

BOTANY INDUSTRIAL PARK PTY LTD

BIP Emergencies

What To Do in an Emergency

The Botany Industrial Park site has safely manufactured chemical products for over 80 years. Whilst an emergency event is very unlikely, we have in place an emergency response procedure, which is coordinated with other BIP Operations and the Emergency Services.

In the case of a major emergency, the authorities will ensure that up-to-date information is made available to the community. They will ensure that there is co-ordination and co-operation between plants and the appropriate combat agencies.

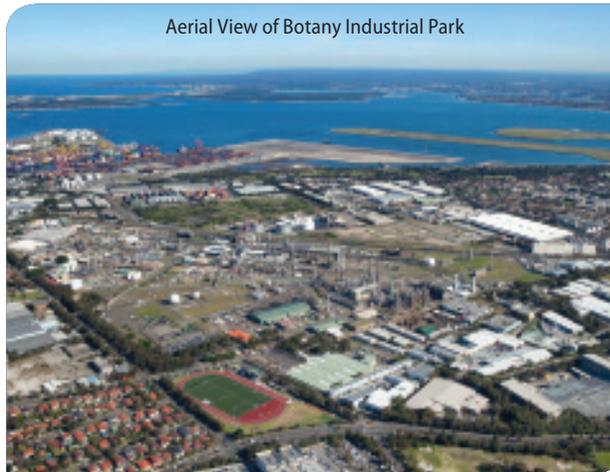
If a major emergency were to occur, emergency authorities recommend that you immediately:

1. Go indoors
2. Close external doors & windows
3. Switch off any air conditioners, heaters or exhaust fans
4. Remain indoors until you receive instructions from the emergency services
5. Also, tune into the radio or television and listen for information. The 'all clear' will be given by the emergency services.
6. After the 'all clear' has been given open doors and windows to restore ventilation.

Please co-operate fully with the instructions given by the emergency services.

**Emergency Response Service:
1800 033 111**

Aerial View of Botany Industrial Park



If you have any queries or comments, or would like further information about any topic mentioned in this brochure, please contact our 24-hour toll-free community hotline

**For Complaints, Enquiries and Feedback
Community Hotline: 1800 025 138**



Orica Australia Pty Ltd

ABN 99 004 117 828

www.orica.com

www.oricabotanytransformation.com



Qenos Pty Ltd

ABN 62 054 196 771

www.qenos.com

HUNTSMAN

Enriching lives through innovation

Huntsman Corporation

Australia Pty Ltd

ABN 67 083 984 187

www.huntsman.com

BOTANY INDUSTRIAL PARK PTY LTD

Safety, Health and Environment Update 2013



HUNTSMAN

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Responsible Care® - A
Community Commitment



BOTANY INDUSTRIAL PARK PTY LTD

BIP EMERGENCIES

The BIP and member companies maintain well-established emergency procedures and conduct regular training exercises.

All member companies rely also upon the Orica Emergency Response Service to provide specialist advice to the public, emergency services and customers in the event of incidents relating to the transport, storage, use and disposal of their raw materials and products.

The BIP has on-site emergency response capabilities including:

- *a site fire water supply system with eight million litres of stored firewater*
- *a site emergency response vehicle fitted with fire monitor and carrying 2200 litres of firefighting foam and other resources to manage chemical incidents*
- *personnel trained to respond to incidents and work with the emergency services to manage incidents*

Emergency Sirens at Botany Industrial Park are to alert on-site workers and initiate an on-site emergency response if needed. Any siren alarm is not used to alert the community to danger. Emergency Services are responsible for community notification.

All plants conduct regular testing of alarm systems and leak detection systems to ensure they are available and in good working order. Neighbours may hear the several alarms being tested around the site on Thursdays.

Joint exercises are regularly conducted with the BIP Safety Team and local emergency services personnel.

Emergency Response Service:

1800 033 111

BOTANY INDUSTRIAL PARK PTY LTD

Welcome to the 2013 edition of the Botany Industrial Park Pty Ltd (BIP) community information brochure. This brochure, first produced in 1994, describes the businesses that make up the BIP, our continuing commitment to safety, our environmental performance, and our community outreach programs. More importantly, it highlights the emergency management procedures for BIP and how you can contact us for more information.

