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Mt Piper Ash Placement Project – Lamberts North Ash Repository Modification 1

Response to Submissions

8 July 2021

Project No.: 0581248

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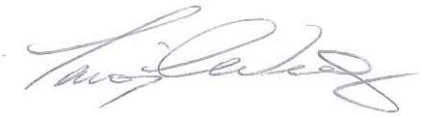
Response to Submissions

Gavin Powell
Senior Consultant

Amanda Antcliff
Consultant Director

Murray Curtis
Partner in Charge



Tamie Weaver
Technical Fellow and Partner

Environmental Resources Management Australia Pty Ltd
Level 15 309 Kent Street
Sydney NSW 2000

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1. INTRODUCTION

1.1 Overview

EnergyAustralia NSW Pty Ltd (EnergyAustralia) owns and operates the Mt Piper Power Station (MPPS), located approximately 18 kilometres (km) north-west of Lithgow, New South Wales (NSW). MPPS comprises two 700 MW coal-fired steam turbine generators which have the capacity to meet the energy needs of approximately 1.18 million homes in NSW every year.

EnergyAustralia has two approved and operating ash placement repositories including the Mt Piper Ash Repository (MPAR), approved under the MPPS development consent (80-10060), as modified and the Mt Piper Ash Placement Project which consists of two ash repository areas, Lamberts North Ash Repository (LNAR) and Lamberts South Ash Repository (LSAR), approved under PA 09_0186 in 2012 (collectively the 'Ash Repositories').

EnergyAustralia is seeking to modify PA 09_0186 as it relates to the LNAR, hereafter referred to as 'the 'Modification'. The following changes are proposed to LNAR:

- staged installation of a liner, with associated leachate management system (i.e. holding ponds and transfer pipelines), within the currently approved LNAR;
- placement of Brine Conditioned Ash (BCA) and Solid Mixed Salts and other authorised wastes from the surface of the liner (below RL 946 m AHD) up to the existing maximum approved height of LNAR;
- replacement of the currently approved LNAR Water Conditioned Ash (WCA) perimeter layer with a suitable capping liner;
- staged installation of lined multipurpose storage ponds to manage the intercepted leachate from LNAR; and
- minor amendments to the approved LNAR footprint, including excising the Western Coal Services washery infrastructure.

1.2 Modification Objectives

The intention of the Modification is to strengthen the environmental controls to avoid the potential escape of leachate from BCA placement activities into the surrounding environment so that the LNAR achieves its approved environmental objectives. Therefore, EnergyAustralia is seeking to improve the design and operation of the LNAR to achieve the following objectives:

- to minimise and manage the potential environmental or social impacts which may result from the ongoing use of the LNAR;
- to limit the risk of leachate from BCA migrating into the surrounding environment through the installation of a liner with very low permeability for BCA placement within LNAR;
- to update the capping strategy associated with LNAR to limit the vertical and lateral movement of BCA leachate through the ash to the surrounding environment;
- to maximise opportunities for reuse of WCA through improved placement strategies within the LNAR; and
- to update the LNAR footprint in the context of the existing and proposed surrounding activities and interactions.

1.3 Approval Process

Section 4.55 of the Environmental Planning and Assessment Act 1979 (EP&A Act) provides for the modification of development consents.

In support of the Modification, a Modification Report was prepared, supported by relevant technical assessments, including a Water Assessment and Biodiversity Assessment. The Modification Report and supporting assessments were publicly exhibited between 27 May 2021 and 9 June 2021.

During the public exhibition period, eight (8) submissions were received from government agencies and three (3) submissions were received from members of the public and community organisations. On the 10 June, the Department of Planning, Industry and Environment (DPIE) requested EnergyAustralia prepare a Response to Submissions (RtS) Report detailing responses to the issues raised in the submissions.

Following receipt of this RtS, the DPIE will complete its assessment of the Modification and prepare an assessment report, taking into consideration the Modification Report and the RtS, as well as submissions made during the public exhibition period. DPIE's Assessment Report will be considered by the consent authority (the Minister for Planning and Public Spaces, or delegate) prior to the determination of the modification application.

1.4 Response to Submissions Approach

1.4.1 Purpose

This RtS provides a considered response to comments and issues raised by agencies and community members and organisations during the public exhibition of the Modification Report in accordance with Section 4.15 (1) of the EP&A Act.

The RtS will be submitted to DPIE so that the modification application lodged by EnergyAustralia can be further assessed and determined. DPIE will forward the RtS to relevant government agencies for consideration and make it publicly available via DPIE's Major Projects website.

The RtS also provides further details of on-going stakeholder engagement activities that have been undertaken since the Modification Report was submitted in May 2021, including both agency and community engagement activities.

