

**Environmental Impact Classification
Pursuant to Section 98 of the *Petroleum Act 2000***

Katnook and Ladbroke Grove Gas Plants - Otway Basin, South Australia

20 September 2002

INTRODUCTION

Pursuant to section 98 of the *Petroleum Act 2000* (the Act) the Minister must classify the regulated activities covered by a prepared Environmental Impact Report (EIR) as either low, medium or high impact.

The classification must be made on the basis of:

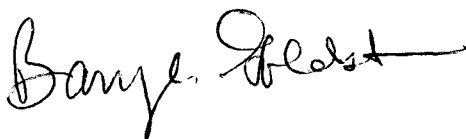
- The prepared Environmental Impact Report (EIR);
- Criteria established for classifying the level of environmental impact of regulated activities, a copy of which is found on the PIRSA Petroleum Group web page: (<http://www.pir.sa.gov.au/dhtml/ss/section.php?sectID=437&templID=8>); and
- Comment received from Department for Environment and Heritage (DEH), the Environment Protection Agency (EPA) and Department for Water, Land and Biodiversity Conservation (DWLBC) in accord with established administrative arrangements between these respective departments and PIRSA.

This document summarises the classification made by PIRSA on Katnook and Ladbroke Grove Gas Plant operations in the Otway Basin. This classification is based on the information provided in the EIR and draft Statement of Environmental Objectives (SEO) both dated November 2001, as submitted to PIRSA by Origin Energy Resources Limited on 3 June 2002.

SUMMARY OF CLASSIFICATION

- 1) From an analysis of the environmental significance of the various potential impacts associated with this operation – summarised in attachment #1 against the classification criteria – this regulated activity has been classified as **low impact**.
- 2) Comments received from DEH on 12/6/02 concur with this classification.
- 3) Comments received from DWLBC on 6 September 2002 also supported this classification subsequent to OERL addressing their concerns raised in their letter of 4/7/02.
- 4) Comments received from the EPA by email (26 and 27/8/02) were also accommodated as suggested by the EPA.

Therefore pursuant to delegated powers dated 28 March 2002 and Gazetted 11 April 2002, I hereby classify this regulated activity as low impact.



Barry A. Goldstein
Director - Petroleum Group
Office of Minerals and Energy Resources
Delegate of the Minister for Minerals and Energy

Otway Basin Katnook and Ladbroke Grove Production and Processing Activities - Environmental Significance Assessment										kat_ladgrove_impactssst_sept2002.xls									
ABBREVIATIONS: H = High certainty; M = Medium certainty; L = Low certainty																			
EIR - REF	TYPE OF IMPACT	POTENTIAL HAZARDOUS EVENT(S)	POTENTIAL CONSEQUENCES	PREDICTABILITY						MANAGEABILITY						COMMENTS	Environmental significance		
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	Natural Environment Impacts																		
	Soil Impacts																		
s. 8.1.	Soil Contamination	Spill or leak of contained produced formation water from evaporation ponds.	Deterioration of soil quality within and possibly beyond the plant perimeter, the latter depending on the size and volume of spill.	M	M	M	M	H	2	No	Low						1	Capacity of evaporation pond and trucking of excess water from pond during periods of higher rainfall makes this a very unlikely event.	Low
s. 8.2.		Spill or leak of liquid hydrocarbon as a result of pipeline failure (from well heads to plant inlet) due to corrosion.	Deterioration of soil quality within the vicinity of the pipeline failure, the size of the area affected will depend on the volume of the hydrocarbon liquid spill.	M	M	M	M	H	2	No	Medium	Short	Small	None			2	Use of corrosion inhibitor and cathodic protection in flow lines makes a corrosion failure event very unlikely and the low amount of liquid in the produced gas will result in very small and minor soil contamination.	Low
s. 8.4.		Condensate or chemical spills onto soil outside banded areas from storage vessels as a result of corrosion failure of storage vessels and overflow from banded areas.	Deterioration of soil quality outside banded area but within the plant perimeter.	M	M	M	M	H	2	No	Low						1	Due to the volume of condensate and chemicals stored on the site and the existing bunding arrangements employed at the plant (designed to contain at least 125% of the volume of the largest tank/drum in the bund) in the event of a spill the volume of material spilt will be insufficient to have a large and long lasting detrimental consequence on the soil. This is well illustrated by the largest spill experienced at Katnook which occurred at the Katnook plant condensate load out facility in May 2001 involving a total volume of about of 4000 litres of condensate of which only about 10% escaped outside the banded area designed to contain such a spill.	Low
s. 8.4.		Condensate and chemical spills outside banded areas as a result of handling material from storage.	Deterioration of soil quality within vicinity of spill area within plant and well sites.	M	M	M	M	H	2	No	Medium	Short	Small	None			2	Same comments as those given above, and in addition continuously reviewed procedures for handling and pumping condensate and chemical are in place and chemical pumps are usually located on hard stand areas to contain any leaks or drips for ease of clean up.	Low
s. 8.8.		Spillage to the ground of low level mercury contaminated sludge from within pressure vessels and filters within the Katnook Plant.	Deterioration of soil quality within the Katnook Plant area.	M	M	M	M	H	2	No	Low						1	The amount of such contaminated sludge is known to be small and is removed from filters 4 to 6 times a year. The sludge is removed under a safety permit system then disposed of via an EPA approved facility.	Low
s. 8.5.		Spillage of condensate to roadside soil as a result of tanker accident.	Contamination of soil.	M	M	M	M	H	2	No	Low						1	The likelihood of such an event is considered low as it will require a sufficiently serious accident resulting in the tanker rolling over and breaching its load. Current controls include strict speed limits and education of tanker drivers of hazards and cautions associated with transporting condensate.	Low

