Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

NRAR Quarterly Report 1: Q3 2023

12/10/2023

To: Alex Bowlay
Senior Investigator
Natural Resources Access Regulator (NRAR)

Enforceable Undertaking Commitments

Contents

Water Balance Model (WBM).

The Goldsim WBM has been implemented and reported internally every month which is assisting in guiding a wholistic approach to water management, across the site.

Since bringing Goldsim onto site, a Trigger Response Action Plan, (TARP) (Ref: Appendix 1). has also been developed to help guide management decisions around site water storages. See **Figure 1** & **Figure 3** for results of Verification and Forecast modelling respectively.

The WBM is also allowing BCOP to validate water intercepted from undisturbed catchments and forecast when groundwater/river extraction will be required due to low site water storage.

Proposed Water Metering.

All metering and telemetry have been installed except for the Auto Water Sampling on SD7. This is scheduled to be installed by the end of October 2023.

The improvements to the metering and telemetry of the pumping system have included:

- Standardising controllers for all pumps.
- Introducing remote start capabilities for diesel pumps and utilising solar for start batteries to reduce time in jump starting pumps that are used infrequently.

Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

- Regular email reports are provided to the site team to inform the Water Balance Model and support day to day decision making. (Ref: Appendix 2).

Calculating Water Take

A verification model was run to assess the model's accuracy in representing the rainfall runoff response to the WMS and to estimate the volume of runoff intercepted from the undisturbed catchment in the previous quarter.

The Site Water Balance data in **Figure 1** indicates the modelled storage volume (blue line) is similar to the observed storage volume (orange line) with similar responses to rainfall occurring for both results. Due to low rainfall during the quarter, there was no water pumped out of the 'Block Dam'.

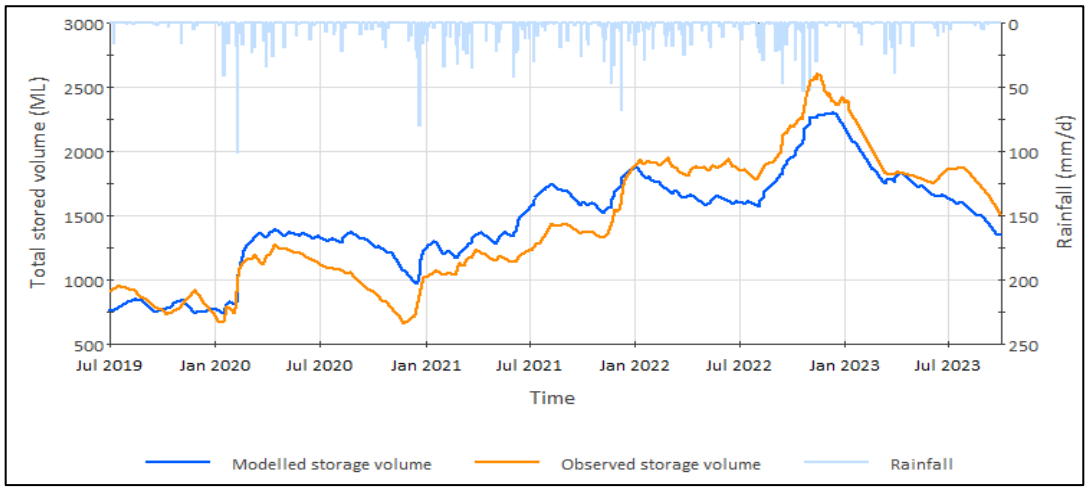


Figure 1: Water Model Run as of 1st October 2023.

Rainfall during reporting period

Month	Rainfall (mm)
July 2023	7.4
August 2023	13.2
October 2023	2.2

Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

Estimated & Actual volume of runoff intercepted from undisturbed catchment.

	Runoff Volumes from Undisturbed catchment	Metered pump volumes Actual Interception (Soil Stockpile dam)
Volume (ML	<1ML	0ML

Total Licensable take for the previous quarter

	Runoff from Third order and higher watercourses	Runoff from minor watercourses in excess of landholdings' harvestable rights
Volume (ML)	<1ML	0ML

Forecasting water take for acquisition allocation.

A Water Balance Model forecast was run to ensure BCOPL holds sufficient water allocation to account for future surface water take (See figure 2). See results below:

Three-month BOM Climate Outlook Oct – Dec**:** Dry

	Predicted Runoff from Third order and higher watercourses	Predicted runoff from minor watercourses in excess of landholdings' harvestable rights	Predicted volume requiring licencing
Volume (ML)	25.52	0	25.52

Current allocation held in WAL44134: 250ML

Bluevale water used Water Year to date: 0ML

Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

Industry learnings.