1.4.2 Methodology

All submissions received were collated and categorised based on the following:

- agency (government);
- individual public submissions; and
- community organisations.

Each submission was reviewed and responses prepared with specialist technical input where required. All responses have been completed by the same study team that prepared the Modification Report.

1.4.3 Structure

The structure of the RtS is as follows:

- Chapter 1: Introduction;
- Chapter 2: Analysis of Submissions;
- Chapter 3: Actions taken since Modification Report exhibition;
- Chapter 4: Responses to government agency submissions;
- Chapter 5: Responses to public submissions; and
- Chapter 6: Revised summary of management and mitigation measures

2. ANALYSIS OF SUBMISSIONS

2.1 Public Exhibition of the Modification Report

The Modification Report was publicly exhibited between 27 May 2021 and 9 June 2021 at the following locations:

- Lithgow City Council, 180 Mort Street, Lithgow; and
- DPIE's online Major Projects register (electronic copy): MOD 1 - Lamberts North Ash Repository Upgrades | Major Projects - Department of Planning and Environment (nsw.gov.au).

2.2 Overview of Agency Submissions

A total of eight[1] (8) submissions on the Modification were received from Government agencies. The submissions are available on DPIE's Major Projects website: Submissions | Major Projects - Department of Planning and Environment (nsw.gov.au).

A breakdown of the submissions by type (support, object, comment) is detailed in Table 2-1.

Table 2-1: Government Agency Submissions

Government Agency	Submission Type
Lithgow City Council (LCC)	Support
WaterNSW	Comment
DPIE Water / Natural Resources Access Regulator (NRAR)	Comment
Biodiversity, Conservation and Science Directorate (BCS)	Comment
Environment Protection Authority (EPA)	Comment
Transport for NSW (TfNSW) (incorporating Roads and Maritime Services)[1]	Comment
Dams Safety	Comment
Resources Regulator	Comment

Agency comments and responses to matters raised are discussed in Section 4.

2.3 Overview of Community Submissions

Three (3) public and community organisation submissions were received as detailed in Table 2-2.

Table 2-2: Community Submissions

Community Submitter	Locality of Submitter	Submission Type
Lithgow Environment Group (LEG)	Blackmans Flat, NSW	Object
Hunter Community Environment Centre	Hamilton East, NSW	Object
Bathurst Community Climate Action Network	Kelso, NSW	Object

Responses to the matters raised in community submissions are provided in Section 5.

[1] The Major Projects portal includes submissions from NSW Roads and Maritime Services (RMS) and Transport for NSW (TfNSW) as separate submissions, however these submissions are identical. Noting RMS sits within TfNSW, for the purposes of this RtS, these have been assumed to be one submission.

3. ACTIONS TAKEN SINCE LODGEMENT OF THE MODIFICATION REPORT

3.1 Stakeholder Engagement

Since the lodgement of the Modification Report in May 2021, continued engagement with government agencies and the community has been undertaken. This has included:

- consultation with LCC's General Manager Environment and Development on 27 May 2021;
- additional consultation with LCC on 31 May 2021 as part of the regular bi monthly EnergyAustralia / LCC meetings;
- a fact sheet outlining the proposed Modification was prepared and placed on EnergyAustralia's MPPS website: EA_028_Mt Piper LNAR Fact Sheet_v3.pdf (energyaustralia.com.au) and distributed to LCC and members of the MPPS Community Consultative Committee (CCC) on 9 June 2021;
- 21 June 2021: email correspondence to TfNSW / DPIE relating to TfNSW submission comments; and
- 22 June 2021: email correspondence to EPA / DPIE relating to EPA submission comments.

EnergyAustralia is committed to ongoing consultation with relevant agencies and the community, with planned consultation including regular bi monthly EnergyAustralia / LCC meetings and engagement with the CCC. The next meeting CCC meeting was scheduled for 6 July 2021, but has been postponed due to COVID restrictions.

4. RESPONSES TO AGENCY SUBMISSIONS

Each of the matters raised by government agencies have been addressed in Table 4-1.

