

Introducing Opal fuel to Alice Springs (A)

Petrol sniffing was one of the most pernicious problems facing remote indigenous communities in northern and central Australia. Although the number of users was relatively low, the social, physical and financial impacts of sniffing were immense. One of many strategies used to combat the issue was product replacement where low-aromatic fuel was substituted for regular unleaded petrol (ULP) in participating communities. In 2004, British Petroleum Australia (BP) approached the Federal Government with a new low-aromatic fuel called Opal which would overcome some of the drawbacks of Avgas – the previous ULP alternative. Opal was introduced in 2005 with great success, so much so that the Government decided to extend the program significantly. However, it soon became apparent that Alice Springs, a major regional hub, would also need to be included for the scheme to be optimally effective. The town had eleven petrol stations, seven of which were willing to replace regular unleaded fuel with Opal but soon after its launch, calamity struck. Reports that Opal was damaging car engines surfaced in the media and were rapidly eroding retailer support. With petrol stations threatening to cease supplying Opal, the Office of Aboriginal and Torres Strait Islander Health (OATSIH)¹, which was overseeing the scheme, needed to devise a new approach.

Volatile substance abuse in Australia

Petrol was one of many volatile substances that could be inhaled to produce mind-altering effects. Containing chemical compounds which released fumes at room temperature, inhalants acted as depressants on the central nervous system and gave users a rapid, short-acting “hit”. There were literally hundreds of household, medical and industrial products that contained potentially intoxicating volatile substances including glues, paints, nail polish removers and lighter fluid. These were also amongst the most commonly abused volatile substances.

This case was written by Marinella Padula, Australia and New Zealand School of Government for Peter Allen as a basis for class discussion rather than to illustrate either effective or ineffective handling of a managerial situation. The assistance of Lesley Podesta, Stephen Castle and Joy Savage is gratefully acknowledged but they are not responsible for the content herein.

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¹ Part of the Commonwealth Department of Health and Ageing (DoHA).

The short-term psychoactive effects of volatile substances included sensations of wellbeing, hallucinations, loss of coordination, lethargy, disinhibition, aggression, confusion and pronounced mood swings. Long-term effects frequently involved chronic headaches, angina and respiratory ailments. Chronic users suffered irreversible neurological damage which could lead to serious cognitive impairment. Other major organs were also adversely impacted and all users risked sudden cardiac arrest or asphyxiation. Pregnant users, meanwhile, jeopardised fetal health; babies born to petrol sniffers were at heightened risk of developmental delay and physical deformities.

Although it was hard to determine the precise extent of volatile substance abuse (VSA), it was an issue of concern in urban and regional areas as well as remote communities. Marginalised youth from dysfunctional backgrounds were at the greatest risk of VSA and paint sniffing or “chroming” was the most widespread form of abuse. One study of Australian high-school students revealed that just over 20 percent of 12 year-olds had tried inhalants, 6.4 percent using them within the previous week.² Inhalant use tended to peak during early adolescence and decline over time. In remote indigenous communities, however, petrol sniffing was the most prevalent form of VSA and Aboriginal youth tended to use the inhalant earlier and for longer periods. Data was difficult to collect but the best available estimates suggested that there were approximately 1000 known petrol sniffers in central and northern Australia. This represented some 4.8 percent of the population aged between 5 and 40 years.³

Petrol sniffing was thought to date back as far as the 1940s when United States soldiers allegedly introduced local Aboriginals to the practice. Petrol sniffing was then largely confined to Arnhem Land and parts of central Australia, but during the 1980s and 1990s, the practice spread to previously unaffected communities including some in far north Queensland and New South Wales. As First Assistant Secretary of OATSIH Lesley Podesta explained, petrol was often the substance of “last resort” when legal and illegal alternatives such as alcohol or cannabis were unavailable. This was often the case in “dry” communities where alcohol bans had been instituted. Petrol was also cheap, portable and relatively accessible. Research indicated that petrol and other inhalants were used primarily to relieve boredom, assert identity or power and suppress hunger or negative emotions. The degree to which indigenous communities were affected by petrol sniffing was influenced by the level of community cohesion, the number of existing users and the availability of resources and supports.

