dear Sir or Madam:

Re: Submission by Virotec International Ltd under Rule 12g3-2(b)

Please see attached ASX announcements made on the 30 August, 2002.

Yours faithfully

  
Angus Craig  
Company Secretary

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30 August, 2002

## **Virotec to market patented Basecon™ technology to the Alumina industry**

Virotec International Ltd (ASX/AIM: VTI) announces that it has the worldwide marketing and distribution rights to a newly invented process, to be known as **Basecon™** technology, which is registered and patent applied for worldwide, and has been successfully demonstrated at alumina refineries in North American and Europe.

**In essence, Basecon™ technology provides the alumina industry with an economic incentive to neutralise bauxite residue (red mud) in such a way that it is no longer caustic thus eliminating the industry's long term waste liability.**

Executive Chairman Brian Sheeran states, "It is impossible to imagine a world without aluminium, yet the industry faces constant challenges. Basecon™ technology gives the alumina industry a 'walkaway' solution to hundreds of millions of tons of caustic bauxite residue currently stored in containment ponds, and tens of millions of tons of caustic bauxite residue produced annually. The Directors believe Basecon™ technology is a significant breakthrough that will benefit the alumina industry throughout the world."

Basecon™ technology was invented by Virotec scientists (led by Professor Dave McConchie) and is covered by existing licensing arrangements. It will be marketed world-wide to the alumina industry, commencing with the 6th International Alumina Quality Workshop to be held in Brisbane, Australia, on September 8-13, 2002, where Professor David McConchie is an invited speaker.

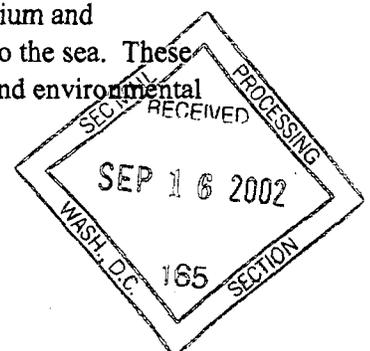
Virotec will be seeking to license Basecon™ technology to alumina companies. When applied to the Bayer process (which is used by the alumina industry worldwide) Basecon™ technology eliminates the need to store a caustic bauxite residue.

Furthermore, the Basecon™ technology can be applied to caustic residue that is currently stored in containment ponds, enabling immediate, effective and complete environmental remediation. Virotec Global Solutions Pty Ltd (Virotec's operations company) will be seeking to enter into contracts to undertake this remediation.

Basecon™ technology is not subject to geographic factors. Unlike current seawater neutralisation, it can be employed by refineries that are not located near the coast.

Basecon™ technology is also economically accessible. In order to implement current seawater neutralisation, large amounts of seawater are required (typically between 12 and 18 times the volume of red mud to be neutralised) if the discharge water is to meet normal environmental standards and large ponds are required to allow the solids to settle before the calcium and magnesium depleted seawater used in the neutralisation process can be returned to the sea. These limitations, which Basecon™ technology overcomes, add substantial economic and environmental barriers to adopting seawater neutralisation.

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Virotec's motivation for pursuing the Basecon™ technology was to develop cheaper and faster methods for producing Bauxsol™ raw material to enable increased manufacture of Virotec's environmental reagents. Bauxsol™ raw material is bauxite refinery residue that has been neutralised and prepared to Virotec's exact specifications, so that it has characteristics that make it a suitable ingredient for environmental reagents, and safe to store and transport.

Basecon™ technology economically converts basicity (mainly sodium hydroxide) and soluble alkalinity (mainly sodium carbonate) into alkalinity that is retained as low solubility hydroxide, carbonate or hydroxycarbonate minerals. After minor additional treatment, the spent neutralising fluid can be safely discharged to the sea or retained in an evaporating basin for salt recovery.

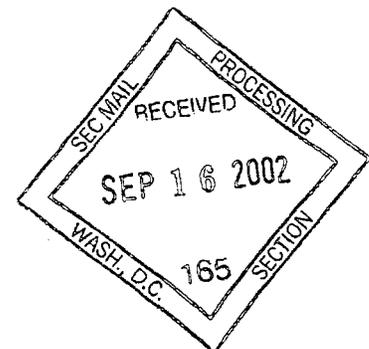
Because of the variability in ores, each alumina plant is almost tailored to suit a particular bauxite. Virotec's Basecon™ technology provides a geochemical computer model that allows rapid calculation of neutralisation requirements for ANY initial red mud alkalinity, ANY solids load in the residue and the composition of a wide range of cost effective, readily available neutralising agents, (including, but not limited to, seawater, saline or hard groundwater brines, salt lake brines, industrial waste brines). The computer model can be applied to any alumina refinery in the world, providing it with the most cost-effective method to neutralise refinery residue and to make available to Virotec reusable raw material

The Directors believe that the implications for the alumina industry are significant. For decades, the alumina industry has been investigating options for treating, disposing, and using bauxite residue, a by-product of the Bayer process to extract aluminium oxide from bauxite ore. The sheer volumes of residue waste generated, together with the cost of treatment and handling, have been the primary issues affecting its use in beneficial applications. The worldwide alumina industry produces over 70 million dry metric tons of bauxite residue annually and Australia is the largest alumina refiner in the world, producing around 30% of the total alumina.

