

Christmas Creek Water Management Scheme

Stakeholder Consultation Reinjection Management Plan

8/11/2011 CC-PL-EN-0006



Christmas Creek Water Management Scheme - Stakeholder Consultation **Reinjection Management Plan**

CC-PL-EN-0006_Rev 0

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1. INTRODUCTION

Fortescue Metals Group Limited (ACN 002594872) (Fortescue) is developing the Pilbara Iron Ore and Infrastructure Project, which involves a series of iron ore mines in the Chichester Range area of the Pilbara region of Western Australia, and associated rail and port infrastructure for export of iron ore through Port Hedland.

The Christmas Creek mine site was approved by the Minister for the Environment on 16 December 2005 with the release of Ministerial Statement 707. Mining of iron ore at Christmas Creek commenced in 2008 and is ongoing. To date, the majority of mining at Christmas Creek has been undertaken above the water table.

The Christmas Creek Water Management Scheme (the project) involves increasing the amount of mine dewatering and injection of abstracted groundwater within the Christmas Creek project area to allow mining of iron ore to continue below the water table.

Fortescue submitted an application to the Environmental Protection Authority (EPA) under Section 38 of the *Environmental Protection Act 1986* for the project. An Assessment on Proponent Information (API) level of assessment was set and the EPA assessed the API Environmental Review document in May 2011. Ministerial Statement 871 was issued for the project on 1 August 2011. Condition 10 of Ministerial Statement 871 requires that:

- 10-1 The proponent shall manage the reinjection of surplus water to ensure that it does not cause a significant increase in dewatering requirement at other non-proponent approved mining operations.
- 10-2 To verify that the requirements of condition 10-1 are being met the proponent shall prepare a Stakeholder Consultation Reinjection Management Plan, to the satisfaction of the Chief Executive Officer of the Office of the Environmental Protection Authority prior to groundwater injection into the eastern brackish injection zone, as delineated by Australian Map Grid co-ordinates provided in Table 2 of Schedule 4, that includes the following:
 - potential issues resulting from the reinjection of the surplus water on other non-proponent mining operations, in consultation with the proponent of those affected mines, and proposed outcomes to ensure compliance with condition 10-1;
 - 2. strategies, including trigger values, to address the potential issues and achieve the outcomes identified in condition 10-2(1) in consultation with the proponent of any potentially affected mines;
 - 3. detailed monitoring program to demonstrate that condition 10-2(2) is being met; and
 - 4. specific management and contingency actions.



- 10-3 The monitoring as required by condition 10-2(3) is to be carried out until such time as the Chief Executive Officer of the Office of the Environmental Protection Authority determines that monitoring may cease.
- 10-4 In the event that monitoring required by condition 10-2(3) indicates an exceedance of trigger levels defined by condition 10-2(2):
 - 1. the proponent shall report such findings to Chief Executive Officer of the Office of the Environmental Protection Authority within 7 days of the exceedance being identified;
 - 2. the proponent shall provide evidence which allows determination of the cause of the exceedance within 21 days of the exceedances being identified;
 - 3. if determined by the Chief Executive Officer of the Office of the Environmental Protection Authority to be the result of activities undertaken in implementing the proposal, the proponent shall submit actions to be taken to address the exceedance within 21 days of the determination being made to the Chief Executive Officer of the Office of the Environmental Protection Authority; and
 - 4. the proponent shall implement actions to address the exceedance upon approval of the Chief Executive Officer of the Office of the Environmental Protection Authority and shall continue until such time the Chief Executive Officer of the Office of the Environmental Protection Authority determines that the remedial actions may cease.
- 10-5 The proponent shall implement the Stakeholder Consultation Reinjection Management Plan required by condition 10-2.
- 10-6 The proponent shall make the Stakeholder Consultation Reinjection Management Plan required by condition 10-2 publically available in a manner approved by the Chief Executive Officer of the Office of the Environmental Protection Authority.

This Stakeholder Consultation Reinjection Management Plan (SCRMP) has been prepared to meet the above requirements of Condition 10.





2. STAKEHOLDER CONSULTATION REINJECTION MANAGEMENT PLAN

2.1 Compliance with Condition 10

Table 1 summarises how the SCRMP addresses the various components of Condition 10.