The impact of petrol sniffing

While petrol sniffing could have serious and lasting health consequences for individual users, the effects were not confined to them. Explained Podesta:

“One of the biggest problems with petrol sniffing is that it has such an impact physically, not just on the users but on the people who live around them. At its early stages kids become dissociated, withdrawn and depressed, eventually there is significant long term brain damage and a tendency to become more violent. They become a danger to themselves and to others and communities become a terrifying place for people to live. It’s also simple health economics, if you’ve got a young Aboriginal man living in a remote place with severe brain damage, the cost of caring for him is phenomenal. You can’t just send him to the rehabilitation facility around the corner, they just don’t exist.”

² Midford R., Maclean S., Catto M., Debuyst O. ‘Review of Volatile Substance Use Among Indigenous People’ Australian Indigenous HealthInfoNet, 2010, p.4.

³ Ibid, p.5.

Chronic users often became estranged from friends and family; they usually had little involvement with educational or vocational activities. Relatives also frequently took on great emotional and financial burdens to care for users and, sometimes, the children they neglected or left behind. Communities had to deal with increased property crime, family breakdown, and the loss of young adults to health problems and suicide. The precise number of petrol-related fatalities was impossible to determine as other health conditions induced by inhalant use were much more likely to be listed as the cause of death.

Although drug and alcohol abuse was far more common and extremely damaging, petrol sniffers were a much harder group to engage with productively. Podesta received regular feedback from fieldworkers who observed that they were the most difficult clients to deal with and had poor long-term prospects. In 2005, the estimated total cost of petrol sniffing in central Australia was \$78.9 million⁴, which comprised:

- \$38.1 million cost of burden of disease;
- \$16.2 million in crime and judicial costs;
- \$8.3 million in lost productivity;
- \$4.2 million in long term care costs;
- \$4.1 million in acute health costs;
- \$3.7 million on rehabilitation.⁵

Meanwhile, the projected cost of petrol sniffing across central and northern Australia over the next 25 years was \$1,708 million (at 2010 values). Just over \$1000 million represented the cost to sniffers, mainly in the form of morbidity and mortality, including lost income. The estimated cost to Government was calculated at \$471 million; \$223 million was the expected cost to communities where sniffers lived.⁶ But, explained Podesta, there were also important symbolic reasons for tackling the issue:

“Petrol sniffing is almost a uniquely Aboriginal problem and we have such a significant challenge around Aboriginal health that if you could address one of the key issues resulting in early mortality for young people that was really important. It’s also Australia’s shame. From our point of view we wanted to eradicate an issue that was almost exclusive to Australia and what we know is that if our kids don’t see petrol sniffers, they don’t do it.”

The Comgas scheme

A variety of strategies had been used to combat petrol sniffing – many were preventative programs aimed at reducing demand and diverting youngsters from substance abuse. Others were geared towards harm minimisation or rehabilitation. Some programs had been successful in avoiding or containing outbreaks, most less so. Much depended on the individual community and its willingness to support particular initiatives. The most effective programs were often those that had been driven by communities themselves. However, until recent years, there had been little coordination of effort, especially between governments and/or community groups. Interventions were frequently launched in response to reported outbreaks and involved one-off grants to individual non-government agencies dealing with users.

⁴ All figures in Australian Dollars.

⁵ Ibid, p.6.

⁶ Ibid.

One of a few schemes to yield tangible results was the Avgas program. During the early 1990s, several indigenous communities in the top end of the Northern Territory began to replace petrol with aviation fuel, commonly known as Avgas, which did not give users the requisite “high”. Communities using Avgas reported significant declines in sniffing activity; outbreaks, when they occurred, were smaller and more sporadic. Gradually, other communities also began substituting Avgas for regular fuel. In 1998, the Australian Government began subsidising Avgas for communities using the fuel and invited other affected communities to apply for subsidies. Called Comgas, the program had 30 participating communities by 2004. Although the scheme was very popular with participating communities, there were some issues. Avgas contained lead which was an environmental health concern (regular leaded petrol was phased out in Australia in the early 2000s). Long-term use of Avgas could also present problems for car engines.

Opal and the eight-point plan

In 2004, British Petroleum (BP) approached the Federal Government with details of a new, low-aromatic fuel called Opal that obviated many of the problems with Avgas. It had been developed at the behest of community groups looking for a viable alternative fuel and BP believed that Opal would not only be a successful Avgas substitute but allow the program to be expanded. The Government agreed and the new fuel was launched in February 2005 (*Exhibit B*). Participating communities were invited to switch to Opal, the Government again subsidising the difference in production and distribution costs.