- The installation of real-time metering has allowed BCOP water managers to make real-time decisions around storages and water movement across the site.
- Additional pumping, pipework and filtration installed as part of the process has facilitated the use of dam water in the Coal Processing Plant, thereby reducing the requirement for the use of bore water.
- The real-time storage monitoring will also reduce the need for regular survey pickup of dam storage levels which is a strain on resources and can vary with human error.
- The Goldsim model has also given site a tangible date that it expects water import from bores to commence based on BOM forecasts. This has allowed for time to source critical spares and test bore infrastructure prior to it being required.

Surface Water Management Plan (SWMP)

BCO is currently reviewing the SWMP with a view to providing an update to the to the DPE.

BCO is in the process of seeking a Modification (MOD8) to its Project Approval and a determination is expected within the next quarter.

BCO has requested permission from DPE to delay the submission of the revised SWMP until Modification 8 is determined. DPE has granted BCO permission to submit the SWMP no later than 3 months after the determination date, or as otherwise agreed by The Secretary. (Ref: Appendix 3)

Payments

BCOPL has for filled the following financial contributions/payments required by the EU:

- A$54,240 to NRAR in recognition of the value of water allegedly taken.
- A$10,000 to NRAR to reimburse for legal costs
- A$5,000 to NRAR for costs associated with investigation and monitoring of the EU

Consultation

Initial consultation has been conducted with members of the local aboriginal community (25th July) to discuss the background to the Enforceable Undertaking and to commence the discussion on past impact of water take on aboriginal communities and their cultural practices.

No concerns were raised at the meeting and BCO agreed to continue to explore the topic at subsequent meetings.

Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

A copy of this report will also be disseminated to the Registered Aboriginal Parties (RAPs)

Additionally, BCO have also commenced a parallel consultation on the subject with its Community Consultation Committee.

Community project Landcare Australia

Boggabri Coal is currently discussing a community project with Northern Slopes Landcare Association to co-ordinate a workshop for farmers on Rangeland Rehabilitation. The workshop would allow farmers to express an interest in having works conducted on their own properties under the guidance of the workshop facilitator, to improve the farmers properties for water ponding rates during rainfall periods, to essentially “future proof” their farms and retain soil moisture during drier times.

BCO is continuing to liaise with Landcare to finalise the scope and secure dates with interested landholders to further this program.