Condition	How Plan Addresses Condition
10-1	The SCRMP has been prepared via extensive consultation with the proponent of the only current non-Fortescue mining operation that may be impacted by the reinjection of surplus water in the project's eastern brackish reinjection zone – i.e. Roy Hill Iron Ore Pty Ltd (RHIO). In implementing the SCRMP, Fortescue shall manage the reinjection of surplus water to ensure that it does not cause a significant increase in dewatering requirement at RHIO's Roy Hill Iron Ore Project, which is immediately east of the project area.
10-2(1)	Potential issues resulting from the reinjection of the surplus water have been discussed with RHIO. Reinjection of groundwater within the eastern brackish reinjection zone, given anticipated volumes and timing, will not cause a significant increase in RHIO's dewatering requirements (refer to Section 2.3).
10-2(2)	Monitoring strategies, trigger levels and management and contingency actions have been agreed with RHIO (refer to Section 2.4).
10-2(3)	A detailed monitoring program has been agreed with RHIO (refer to Section 2.4).
10-2(4)	Management and contingency actions have been agreed with RHIO (refer to Section 2.4).
10-3	Fortescue will carry out the monitoring as required by condition 10-2(3) until such time as the Chief Executive Officer of the Office of the EPA determines that monitoring may cease.
10-4(1) 10-4(2) 10-4(3) 10-4(4)	In the event that monitoring required by condition 10-2(3) indicates an exceedance of trigger levels defined by condition 10-2(2), Fortescue shall report such findings to Chief Executive Officer of the Office of the EPA within 7 days of the exceedance being identified. Fortescue shall also provide evidence which allows determination of the cause of the exceedance within 21 days of the exceedances being identified.
	If determined by the Chief Executive Officer of the Office of the EPA to be the result of activities undertaken in implementing the proposal, Fortescue shall submit actions to be taken to address the exceedance within 21 days of the determination being made to the Chief Executive Officer of the Office of the EPA. Fortescue shall implement actions to address the exceedance upon approval of the Chief Executive Officer of the Office of the EPA and shall continue until such time the Chief Executive Officer of the Office of the EPA determines that the remedial actions may cease.
10-5	Fortescue shall implement the SCRMP required by condition 10-2.
10-6	Fortescue shall make this SCRMP publically available via the Fortescue website (refer to Section 2.5).

Table 1:	How Fortescue	has addressed	Condition	10



2.2 Stakeholder Consultation

The only current non-Fortescue mining operation that may be impacted by the reinjection of surplus water in the eastern brackish injection zone is the proposed Roy Hill Iron Ore Project, currently being developed by Roy Hill Iron Ore Pty Ltd (RHIO).

Fortescue has held meetings with relevant senior RHIO staff (Bill Lamb – Manager, Mining; and Ron Colman – Principal Hydrogeologist) to discuss potential issues resulting from reinjection of surplus water in the eastern brackish injection zone and to agree monitoring strategies, trigger levels and management and contingency actions.

Four meetings have been held between Fortescue and RHIO on the following dates:

- 6 September 2011
- 27 September 2011
- 11 October 2011
- 2 November 2011.

The items discussed and agreed at each meeting were recorded in meeting minutes (see Appendix 1). After each meeting, a draft set of minutes was circulated by Fortescue to RHIO attendees for review. Once the minutes were agreed to by the RHIO attendees, they were then finalised.

The following items were agreed to at these meetings:

- That reinjection of groundwater within the project's eastern brackish reinjection zone, given anticipated volumes and timing, will not cause a significant increase in RHIO's dewatering requirements.
- Monitoring strategies, trigger levels and management and contingency actions.
- That regular Fortescue-RHIO Water Management Working Group meetings will continue, in order to review monitoring data, agree required management actions and assess on-going synergies.

RHIO attendees have also reviewed the SCRMP, and have confirmed that RHIO is supportive of the document being provided to the Office of the EPA in fulfilment of Condition 10 (see Appendix 2).

2.3 Anticipated Reinjection Regime and Impacts

During the 6 September 2011 meeting with RHIO, Fortescue reported that reinjection of groundwater within the eastern brackish reinjection zone will be for fresh/brackish water, and is likely to occur at a rate of 3 to 4 gigalitres per annum (Glpa) for a duration of 18 to 24 months. Fortescue also reported that groundwater modelling undertaken for the project indicated that, during this period, groundwater flows within the north western area of RHIO tenements may





increase (above seasonally dynamic levels) by approximately 7 litres/second. A map, showing potential groundwater mounding (based on modelling undertaken for assessment of the project) within RHIO tenements, was tabled at the meeting.