However, Podesta noted, the Federal Government was keen to take a more holistic and coordinated approach to petrol sniffing. After the launch of Opal, the Western Australian, South Australian and Northern Territory Governments were enlisted to support the Federal Government’s “Eight-Point Plan” – renamed the Petrol Sniffing Strategy (PSS). Several Commonwealth Departments would also be involved along with the Department of Health and Ageing (DoHA), including the Department of Education, Science and Training (DEST)⁷ the Attorney General’s Department (AGD) and the Department of Families, Community Services and Indigenous Affairs (FaCSIA)⁸ The PSS committed departments and governments to the following actions:

- adopting consistent legislation with strong penalties for offences relating to sale or supply of volatile substances for sniffing;
- appropriate levels of policing;
- further rollout of Opal fuel;
- developing diversionary activities for young people;
- providing treatment and respite facilities;
- developing communication and education strategies;
- strengthening and supporting communities;
- evaluating interventions.⁹

The PSS would be led by the Office of Indigenous Policy Coordination (OIPC) which was eventually absorbed by FaCSIA. DoHA through OATSIH would be responsible for the rollout of Opal fuel, communication and education strategies and treatment facilities.

⁷ Later to become the Department of Education, Employment and Workplace Relations.(DEEWR).

⁸ Later to become FaHCSIA when housing was added to the portfolio.

⁹ Midford R., Maclean S., Catto M., Debuyst O. ‘Review of Volatile Substance Use Among Indigenous People’ Australian Indigenous HealthInfoNet, 2010, p.9.

But even as the full plan was being finalised, OATSIH was getting some very positive feedback. Anecdotal reports from communities and frontline staff revealed that Opal was a good product and having a major impact on sniffing. “Opal was never seen as a panacea but a part of a broader, multifaceted community solution to the problem” explained Joy Savage, Assistant Secretary of the Remote Health Services Development Branch in OATSIH. It was also an extremely valuable circuit-breaker that gave elders, health professionals and youth workers a chance to disrupt the behaviour and redirect users before the worst effects took hold. Moreover, it didn’t appear as though users were migrating to other volatile substances such as solvents. As a result, the campaign to extend the Opal rollout gathered pace.

The May 2005 Budget provided \$9.6 million, over four years, to expand the Petrol Sniffing Strategy (PSS), and affected communities not using Opal were able to apply for the subsidy. In September, the Government announced further funding (\$9.5 million over two years).¹⁰ At the same time, OATSIH also took a more proactive approach, identifying remote communities with sniffing issues, as well as roadhouses and petrol stations frequented by users, and encouraging them to introduce the fuel. “The program wasn’t widely promoted prior to Opal,” Savage recalled. “It was more word-of-mouth from community to community. But Opal provided a big opportunity and as more communities got on board, the rollout of Opal fuel expanded immensely beyond the original Comgas program.” In the 2006 budget, the Federal Government allocated a further \$55.1 million, over four years, for the petrol sniffing strategy in the Central Desert Region, and to extend the program to other areas. More than \$20 million of this funding was earmarked specifically for DoHA activities.¹¹

The extended Opal rollout was proving successful but regular unleaded petrol could still make its way into communities: usually inadvertently via tourists or through bootleggers who were sometimes members of the communities themselves. Some people, observed Stephen Castle (Director of Social Health of OATSIH’s Family Health and Wellbeing Branch), were prepared to travel as far as 500km to obtain regular unleaded fuel. One of the main sources of regular unleaded fuel was Alice Springs but the town also presented quite a different set of challenges.

A town like Alice

Situated close to the geographical centre of Australia, Alice Springs was the second largest settlement in the Northern Territory, roughly half-way between Darwin and Adelaide. Apart from being a significant regional and transport hub, the town was also the gateway to the Uluru-Kata Tjuta National Park – one of the nation’s major tourist attractions. Indeed, tourism was Alice Spring’s dominant industry. In 2006, the population was close to 24,000 and indigenous Australians made up almost 19 percent of permanent residents.¹² As OATSIH staff noted, it was a unique community for a number of reasons. Firstly, there was a sizeable transient population which included visitors, hospitality workers and indigenous people who came from outlying settlements to collect supplies, access health services or meet up with friends and extended family. Secondly, Alice Springs was quite segmented. Most residents lived in suburban areas, however, there were also a number of town camps on the outskirts of Alice Springs that consisted mostly of improvised dwellings and attracted many itinerant

¹⁰ ‘Review of the First Phase of the Petrol Sniffing Strategy’ Department of Families, Housing, Community Services and Indigenous Affairs, June 2008, p.1.