Landcare have indicated that a Q1 2024 commencement date is most likely

Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

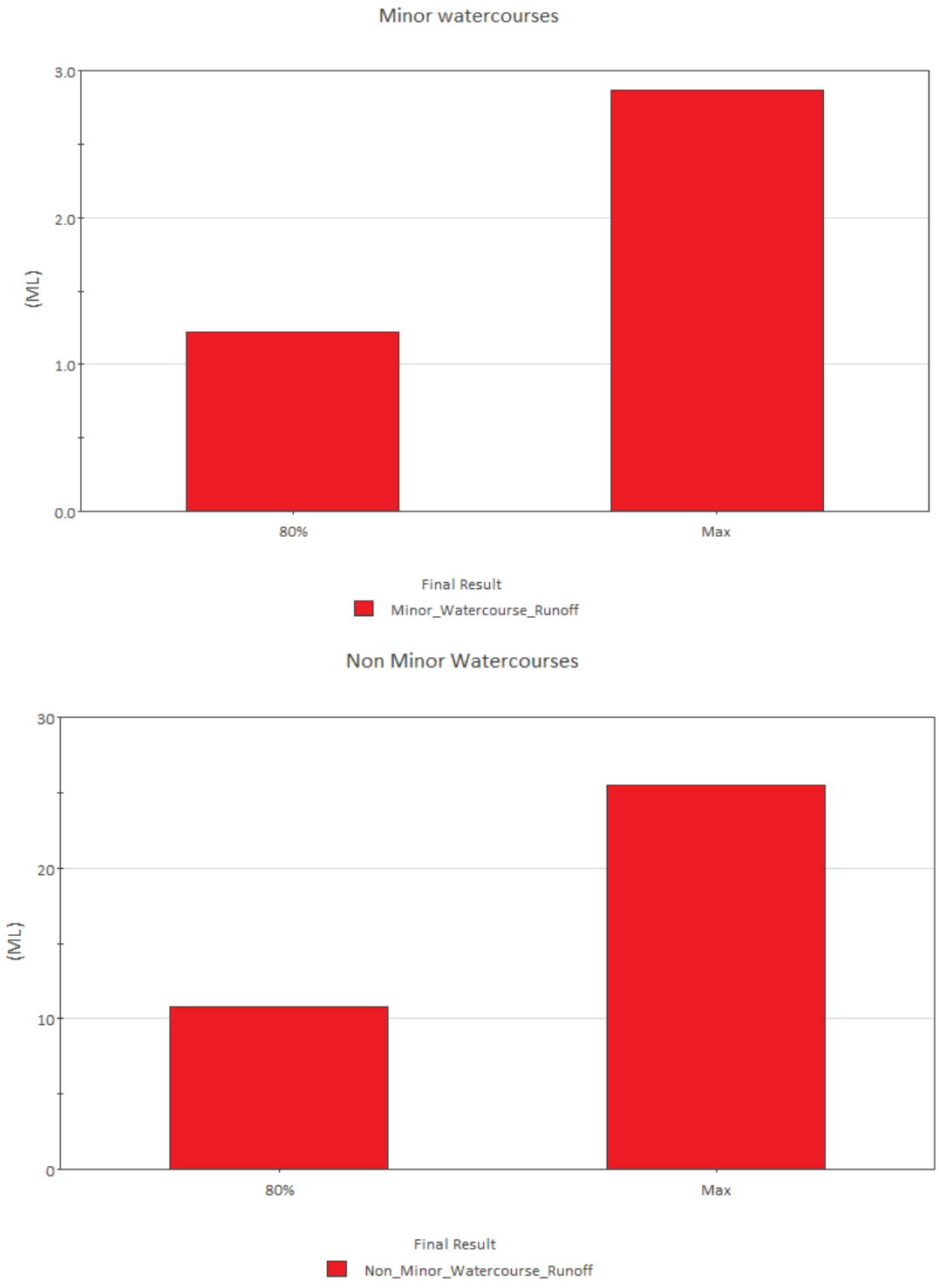


Figure 2: Predicted licensable water take for Oct-Dec 2023.

Boggabri Coal Operations Pty Ltd
ABN 76 600 191 455
386 Leard Forest Road, Boggabri, NSW, 2382 Australia
PO Box 12, Boggabri, NSW, 2382 Australia
Phone: +61-(0)2-6749-5013