At the same meeting, RHIO reported they have sought a license for abstraction of 3.7 Glpa for a two year period to provide construction water in the north western area of its tenements. The timing and volumes of planned RHIO abstraction aligns almost exactly with reinjection of groundwater within the eastern brackish reinjection zone. As such, RHIO advised it is supportive of Fortescue undertaking reinjection of groundwater within the eastern brackish reinjection of groundwater within the volumes and durations proposed [Ref. Item 3 in 6 September minutes].

As dewatering within the north western area of the RHIO tenements is expected to start in 2014, RHIO has requested that Fortescue report target start and finish dates for reinjection of groundwater within the eastern brackish reinjection zone at each Fortescue-RHIO Water Management Working Group meeting. This has been agreed [Ref. Item 3 in 11 October minutes].

2.4 Agreed Monitoring, Trigger Levels and Management Actions

The following monitoring and management regime has been agreed by Fortescue and RHIO:

- Data will be collected on a monthly basis from four (new) monitoring bores within Fortescue tenements (Table 2) and three (existing) bores within RHIO tenements [Ref. Item 6 in 6 September minutes; Item 4 in 27 September minutes].
- This data will be tabled at each Fortescue-RHIO Water Management Working Group meeting [Ref. Item 4 in 27 September minutes].
- If the data were to show: (i) a trend indicating the 1.5 m increase from seasonally dynamic levels trigger will be exceeded; or (ii) a specific increase of 1.25 m from seasonally dynamic levels, then a revised hydrogeological assessment of reinjection and flows will be undertaken by Fortescue for further discussion with RHIO [Ref. Item 4 in 27 September minutes].
- RHIO will provide existing bore data to help assess baseline groundwater conditions in order to account for seasonal variation [Ref. Item 4 in 27 September minutes].
- Fortescue's monitoring bores shall be installed, with monitoring underway, within two months of the start of reinjection of groundwater within the eastern brackish reinjection zone [Ref. Item 3 in 11 October minutes].
- If necessary, RHIO will facilitate access through RHIO tenements for Fortescue staff and constractors for construction and monitoring of bores SPM07, 8, 9 and 10 [Ref. Item 3 in 11 October minutes].





Bore number	Location	Easting (GDA94, Zone 50)	Northing (GDA94, Zone 50)
SPM07	Immediately west of the RHIO tenement boundary	794,829	7,514,733
SPM08	Immediately north of the RHIO tenement boundary	795,886	7,516,420
SPM09	Immediately north of the RHIO tenement boundary	798,547	7,516,424
SPM10	Immediately west of the RHIO tenement boundary	794,780	7,512,137

Table 2: **Fortescue Monitoring Bores**

2.5 Public Availability of the SCRMP

A copy of the SCRMP will be made available to the public on the Fortescue website.

Conclusion 2.6

The SCRMP has been prepared via extensive consultation with RHIO, which is the proponent of the only current non-Fortescue mining operation that may be impacted by the project's reinjection of surplus water in the eastern brackish reinjection zone.

In implementing the SCRMP, Fortescue will manage the reinjection of surplus water to ensure that it does not cause a significant increase in dewatering requirement at RHIO's mining operations.

Appropriate monitoring strategies, trigger levels and management and contingency actions have been agreed with RHIO, and will be implemented in compliance against Condition 10 over the life of the project.





Appendix 1

Meeting minutes









Minutes from 6 September 2011



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	Section FORMS/REGISTERS	

FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

Meetina

Number:

1

DATE: 6 September 2011

10:30am

TIME:

LOCATION: HPPL House, 28-42 Ventner Avenue, West Perth

ATTENDEES: RHIO: Bill Lamb (BL), Ron Colman (RC). FMG: Doug Brown (DB), Ian Brandes de Roos (IB), Paul Ridout (PR).

DISTRIBUTION: Attendees, plus: FMG: Ross Oliver, Deidre Willmott, Viv Roberts, Mark Skelton.

