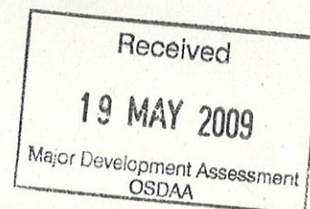


Our reference: FIL07/13224:DOC09/16252:CP
Craig Patterson, (02) 4224 4100



Alison Thomas
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Ms Thomas

APEX ENERGY EXPLORATION DRILL PROJECT – PROJECT APPLICATION 07-0103
RECOMMENDED CONDITIONS OF APPROVAL

I refer to the Project Application, Environmental Assessment and accompanying information provided for the above proposal which was received by the Department of Environment and Climate Change (the Department) on 3 April 2009 for comment.

The Department has reviewed the information provided and has determined that it is able to support the proposal subject to the Department of Planning (DoP) addressing the matters and seeking the additions to the draft Statement of Commitments (SoC) as detailed in Attachment 1. These matters relate to the following:

- Noise
- Protection of Waters
- Native Vegetation and Threatened Species
- Dharawal State Conservation Area and Nature Reserve (in particular location of Boreholes)
- Aboriginal Cultural Heritage

The Department would appreciate being given an opportunity to review the draft Director General's Environmental Assessment Report and associated conditions to ensure the above matters have been adequately addressed. If the above amendments are not included in a satisfactory manner, the Department will recommend that they are included as Conditions of Approval (if approval is recommended by the DoP). It should be noted that these amendments are important for Department's ongoing support of the proposal.

It is noted that for this stage of the project, an Environment Protection Licence will not be required to be obtained by the proponent to carry out the proposed gas exploration drilling activities.



Should you require any further information, please contact the officer above.

Yours sincerely



PAUL WEARNE
A/Manager Illawarra
Environment Protection and Regulation

15/5/09

Att: Comments and amended/additional SoC
Diagram

(N:\EPRD\PART 3A\DRAFTS\DOC09-16252 - PART 3A - APEX ENERGY - FINAL EA1.DOC)

ATTACHMENT 1**COMMENTS AND AMENDED/ADDITIONAL STATEMENT OF COMMITMENTS**

The Department of Environment and Climate Change (the Department) considers that the draft Statement of Commitments (SoC) detailed in the Environmental Assessment (EA) should be adopted in the development of any proposed approval conditions. In addition we have undertaken a review of the EA and provide the following comments and additional/amended SoC with justification for the Department of Planning's (DoP) consideration.

Noise

The Department has undertaken a review of the Noise and Vibration Assessment and provide the following comments for DoP consideration where clarification may need to be sought from Apex Energy.

- a) Table 12 of the Noise and Vibration Assessment includes night time intrusive noise criteria for monitoring locations four and five. Based on the information provided in Tables 6 and 7, night time noise monitoring does not appear to have been undertaken for these monitoring locations and so it is unclear as to how the intrusive criteria has been derived. It appears that the same criteria for the evening period has been used for the night time period which is not appropriate.
- b) Table 14 identifies indicative day time drilling operational noise levels. For drill sites AI07, AI08, AI09, AI10, AI11 and AI13, the table states that the day time operational noise objective is 55dB(A). According to Table 12, for Location Two which is identified as the representative background noise monitoring location for these boreholes, the correct noise limit should be 43dB(A).
- c) The noise assessment does not address the issue of sleep disturbance. Given that the proposed drilling activities are to be carried out 24 hours a day, seven days a week and that Table 16 predicts up to a 23 dB(A) exceedence of the noise criteria, Apex Energy must ensure that all appropriate noise mitigation measures are implemented to ensure compliance with the Department's sleep disturbance criteria.

To address construction work the Department also recommends the addition of a new SoC which states that:

"All construction work will be conducted between 7am and 6pm Monday to Friday and between 7am and 1pm Saturdays and at no time on Sundays and public holidays, unless inaudible at any residential properties."

Protection of Waters

The extraction of the coal seam gas appears to require dewatering of the coal seams prior to extraction of gas. Every effort needs to be made to make sure highly saline water (either groundwater or drilling water with KCL added) does not make its way into the environment. In addition to the proposed SoC the Department recommends that the following additional SoC be included to protect both surface waters and groundwaters and to ensure that the proposed activities comply with Section 120 of the *Protection of the Environment Operations Act 1997*:

"There will be no discharge of polluted waters to either surface waters or groundwaters from the site activities".