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Surface Water Impacts																		
s. 8.1.	Wetland contamination.	Overflow of contained produced formation water from evaporation pond into adjacent environment outside plant area during periods of inundation.	Contamination of water quality.	M	M	M	M	H	2	No	Low					1	The likelihood of such a hazardous event occurring is considered to be rare as it requires a series of simultaneous events to occur, the first being high rainfall to inundate the surrounding land, an overflow of the evaporation pond and for the oversplash to be of sufficient volume to carry over into the surrounding environment beyond the plant perimeter. During periods of high rainfall or low evaporation, freeboard of the evaporation ponds is strictly maintained by trucking excess water away to SA Water approved disposal sites.	Low
s. 8.4.		Condensate or chemical spills from storage vessels as a result of either corrosion failure and overflow from bunded areas and into adjacent water channels.	Contamination of water channels.	M	M	M	M	H	2	No	Low					1	The likelihood of such a hazardous event occurring is considered to be rare as it requires a series of simultaneous events to occur, the first being high rainfall to inundate the normally dry channels surrounding the facility, secondly a leak from the condensate or chemical drums and the unlikely overflow of any such leak from the bunded areas, and finally of a sufficient volume to flow beyond the plant perimeter and into the channel.	Low
s. 8.5.		Condensate spill into water courses as a result of tanker accident.	Contamination of fresh water ecology.	M	M	M	M	H	2	No	Low					1	The likelihood of such an event is considered low as it will require a sufficiently serious accident resulting in the tanker rolling over and breaching its load. Current controls include strict speed limits and education of tanker drivers of hazards and cautions associated with transporting condensate.	Low
s. 8.5.		Glycol or Methanol spill into water course during transport to well sites.	Contamination of water way with miscible corrosion or hydrate inhibitor.	M	M	M	M	H	2	No	Low					1	The likelihood of such an event is considered rare as it will require a number of rare individual incidents to occur simultaneously. That is the drums containing these chemicals need to rupture while being transported to the well sites (procedures in place for handling and securing such drums during transport makes this very unlikely). Any rupturing will need to result in a spill into the water course channels on route to the well sites. This is considered unlikely because of the rare occasion of significant water being present in the water channel over which the drums are transported and secondly the road is built up above the water level of the channel and any unlikely spill from the drum would likely remain on the road surface.	Low
Groundwater Impacts																		
s. 8.1.	Ground water contamination with disposed formation water.	Deterioration of impervious liner under evaporation pond resulting in a leak of contained formation water into underlying ground water.	Contamination of near surface aquifer water with hydrocarbon contaminated produced water.	M	M	M	M	H	2	No	Low					1	The impervious liner is relatively heavy duty and as a second precaution the pond is lined with a clay under the liner which adds further protection against the percolation of produced water through the soil profile and into the shallow surface aquifers. Monitoring bores around the site are used to monitor for any leaks (subsurface) from the evaporation ponds. In addition, regular visual inspection of the liner is undertaken.	Low