ITEM	TOPIC / DISCUSSION	RESULT / ACTION	ACTION BY	DATE RAISED	DATE ACTIONED	DUE DATE	Comments or Reasons If unable to Action
1	 It was agreed that FMG-RHIO Water Management W Group meetings be held initially every two weeks with venue to alternate between the RHIO and FMG office DB proposed reinjection within the eastern reinjection Christmas Creek as the first item to be covered. 	/orking Items agreed. h the es. n area at	-	-	-	-	-
2	 PR reported that FMG has recently received Part V approvals (under the EP Act) for the Christmas Creek Management Scheme and that, operationally, FMG w ready to start reirjection of groundwater within the eareinjection area (close to the RHIO tenements) in the to 6 weeks. PR also reported that FMG wish to consult with RHIO starting this reinjection and that EPA have asked for the part of their approval conditions. PR advised that FMG like consultation to include proposed monitoring locat trigger levels and management if trigger levels are exceeded. 	Note. k Water vill be astern o next 4 D before this as G would tions, kceeded.	-	-	•	-	-
3	 IB reported that reinjection of groundwater within the reinjection area will be for fresh/brackish water and is to occur at a rate of 3 to 4Glpa for a duration of 18 to months. IB also reported that groundwater modelling underlaken for the Christmas Creek Water Nanagem Scheme API indicated that during this period groundw flows within the NW area of RHIO tenements may ind (above seasonally dynamic levels) by approximately litres/second. IB tabled a map showing potential groundwater mounding (based on the API modelling) RHIO tenements. 	eastern s likely 24 given location, volume and timing of FMG water crease 7 construction water requirements.	-	-	-	-	-
Rev	Description Pres	pared by	Reviewed By		Approved	By	Date
0	Issued For Use Paul	Il Ridout	Ron Colman (RHIO)	Ban Colm	Ros- Colone	01/11/11
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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

	 RC wained RH two that are pro 	sought clarity as to whether FMG intends to ter in the longer term and stated that RHIO v harge of the aquifer in the NW area of their IO have sought a license for abstraction of 3 year period to provide construction water. If t RHIO have abstraction bores already in pla- a and will be building a construction water s ximity to the RHIO processing plant.	o use this vould prefer tenements as 3.7Glpa for a RC also stated ace in the upply dam in							
4	 BL ten rep dev alte pla DB add cou incl and to t 	reported that mining within the NW area of t ements is planned to occur in late-2013/earl orted that potentially there may be no RHIO vatering occurring within the next two years emative supply may be required for the RHIC nt. sought clarity as to whether RHIO would be ditional water supply for this period. RC state ald be of interest and proposed that arrange lude a future return of water in the event of R d FMG shortfall. DB reported that options for he RHIO processing plant, for a ~2 year per iewed.	he RHIO y-2014. RC mine and an processing interested in ed that this ments could RHIO surplus water supply iod, will be	Review options for water supply to RHIO processing plant for ~2 year period.	DB	6.9.11	-	20.9.11	-	
5	 A ti wa Thi 	 hree stage approach for FMG/RHIO water m s discussed as follows: Stage 1 – FMG reinjection within the reinjection area with monitoring an points. Stage 2 – Potential for FMG supple construction and/or processing. Stage 3 – Explore options for long transfer. s approach was agreed, in principle, by all a 	hanagement he eastern d trigger y to RHIO for -term water ttendees.	In principle agreements of three stage approach for FMG/RHIO water management.	-	-	-	-	-	
6	For poi sea pro ten mo cor	Stage 1 activities, DB and IB proposed four nts with a trigger level of a 1.5 metre increas isonally dynamic levels. IB tabled a map sho posed monitoring points and their proximity ement boundary. DB reported that data from nitoring bores can be shared with RHIO to in nbined understanding of the aquifer. Monitor	r monitoring se from wing the to the RHIO in the mprove the ring	Circulate data/info for: (i) eastern injection area and injection bores; (ii) monitoring bores; (iii) proposed trigger levels and	IB	6.9.11	-	12.9.11	•	
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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