In the Bayer process, the bauxite is crushed and ground, then mixed with a solution of caustic soda and pumped into large autoclaves. There, under pressure and at a temperature of 110°C to 270°C, the alumina contained in the ore is dissolved to form sodium aluminate. The silica in the bauxite reacts and precipitates from solution as sodium-aluminium-silicate. The remaining residue settles out of solution and is separated from the sodium aluminate solution, washed to recover the caustic soda, and pumped to large surface impoundments or lagoons.

However, washing does not ensure the complete recovery of the caustic aluminate, which is the cause of the alkalinity of the residue (a pH that is usually greater than 13.0 and often about 13.5) that is pumped into the lagoons. Naturally, there are concerns with the potential for groundwater contamination with large alkaline residue; even with clay liners, some leakage may occur. To date, any area dedicated to be a disposal area has limited future land use.

Some disposal areas spread over thousands of acres.



By an act of the United States Congress some high-volume mining wastes in the United States, including bauxite residue, have been designated as non-hazardous because they are being safely stored in the lagoons. However, there is no guarantee that this designation will remain unchanged in the future.

Subsequently, the alumina industry has openly declared that it faces challenges related to the storage of residue. These include:

### **FINANCIAL ISSUES**

Product liability

Potentially high life-cycle costs of future disposal and monitoring

Uncertainty (and probably under-estimation) about total costs of residue disposal

### **ENVIRONMENTAL, HEALTH and SAFETY ISSUES**

Large volumes of long-term, non-usable wastes

Highly caustic material

Potential for reclassification as a hazardous waste at some future time

Potential for leaching/rainwater penetration

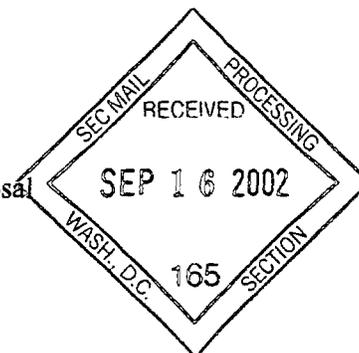
Perception of wastes as hazards

Tighter environmental regulations in the future

Potential groundwater contamination

Future requirements precluding abandonment

Unlikelihood of "walkaway" situation



Virotec believes potential costs and liabilities can best be reduced by not having to store a caustic residue. The neutralised residue produced using Basecon™ technology is not only environmentally harmless, it is also fairly easy to rehabilitate and consequently, whether it is reused or not, the long term management costs are substantially reduced.

However, the Directors believe the issue is how best to make bauxite refinery residue reusable and not how best to store or dispose of it. Virotec has a well established need for appropriately neutralised residue that can be used as the starting material to produce its range of marketable environmental management and remediation products and all available information suggests that environmental management and remediation products provide the best currently available option for reusing large volumes of refinery residue. Potentially, these products could consume the tens of millions of tons of residue that are produced annually.

Executive Chairman Brian Sheeran concludes "In recent years, Aluminium companies have joined together to work cooperatively on the common problem of treating bauxite refinery residue. By leveraging their resources and knowledge, the companies have identified that they could develop economical solutions faster than they could by acting independently.

Virotec also has a stake in a positive outcome.

With the Bauxsol™ Technology Virotec has identified technical, environmental and financial drivers that will open up significant, diverse markets for the use of millions of tons of alumina refinery residue on a global basis. With the Basecon™ technology, Virotec is saying to the alumina industry, we want to be a meaningful proactive partner to assist and support the industry for the long term.”

For further information go to [www.virotec.com](http://www.virotec.com)

Or contact:

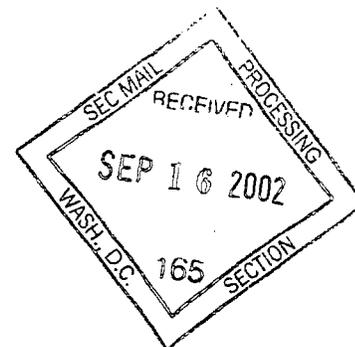
**Angus Craig**

Company Secretary

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**Notes to editors**

*Bauxsol™ Technology is a fast and cost-effective green technology developed by Virotec that simultaneously neutralises acid and extracts heavy metals from contaminated water and soils.*