Environmental Management Plan

The proponent has identified a number of environmental matters which would be best addressed in an Environmental Management Plan (EMP). In this regard the Department recommends that an additional SoC be included requiring the proponent to develop this plan.

"The proponent prepare and implement an Environmental Management Plan that covers all gas exploration activities and include but need not necessarily be limited to the following:

- a) *measures that will be implemented to ensure any intrusive noise impacts are minimised and satisfies the NSW Industrial Noise Policy;*
- b) *measures to minimise or prevent the emissions of wind blown and traffic generated dust from the site activities;*
- c) *measures to prevent pollution of waters;*
- d) *measures to ensure that all wastes generated or stored are assessed, classified and managed in accordance with the Waste Classification Guidelines (2008);*
- e) *measures to monitor and report environmental performance ie noise monitoring;*
- f) *a program for managing any complaints from members of the public in relation to activities conducted at the site;*
- g) *measures for community consultation including site contact details;*
- h) *measures to address any environmental emergencies and contingencies at the site; and*
- i) *a program to provide environmental awareness training for both contractors and employees.*

Native Vegetation

A review of the EA has revealed an inconsistency in the EA regarding clearing, with a greater area of clearing proposed in the Flora and Fauna Impact Assessment. In this regard it is estimated that the clearing will consist of:

- 3.6 Ha of Coastal Sandstone Ridgetop Woodland
- 0.6 Ha of Sandstone Gully Forest
- 1.2 Ha of Coastal Upland Swamp; and
- 6 Ha of disturbed areas supporting regenerating common native and exotic species.

Whilst it is acknowledged that Apex Energy have taken some steps towards locating drill sites on previously disturbed areas, the EA states that some of the proposed sites will still require clearing of native vegetation, including one site (AI10) located in an area described as Coastal Upland Swamp.

Upland swamps in the O'Hares Creek Catchment are listed on the Directory of Important Wetlands of Australia, where over 500 plant species have been recorded including three listed as Vulnerable on Schedule 2 of the *Threatened Species Conservation Act 1995*. In addition they provide habitat for several threatened species (for example, Eastern Pigmy Possum), populations and Endangered Ecological Communities (EEC). They are important in maintaining high water quality and ongoing flows in the catchment and furthermore they support biodiversity during periods of drought and have further refuge values with climate change.

Given the sensitivity of Coastal Upland Swamps, their uniqueness to the Woronora Plateau and their links with the hydrology of the area, the Department would not support the clearing of the proposed 1.2ha of Coastal Upland Swamp associated with Borehole AI10. The EA does not appear to provide any justification for the selection of this site and nor does it describe any other potential alternatives. In this regard the Department recommends that DoP explore with Apex Energy the feasibility of alternative locations for this site which address the above concerns.

In relation to the Coastal Sandstone Ridgetop Woodland and Sandstone Gully Forest communities the Department's preferred option is that there is no clearing of native vegetation, however should the Department's preferred position not be adopted, any disturbance to native vegetation must be to the minimum extent necessary. In this regard the Department requests that the following SoC be included:

"In the event where the clearing of the Coastal Sandstone Ridgetop Woodland and Sandstone Gully Forest communities cannot be avoided, any disturbance to these vegetation communities will be to the minimum extent necessary when undertaking the activity at the site"

Section 4.4.6 of the EA identifies a number of recommendations to be implemented to ameliorate any potential impacts on cultural heritage and native vegetation. Recommendation 3 states that for Boreholes AI04B, AI10, AI12, AI14, AI15 and AI18 which have good condition native vegetation that will be impacted by the proposal; *"Seed banks would be established for each of these boreholes and at the conclusion of the testing program the areas would be rehabilitated to the satisfaction of DECC"*. The Department recommends that this be included as an additional SoC as follows.