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s. 8.3.	Cross flow of gas into fresh water aquifers.	Well casing or cement failure.	Pressurisation of near surface aquifers and/or contamination of aquifers.	M	M	M	H	H	2	No	Low					1	The good industry practice adopted in designing and setting casing and cementing and in the maintenance of casing and monitoring of corrosion are such that the likelihood of such an event would be very rare. Also the volume of gas that would need to crossflow to cause significant pressurisation of the surface aquifers is simply not present in the gas producing zones.	Low
s. 8.3.	Cross flow of deeper saline water aquifers into fresh water aquifers.	Well casing or cement failure.	Increase salinity in fresh water aquifers.	M	M	M	H	H	2	No	Low					1	The good industry practice adopted in designing and setting casing and cementing and in the maintenance of casing and monitoring of corrosion are such that the likelihood of such an event is very rare. Also all saline aquifers in the Otway Basin are considerably distant from fresh water aquifers and are cemented behind 7" casing and not in producing zones so as to have been perforated.	Low
s. 8.4.	Percolation of hydrocarbon or chemical through soil into aquifers.	Spill or leak of condensate or chemicals.	Contaminate near surface aquifers with hydrocarbon or chemicals.	M	M	M	H	H	2	No	Low					1	In the case of a spill outside impervious banded areas, the maximum size of spill expected, considering the size of the most significant spill at Katnook which occurred in May 2001 would be incapable of percolating several meters through the soil and into the shallowest fresh water aquifer.	Low
Air Impacts																		
s. 8.12.	Green house gas emissions.	Emission of gas from plant during emergency shut down or when venting plant equipment for maintenance.	Contribute to green house effect.	M	M	M	H	H	2	No	Medium	Short	Small	Negligible		2	The release of any gas resulting either from an emergency shut down or venting would be for a relatively short period of time and small volume (5 to 15 minutes, maximum volume of 900 m3 for venting) and in the case of an emergency plant shut down no more than the total plant and flow line inventory, since wells would shut in immediately in such a case. Therefore in terms of greenhouse emission effects this would prove insignificant.	Low
s. 8.2.		Corrosion failure at the well head, vessels and pipelines.	Contribute to green house effect.	M	M	M	H	H	2	No	Low					2	In the rare event of well head, pressure vessel and pipeline failure due to corrosion, these will be shut in almost immediately. This event is expected to be very rare as a result of the extensive corrosion monitoring and protection through use of inhibitors and cathodic protection and maintenance. In the case of any release, its volume would be insignificant in terms of any green house gas emission.	Low
s. 8.7.		Release of gas from pipeline rupture as a result of third party activities or third party interference with well heads.	Release of gas to atmosphere.	M	M	M	H	H	2	No	Low					1	The likelihood of third party interference with flow lines is rare due to the burial depths of these flow lines is such to make third party activities in this region incapable of contacting the flow lines. Also all well yards are fenced with man and stock proof fencing making access to well heads difficult. Additionally, the remote location of well sites makes third party access difficult.	Low
Vegetation Impacts																		
s. 8.1.	Impact on adjacent River Red Gum trees.	Spills or leaks of disposed formation water contained in evaporation ponds onto root system of adjacent gum trees.	Poison gum trees.	M	M	M	H	H	2	No	Low					1	The likelihood of any such an event is very unlikely for reasons previously given. Also in the event of a spill or leak, the volume and concentration would be insufficient to poison the trees.	Low

