

Review of the Environmental Protection (Goldfields Residential Areas)(Sulfur Dioxide) Policy

An Environmental Protection Policy (EPP) is a mechanism for the protection of any portion of the environment or prevention/control of pollution or environmental harm, issued through the *Environmental Protection Act 1986*.

The EPA is required to review an EPP within seven years of gazettal unless otherwise directed by the Minister under section 36(1)(b) of the *Environmental Protection Act 1986*. The EPA prepared a discussion paper and sought public input for the scoping phase prior to undertaking the formal review of the *Environmental Protection (Goldfields Residential Areas)(Sulfur Dioxide) Policy 2003*. The discussion paper was released in December 2009 and the submissions period closed in February 2010. Comments were received on the discussion paper and the EPA have responded to these comments and concerns in the attached Table.

From the information that was collected through this public consultation process the EPA recommended to the Minister for Environment that the review of the EPP not be undertaken at this time and be retained in its current form. The Minister has agreed and directed the EPA via a notice to this effect published in the *Government Gazette* on 1 June 2010.

The EPA acknowledged there was not enough information provided in the submissions to justify any proposed amendments to the Goldfields EPP. The EPA recommended to the Minister for Environment that further investigations are required throughout the Goldfields region on air quality issues identified as a result from the consultation of the discussion paper.

List of Submitters to the Discussion Paper – Review of the Environmental Protection (Goldfields Residential Areas)(Sulfur Dioxide) Policy 2003

Sub No.	Organisation	Nature of Interest
1	Community	Community
2	Community	Community
3	Department of Health	State Government
4	BHP Billiton	Industry
5	Shire of Menzies	Local Government
6	Paddington Gold Mine	Industry
7	Community	Community
8	Community	Community
9	Goodz & Associates GMC Pty Ltd	Community
10	Community	Community
11	Barrick - Kanowna	Industry
12	Kalgoorlie Consolidated Gold Mines	Industry
13	Kalgoorlie Air Monitoring Network (KAMN)	Industry
14	Department of Mines and Petroleum	State Government
15	Department of Planning	State Government
16	City of Kalgoorlie-Boulder	Local Government
17	Department of Environment and Conservation	State Government
18	Community	Community
19	Department of State Development	State Government

Issue	Comment	EPA Comments	Response to EPP	Response to other issues
1. Acknowledge of Improved Air quality	(1)(2)(9)(10)(11)(12)(13)(14)(15)(17)(19)	Noted	No change	N/A
2. Can you suggest any areas that are not currently protected by the EPP, which in your opinion should be and why?	Interim expansion of the current EPP to require flexible additional monitoring and compliance with EPP in certain circumstances (including impacted areas & highway) that may pose a potential health risk and is not routinely monitored under the EPP and other monitoring provisions (3)	Interim Expansion are not feasible under an EPP.	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.
	The effect that emission may have on inhibiting development and ecotourism in the Goldfields region should be considered (3)(16)	Monitor over time to determine if there is an issue. Requires scientific justification	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.
	Industry in the Goldfields are not aware of any circumstances in which the effect of emission are inhibiting development and ecotourism in the Goldfields region (11)(12)(13)	Noted	No change	Develop a coordinated approach to establish a monitoring program for the areas of interest.
	All sensitive receptors are protected by current policy (4)(11)(12)(13)	Sensitive receptors are associated with National Environment Protection Measures and are not directly relevant to EPP protected areas.	No change	
	It is not recommended to increase the Policy area (9)(11)(12)(13)	Noted.	No change	
	Include work areas in protected areas.(10)	Requires further evidence and monitoring data.	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.
	Policy area should include current residential areas not covered (e.g. Parkeston, Broad Arrow and Ora Banda) and those that may be residential in the next life of the EPP (14)(15)(16)(19)	Not clear that there is an issue, so requires further evidence and monitoring data.	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.
	Recommend that the policy area be increased (see attached) (17)			A coordinated approach should be developed to establish a monitoring program for the areas of interest. Monitor of plume to collect information which should be reported to the EPA on a regular basis.
3. Should Industry have a limit on the amount of emissions that they can emit in addition to current controls that protect the residential areas?	Levels of SO ₂ are not low enough (1)	On the basis that the EPP has satisfied the prescribed ambient SO ₂ levels within the EPP, points of emissions should be regulated by DEC through Part V licence condition setting.	No change	DEC licence conditions should continue to manage emissions through best practice licensing and best available technologies A coordinated approach should be developed to assist in reducing emissions.
	No - currently demonstrating a sustainable practice (4)(11)(12)(13)(14)			
	There should not be any SO ₂ emissions at all (7)			
	Possibly - warrants further investigation (10)(16)			
	Emissions should be monitored at the point of origin			
	Control emissions at source (17)			
	Use best available technology and best practice (17)			
	Impose a cap on SO ₂ and mercury similar to licence conditions (17)			
	Only if health risks are apparent (19)			

