

9 September 2013

Update of Mining Operations Plan (MOP) Guidelines, September 2013

The Mining Operations Plan (MOP) is a tool used by the Department to monitor the progress of mining and rehabilitation activities across the life of a mine. On 9 September 2013, the Department released *ESG3: Mining Operations Plan (MOP) Guidelines, September 2013* (ESG3) which details a new process for monitoring and managing progression towards successful rehabilitation outcomes. The Guideline requires industry to identify and provide measurable data and demonstrate that proposed rehabilitation outcomes are achievable and realistic within a given timeframe.

The ESG3 Guideline replaces:

- EDG03 Guidelines to the mining, rehabilitation and environmental management process (January, 2006); and
- EDG11 Format and guideline for the preparation of a Mining Operation Plan (MOP): Small mine version (February 2002).

Transitional Period

The Department recognises that the new Guidelines represent a significant shift in thinking from earlier Guidelines and it will take time for industry to understand the new requirements and achieve compliance. Whilst Industry is encouraged to transition to the new Guidelines as soon as possible, a transition period applies as outlined below:

- 1. New Mining Titles MOPs must be prepared in accordance with ESG3: Mining Operations Plan (MOP) Guidelines, September 2013.
- 2. Title Renewals MOPs must be prepared in accordance with *ESG3: Mining Operations Plan (MOP) Guidelines, September 2013* in accordance with the requirements of point 4.
- 3. Where Mining Titles are not the subject of a renewal over the coming months, the Conditions of Title will be varied, using s239(2) of the *Mining Act 1992*, to include a new condition to prepare a MOP in accordance with ESG3. Transitional provisions will apply in accordance with the requirements of point 4. Until such time as the Conditions of Title are varied, MOPs may be prepared in accordance with the requirements of the Conditions of Title applicable at the time of preparing the MOP.
- 4. For Title Renewals, and Titles subject to a title variation under s239(2) of the *Mining Act 1992* the requirement to comply with ESG3 will apply as follows:
 - i. activities declared to be State Significant Development for the purposes of the Environmental Planning and Assessment Act 1979 (EP&A Act) will not be required to comply with the 2013 Guidelines until 1 July 2014. Until that time, any new MOP or amendment to an existing approved MOP must be in accordance with either EDG03 Guidelines to the Mining, Rehabilitation and Environmental Management Process January 2006 ("the 2006 Guidelines") or the 2013 Guidelines. However where a new MOP or amendment to a MOP is prepared in accordance with the 2006 Guidelines, the term of the approval will be a maximum of 2 years.
 - activities authorised under this mining lease which are not State Significant
 Development for the purposes of the EP&A Act will not be required to comply with the 2013 Guidelines until 1 July 2015. Until that time, any new MOP or amendment

to an existing approved MOP must be in accordance with either the 2006 Guidelines or the 2013 Guidelines. However where a MOP or amendment to a MOP is prepared in accordance with the 2006 Guidelines, the term of the approval will be a maximum of 2 years.

Questions?

The Department recognises that there will be many questions from Industry regarding the requirements of ESG3. You are encouraged to contact your local Inspector, Environment to discuss any issues you may have in preparing a MOP. Questions may also be emailed to minres.environment@industry.nsw.gov.au with MOP Question in the subject line. Questions and answers may be published anonymously on the Department's website where relevant.

Feedback

Industry is encouraged to provide feedback on the new Guidelines. Feedback and/or questions can be emailed to minres.environment@industry.nsw.gov.au with MOP Comments in the subject line.

Feedback may be incorporated into subsequent updates of ESG3 and may be published anonymously on the Department's website.

Your personal information is protected under the *Privacy and Personal Information Protection Act 1998* (PPIP Act). The Department collects personal information in submissions for the purposes set out in the Department's Privacy Statement. The Trade and Investments Privacy statement is located at http://www.trade.nsw.gov.au/legal/privacy

edg11 small mine MOP guide V2.doc Page 1 of 8



Environmental Management Guidelines for Industry

9 September 2013

These Guidelines have been superseded by ESG3: Mining Operations Plan (MOP) Guidelines, September 2013.

MOPs prepared in accordance with these Guidelines will be accepted subject to the transitional arrangements published above.

Format and Guideline for the Preparation of a Mining Operation Plan SMALL MINE VERSION

This form may be used as an alternative to the format described in **Guidelines to the Mining, Rehabilitation and Environmental Management Process**. The form is suitable for mines:

- with less than 4 hectares of total disturbance at any time during the MOP period. (may be extended at the discretion of the Department).
- which do not use dangerous or hazardous chemicals, or store greater than 1.000 litres of fuel on the mine site
- which do not have or require an EPA pollution control licence, or have a dam prescribed under the Dam Safety Act.
- where the primary environmentally significant issues are erosion and sediment control, and rehabilitation.
- are free of acid mine drainage and possible contamination problems
- without Aboriginal or historic heritage issues

At the discretion of the Department the form may be used for some sites which do not meet these criteria.