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s. 8.5.	Impact on adjacent area vegetation.	Tanker spill of condensate resulting in smothering of road side vegetation by condensate.	Poisoning of vegetation.	M	M	M	H	H	2	No	Low					1	The likelihood of such an event is considered low as it will require a sufficiently serious accident resulting in the tanker rolling over and breaching its load. Current controls include strict speed limits and education of tanker drivers of hazards and cautions associated with transporting condensate.	Low	
s. 8.9.	Introduction of weeds.	Inadvertent introduction of declared weeds into region by company or contractor vehicles.	Choke out native vegetation.	M	M	M	M	H	2	No	Low					1	Vehicle wash down and certification procedures and weed identification and eradication programs makes the likelihood for such an event very unlikely. The sparse and rare presence of any native vegetation also makes the potential consequence very unlikely.	Low	
s. 8.12.	Bush fire.	Uncontained ignition causing bush fire in adjacent area.	Destruction of adjacent vegetation, in particular gum trees.	M	M	M	M	H	2	No	Low					1	Existing controls in place in terms of ignition sources, static electricity, hot work permits, inductions, storage and handling of flammable material, and removal of combustible rubbish and dry grass sufficient to the extent where the risk of such fires is very low.	Low	
Social Environment																			
Cultural & Heritage Impacts																			
s. 8.11	Disturbing cultural sites.	Construction activity disturbance of cultural sites.	Destruction of cultural values.	H	H	H	H	H	1	Yes						1	Any risk to disturbing cultural heritage sites is mainly present at the time of construction activities being undertaken where earthworks and soil disturbance occur. At the time these facilities were constructed in 1990, the site was scouted using appropriate people for cultural sites and none were found. Therefore since this EIR and SEO relate only to production and processing activities and not construction activities, this risk is not relevant. Any new construction activities will require a separate EIR/SEO.	Low	
Community Health & Safety																			
s. 8.12.	Gas release.	Emission of gas from plant during emergency shut down or when venting plant equipment for maintenance.	Explosion risk if ignition source present, posing safety risk to any third parties that may be within the plant vicinity at the time of explosion.	M	M	M	H	H	2	No	Medium	Short	Small	None		2	The release of any gas resulting either from an emergency shut down or venting would be for a relatively short period of time and small volume (5 to 15 minutes, maximum volume of 900 m3 for venting) and in the case of an emergency plant shut down no more than the total plant and flow line inventory, since wells would shut in immediately in such a case. In light of the precautions taken on ignition sources and the rare presence of third parties due to its isolated location, the likelihood of an explosion is rare as is in turn any safety risk to third parties.	Low	
s. 8.12.		Release of gas under pressure from the plant.	Discomfort to third parties due to excessive noise above 85 Db.	M	M	M	H	H	2	No	Medium	Short	Small	None		2	Release of gas under pressure resulting in excessive noise would only be for a short duration.	Low	

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s. 8.2.		Component failure at the well head.	Injury to any third parties that may be within the vicinity of the well head and in line with the trajectory of any failed component which may be projected from the well head as a result of the failure.	M	M	M	H	H	2	No	Low					1	In the rare event of well head components failing due to corrosion and being projected off the well head, to cause any risk to third parties, third parties will need to be within the vicinity of the well site. This is unlikely due to the remoteness and the fencing around each well site.	Low
s. 8.2.		High pressure gas release from well head.	Discomfort to third parties due to excessive noise above 85 Db.	M	M	M	H	H	2	No	Low					1	In the rare event of a well head component failure any excessive noise as a result of the pressure release would be of a short duration until such time that the well head is shut in, almost immediately. Also the remoteness of the well sites from nearby land owners and other third parties makes this consequence unlikely.	Low
s. 8.7.	Third party access to plant and wells.	Unauthorised entry into plant and well sites.	Injury to third parties.	M	M	M	M	H	2	No	Low					1	All well sites and plant are fenced off with man proof fencing with the plant being continuously manned makes the likelihood of unauthorised access very unlikely.	Low
s. 8.5.	Vehicle accidents.	Operations vehicles or condensate truck colliding with third parties.	3rd party injuries or fatalities.	M	M	M	M	H	2	No	Low					1	The safety precautions, through safety training inductions and avoiding use of road during periods of increased risk to third parties, taken by the company especially with condensate tankers makes the risk of this event very rare.	Low
s. 8.7.	Well flow line damage.	Flow line rupture as a result of third party damage to buried flowlines from well heads to Katnook and Ladbroke Grove Gas Plants.	3rd party injuries or fatalities.	M	M	M	M	H	2	Yes						1	Flow lines are designed and constructed in accord with the AS 2885 standard. This ensures that it is done so in such a way that any risk to third parties in light of likely third party activities in the vicinity of the flow lines is avoided. That is, the steel thickness of the flow line wall and its depth of burial is such that any contact with the pipeline by third party activities typically undertaken in this area would not result in a pipeline rupture.	Low
	Economic Environment																	
	Existing Land Use Impacts																	
s. 8.9	Introduction of weeds.	Inadvertent introduction of declared weeds into region by company or contractor vehicles.	Overtake pasture grass and make them unsuitable for grazing.	L	L	L	L	H	4	No	Low					1	Vehicle wash down and certification procedures and weed identification and eradication programs makes the likelihood for such an event very unlikely. The sparse and rare presence of any native vegetation also makes the potential consequence very unlikely. In the event of weed identification weeds will be eradicated.	Low
s. 8.1	Pasture contamination.	Spill or leak of formation water from pond and onto adjacent grazing land resulting in stock ingesting contaminated pasture.	Decline in meat quality of stock as a result of ingesting produced water contaminates.	M	M	M	M	H	2	No	Low					1	The likelihood of such a hazardous event occurring is considered to be rare as it requires a series of simultaneous events to occur, the first being high rainfall to inundate the surrounding land, an overflow of the evaporation pond and for the oversplash to be of sufficient volume to carry over into the surrounding environment beyond the plant perimeter. During periods of high rainfall or low evaporation, freeboard of the evaporation ponds is strictly maintained by trucking excess water away to SA Water approved disposal sites.	Low