Introduction

The BIP, previously owned in its entirety by Orica (the former ICI Australia), was subdivided in 1998.

The following three companies share the majority of the site and make up the BIP, which occupies over 100 hectares and is the third largest complex of its type in Australia.

- **Orica Australia Pty Ltd** now operates the ChlorAlkali Plant, Groundwater Treatment Plant and manages site legacy issues, including the Former ChlorAlkali Plant site.
- **Huntsman Corporation Australia Pty Ltd** operates the Surfactants Plant. Huntsman is entirely independent of Orica, and operates other facilities across Australia.
- **Qenos Pty Ltd** operates the Site Utilities, Olefines, Alkathene and Alkatuff Plants. Formerly operated as a joint venture plastics manufacturing company between Exxon-Mobil and Orica, Qenos is now a wholly-owned subsidiary of ChemChina and is entirely independent of Orica. It operates another petrochemical complex in Altona, Victoria.

More information on each company may be found on their web sites as listed on the back of this publication.

In addition to these three larger operating companies Qenos, Huntsman and Orica, the BIP also co-ordinates activities with other companies that lease land on site from Orica. These include Air Liquide in Baker Street at the northern end of the site; KBR (engineering) which occupies offices on the corner of Denison Street and Beauchamp Road; and Transfield Services ("TSL") (maintenance, projects and turnarounds) which is located at the north end of the site, off Corish Circle.

The BIP was established in December 1998 as part of a requirement by the then NSW Department of Urban Affairs and Planning, in order to ensure that established safety, health and environmental standards were maintained.

1. Constituent companies

Huntsman

Surfactants
Coolant
Brake fluid

Qenos

Alkathene
Alkatuff
Olefines
Site Utilities

Orica

Chemicals
Remediation
Projects & Property

2. Lessees

TSL
Air Liquide (ALA)
KBR

Although the site has been subdivided, much infrastructure remains integrated, such as water, electricity supply, drainage, and roads. The provision of essential services, such as occupational health services and environment management, is still centralised through the BIP, which co-ordinates the common activities and provides a single point of contact for the regulatory authorities and the community.

Commitment to Safety

All members of the BIP are strongly committed to the safety of their personnel, the community and the environment as reflected in their Safety, Health and Environment policies.

Orica is committed to Safety, Health and the Environment (SH&E). Orica's SH&E Policy states: "We will manage all our activities with concern for people and the environment and will conduct our business for the benefit of society without compromising the quality of life of future generations." We have a vision 'that all work related injuries, illnesses and environmental incidents are preventable'. This is achieved by focussing on safety through Plant, People and Procedures. Our workforce is proud of our SH&E performance.

Huntsman is "committed to achieving excellence in Environment, Health and Safety (EHS) protection in all our activities. Our operations will be conducted safely, efficiently and in a socially responsible manner; we will protect the health of our associates, contractors, customers, and the local community; and we will comply with environmental standards."

At **Qenos**, "we believe that all injuries, occupational illnesses and environmental incidents are preventable. We are committed to, and everyone who works at Qenos must show responsibility for, operations, products and practices that protect the safety and health of our employees, contractors, customers and the community, as well as protecting the environment."

Responsible Care®

Each BIP company on the site who is a signatory to the Plastics and Chemicals Industry Association's (PACIA) Responsible Care® commits to its guiding principles. These principles ensure that the chemical industry meets community expectations for protection of people and the environment, the manufacture of safe products and the operation of a sustainable industry.

Botany Industrial Park (BIP)

The BIP team offers a point of contact with external authorities and the community through the BIP Operations Manager, who oversees the management of the site's interaction with the regulatory authorities, such as the Environment Protection Authority (EPA), the Department of Planning & Infrastructure, Sydney Water, WorkCover, local government, police and Fire & Rescue NSW. The BIP Operations Manager also ensures consistently high standards of SH&E management from all businesses on the site. The team provides BIP plants with specialist advice on occupational health and environmental management. The systematic and proactive approaches in these areas formerly used by ICI, and then Orica, are also employed by all operating companies. In addition, the BIP Operations Manager has the responsibility of co-ordinating the use of common resources such as the roadways and security.