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4. Is vegetation adequately protected outside residential areas? If not, how should this be managed and why?	Concerned if the effect of SO ₂ has an effect on native and productive use of native grasses (2)	The EPP does not address specific issues like environment and human health; the EPP does address ambient concentrations of SO ₂ in the protected areas	No change	A coordinated approach should be developed to establish a monitoring program (including vegetation) for the areas of interest outside of the EPP. Results of ambient SO ₂ monitoring should inform where vegetation impacts should be assessed.
	Monitoring on trees indicate that vegetation is adequately protected (4)(11)(12)(13)			
	Bush land monitoring should be continued (7)			
	All affected areas, not just protected areas, need to be addressed or re-addressed, to improve the air quality in the Goldfields regions (8)	Agreed		
	Warrants further investigation (16)(17)	Noted		
	No Comment (10)(19)			
5. Are there any animals/plants that you are concerned about that may be negatively affected by the SO₂ emissions?	Leaseholders to the east of Gidji have noted the lack of birdlife in the area (1)	Noted	No change	A coordinated approach should be developed to establish a monitoring program (including flora and fauna) for the areas of interest outside of the EPP.
	Vegetation and animals are adequately protected (4)(11)(12)(13)			
	Concerns for flora and fauna (8)			
	No Comment (10)(19)			
	No (16)			
	Knowledge of vegetation is central to ensuring faunal health (17)			
6. Should other substances in addition to SO₂ be included in the EPP? If so what and why?	Many other substances that are not monitored that should be, particularly Mercury and other heavy metals (including cadmium, lead, aluminium, barium) mining by-products, Oxides of Nitrogen, PM10, PM2.5 (1)(8)(10)(16)(17)	The <i>Draft State Environmental (Ambient Air) Policy 2009 (SEP)</i> serves to establish a framework and program to protect and enhance environmental quality to support the environmental value of ambient air. Once the SEP is finalised, these substances may be captured more appropriately through this framework.	No change	May require local pollutants to be identified as described in the <i>Draft State Environmental (Ambient Air) Policy 2009</i> .
	The other criteria pollutants should be similarly considered while emissions of air toxics and heavy metals may continue to be managed through existing EPA processes, incorporations of appropriate health risk assessments and modelling for buffer requirements for specific industries (3)	Shall require further proposed monitoring.	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest and articulate appropriate buffer zones surrounding industry.
	No - e.g. Part V licensing (4)(11)(12)(13)	Agreed	No change	
	If there is evidence that there is a risk to health (19)	Agreed	No change	
7. Does SO₂ require on-going monitoring?	Current monitoring is necessary and adequate in current policy area (4)(8)(11)(12)(14)(16)	Agreed - clearly required in protected area	No change. Monitoring associated with the EPP should continue.	A coordinated approach should be developed to establish a monitoring program for the areas of interest outside of the current EPP areas.
	The emissions need to be continually monitored by EPP or a tool of equal or more efficiency (8)	Agreed and additional monitoring will be supplementary	No change. Monitoring associated with the EPP should continue.	
	Yes (10)(12)	Agreed	No change. Monitoring associated with the EPP should continue.	

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8. Should industry continue to monitor SO₂ ambient concentrations in the Goldfields? Is the current monitoring programme adequate? Should more sites be monitored?	The monitoring area should be expanded (1)(10)(15)	Noted.		
	Blue haze very common as for north as Edjudina station (2)	Noted.		
	Suggestion of a trial to be commissioned to establish if SO ₂ is contributing to pastoral grass diminishment (2)	Noted.		
	Establish a series of monitoring sites toward the north to determine SO ₂ levels over pastoral properties, mining communities and Aboriginal communities (2)	Noted.		A coordinated approach should be developed to establish a monitoring program for the areas of interest outside of the current EPP.
	The LGA have not been in receipt of complaints or have any evidence that there is an issue in the area with reference to SO ₂ (5)	Noted.		
	Paddington Gold mine would appreciate if sulfur emitting industries would install SO ₂ monitoring stations at the mill and Panglo site and engage in dialogue to develop an ongoing SO ₂ management strategy (6)	Noted. Agree that areas such as mine sites if potentially affected by emissions should be involved in the development of a monitoring program.		
	A monitoring station at the Paddington processing plant would assist in developing an SO ₂ management strategy for the site (6)	Noted.		
	Monitoring should be conducted by an independent body with oversight by the EPA and not by industry (7)	Monitoring results should be reported back to EPA on a regular basis or on request		
	More monitoring sites in less populated areas (7)(16) e.g. Mt Veters station (18)	Noted.		
	Industry is intending to conduct further monitoring in locations outside current policy area (12)(13)	Noted and encouraged.		
The current programme is adequate (11)(12)(13)	Acknowledged this is appropriate for current EPP.			
Yes – industry monitoring to government standards provides an understanding of the cumulative emissions (19)	Noted			
9. Would you like to see the air quality outside EPP area be managed? If so where and why?	The SO ₂ NEPM should apply to all areas outside specific industry buffer zones (3)(16)	The State Environmental (Ambient Air) Policy, when finalised, shall deal with this issue and will require the framework to be incorporated into industry licensing. Agree that there is a need for investigations into the presence of communities not currently protected.	No change - it would be inappropriate to change the boundary at this time without knowledge of where communities are located.	A coordinated approach should be developed to establish a monitoring program for the areas of interest.
	No (4)(11)(12)(13)(19)			
	Yes - if human activity is high (9)(10)			
	Re-evaluate the presence of communities and other 'sensitive receptors' not currently protected (17)			
10. Do you think that management of the areas should be implemented over a period of time (step-down approach) or implemented immediately?	Immediately (10)	The realities of change would require a step-down approach if the changes were to be significant.	Not relevant to the EPP	A coordinated approach should be developed to establish a monitoring program for the areas of interest. Changes would be implemented through licence condition setting stepped down over a period of time to allow industry to adjust.
	Step-down if management changes are to impact industrial operations (4)(9)(11)(12)(13)(16)(19)			