"Seed banks will be established for each of these boreholes and at the conclusion of the testing program the areas would be rehabilitated to the satisfaction of the DECC"

O'Hares Creek Shale Forest Community

Section 4.3.5.2 of the EA states that borehole AI05, AI06, and AI13 has been mapped as supporting Sydney Shale Ironstone Cap Forest which includes the O'Hares Creek Shale Forest Community which is a listed EEC under the TSC Act 1995. Based on a review of the information provided, Boreholes AI11 and AI14 may also be located in an area that supports Sydney Shale Ironstone Cap Forest. Where these EECs are encountered and have not been subject to assessment as part of this project application, it is important to emphasise to Apex Energy that it is an offence under the NPW Act for a person to "pick" (noting that this definition includes harming) any plant that is of, or is part of, a threatened species, an endangered population or an EEC.

Dharawal State Conservation Area and Nature Reserve

Both the Dharawal State Conservation Area (SCA) and Dharawal Nature Reserve are covered by a Plan of Management dated July 2006 prepared under the National Parks and Wildlife Act 1974. This Plan is a legal document outlining how the areas must be managed and must be complied with for all activities undertaken within these areas.

As at 2 March 2009, the former Lot 11 DP 1021827 now known as Lot 2 DP 1127487 was gazetted and is now part of the Dharawal SCA (see Attachment 2). Given this recent addition, Boreholes AI15 and AI17 now lie within this new section of the conservation area. This recent change in land ownership has not been recognised in the EA nor an assessment undertaken in relation to permissibility for these Boreholes in satisfying the Dharawal Plan of Management.

The EA states that Borehole AI05 is located within the Dharawal SCA. In earlier discussions with Apex Energy, the Department advised that the location of Borehole AI05 is situated in habitat which a number of frog species inhabit including the vulnerable Giant Burrowing Frog which has both state and national conservation significance. This species was also identified in the EA. In these earlier discussions, Apex Energy advised the Department that they had an alternative location for this borehole in the adjacent private land approximately 50m north. The EA does not appear to have considered this alternative location as previously discussed. Given that there appears to be an available alternative location and that the proposed site is situated in significant habitat for this species, the Department is not in a position to support this borehole location. In this regard the Department recommends that DoP explore with Apex Energy the feasibility of the alternative location to address the above issues at the site.

In addition, following previous discussions with Apex Energy, the Department understands that Borehole AI05 may need to be drilled on an angle to access the relevant goaf areas to extract the gas. There was insufficient information provided in the EA regarding the angle, direction and length of drilling in relation to this borehole and any associated potential impacts. In this regard, given its close proximity to the Dharawal Nature Reserve, the Department requires that any impacts on the Dharawal Nature Reserve associated with this activity are prevented and the permissibility of drilling in relation to the Nature Reserve must satisfy the requirements of the Plan of Management.

To address the above issues the Department recommends that the SoC includes the following commitment:

"All activities associated with Boreholes AI05, AI15 and AI17 must be carried out in accordance with:

- *the "Dharawal Nature Reserve and State Conservation Area Plan of Management" (2006) for both the Dharawal State Conservation Areas and Dharawal Nature Reserve";*
- *the National Parks and Wildlife Act 1974 and Regulations; and*
- *the Threatened Species Conservation Act.*

Section 4.10 of the EA addresses the rehabilitation of the borehole sites and states that *"Apex has committed to repair any damaged SCA roads and tracks as a result of their exploration activities within the catchment areas"*. The Department recommends that this statement be included as an additional SoC and requests that the statement include any associated National Parks and Wildlife access roads and tracks which may be damaged as a result of the proposed activities.

"Apex will repair any damaged SCA and National Parks and Wildlife access roads and tracks as a result of their exploration activities"

Aboriginal Cultural Heritage

The EA states that Aboriginal community comment is yet to be received. The Department recommends that the DoP obtain a copy of this correspondence to confirm that appropriate consultation was undertaken as described and to ensure that the local Aboriginal Land Council has been adequately consulted and approves with the location of each borehole.

Section 4.4.3 of the EA states that three of the proposed borehole locations are within 200 metres of registered Aboriginal sites. Whilst it is acknowledged that subsidence impacts may not be an issue for these sites, Apex Energy must ensure that appropriate measures are implemented to minimise or prevent any potential impacts as a result of vibrations caused by drilling the boreholes.

ATTACHMENT 2