Over the last year, the BIP team has:

- *successfully managed Dangerous Goods Storage notifications to WorkCover and trade waste agreements with Sydney Water. (These are living documents. The companies are updating their depots in accordance with the parts of the documents that are relevant to them.);*
- *conducted extensive workplace health assessments;*
- *provided ongoing support to each BIP plant;*
- *continued to represent all companies in professional and industry associations;*
- *played an active part in the EPA-industry consultation process through membership of the Australian Sustainable Business Group, and PACIA;*
- *participated in Sydney Water's Customer Forum;*
- *interacted with the EPA on revisions to licences;*
- *assisted in compliance audits conducted by the EPA; and*
- *conducted numerous tours of the BIP for educational and community groups*

The BIP formed the Community Consultative Committee in June 1999, comprised of local residents, representatives from local businesses, EPA, WorkCover and Sydney Water, officers from the City of Botany Bay Council, local school principals and representatives from each of Qenos, Huntsman and Orica. The BIP Operations Manager chairs the meetings which are held on a

regular basis to allow dialogue between industry, council and residents. Any concerns in relation to safety, health and environment are able to be raised by the local community and responded to at the meetings. If you would like to know more about these meetings, please contact the community hotline number printed on the back of this publication.

Major Hazard Facilities

"Major Hazard Facilities" (MHF) may be regarded as large chemical manufacturing and/or storage facilities. WorkCover NSW regulates the operations of MHFs. Orica, Huntsman and Qenos have all completed Notification as MHFs, as well as submitting their respective Safety Reports. A Safety Report is a written presentation of the technical, management and operational information covering the hazards and risks that may lead to a major accident at a major hazard facility and their control, and which provides justification for the measures taken to ensure the safe operation of the facility.

Other Companies Located within BIP

Transfield Services ("TSL") has a significant presence on the BIP site, as it is the principal alliance contractor to provide logistical support to maintenance and repair activities for all plants.

KBR provides specialist engineering support and a central drawing office to all BIP plants.

Air Liquide provide some gases to the BIP plants, but operate independently.

BIP Environmental Data 2011-12

As part of their reporting program, BIP companies continue to report their emissions under the National Pollutant Inventory (NPI). The following table is a summary of the data supplied to NSW EPA for the combined BIP companies for the years ending June 2012 (Orica and Huntsman) and September 2012 (Qenos), detailing emissions to atmosphere, as well as transfers to effluent and waste treatment/disposal. This table includes only those materials for which emissions/transfers were over 1 kg per annum and are expressed herein tonnes per annum. There were no emissions to waters exceeding 1kg.

NPI Compounds Released to Atmosphere (tonnes per annum)

Acetic Acid	0.002
Acetone	0.593
Ammonia (total)	0.100
Arsenic and Compounds	0.020
Benzene	4.579
Beryllium and Compounds	0.006
2-Butanone ("MEK")	0.026
Cadmium and Compounds	0.004
Carbon monoxide	46.522
Chlorine	0.043
Chloroform	0.003
Chromium (III) Compounds	0.017
Chromium (VI) Compounds	0.003
Cobalt and Compounds	0.009
Dichloromethane	0.029
Ethanol	0.823
Ethylbenzene	0.011
Ethylene oxide	0.620
Fluoride Compounds	26.741
Formaldehyde	0.131
n-Hexane	0.003
Hydrogen sulphide	0.906
Hydrochloric acid	7.177
Lead and Compounds	0.020
Magnesium oxide fume	0.478
Manganese and Compounds	0.067
Mercury and Compounds	0.022
Methanol	2.438
Nickel and Compounds	0.014
Oxides of Nitrogen	852.604
Particulate Matter 10.0 um (flyash/soot)	26.817
Particulate Matter 2.5 um (flyash/soot)	5.610
Polycyclic aromatic hydrocarbons	0.001
Selenium and Compounds	0.061
Sulphur dioxide	179.057
Sulphuric acid	12.506
Tetrachloroethylene	0.002
Toluene	0.821
Total VOC (from combustion)	4.782
Total non-combustion NPI VOC (not otherwise listed)	414.706
Xylenes	0.019
Zinc	0.004