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s. 8.4.		Spill or leak of hydrocarbon or chemicals onto adjacent pasture land resulting in stock ingesting contaminated pasture.	Decline in meat quality of stock as a result of ingesting produced water contaminates.	M	M	M	M	H	2	No	Low					1	In light of existing bunding arrangements and expected maximum size volumes of spills, such an event where spill will escape into surrounding adjacent area is unlikely.	Low
s. 8.12.	Bush fire.	Uncontained ignition causing bush fire in adjacent area.	Decline in stock feed.	M	M	M	M	H	2	No	Low					1	Existing controls in place in terms of ignition sources, static electricity, hot work permits, inductions, storage and handling of flammable material, and removal of combustible rubbish and dry grass sufficient to the extent where the risk of such fires is very low.	Low
s. 8.7.	Bush fire.	Third party damage to buried flowlines from well heads to Katnook and Ladbroke Grove Gas Plants.	Decline in stock feed and pine plantations.	M	M	M	M	H	2	Yes						1	Flow lines are designed and constructed in accord with the AS 2885 standard to ensure that any risk to third parties in light of likely third party activities in the vicinity of the flow lines is avoided.	Low
s. 8.5	Vehicle accidents.	Operations vehicle or condensate truck colliding with stock.	Injury or loss of stock.	M	M	M	M	H	2	No	Low					1	The safety precautions, through safety training inductions and avoiding use of road during periods of increased risk to third parties, taken by the company especially with condensate tankers makes the risk of this event very rare.	Low
	Security of Gas Supply Impacts																	
s. 8.12.	Loss of gas production.	Release of gas from plant due to unavoidable emergency shut down.	Disruption to business and inconveniences to customers resulting from a loss of gas supply into pipeline.	M	M	M	M	M	3	No	Low					1	The various precautions taken by the company in managing the risks of such an event occurring including the recent Fitness-for-Purpose assessment and standards to which the plant is operated makes such an event very unlikely. Furthermore customer communication with respect to gas demand and supply needs would make the inconvenience and business disruptions as a consequence loss of gas supply minimal.	Low
s. 8.6.		Hydrate/Emulsion formation in plant equipment.	Plant blockage & shut down.	M	M	M	M	M	3	No	Low					1	The formation of emulsions and hence the threat to security of supply can be made very unlikely through the use of chemical breakers and use of separators. The formation of hydrates and hence the threat to security of supply can be made very unlikely through the use of hydrate inhibitors. Also in the very unlikely situation of plant shut down, its duration would very short, less than 2 hours to clear the blockage.	Low
s. 8.2 & 8.7.		Failure to flowlines and well heads from corrosion and third party damage.	Loss of gas supply from the field to the plant.	M	M	M	M	M	3	No	Low					1	Design and construction of flow lines to AS 2885 and corrosion management system make the likelihood of such events very low. In addition to realise significant loss of gas supply to plant would require more than one flow line and/or well head to fail at the same time, which is very unlikely.	Low

RECEIVED
17 JUN 2002

BY:.....

12-Jun-02

Chief Executive
Department of Primary Industries and
Resources
GPO Box 1671
ADELAIDE SA 5001

Dear Sir,

The Department for Environment and Heritage has considered the application described below by consulting with the various groups within the Department.