	•	frequencies were discussed, and DB suggested that dataloggers may be employed to collect these data. IB proposed a monthly monitoring as a minimum frequency, with data sent to RHIO also on a monthly basis. RC reported that the items proposed did not appear to present any show-stoppers. RC also reported that RHIO has monitoring bores within the RHIO tenements and that data from these can also be shared. DB highlighted that the data sharing process should be formalised. IB agreed to send to RC the location of the monitoring sites and the location of the proposed injection sites (both in Shapefile format). BL sought clarity on the requirement for a salinity trigger level. DB reported that FMG can only inject fresh/brackish water in the eastern injection area in order to not contaminate the aquifer. There was discussion on required actions in the event of a trigger level being exceeded. It was agreed that, in the event of a trigger level being exceeded, a meeting between RHIO and FMG would be required to reassess impacts and to agree an action plan.	monitoring frequency; (iv) management plan in event of trigger level being reached.					
7	•	For Stage 2 activities, RC reported that doubling the size of the proposed construction water dam will be reviewed with a view to FMG water supply. PR sought clarity on the timing for construction of the dam and RC reported that the dam is due to be in place early-2012 and that a more detailed timeline will be confirmed.	Review increase in dam size and confirm construction timelines.	RC	6.9.11	-	20.9.11	-
8	•	Other agenda items were discussed for the next meeting. These were agreed as: • Hydrology (eg upstream detention dams). • Rail water supply. • Port Hedland water supply. RC requested that DB review FMG rail construction water supply bores that are not being used and the scope for RHIO to utilise these for their rail construction. DB reported this will be followed-up for discussion at the next meeting.	Review FMG rail bores not being used and scope for RHIO to utilise.	DB	6.9.11	•	20.9.11	-

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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

NEXT MEETING: 20.9.11 - 10:30; FORTESCUE CENTRE

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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

DATE: 27 September 2011

<u>Meetina</u> Number: 2

TIME: 11:00am

LOCATION: Fortescue Centre, East Perth.

ATTENDEES: RHIO: Ron Colman (RC). FMG: Doug Brown (DB), Ian Brandes de Roos (IB), Jacqui Hickey (JH), Paul Ridout (PR).

APOLOGIES: RHIO: Bill Lamb (BL).

DISTRIBUTION: Attendees, plus: FMG: Ross Oliver, Deidre Willmott, Viv Roberts, Mark Skelton.

ITEM	TOPIC / DISCUSSION		RESULT / ACTION	ACTION BY	DATE RAISED	DATE ACTIONED	DUE DATE	Comments or Reasons If unable to Action
1	 Minutes for the previous meeting, held on 6.9.11, agreed. Progress on outstanding actions was reviewed. 	were ewed.	Note.	-	-	-	-	•
2	 Further to Item 2 in the 6.9.11 minutes, PR reporte FMG will be ready to start reinjection of groundwal the eastern reinjection area (close to the RHIO ter the next 3 to 4 weeks. 	ed that ter within nements) in	Note.	-	-	-	-	-
3	 Further to Item 4 in the 6.9.11 minutes, re potentia water supply for the RHIO processing plant, RC cl RHIO project timelines as follows: OPF construction from Q1-2012. OPF commissioning from Q3-2013. OPF commissioning from Q3-2013. On basis of current mine plan, 12 mo mining with dewatering to start in 2011. Full dewatering to start in 2015. RC also reported that a paper has been submitted RHIO project implementation team to describe the benefits of FMG water supply and RHIO infrastruc would be required to facilitate this. DB reported that the water balance for FMG's Chimines is being assessed in order to confirm the via water supply to the RHIO OPF. However, DB high timing is likely to be problematic. 	I FMG arified nths of dry 4. to the potential ture that chester ability of lighted that	Note.	-	-	-	-	-
4	 Further to Item 6 in the 6.9.11 minutes, RC reporte injection and monitoring bore data has been receiv and passed onto RHIO GIS. 	ed that ved from IB	Assess best access option(s), for proposed FMG	IB	27.9.11	-	30.9.11	-
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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