MINING OPERATION PLAN REQUIREMENTS

Each mine operator in NSW is required to develop a Mining Operations Plan (MOP) that applies current best mining practice to achieve agreed environmental outcomes. Site activities must not be undertaken other than in accordance with a MOP that has been accepted by the Department. "Guidelines to the Mining, Rehabilitation and Environmental; Management Process" gives further detail of the context and regulatory framework which guides a MOP.

A MOP may be for seven years or, if convenient to both the Government and the Leaseholder, an agreed lesser period.

Progress against the MOP, and environmental performance in general, is reported each year through an Annual Environmental Management Report.

Changes of timing or scheduling, and minor deviations from the MOP that occur during the course of mining, can be accommodated by annual review without a need to redraft and submit the MOP document.

COMPLETION GUIDELINES

The form may be filled in by hand or typed. A MSword version is available on request.

As this guide applies regardless of the stage in the mine life cycle and the nature of operations, there may be some sections which are not relevant to a specific mine site and may be noted as not applicable.

Completed forms should be sent to your previous Departmental contact or:

Administration Officer,

Environmental Sustainability Branch

NSW Dept of Primary Industries - Mineral Resources

PO Box 344

Hunter Region Mail Centre NSW 2310

PLAN GUIDELINES

Plans may be derived from a convenient base map/plan with activity areas and features drawn by hand provided there is sufficient accuracy and detail to adequately describe activities and their impact. If contours are not shown, slopes and drainage lines must be clearly marked. The scale should show sufficient detail to review operations and rehabilitation. For most small mines A3 or A4 or sized plans will be appropriate. Also provide photographs and diagrams where appropriate. All plans must show

- the name of the mine;
- a graphical scale;
- boundaries of leases;
- cadastral information (land ownership boundaries);
- a title block showing the date of preparation of the plan, title and number;
- the signature of the person responsible for the plan.

PLANS REQUIRED

Plan 1: Pre MOP

Show the state of the site at the COMMENCEMENT of the MOP period including:

- site access and relationship to the nearest main road and town;
- natural features including swamps, rivers, creeks, streams or watercourses;
- existing non mining developments including roads, fences, transmission lines;
- vegetation and land use boundaries; eg cropping, pasture, forest, undisturbed flora/fauna habitat;
- derelict mines/mined land from activities which occurred before the grant of the present mine lease;
- neighbouring residences, within and adjacent to the mine holding/lease(s) area;
- extent of all mining, mineral processing, waste emplacement, ore/product stockpile, soil stockpiles, water management structures, other infrastructure features, rehabilitation, water monitoring sites.

Plan 2: End of MOP

Show the proposed state of the site at the END of the MOP period including:

- the extent of all mining, mineral processing, waste emplacement, ore/product stockpile, soil stockpiles, other infrastructure features;
- constructed drainage lines, water management and erosion control structures, water monitoring sites;
- the slope and shape of rehabilitated land;
- vegetation on rehabilitated land., and boundaries of vegetation types.

Plan 3: Final Rehabilitation

Show the anticipated state of the site after rehabilitation has been completed and the lease prepared for title relinquishment including:

- natural features including swamps, rivers, creeks, streams or watercourses;
- pre mining non mining developments including roads, fences, transmission lines;
- derelict mines/mined land from activities which occurred before the grant of the present mine lease;
- neighbouring residences, within and adjacent to the mine holding/lease area;
- boundaries and slopes of disturbed and rehabilitated land;
- vegetation type and land use boundaries of disturbed and undisturbed land;
- post mining land use capability of undisturbed and rehabilitated land;
- constructed drainage lines, water management and erosion control structures;
- remaining voids/pits and remaining disturbed land;
- all mine related infrastructure to remain on site after mine closure;
- fences, bunds and other public, fauna/ and stock safety features

Where mine closure will be completed during this MOP period, plans 2 and 3 may be combined

Prepared by J. McGlynn Approved by A.. Coutts Version date February 2002

Title Details

MINING OPERATIONS PLAN FOR SMALL MINES

Name	of mine		
Minin	g Titles/Leases		Expiry Date
Name	of leaseholder		
Name	of mine operator (if diffe	rent)	
Posta	I Address		
Telep	hone/fax/email		
Land Ow	vnership and Land Us	e Boundaries	70
	er/Occupier Crown, state agency)	Tenure, (freehold/leaseh	Premining landuse (old)
		460	
	s and Licences		
Local Cour	ncil Area		
Developme	ent Consent: granted []	required but not gr	ranted [] not required []
Do licence	s granted by other agencies	apply to the mine act	ivities? yes[] no[]
EPA [] NPWS[] NPWS[] Dam Safety []	Other []
MOP Pei	riod		
MOP	Commencement Date	MOP Comp	letion date (nominal)
Commer	nts		
Signatur			
Leasehold	ler	Environm	ental Officer
Signature		Signature	
Name		Name	
Date		Date	

Proposed Mining Activities

Describe the operations proposed and the methods to be used for any of the following activities which are proposed during the MOP period. Descriptions should supplement information shown on plan 2. Include where relevant:

- a) Land clearing;
- b) Construction activities;
- c) Ore Extraction;
- d) Mineral Processing.