The following comments are offered:

DME reference: 1581/99B **type:** ImpactSEOB

locality: Katnook/Ladbroke Grove Secn 336 Hd Monbulla near Penola Otway Basin

applicant: PIRSA - Origin Energy Resources Limited (Otway Basin)

application type: Katnook/Ladbroke Grove Facilities, Otway Basin)

comments:

In accordance with the terms of the Memorandum of Administrative Arrangement between PIRSA and DEH, we are in agreement with PIRSA's assessment that the proposal is one of low impact.

Yours sincerely



Brian Moore
A/PROGRAM LEADER RESERVE PLANNING
NATIONAL PARKS AND WILDLIFE SA



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Kensington SA 5068

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www.parks.sa.gov.au



Government
of South Australia

RECEIVED
- 5 JUL 2002

BY:.....



The Department of
Environment and
Heritage
Conservation

Resource Management

DWR0548/02

Date: 4/7/02

Mr Michael Malavazos
Manager Engineering Regulation
Petroleum Group
Office of Minerals and Energy Resources
GPO Box 1671
Adelaide SA 5001

Level 1 Grenfell Centre
25 Grenfell Street
Adelaide
South Australia 5000
DX 168

GPO Box 2834, Adelaide
South Australia 5001
Australia

Telephone (08) 8463 6800
Facsimile (08) 8463 6840
<http://www.dwr.sa.gov.au>

Dear Mr Malavazos

I write in response to your request for comment on the revised version of the Katnook and Ladbroke Grove Facilities, Environmental Impact Report (EIR) and Statement of Environmental Objectives (SEO) and I thank you for the opportunity.

The Department has undertaken an assessment of the revised version of the documents and has the following comments to make: -

1. The revised EIR fails to take into account the recommendations of this Department made on the draft EIR which were incorporated into a letter sent to you on 22 May 2002. These recommendations were: -
 - Further research on the local flora, fauna and ecosystems is required providing an informed assessment of the potential impacts on the local environment.
 - Provide a quantitative assessment of the ability of the evaporation ponds to contain water during extended and extreme rainfall events.
 - Provide information on the flood hydrology and the security of the evaporation ponds against the impact of extreme runoff events.

Considering this the Department is unable to support PIRSA's low impact

Considering this the Department is unable to support PIRSA's low impact classification of the Katnook and Ladbrooke Grove Facilities due to the lack of information required to complete a satisfactory assessment of the EIR.

For further information on this matter please contact Mr Vince Rigter on telephone 8463 6856 or e-mail rigter.vince@saugov.sa.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Bob McLennan', with a horizontal line extending to the right.

Bob McLennan
DIRECTOR, RESOURCE MANAGEMENT DIVISION
DEPARTMENT OF WATER, LAND AND
BIODIVERSITY CONSERVATION

Subject: FW: Katnook redraft SEO and EIR

-----Original Message-----

From: Rigter, Vince (DWLBC)
Sent: Friday, 6 September 2002 2:15 PM
To: Malavazos, Michael (PIRSA)
Subject: FW: Katnook redraft SEO and EIR

Hi Michael

John Rodda has asked that I forward this email to you, to verify that DWLBC are now satisfied with the documentation.

regards

Gary Mavrinc

-----Original Message-----

From: Murdoch, Bruce (DWLBC)
Sent: Tuesday, 27 August 2002 10:40
To: Rigter, Vince (DWLBC)
Subject: Katnook redraft SEO and EIR

Vince,

The issues raised by us at the meeting on 10/07/2002 have been addressed in the redrafted State of Environmental Objectives and Environmental Impact Report.

Bruce Murdoch

Senior Water Information Officer
Surface Water Assessment Branch
Resources Assessment Division
Department of Water, Land and Biodiversity Conservation
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Crimes, Angela (PIRSA)

Subject: FW: Katnook SEO

-----Original Message-----

From: Malavazos, Michael (PIRSA)
Sent: Friday, 19 July 2002 3:11 PM
To: Preston, Uma (EPA)
Cc: Crimes, Angela (PIRSA); Aust, Terry (PIRSA); Goldstein, Barry (PIRSA)
Subject: Katnook SEO

Uma,

Thankyou for allowing myself and Angela to meet with you today to go through your concerns and comments on various issues relating to the draft Katnook SEO and the recent Tonkins Consulting report with regards to the sampling under the evaporation pond liner and at the May 2001 spill site at the condensate loading dock. I found the meeting most constructive as I believe it clarified for yourself the purpose of the SEO and that we both saw and agreed how it can be used to satisfy the requirements of both Acts.