¹¹ Ibid, p.2.

¹² 2006 Census QuickStats :Alice Springs, Australian Bureau of Statistics, www.censusdata.abs.gov.au, Accessed: January, 2010.

visitors for extended periods. Petrol sniffing tended to be concentrated in these settlements. Said Podesta:

“The push for Alice Springs to be brought on board wasn’t so much about dealing with the issue in Alice Springs itself but more about the fact that if there was regular unleaded available there, then it would be going from Alice Springs into the communities. In Alice there has always been sniffing. The number varies depending on who’s in the town at any one time but the number was estimated to be between 20 and 50. The majority of those would be coming in from other communities but there are some who are chronic sniffers who are part of town camps”.

There was, explained Stephen Castle, some debate within OATSIH and the DoHA about the viability of extending the rollout to Alice Springs. “Remembering back,” he said, “it was felt that it probably wasn’t possible to do Alice Springs partly because: a) it was a largely non-indigenous community and b) to do it you’d have to bring on everybody and people felt that it would be fairly difficult to get all parties to agree.” Added Podesta, “Alice Springs was right in the middle of (one of the worst affected regions) but originally we felt we couldn’t include it because there are so many people and petrol outlets there and we’ve never had a replacement for high octane (premium unleaded) fuel. But we eventually decided to include Alice Springs because all it would mean is that people who really wanted petrol would just go to Alice Springs and exacerbate the issues there.”

Some of the groups lobbying for Alice Springs to be included were the Central Australian Youth Link Up Service (CAYLUS) which had long been involved in anti-sniffing initiatives, the Ngaanyatjarra Pitjantjatjara Yankunytjatjara (NPY) Women's Council which represented communities in South Australia, Western Australia and the Northern Territory, along with church groups and a number of large hotels in Central Australia. The local council was also supportive of the program. But, as Castle observed: “Everywhere else we had put Opal previously was to address a problem, as opposed to a preventative measure. In terms of policy it was different to what the policy had been up to that point.”

The exploding Tarago

In May 2006, OATSIH began the roll-out of Opal to seven petrol stations in Alice Springs. By then, a total of 62 indigenous communities and 24 roadhouses and service stations outside Alice Springs were stocking Opal unleaded fuel.¹³ The Federal Government had also committed an additional \$12 million to supply the fuel to Alice Springs.¹⁴ The rollout had been preceded by many meetings and site visits with petrol companies, retailers, mechanics and car hire companies where the need for Opal was explained along with the technical aspects of the fuel. While Opal was equivalent in all key respects to regular 91 octane unleaded petrol, there were potential minor issues for fuel pumps at service stations and engine seals in a small percentage of older vehicles. OATSIH made it clear that it would cover the cost of any pump modifications. Premium fuel would still be available but subject to strict conditions of sale. Motorists of pre-1986 vehicles would need to switch to premium unleaded if they hadn’t already.

¹³ ‘Rollout of unleaded Opal fuel in Alice Springs’ Media Release: Department of Health and Ageing, 11 September 2006.

¹⁴ Opcit, p.2.