NPI Transfers in Wastes

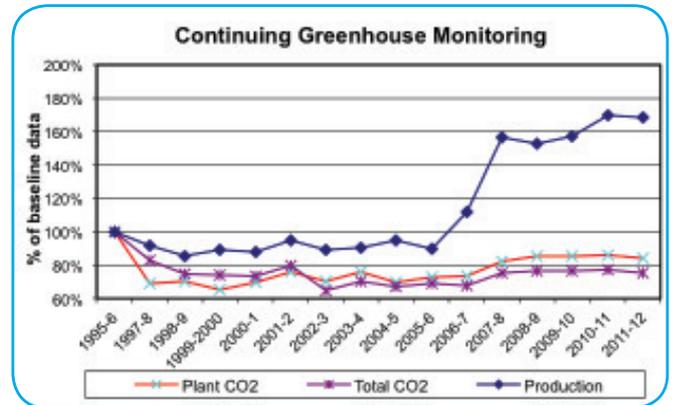
Arsenic	0.000
Chlorophenols	0.000
Chromium	0.009
Copper	0.000
Lead	0.006
Mercury	0.198
Nickel	0.009
Sulphuric acid	2546.434

NPI Transfers in Effluent

Ammonia (total)	14.966
Chloroform	0.027
Cobalt and Compounds	0.067
1,2-dichloroethane ("EDC")	0.003
Ethylene oxide	0.888
Petroleum HC (flammable)	0.007
Phenol	0.011
Zinc and Compounds	1.328

Greenhouse Gas Emissions

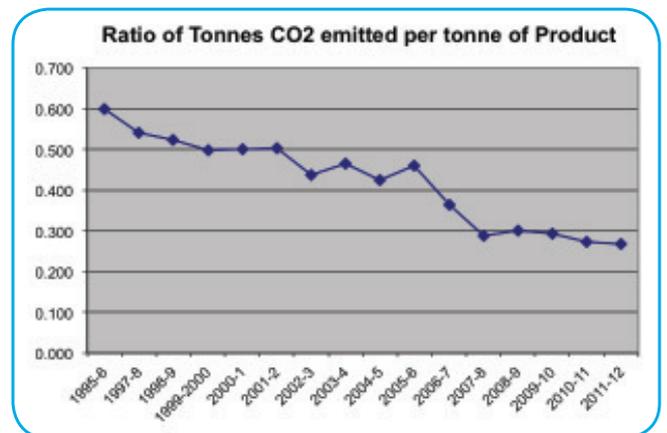
BIP plants continued to monitor greenhouse emissions throughout the past year.



Plant emissions are greenhouse emissions directly from plant.

Total emissions are total greenhouse emissions; that is, plant emissions plus remote power generation.

Even though the absolute tonnage of CO₂ has increased over the last few years, the following graph shows that the ratio of emissions to production has, overall, gradually reduced. This reflects the efficiencies achieved by the various operations on site throughout 2011-12. It also illustrates the continuous attention paid to achieving energy efficient operations across the BIP.



Health and Safety Initiatives 2012

The BIP Occupational Health Service provides ongoing health surveillance programs for all employees and biological monitoring and physical health checks of workers involved in the Orica Botany Legacy Projects. It also provides the employee with information and advice on risk factors such as hypertension, obesity and smoking. It also arranges health providers to visit the site for health promotion programs.

The Occupational Health Service also coordinates effective injury and illness management of injured workers, resulting in a safe and timely return to work (RTW). The success of this injury management system is attributed to the cooperative efforts of management, the injured employee and the RTW coordinator.

The Site Safety Unit has many wide-ranging roles, which include providing a round-the-clock emergency response service within the BIP. It has a dedicated fire truck manned 24 hours per day and a volunteer group comprising shift technicians, known as the Botany Emergency Response Team (BERT), who assist the fire crew with the control of any incidents.



Site Safety Training Drill

Qenos A Bluestar Company The Name for Plastics at Botany



Qenos is the only manufacturer of polythene in Australia and employs nearly 1000 people on two sites in Botany, NSW and Altona, Vic.

At Botany, Qenos operates the following plants:

- *Olefines – which manufactures ethylene from ethane (a component of natural gas) piped to Botany from South Australia. Ethylene is the building block for many products made on the site, such as polythene and detergents;*
- *Alkathene – which uses ethylene to make low density polythene, which is found in drink cartons, bin liners, garbage bags, toys and garden equipment;*
- *Alkatuff – which uses ethylene to make linear low density and high density polythenes, which are found in frozen food packaging, shrink wrap, heavy duty piping and rainwater tanks; and*
- *Site Utilities – which operates three boilers and supplies steam, cooling water, townswater, firewater, compressed air, electricity and drainage services to all BIP plants.*

Qenos is strongly committed to protecting the community, its employees and the environment, and is proud of its excellent record. Qenos recognises that its good performance does not come about by chance, but rather through the development and application of a world-class safety, health and environment operating system, and the on-going commitment and enthusiasm of its employees.