		The	re was discussion on EMG access to the mo	nitoring bore	monitoring bores]
		loca	tions - which will prioritise EMG tenements	where	and forward to BC						
		DOCE	sible, but may benefit from use of existing tra-	ke within	for review prior to						
		PU3	O tenemonts. It was acroed that BC and IB v	vill moot	site visit.						
		onsi	te on 6 10 11 to agree the best access ontio	ns	one mon						
		Tho	monitoring plan for Stage 1 activities (prono	sod	BC to forward	BC	27.9.11	-	11.10.11		
	-	mon	itoring boros and a triggor lovel of a 1.5 mot	no incroaso	existing RHIO						
		from	seasonally dynamic levels) was discussed.	BC reported	bore data to IB for						
		that	the plan has been reviewed – and pragmatic	ally agreed	development of						
		- by	both he and BL based on the understanding	that an	baseline.						
		incre	ease of this level would represent a minimal	impact to							
		RHI	O operations.		Develop individual	RC/IB	27.9.11	-	11.10.11	-	
	٠	lt wa	as agreed that monthly monitoring data from	FMG and	schedules to						
		RHI	O will be reviewed at each FMG-RHIO Wate	г	document FMG						
		Man	agement Working Group Meeting. It was als	o agreed	and RHIO bores						
		that	if the data were to show: (i) a trend indicatin	g the 1.5	proposed for data						
		met	re increase from seasonally dynamic levels t	rigger will be	sharing.						
		exce	eeded; or (ii) a specific increase of 1.25m fro	m							
		seas	sonally dynamic levels; then revised hydroge	ological							
		asse	essment of reinjection and flows will be unde	rtaken by							
		FMC	G for further discussion with RHIO.								
	•	DB I	highlighted that a baseline is required in orde	er to account							
		for s	seasonal variation. This was agreed and RC	offered to							
		prov	vide existing RHIO bore data for this purpose								
	٠	The	re was discussion on formalising the data sh	aring							
		proc	cess. It was agreed as understood that hydro	information							
		IS CO	overed under the Mutual Deed of Confidentia	lly between							
		Han	COCK Prospecting Pty Ltd and Fortescue Mei	als Group							
		LIMI	ted. It was also agreed that a schedule will b	e tabled to							
	-	Euct	her to Item 7 in the 6.9.11 minutes (as parti	om 2) DC	Poviow increase	PC.	6911		20.0.11	Actio	n carried
	•	rend	arted that a paper has been submitted to the	BHIO	in dam size and	N C	0.0.11	-	20.3.11	over.	in Gamera
5		proi	act implementation team to describe the note	antial	confirm						
-		ben	efits of EMG water supply and BHIQ infrastru	cture that	construction						
		wou	Id be required to facilitate this.		timelines.						
		Furt	her to Item 8 in the 6.9.11 minutes. BC desc	ribed a	Review FMG rail	DB	6.9.11	-	20.9.11	Actio	n carried
6		prop	oosed detention dam to be located on the no	rthern border	bores not being					over.	
					used and scope						
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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

of the RHIO tenements and highlighted a preference for implementing smaller dams upstream (within FMG tenements) to control surface water flows. DB reported that FMG should review this and proposed that RHIO table more detailed information at the next W ater Management W orking Group meeting. It was agreed this will be an agenda item at the next meeting and that RC will circulate background information prior to the meeting.	for RHIO to utilise. Circulate background information on proposed RHIO retention dams.	RC	27.9.11	-	11.10.11		
 There was discussion on options for RHIO rail water supply. DB reported that RC's request at the 6.9.11 meeting (for DB to review FMG rail construction water supply bores that are not being used and the scope for RHIO to utilise these for their rail construction) has been escalated within FMG but no feedback has been provided to date. RC raised the possibility of RHIO accessing FMG dewatering pipelines for rail construction water supply. DB reported that this too will be reviewed within FMG and requested that RC provide details of the areas/zones that require water supply. 	Provide details of RHIO rail areas/zones that require water supply.	RC	27.9.11	-	11.10.11		
NEXT MEETING: - 11 OCTOBER 2011; HPPL HOUSE							
NEXT WEETING.	- II OCIOBENZ	UTI, HEFI	LHOUSE				

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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

<u>Meetina</u> Number: 3

DATE: 11 October 2011

TIME: 10:30am

LOCATION: HPPL House, West Perth.

ATTENDEES: RHIO: Ron Colman (RC), Bill Lamb (BL). FMG: Ross Oliver (RO), Ian Brandes de Roos (IB), Jacqui Hickey (JH), Paul Ridout (PR).

APOLOGIES: FMG: Doug Brown (DB),

DISTRIBUTION: Attendees, plus: FMG: Deidre Willmott, Viv Roberts, Mark Skelton.