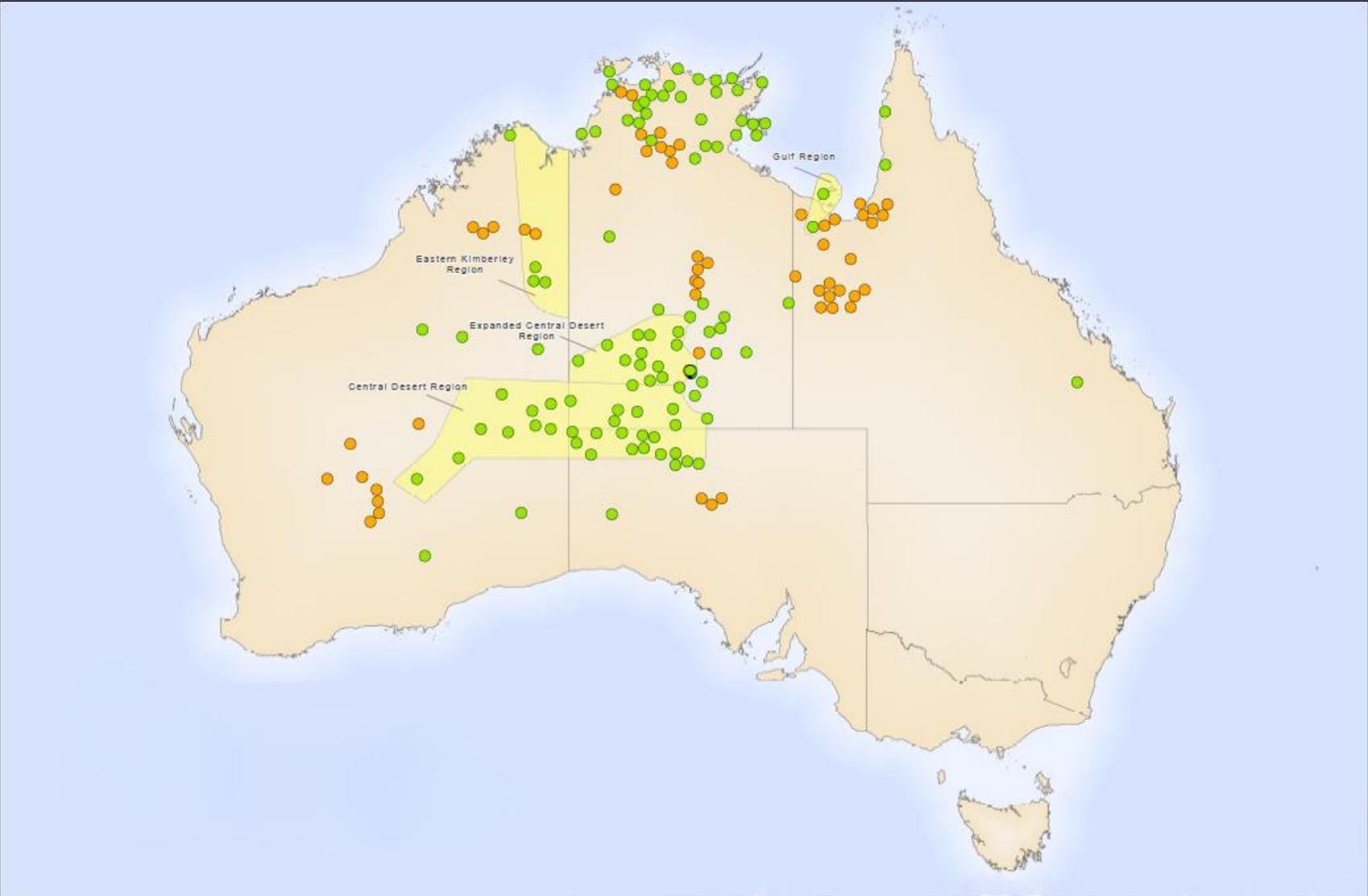
At the beginning of the rollout, signs alerting customers to the new fuel were installed above fuel pumps (*Exhibit C*) and leaflets were distributed at Alice Springs airport and car rental firms. However, just a few weeks into the rollout, trouble surfaced. Reports began appearing in local papers such as *The Centralian Advocate* suggesting that Opal had been responsible for damaging the engines of several cars. Complaints also emerged that Opal hampered fuel economy or ruined small engines such as those in lawnmowers. One prominent case involved a Toyota Tarago that blew up outside Curtain Springs. Sent off for analysis, tests revealed it was actually using premium fuel. This didn't deter the local media which continued to run with the story and air warnings from small repair shops and disgruntled motorists. A Royal Automobile Association of South Australia hotline was set up so people reporting problems could have their cars professionally examined. Approximately half a dozen callouts were made but all of the problems were eventually attributed to normal wear and tear.

The campaign against Opal showed no signs of abating and the seven petrol stations stocking Opal were threatening to pull out. People, noted Podesta, seemed to feel that by losing regular unleaded petrol they were being "punished" for a problem that only pertained to a small number of individuals. And, some OATSIH staff noted, community dissent over Opal wasn't exclusive to non-indigenous residents. There was also a degree of opposition from local Aboriginal people who felt it was the wrong approach and that Opal was a poor product from a mechanical point of view. Remarked Castle: "We'd never done anything like it before but nobody expected the reaction we got including the local stakeholders who were providing advice."

Back to the drawing board?

Podesta and her colleagues now faced a quandary. Did they simply forge ahead, try to convince retailers to stay on board and hope that the antipathy towards Opal would eventually subside? Or did they try another approach? Significant money and effort had already been invested in producing, storing and distributing Opal – something quite new for the Department. More importantly, there were dozens of communities desperate to preserve their hard-won gains against the scourge of petrol sniffing.