Sustainability

Qenos is actively managing and running its business in a sustainable manner. Recognising that without the three “legs” of sustainability: environment, social responsibility and economic management, Qenos will not have a financially viable business into the future. Ensuring our business survives not only benefits its employees, but also the communities that we live and operate in and businesses that we sell to and buy from. More broadly, Qenos contributes to the economic and social well-being of Australia. You can find Qenos’ biannual sustainability report for 2010 and 2012 on its website, www.qenos.com.

Recognising our people

Qenos recognises that its continuing success, across all levels of the business, relies on its employees. Qenos is committed to training these employees to the highest level and ensuring that they understand their responsibilities. Qenos encourages its employees to make a positive contribution and to help shape Company direction. Qenos and its employees share a vision and both are totally committed to protecting the workforce, the community and the environment.

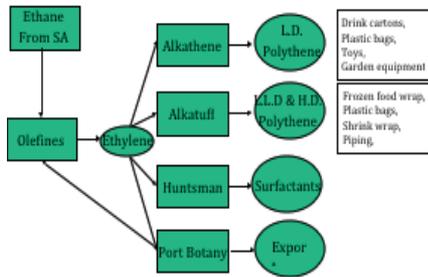
Operating safely

Qenos devotes significant resources directly to programs designed to ensure the long-term safe operation of the facilities, as well as to programs that can enhance the safe and environmentally sustainable production of polyethylene. Qenos is compliant with all the requirements of the NSW major hazard facilities and environment protection legislation. Qenos is committed to working with the regulators to ensure the best possible outcome for all stakeholders.

Safety & Environment, spreading the word

Qenos as part of ChemChina's Bluestar Group, continues to support the development of new health, safety and environment systems and practices Bluestar's plants in China. The last year has seen technical and safety experts from our Botany and Altona Sites visiting China to audit manufacturing operations and encourage the development of an improved culture, truly recognising the benefits of safe and environmentally responsible manufacturing plants.

QENOS PRODUCTION CHART



Flare Systems

Two of Qenos' plants which use large amounts of flammable gases are equipped with flare systems to manage the safe disposal of excess gases. These flare systems are located at the northern end of the BIP, near the intersection of Baker and Anderson Streets, Banksmeadow. When the plants are operating normally, small amounts of off-gases are burnt in ground furnaces, which have no externally visible flames and which do not emit externally noticeable noise.

However, when the demand is higher, such as during the operations to shut down the plants, the ground furnaces are supplemented by high capacity elevated flares. The Olefines Plant flare is a tubular structure about 70 metres tall. On the infrequent occasions when we use this elevated flare, there is a large, visible flame and accompanying noise. When a planned shutdown occurs, this flare is operated at the lowest rate we can manage, for as short a time as possible, in daylight, to minimise any concern in the community. However, should the plant experience a malfunction which automatically shuts it down for safety reasons, we cannot select the time, duration or intensity of its operation. At such times, it may be very noticeable.

The smaller Alkatuff flare looks like a vertical grey cylinder, about 20 metres tall, with burners surrounding the top edge. When it activates, all the burners light up. Again, there is a visible flame and accompanying noise. Just like the Olefines flare, operations due to an automated safety shutdown of the plant are not planned and may therefore occur at any time.

Most of our flare systems rely upon the injection of steam to the flames to obtain complete combustion and ensure a clean flame. Under certain circumstances, smoke may be seen coming from the flares. This smoke from the flares (along with the other combustion products) does not pose a health risk to the community.

It should be remembered that these flares are safety devices, installed for the protection of the community and the plants. Should you witness their operation, be confident that they represent an assurance of your safety, not a risk to you or your families. However, if you still have any questions, please call the community hotline number provided on the back page.