For the record, I thought it would be useful to document the key outcomes of the meeting, please feel free to add to or alter what I have got here.

1) It was agreed that the EPA will review the SEO, in particular the assessment criteria in Appendix #1 for Objectives 3 and 4 and provide comments back to PIRSA by 2 August 2002. In summary, our discussion led to amendments to the following affect:

Objective 3

The following additions/changes are proposed to the following Assessment Criteria:

- "Bunding is maintained in good condition." amended by adding ... as demonstrated through inspections undertaken in accordance with AS 1940.
- A separate assessment criterion for the bunding of chemical storage be specifically included to the effect: "All chemical drum storage bunds are maintained in good condition as demonstrated through quarterly inspections undertaken in accordance with AS 1940.
- "All spills cleaned up." to be amended by adding ... and remediated in accordance with remediation plan developed in consultation with the EPA.

Objective 4

The EPA will provide further details to include in the assessment criterion "Records available for analysis of monitoring bores, pond water, and any samples from beneath the liner..." to more specifically describe:

- the frequency of the bores being monitored; and
- the standard to which monitoring and water analysis is to be undertaken.

OERL will be requested for the purpose of clarity, that for this assessment criterion to define "adverse results" more specifically such as "TPH readings detected above background levels".

2) The EPA will review the definitions of reportable and serious incidents given in section 3 of the SEO and add or amend if needed to ensure that they are consistent with what it views to be such incidents.

3) The EPA will continue to pursue with OERL its concerns and comments made on the Tonkins Consulting report on the sampling of soil under the evaporation pond liner and the May 2001 condensate spill site. It was agreed that the outcome of this will not deter EPA's final comments on the SEO, in fact it simply reinforces the above proposed amendments to the SEO.

I look forward to the EPA's final comments on the SEO and in maintaining a productive ongoing working relationship to monitor and enforce the SEO in the spirit of a whole of government approach.

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ENVIRONMENT PROTECTION AUTHORITY

INTRA-GOVERNMENT MEMORANDUM

To: Michael Malavazos, Engineering Regulation Manager, Petroleum Group, PIRSA

From: Uma Preston, Senior Adviser Air Quality, Southern Operations, EPA

CC: Peter Reill, Senior Adviser Air Quality, Technical Support, EPA

Re: Feedback to PIRSA on the Origin Katnook SEO.

Date: 12 August 2002

Michael,

The EPA has been given the opportunity to review the Statement of Environment Objectives, SEO prepared by Origin Energy for the operations at their Katnook gas processing facility. I understand that PIRSA are the government authority responsibly for approving the SEO and for this purpose compile comments from all appropriate government departments, including the Environment Protection Authority.

About two years ago when I was given this licence to coordinate we placed a requirement on Origin to prepare a site Environment Management Plan given the complexity of activities and scale of production occurring on the site. However what Origin submitted was merely a modified version of their SEO, hence it was decided between PIRSA and EPA that in future one document reflecting the requirements of both departments would suffice.

It is with that experience and background in mind that I recommend that you note the following comments from the EPA relating to the Origin Katnook SEO.

Part 1: Scope and Purpose

I feel we should require a statement stating that whilst the SEO has been written to reflect the requirements of the Petroleum Act 2000, it also reflects requirements under the Environment Protection Act, 1993 and in particular relating to Section 25 of the Act relating to the General Environmental Duty as well as the mandatory requirements of the Act and it's associated policies. This seems reasonable given that when the EPA removed the requirement for Origin to prepare and submit an Environment Management Plan, we understood that the SEO would cover the requirements of both government sectors: PIRSA and EPA. The condensate spill which occurred in 2001 and the subsequent tardiness of the clean-up response (site assessment report still to be finalised) provides further justification that EPA legislative requirements be a focus of the SEO report.

Date 12 August 2002

Signature

Part 2: Regulatory Definitions

I feel that definitions of environmental harm, (serious and material) as specified in our Act are appropriate for insertion in this section.

It seems appropriate to provide Origin and PIRSA with a copy of the draft licence condition so that they can consider any other scenarios require reporting and which can also be referenced in Part 3 - which are necessary under Section 83 of the Act.