Exhibit A: Petrol sniffing affected townships and regions





fact sheet



Opal™

a safer petrol for remote communities

Opal™ - a safer petrol for remote communities

BP remains committed to working with communities and government agencies to address the issue of petrol sniffing in remote communities.

Comgas has been in the market for several years and has been found to be useful in mitigating petrol-sniffing.

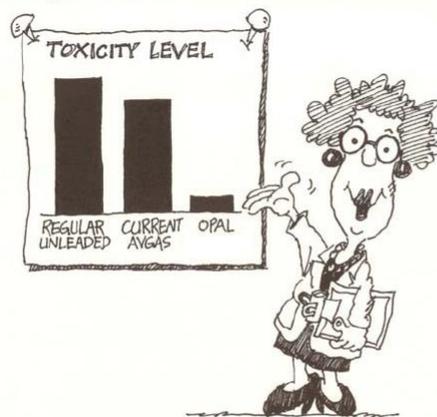
As an improvement to Comgas, which contains lead, BP with assistance from government and community groups, has introduced a new unleaded replacement fuel called Opal. Opal maintains the same deterrent aspect of Comgas whilst also removing the lead component.

Opal is the first fuel of its kind in the marketplace and has been available as of January 2005. Opal is not available for general distribution, but is available to all remote communities who previously received Comgas and who participate in the Comgas scheme managed by the Department of Health and Ageing.



What does the doctor say?

BP has consulted a professional toxicologist to assess how this new BP Opal compares to other types of fuel.



A range of fuels were compared including Regular Unleaded, the current Comgas, and Opal.

On the basis of the assessments conducted, the toxicologist stated that 'all fuels are potentially toxic, but that in terms of chronic exposure [Opal] is the least toxic of all the fuels assessed'.

Prof M Moore, Report to BP on Comgas, October 2004.

All fuels are potentially toxic, but that in terms of chronic exposure Opal is the least toxic of all the fuels assessed.

Prof M Moore, Report to BP on Comgas, October 2004

Will Opal™ cost more?

The Australian Government's financial support will allow Opal to be priced at an equivalent local price to regular unleaded fuel.

What about my car or outboard?

BP commissioned independent automotive testing of Opal in October 2004 and January 2005. The testing found:

For cars

- Exhaust emissions for a vehicle running on Opal were equal to or less than the tailpipe emissions of the same vehicle running on regular unleaded petrol.
- There was no significant difference in driveability between a vehicle running on Opal and the same vehicle running on regular unleaded petrol.
- The difference in fuel economy between a vehicle running on Opal and regular unleaded petrol measured no more than 0.3 litres per 100km – within the normal variation of petrol in the market place.



There is no significant difference when a vehicle runs on Opal compared to the same vehicle running on regular unleaded petrol.

Independent automotive testing laboratory report, October 2004



For outboards

BP commissioned independent testing of Opal on a marine two-stroke outboard engine through Orbital Australia Pty Ltd.

The report concluded:

- On-water drivability and performance tests did not indicate any sensitivity to the Opal tested in comparison to the baseline fuel.
- Testing shows that Opal tended to be more difficult to start and idled poorly during the post-start stage of operation following tank 'dry run' simulation. However this circumstance is rare under normal operation.
- The extended idle engine test of Opal was successfully completed.
- Overall, the differences between the baseline fuel and Opal are minimal and for the majority of users any differences noted would be transparent.

Orbital Report, Assessment of BP Low Aromatic Fuel, February 2005

To obtain a full copy of the report, or more information on Opal's performance in outboard motors, please contact BP as detailed on the back page of this factsheet.

Opal can be used in most other applications that require regular unleaded petrol including two and four stroke motors – chain saws, lawn mowers, as well as passenger vehicles and petrol 4WDs.

Opal cannot be used in applications that require leaded fuel nor can it be used for aviation fuel.

fact sheet

For more information

BP welcomes enquiries about Opal. If you would like more information please contact:

- **Media enquiries** – Peter Metcalfe (08) 9419 9644
- **Vehicle and outboard performance** – Garry Whitfield (03) 9268 4997
- **Toxicology assessments** - Mark Glazebrook (03) 9268 3932
- **Government enquiries** – Bill Frilay (03) 9268 3880

For other information about Opal or other BP products and services, please visit www.bp.com.au

Exhibit C: Opal petrol station sign