HUNTSMAN

Enriching lives through innovation



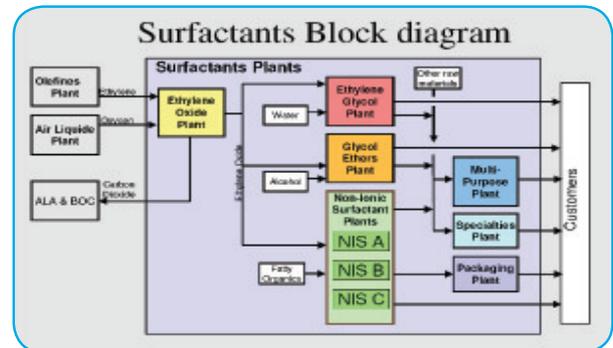
Huntsman Surfactants

Huntsman is a global manufacturer and marketer of differentiated chemicals. Its operating companies manufacture products for a variety of global industries, including chemicals, plastics, automotive, aviation, textiles, footwear, paints and coatings, construction, technology, agriculture, health care, detergent, personal care, furniture, appliances and packaging.

Originally known for pioneering innovations in packaging and, later, for rapid and integrated growth in petrochemicals, Huntsman today has more than 12,000 employees and operates from multiple locations worldwide.

At Botany, its Surfactants Plant manufactures a range of over 300 products for many essential industries including detergents, personal care, agriculture, automotive, mining, textiles and chemicals. Some common product groups include cleaning products, brake fluids and radiator coolants.

Surfactants Block Diagram



EHS highlights in 2012 / Q1 2013 were:

- The total injuries rate for 2012 was the lowest on record.
- In February 2013, one of our operational teams achieved 7000 days without a Recordable or Lost Time Injury.
- In 2012, the 5000 safe day milestone was achieved by the office based staff and 2 operational workgroups passed the 4000 safe day milestone.
- Safety improvements projects during 2012 included upgrades to 2 Tanker Loading / Unloading bays as well as improvements in instrumentation and control systems in a number of places across the facility.

Huntsman is certified to a number of international standards - ISO 9001 (International Standard for Quality Systems), ISO/TS 16949 (International Standard for Quality Systems - Automotive Products) and ISO14001 (International Standard for Environment Management Systems)



Orica is the largest provider of commercial explosives and blasting systems to the mining and infrastructure markets, the global leader in the provision of ground support in mining and tunnelling, and the leading supplier of sodium cyanide for gold extraction. The company has operated for nearly 140 years and employs more than 15,000 people in 50 countries.

Orica also supplies general chemicals across a diverse range of markets, including agriculture, building and construction, food and beverage, pharmaceutical and personal care, plastics, pulp and paper and water treatment industries.

Orica has a strong portfolio of manufacturing and distribution assets strategically located across Australia, New Zealand, Asia, Latin America and Africa which enables us to provide valuable supply chain capabilities for our customers.

Orica's traditions of leadership, innovation, quality and safety are shared by its 15,000 people located in around 50 countries across six continents.

Orica continues to have a presence on the BIP through its manufacture of ChlorAlkali products, operation of the Groundwater Treatment Plant and management of environmental legacy programs.



ChlorAlkali Plant at dusk

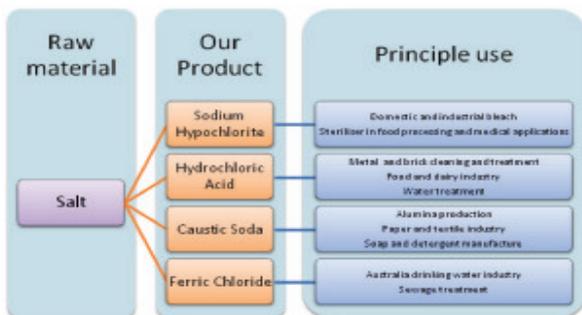
ChlorAlkali Manufacturing

Orica has been producing chlorine for over 60 years at the Botany Industrial Park. Since 2002 Orica has been successfully operating its new 'gas-only' chlorine plant based on modern membrane technology. The new plant has resulted in significant improvements in safety, environmental performance and energy efficiency through the implementation of best practice design and technology.