ITEM		TOPIC / DISCUSSION		RESULT / ACTION	ACTION BY	DATE RAISED	DATE ACTIONED	DUE DATE	Comments or Reasons If unable to Action
1	 Mir agr 	nutes for the previous meeting, held on 27.9.1 reed. Progress on outstanding actions was re-	1, were riewed.	Note.	-	-	-	-	-
2	 Fur 1.1 bei 	ther to Item 2 in the 27.9.11 minutes, PR rep 1.11 is the target date for eastern reinjection i ng ready to operate.	orted that infrastructure	Note.	-	-	-	-	-
3	 Function the Function Function 	ther to Item 4 in the 27.9.11 minutes, RC and t a meeting had taken place at site on 6 Octol iew access options for construction and mana proposed FMG monitoring bores. ther to this, IB reported that an existing track ements will be required for access to the two	IB reported ber 2011 to agement of within RHIO western	RC to forward existing RHIO bore data to IB for development of baseline.	RC	27.9.11	-	11.10.11	Action carried over.
	mo acc	 nitoring bores. RC and BL reported that this optimized by reported that this optimized with the following protocol: Approximately two days prior to accorequired, FMG shall notify Darren H Dellar or Martin Heydari. RC will circulate an email to notify D 	ess being ardy, Adrian arren,	Develop individual schedules to document FMG and RHIO bores proposed for data sharing.	RC/IB	27.9.11	-	11.10.11	Action carried over.
	 Adrian and Martin of this arrangement. Timing for implementation of the FMG monitoring bores was discussed. It was agreed that the bores shall be installed, with monitoring underway, within two months of the start of reinjection within the FMG eastern injection area. It was also agreed that if this condition is not met, reinjection within the FMG eastern injection area will cease until the bores are installed and monitoring has commenced. 			Circulate start/finish date estimates for reinjection in the eastern injection area	IB	11.10.11	-	25.10.11	-
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4	•	There was discussion on the anticipated duration of FMG reinjection in the eastern injection area. IB reported that this is currently anticipated to be in the order of 18-24 months but is ultimately contingent on FMG mine plans. It was agreed that IB will circulate start/finish date estimates for reinjection in the eastern injection area and that these will be tabled for each W ater Management Working Group meeting. Further to Item 5 in the 27.9.11 minutes, RC reported that increasing the dam size should no longer be considered as BHIO project timelines now have implementation targeted for	Item closed.	-	-	-	-	-
	•	Q1 2013. It was agreed that the item be closed. Further to Item 6 in the 27.9. 11 minutes, there was further discussion on locating detention dams within FMG tenements to control surface water flows for No-name Creek. It was agreed that RC will provide location and RL data for the proposed dams and that JH will undertake an initial assessment of potential impacts.	Review FMG rail bores not being used and scope for RHIO to utilise.	DB	6.9.11	-	20.9.11	Action carried over.
	•	There was also discussion on a proposed detention dam for West Kulbee Creek and the implications from this on the design of the P2 and P5 roads. It was agreed that JH will discuss this with Chris Jansen (FMG).	Provide details of RHIO rail areas/zones that require water supply.	RC	27.9.11	-	11.10.11	Action carried over.
5			Provide location & RL data for No- name Creek dams.	RC	11.10.11	-	19.10.11	-
			Undertake initial assessment re No-name Creek dams.	JH	11.10.11	-	25.10.11	
			Discuss P2/P5 impacts with Chris Jansen.	JH	11.10.11	-	25.10.11	-

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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

NEXT MEETING: - 25 OCTOBER 2011; FORTESCUE CENTRE

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Minutes from 2 November 2011

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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

DATE: 2 November 2011

Meetina Number: 4

TIME:

2:00pm LOCATION: Fortescue Centre, East Perth.

ATTENDEES: RHIO: Ron Colman (RC), Bill Lamb (BL). FMG: Doug Brown (DB), Ian Brandes de Roos (IB), Jacqui Hickey (JH), Paul Ridout (PR).