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11. What should the goal or the objective be for the Goldfields EPP? Should the Objective be broadened to further improve the air quality in the Goldfields region?	Maintained (4)(9)(11)(12)(13)(14)(19)	Noted. See "Response to other issues".	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.	
	Include the provision to establish a management framework (16)				This should include the following: <ul style="list-style-type: none"> - commence with preliminary investigations over a number of years including surveillance monitoring; - clarification of sensitive environments; - develop a management or attainment plan to reduce emissions over time; - use the Perth AQMP as a model as recommended in State of the Environment Report 2007 and draft State Environmental (Ambient Air) Policy 2009 framework; and - collaborate with industry, local government,, state government departments, development commission and other relevant stakeholders on the plan.
12. Do you think that air quality in the Goldfields region still requires and EPP or similar tool for its management?	Yes - (4)(9)(10)(11)(12)(13)(14)(16)(17)(19)	Overwhelming support noted to retain an EPP for the Goldfields area.	No change		
	Indifferent (15)				
13. What would you think if the EPP was removed and another government instrument was used to protect the Goldfields?	The current EPP should not be removed with out consideration to an appropriate alternative strategy for enduring on-going compliance with SO ₂ air quality standards (3)	Agree	No change	A coordinated approach should be developed to establish a monitoring program for the Goldfields Region	
	Preference towards SO ₂ emissions being regulated through DEC licensing processes (3)	Agree	No change		
	No - retain an EPP (4)(9)(10)(11)(12)(13)(16)(17)(19)	Agree	No change		

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14. Health Issues	Asthma attacks (1)(7)(18)	These issues should be explored in the monitoring undertaken by DEC, Industry and local government in the lead up to the development of the AQMP. The AQMP should address issues such as: - Health; and - Environment.	No change	Department of Health to conduct epidemiological studies alongside the suggested monitoring from DEC, industry and local government.
	Severe eczema (1)(18)			
	Following the call for submissions a number of responses regarding health and safety concerns were received between 22 January and 3 February 2010, including, sore throats, nausea, sinus irritations, eye irritations, Viability, Headaches and skin irritations (6)			
	Alarming medical results of children with high levels of heavy metals (cadmium, mercury, lead, aluminium and Barium). Six times the acceptable reference range (10)			
	Change in behaviour (acknowledge that this would require further investigation) (10)			
15. General	Suggested options for SO ₂ management: - installation of scrubbers; - development of a separate roaster shutdown strategy based on a combination of fixed and mobile SO ₂ monitor and agreed levels; - the use of a similar shutdown strategy for Paddington as the current strategy for the City of Kalgoorlie-Boulder (6)		No change	DEC to investigate implementation in existing licences.
	The EPP should be altered to require scrubbers to be put in place with a reasonable time period for industry to revamp the processing plants (7)	It is not appropriate to specify a particular mechanism within an EPP. The objective should be negotiated through an AQMP.	No change	
	Consider the impacts of the emissions to the planet not just local impacts (7)	Noted – information to be gained through monitoring.	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.
	Economic viability should be considered (9)(11)(12)(14)(19)	Step-down process through agreed AQMP.	No change	
	Improvements to air quality funded from Royalties for Regions fund (9)	Noted – Not EPA responsibility. Goldfields Esperance Development Commission should be party to the AQMP.		Through the development of a coordinated approach financial assistance can be sought from government grants.
	What would be useful would be to know what the true fate of the emissions is: - what is the background level of non SO ₂ emissions in Kalgoorlie, particularly in the soils of the older parts of town closer to the super pit / former mixed use areas? - In what form are the mercury, lead and other pollutants discharged from the stacks – elemental or other? - How do these pollutants react? do they drop out close to the stack, or do they remain in the plume for an extended period, in the same way as SO ₂ ? - what are the readings for non SO ₂ pollutants at the receiving monitoring stations when there is elevated SO ₂ at these stations? (10)	Should be addressed through AQMP.	No change	A coordinated approach should be developed to establish a monitoring program for the areas of interest.