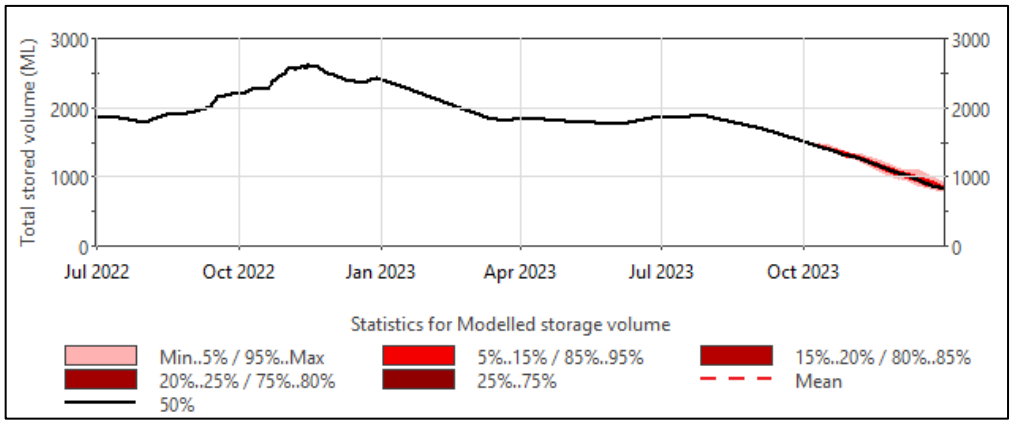
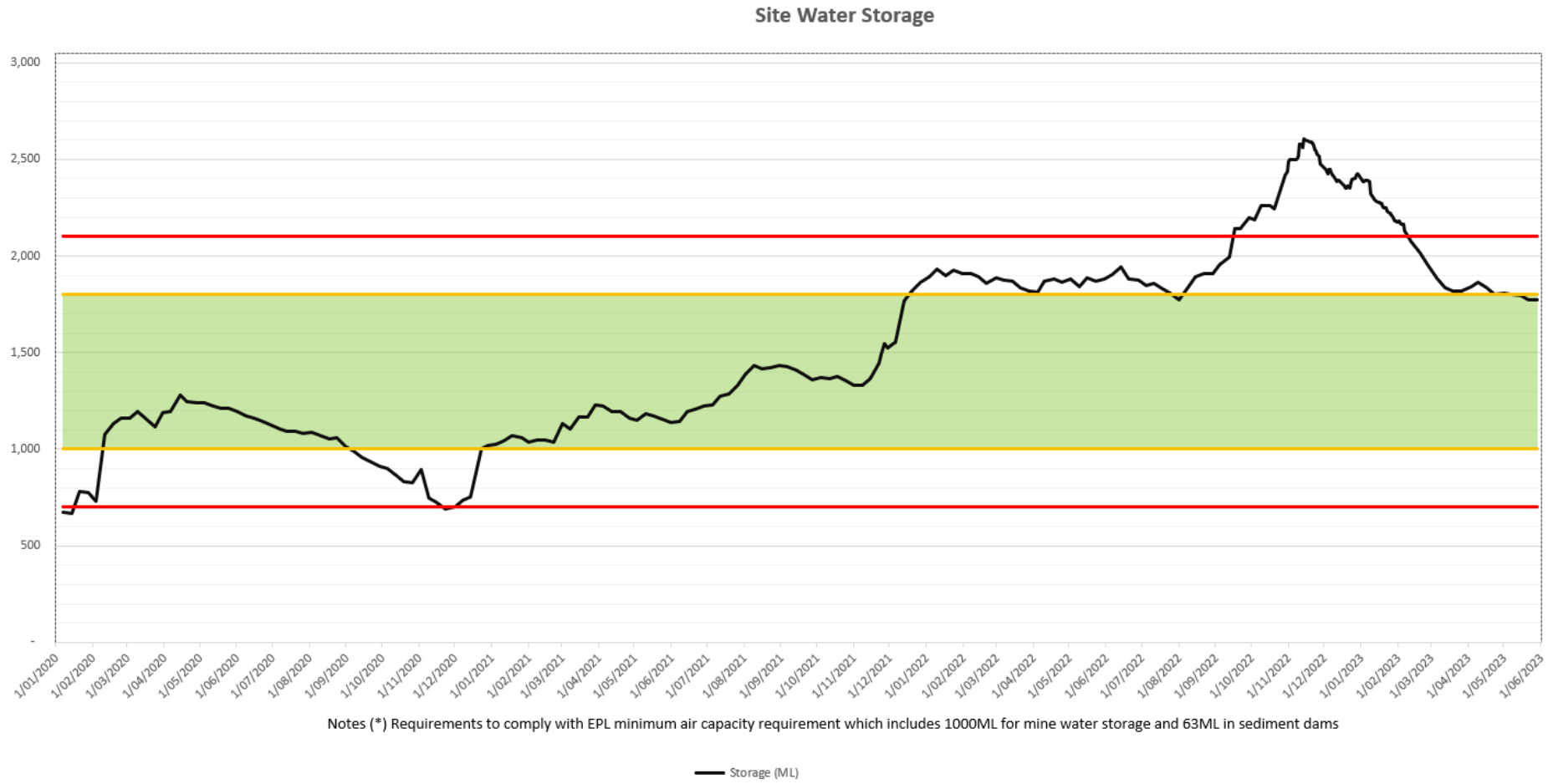


Figure 3: Predicted Site storage Volumes Oct-Dec 2023.

	Water Risk Level				
	Red alert - Lower	**Amber Alert - Lower**	**Green**	**Amber Alert - Upper**	**Red alert - Upper**
TRIGGER LEVEL Volumes	Below 700ML (70 days water remaining)	Below 1000ML (100 days water remaining)	Between 1000-1800ML	Above 1800ML Potential to impact operation	Above 2100ML Likely to impact operation
Operational Activities	Utilise Cooboobindi & Victoria Park borewater via CHPP for dust suppression. Consider standing down sections of fleet on hot windy days Weekly Crisis Management Team meeting	Discuss water cart efficiencies with operators. Consider importing water from Cooboobindi bore during summer and/or hot dry conditions forecast. Close non-essential roads	Utilise pit water for dust suppression Pump water back to MIA for usage in CHPP Use water carts efficiently Maximise harvest of surface water runoff	Maximise watercart dust suppression	Plan for potential water storage in pit Watering of non-essential roads Weekly Crisis Management Team meeting.
CHPP/MIA Activities	Consider installing river pumps (if water/licence available) Maximise bypass coal Close non-essential roads	Utilise Victoria Park bore water for MIA needs. Utilise water stored in MW3 Minimise water stored in SD6, SD12, SD3 & SD8. Maintain bore critical spares	Utilise pit water for all MIA needs (excluding potable) All dams stored below design air capacity Maximise harvest/recycling of water Regular inspections of bore infrastructure	Maximise water stored in MW3 as an evaporation dam. Maintain SD3 & SD6 on air space limit Utilise pit water for all MIA needs (excluding potable)	Increase water storage limits on SD10, SD12 & MW3 to 85% when no rain forecast. 2x a week survey pickups Install infrastructure to accommodate manual discharge out of LDP's.
ENV activities	Review daily import data Investigate evaporation control measures Minimise dust suppression	Weekly water meetings Weekly water efficiency notifications Consider dust suppressing agents Consider purchase additional groundwater allocation Increase bore monitoring (Monitoring, production, and neighbouring bores)	Monthly water meetings or when >50mm rain forecast in the next 5 days Monthly water efficiency notifications (incl. goldsim model run) Ensure carryover is maximised in water accounts Weekly survey pickups Regular dam inspections	Weekly water meetings Monthly dam inspections Discharge after rainfall events exceeding 38.4mm if water quality within EPL requirements. Floc/treat SD3 & SD6 if required.	Weekly dam inspections Consider manual water discharge Daily In-situ monitoring at SD3 & SD6