TABLE 1: Provisional Production And Waste Schedule

		Provisional Cumulative Production during MOP Term						
ITEM	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Stripped top soil	cum							
Waste rock	cum							
Ore	cum							
Processing waste	cum							
Product (define units)								

Cumulative Production: For example, if 2,000 cubic metres of processing waste is to be produced in each of years 1 to 7, the cumulative production would be 2,000 in year one rising to 14,000 cum at year 7. If the only waste rock was 1,000 cum in year 1, the cumulative waste rock would remain at 1,000 for the remainder of the term

Product Units: may be defined in whatever units are convenient for the commodity produced.

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PROPOSED REHABILITATION DURING THE MOP PERIOD

Describe proposed rehabilitation and methods to be used for each rehabilitated area. Descriptions should supplement information shown on plan 2. Include, where relevant:

- a) rehabilitated landform, profile, and slopes;
- b) subsoil and topsoil cover thicknesses;
- c) vegetation species, plant/seed density, soil treatment, method of establishment;
- d) agreed post mining land use, or land use options.

Prepared by J. McGlynn

TABLE 2: Summary Of Proposed Rehabilitation

		Area Affected (hectares)				
		Total Area, start of	Total Area, end of MOP	At mine closure		
A:	MINE LEASE AREA	MOP		(anticipated)		
A1	Mine lease(s) Area					
B:	DISTURBED AREAS	Į.				
B1	Infrastructure area (other disturbed					
1	areas to be rehabilitated at closure					
	including facilities, roads)					
B2:						
	(excluding items B3 - B5 below)					
B3	Waste emplacements,					
	(active/unshaped/in or out-of-pit)					
B4	Tailings emplacements,					
D.F.	(active/unshaped/uncapped)					
B5	Shaped waste emplacement (awaits final vegetation)					
A1 I	DISTURBED AREAS					
ALL	DISTORBED AREAS					
С	REHABILITATION					
C1	Total Rehabilitated area					
	(except for maintenance)					
D:	REHABILITATION ON SLOPES					
D1	10 to 18 degrees					
D2	Greater than 18 degrees					
E:	SURFACE OF REHABILITATED LAND					
E1	Pasture and grasses					
E2	Native forest/ecosystems					
E3	Plantations and crops					
E4	Other (include nonvegetative outcomes)					

Final (mine closure) Rehabilitation and Outcomes

The outcomes of final rehabilitation should be progressively developed during the life of a mine. For a small miner this generally means being aware of land occupiers' and land management agencies' expectations, and using those expectations as the basis for the final rehabilitation plans and outcomes.

Describe the anticipated state of the site after rehabilitation has been completed and the lease prepared for title relinquishment. Descriptions should supplement information shown on plan 3. Include, where relevant:

- a) agreed post mining land use capability of disturbed and undisturbed land,
- b) agreed rehabilitation completion criteria;
- c) stakeholders who have been consulted in reaching those agreements;
- d) if agreement has yet to be reached, the processes that are in place to finalise landuse and rehabilitation completion criteria;
- e) erosion/sediment control measures to protect rehabilitated land;
- f) subsoil and topsoil cover thicknesses of rehabilitated land;
- g) landform and slopes of disturbed and undisturbed land;
- h) vegetation species on disturbed and undisturbed land;
- i) drainage lines, water management and erosion control structures, and their relationship to natural drainage lines and water courses;
- j) remaining voids/pits and other disturbed land including derelict mines/mined land from activities which occurred before the grant of the present mine lease(s);
- k) mine related infrastructure to remain on site after mine closure;
- I) fences, bunds and other public, fauna/ and stock safety features;
- m) post mining maintenance requirements.

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Environmental management strategies

Describe proposed environmental management strategies which will be applied to ensure a satisfactory environmental performance. Descriptions are not necessary for information clearly shown on plans. Include where relevant:

- a) monitoring and data collection;
- b) pollution control measures;
- c) erosion and Sediment control;
- d) bunding and other containment;
- e) other.

For further information and contact details see www.dpi.nsw.gov.au/minerals
Telephone (02) 4931 6605 Email environment@dpi.nsw.gov.au/minerals

Prepared by J. McGlynn Approved by A.. Coutts