APOLOGIES:

Attendees, plus: FMG: Deidre Willmott, Viv Roberts, Mark Skelton, Ross Oliver (RO). DISTRIBUTION:

ITEM		TOPIC / DISCUSSION		RESULT / ACTION		DATE RAISED		DUE DATE	Comments or Reasons If unable to Action
1	• Min agr	utes for the previous meeting, held on 11.10. eed. Progress on outstanding actions was rev	11, were viewed.	Note.	-	-	-	-	-
2	 Fur con bee will zon 	ther to Itom 2 in the 11.10.11 minutes, PR rep missioning of the eastern reinjection infrastri in delayed by wet weather and that, operation be ready to start reinjection within the easter is within the next two weeks.	portod that ucture has nally, FMG n reinjection	Noto.			-	-	-
	 Fur exis location for IB r with 	ther to Item 3 in the 11.10.11 minutes, RC re sting RHIO bore data (water levels and quality ation data for the three RHIO monitoring bore varded to IB by 4.11.11. eported that the anticipated start date for rein hin the eastern reinjection zone is mid-Novem	ported that y) and s will be njection nber 2011. IB	RC to forward existing RHIO bore data to IB for development of baseline.	RC	27.9.11	-	4.11.11	Action carried over.
3	 also reported that reinjection within the eastern reinjection zone is proposed to cease by November 2013. IB highlighted that the track within RHIO tenements will still be required for access to the two western FMG monitoring bores in order to collect data. RC and BL reported that this can continue to be accommodated via the protocol agreed at the 11.10.11 FMG RHIO Water Management Working Group meeting. IB reported that the proposed FMG monitoring bores have been implemented and that initial data will be reported at the next FMG-RHIO Water Management Working Group 		einjection ints will still monitoring ed that this col agreed at orking Group	Develop Individual schedules to document FMG and RHIO bores proposed for data sharing.	RC/IB	27.9.11	-	11.10.11	Action carried over.
			Circulate start/finish date estimates for reinjection in the eastern injection	IB	11.10.11	-	-	Action on-going.	
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FMG-RHIO WATER MANAGEMENT WORKING GROUP MEETING

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	•	Further to Item 5 in the 11.10.11 minutes, RC reported that the RHIO Mining Proposal (intended to cover the initial five years of RHIO operations) no longer includes detention dams as another surface water management solution is proposed. DB raised the risk this may pose to the P2 and P5 (EMG site access) roads. It was agreed that JH will discuss	Review FMG rail bores not being used and scope for RHIO to utilise.	DB	6.9.11	-	20.9.11	Action carried over.
		the issue with Chris Jansen (FMG) and that the P2 and P5 road design will be reviewed by RHIO's surface water consultants to assess suitability re the management solution proposed in the RHIO Mining Proposal.	Provide details of RHIO rail areas/zones that require water supply.	RC	27.9.11	-	11.10.11	Action carried over.
4			Provide location & RL data for No- name Creek dams.	RC	11.10.11	-	19.10.11	Action closed.
			Undertake initial assessment re No-name Creek dams.	JH	11.10.11	-	25.10.11	Action closed.
			Discuss P2/P5 impacts with Chris Jansen. Forward P2/P5 design to RHIO for assessment by surface water consultants.	JH	11.10.11	-	8.11.11	Action updated to include assessment of P2/P5 design.
	NEXT MEETING: - 16 NOVEMBER 2011; HPPL HOUSE							

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Appendix 2

Review of SCRMP by RHIO





Christmas Creek Water Management Scheme – Stakeholder Consultation Reinjection Management Plan CC-PL-EN-0006_Rev 0





From: Ron Colman [mailto:Ron.Colman@royhill.com.au]
Sent: Monday, November 07, 2011 10:50 AM
To: Paul Ridout
Cc: Bill Lamb <bill.lamb@royhill.com.au>
Subject: RE: FMG-RHIO Water Management Working Group - draft meeting minutes

Paul,

I have reviewed the draft Management Plan and can confirm that RHIO is supportive of the document being provide to the OEPA in fulfilment of Ministerial Statement 871 Condition 10.

Regards

Ron Colman

Ron Colman Principal Hydrogeologist | Roy Hill

Level 4, 28-42 Ventnor Ave West Perth WA 6005 P O Box Locked Bag No. 2 West Perth WA 6872 Office: +61 (0)8 6143 1500 | Direct: +61 (0)8 6143 1556 Fax: +61 (0)8 6143 1600 | Email: <u>ron.colman@royhill.com.au</u>

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