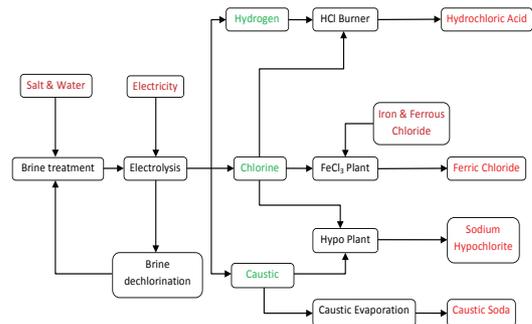
The site operates continuously, 24 hours a day and employs approximately 40 people. Salt (from South Australia), electricity and water are used in the plant. Our four main products include sodium hypochlorite, hydrochloric acid, caustic soda, and ferric chloride.

Some significant achievements for the plant in 2012-13 included:

- an injury free year
- reliable plant operations
- completion of Workshop Refurbishment Project



Orica ChlorAlkali Production Chart



Orica's Commitment to Solving Environmental Legacy Issues

During former operations at the Botany site, contamination of soil and groundwater occurred as a result of manufacturing activities, when environmental considerations, regulations, and understanding were not of today's standards. Orica acknowledges that it contributed to this contamination and is committed to implementing a range of remediation projects that address land and groundwater contamination,

and to destroying waste currently stored at its Botany site.

Orica continues a number of cleanup projects, known as the Botany Transformation Projects, whilst safely managing legacy matters in close consultation with the local community, agencies, government and other stakeholders.

- In 2012 Orica completed the safe treatment of 90,000 tonnes of contaminated soil for the Car Park Waste Encapsulation Remediation Project.
- Detailed planning for the remediation of mercury contaminated soil at the site of the Former ChlorAlkali Plant has been underway for some time, with remediation works planned to commence in mid 2013, once the NSW EPA has endorsed management plans and confirmed licence requirements.
- We continue to treat groundwater at the Groundwater Treatment Plant (GTP), as well as undertaking extensive monitoring, to ensure risks to human health and the environment are managed at acceptable levels.
- Orica is progressing works to subdivide the Southlands site located to the west of the BIP in the suburb of Banksmeadow. Lots are to be developed for warehousing purposes and Orica will retain ownership of land required for ongoing groundwater treatment.

Orica remains committed to finding a solution for destruction of the hexachlorobenzene (HCB) waste. The HCB is stored at the BIP in accordance with licensing requirements to ensure that there are no unacceptable risks to human health and the environment.

Community consultation

There are two community groups: the Botany Groundwater Community Liaison Committee (CLC); and, the HCB Community Participation and Review Committee (CPRC) that meet regularly to discuss Orica's remediation projects at Botany. These community groups have access to independent technical advice from experts in fields relevant to the various remediation projects.



Orica greatly values the commitment and contribution that local residents, environment groups, businesses and the three levels of government make to these committees. Orica encourages feedback on the various projects at Botany, and seeks to meet the needs of stakeholders as it works to address legacies of the past. Everyone is

welcome to attend the CLC and CPRC meetings.

We know that not everyone has the time to attend community meetings and are very happy to come to you and share information about our projects with your local group and to take local residents on site tours.



We provide monthly updates in the Southern Courier and quarterly updates in the St George Leader newspapers. We also distribute regular newsletters in the local area and hold workshops to share information and seek community input on the various cleanup projects at Botany.

Details of the Orica community consultation programs and further information about the Botany Transformation Projects are available on

www.oricabotanytransformation.com or via the BIP community complaints and enquiries and feedback line **1800 025 138.**

Your feedback will improve our community consultation approach

Orica invites you to share your ideas on how we share information and seek your feedback.

Community Support

Orica is committed to the following community support programs:

- *Ronnie Harding Award: an annual award provided to environmental studies students at the University of NSW.*
- *Guided bus tours of the BIP for local community, schools, university students and overseas visitors: these tours allow members of the public to see the BIP, and to learn more about the Botany Transformation Projects.*
- *Local sponsorships: Orica is delighted to be sponsoring environmental initiatives at local primary schools and to be continuing support for Randwick Botany Little Athletic Centre.*
- *Local National Parks: Over recent years Orica has funded \$140,000 toward three ora surveys in local National Parks and construction of a coastal walking track at Botany Bay National Park.*
- *We are also in the process of producing a documentary film as a school's learning resource. This film tells the local area history and explores the life of Order of Australia medallist, Nancy Hillier, a highly respected local resident who has dedicated many years to her community.*



Orica regularly hosts site tours for school, community and industry groups