Part 4: Environmental Objectives

Again there is no reference to the general environmental duty under the Act or any reference for that matter to the Act.

In relation to bullet point a) in this section I believe the words “reduce environmental damage” should be replaced with the words “prevent or minimise environmental harm”.

In relation to the paragraphs in this part of the SEO that read:

“Managing and facilitate rehabilitation of the impacts of activities that have, or are likely to have, only short to moderate term adverse consequences on the biological diversity or cultural features of the local region or on other land users.”

And

“To avoid undertaking all activities that have, or are likely to have, long term significant adverse consequences on the biological diversity or cultural features of the local region or on other land users.”

This appears to be in conflict with S25, which does not explicitly differentiate between levels of environmental harm in terms of the duration of the environmental consequences and requires that all reasonable and practicable measures be taken to prevent or minimise any resulting environmental harm” and implicitly this is the case no matter how long the actual or potential resulting consequences may last for. (Short, moderate or long term).

Appendix 1: Environmental Objectives and Assessment Criteria

In general the controls and/or assessment criteria for many of the objectives need to be a bit more detailed in my opinion in order to be more meaningful.

Objective 1

Under the assessment criteria, I'd like to see reference to legislative requirements, an assessment criteria could be:

- All operating procedures reflect environmental legislative requirements;
- Induction procedures communicate legislative requirements as they relate to the environment, including Section 25 of the Act and key requirements of PIRSA legislation – as they relate to activities undertaken by Origin at Katnook. Many Induction programs run by facilities licensed by the EPA refer to such legislation.

I will be providing further feedback in relation to objectives for groundwater, which need to be more specific given the sensitivity of the groundwater resource in the Katnook area.

Regards,
Uma Preston

Subject: FW: Origin Katnook SEO's

Sensitivity:

-----Original Message-----

From: Cattlin, Luke (EPA)
Sent: Wednesday, 28 August 2002 3:15 PM
To: Malavazos, Michael (PIRSA)
Cc: Preston, Uma (EPA)
Subject: Origin Katnook SEO's
Sensitivity: Confidential

Michael,

Some more comments on Origin's SEO, these relate to the summary table.

General Comments:

Origin need to refer relevant legislation, regulations and guidelines as part of their SEO.

Any soil, surface water or groundwater sampling must be conducted in accordance with current regulatory requirements. Soil assessment must be completed in accordance with the National Environmental Protection (Assessment of Site Contamination) Measure, 1999 (NEPM) and Australian Standard AS4482.1 and .2 Guide to the Sampling and Investigation of potentially contaminated soil. Groundwater to be sampled in accordance with the NEPM, Australian Standards for groundwater sampling and relevant regulatory guidelines, such as the Victorian EPA Groundwater Sampling Guidelines. Surface Water sampling to be completed in accordance with Australian Standards and relevant regulatory guidelines such as Queensland EPAs Water Quality Sampling Manual or Vic EPA A Guide to the Sampling and Analysis of Waters, Wastewaters, Soils and Wastes.

Objective 3:

EPA assume this to read soil and GROUNDwater
EPA expect Origin to provide a definition of a significant spill or leak. EPA would expect any spill of hydrocarbon, condensate or process waste to a surface water body or to potentially impact surface water to be a significant leak. Some negotiation may be required for spills to land, etc.

Objective 4:

Origin must define the current GROUNDWATER monitoring bore sampling program and pond water sampling program. On the evidence provided to EPA (Tonkin, 2002) no such monitoring program exists. A copy of the monitoring program should be attached to the SEO.

The Draft Environment Protection Policy (Water Quality) defines a maximum level of for wastewater ponds at 600mm below the top of any waste water storage. It is not clear what Origin do at present, maybe this should be included as part of the SEO.

Objective 6:

It is unclear as to the meaning of "Record of analysis of soil and GROUNDwater in the area". EPA will require more detailed technical information to be included in the SEO.

Objective 11:

The "Waste Management Plan" should be included in the SEO.

Impact Objectives

The surface water row includes disruption to 3rd party water supplies, surely this must be same for groundwater supply. With the table in its current form it indicates a low level of understanding of the hydrogeology beneath the site.

Spill response

compliance with NEPM (Assessment of Site Contamination)
assessment will most likely be the number of REPORTABLE spill events

Regards

Luke

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