Appendix: Example of TARP Chart



Appendix 2

Water Stats Report

Dam Levels			
till dd/MM/yyyy: 02/10/2023 00:00:00 AM	**Level (%)**	**RL Value (m)**	**Volume (ML)**
MW5	16.5	321.29468	1165
SD23	14.75	291.51144	15.952838
SD7	7.9276667	325.71405	63.090843
SD3	10.12	270.27625	41.508522
SD6	47.16	264.4314	5.711483
SD12	8.1899996	264.51208	43.527458
SD10 (PP934)	21.92	267.15576	63.349915
SD10 (PP935)	21.92	267.15576	63.349915
SD10 (PP939)	21.92	267.15576	63.349915
MW3	57.869999	272.3085	72.219284
SD8	38	269.09827	1.6922528

Pump Flow Totals	
till dd/MM/yyyy: 02/10/2023 00:00:00 AM	**Totaliser (kL)**
MW5 Electric (PP924)	894398
MW5 Diesel	198663
SD23 Transfer	3456
SD23 Fill Point	199059
SD7 Diesel	87842
SD3	95901
SD6	206525
SD12	2407440
SD10 (PP934)	202329
SD10 (PP935)	2772300
SD10 (PP939)	164314
MW3	850239
SD8	26702

[redacted]

From: [redacted]
Sent: Tuesday, 3 October 2023 7:01 AM
To: [redacted]
Cc:
Subject: FW: BCO submission of Management Plans as per 2021 AR action plan

#
#
Regards

[redacted]
ENVIRONMENTAL COMPLIANCE SUPERINTENDENT

[redacted]
#

From: Heidi Watters [redacted]
Sent: Thursday, 28 September 2023 4:26 PM
To: [redacted]
Cc: [redacted]
Subject: Re: BCO submission of Management Plans as per 2021 AR action plan

[WARNING: This email originated outside of Our Company.DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.]

Hi Alex

Brittany has forwarded you request to the Compliance branch since the action to revise the management plans stemmed from the 2021 IEA RAR and 2021 Annual Review.

The February 2023 IEA RAR update included a target date of 30/09/2023 to submit revised management plans to the department. With the impending determination of MOD 8, an extension to the submission date is approved. The revised management plans are to be submitted within 3 months of the determination of MOD 8, or as otherwise agreed by the department.

If you have any further queries, please contact myself.

Regards

Heidi Watters
Team Leader Compliance

Development Assessment | Department of Planning and Environment
[redacted]
Suite 14, Level 1, 1 Civic Avenue, Singleton NSW 2333
www.dpie.nsw.gov.au

The Department of Planning and Environment acknowledges that it stands on Aboriginal land.
We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

From: A[redacted]>
Sent: Wednesday, 27 September 2023 11:39 AM
To: Brittany Golding [redacted]
Cc: L[redacted]
Subject: BCO submission of Management Plans as per 2021 AR action plan

Hi Brittany

Thanks for your time on the phone earlier. As discussed BCO submitted an action plan requested by DPE in relation to acceptance of BCO 2021 Annual Review (see attached). Due to modification 8 approval theoretically drawing closer and to avoid an unnecessary increased work load for the Department, BCO are requesting permission to postpone the submission of the management plans mentioned in the action plan until the determination of Mod 8.

We appreciate your time in considering this matter.

Regards

Environmental Compliance Superintendent

Idemitsu Australia Pty Ltd

386 Leards Forest Road, Boggabri
[redacted]
idemitsu.com.au