Table 4-1: Response to Government Agency Submissions

Agency	Submission	Response
Lithgow City Council	Council notes that the modification involves installing a leachate barrier system to capture and subsequently reuse / treat leachate that has moved through the ash placed above the liner. The modification also seeks to reduce the footprint to avoid interaction with the existing Western Coal Services Infrastructure area. As such, Council has no objection to the modification subject to the original condition remaining on the consent.	Noted.
WaterNSW	WaterNSW has reviewed the Modification Report and associated assessment reports and considers this modification can achieve a Neutral or Beneficial Effect on Water Quality (NorBE), if all proposed management measures are appropriately implemented.	Noted.
	If the Department approves the proposed modification, WaterNSW requests the following documents be prepared or updated in consultation with WaterNSW: ■ Soil and Water Management Plans for each stage of the works as per Consent Conditions B4 and B5, and ■ Operational Environmental Management Plan for Lamberts North Ash Repositories as per Consent Conditions D2 and D3.	WaterNSW reference to conditions B4 and B5 of PA 09_0186 relates to the LNAR Construction Environmental Management Plan (CEMP) and related sub plans. Please note that LNAR construction works covered by the CEMP are complete and LNAR, as an existing operational ash repository, is managed in accordance with the existing Operational Environmental Management Plan (OEMP). The CEMP is no longer relevant to operational activities at LNAR. As such, all proposed management and mitigation measures as detailed in the Modification Report and supporting Water Assessment relating to the liner installation and associated works will be detailed in an updated OEMP, as per consent conditions D2 and D3 of PA 09_0186. The Soil and Water Management Plan will form a component of the OEMP as per the existing condition D3. The updated OEMP will be prepared in consultation with WaterNSW.
	WaterNSW requests to remain as a stakeholder and opportunity to continue to be involved in further assessment of the proposal.	It is expected that DPIE will refer the RtS to WaterNSW for review and comment prior to completion of the Assessment Report and determination by the consent authority.

Agency	Submission	Response
DPIE Water / NRAR	**Surface Water Management – Recommendation prior to Determination** The proponent should review the surface water storages that capture runoff (as part of the modification) to ensure the separation of clean and dirty water, and the diversion of clean water downstream. Where clean water is taken due to the project, the proponent needs to ensure this is in accordance with a water licence or an exemption. <u>Explanation</u> The modification proposes that there is no additional surface water or groundwater requirements, and there is no proposal to intercept groundwater. Therefore, an assessment of the ability to hold water entitlement and an assessment of the impacts of water supply infrastructure and interception is not required. However, a review of the design of the capture of surface water in storages is required. SHG1 captures clean runoff from an upstream catchment and this proposal has indicated the requirement to use this storage to store runoff from the external batters of LNAR. NRAR recommends that clean and dirty water be separated, and that the clean water is diverted downstream.	The surface water management arrangements for all stages of the modified LNAR will be in accordance with the existing approved practices which manage runoff from external batters of LNAR through existing approved sediment basins. The approved final landform for the LNAR authorises diversion of water from external batters of the LNAR to SHG1 and, at present, SHG1 has no surface connection to downstream waterways. There are no changes to surface water management proposed in relation to the modified LNAR and activities at the LNAR will not harvest or use water that has not been in contact with ash placement activities. Stormwater run-off from the west and south-west of the LNAR is captured by the existing drain and is diverted into the clean water system. Stormwater to the south of the LNAR falls onto the existing mining operations of Centennial Coal and is managed by Centennial through a series of ponds and drains in the vicinity of the old Lamberts Gully Creek, well to the east of the LNAR. Stormwater falling on areas to the east and north of LNAR largely drain naturally to the east into Wangcol Creek following the general lay of the land away from the site. Water management principles currently approved and employed at the LNAR will continue as a result of the modification including: ■ The separation of clean and dirty water (as discussed above); ■ Rainwater falling onto the LNAR will be contained onsite, by diverting water to on-site retention / sediment ponds (dirty water) which will be strategically located within the LNAR. On-site containment may include the use of the existing ponds; ■ Design of retention and sediment ponds will be designed on the basis of catchment areas and where possible will be sized to target minimum 50-years ARI (average recurrence interval) event; ■ Sediment from the retention and sediment ponds will be periodically removed to manage on site capacity; ■ Dust suppression and irrigation water will be sourced from the retention / sediment ponds or directly from existing ponds at the MPPS; ■ Capping and revegetation of completed areas will enable diversion of clean water to site drainage system; and ■ The establishment and maintenance of erosion and sediment controls.

Agency	Submission	Response
	Operational environmental Management Plan – Recommendation Post Determination The proponent must update the Operational Environment Management Plan. Explanation The proposal to update the Operational Environment Management Plan to address surface water and groundwater monitoring and management measures as required is supported.	EnergyAustralia agrees with this recommendation. .
BCS	BCS understands that the modification includes minor boundary adjustments that will result in an overall reduction of the approval area by 4.9 hectares. A biodiversity development assessment report is not required. A biodiversity development assessment report (BDAR) is required with a modification application, unless the determining authority is satisfied that that the modification will not increase the impact on biodiversity values. Some sparse vegetation regrowth (0.25 hectares) located on excavated mine material will be cleared. This regrowth, consisting of Cootamundra wattle (*Acacia baileyana*), Sydney golden wattle (*Acacia longifolia*), introduced pine (*Pinus sp.*) and pampas grass (*Cortaderia selloana*), is unlikely to match any native plant communities in the area. The area has not been formally rehabilitated. Given the overall decrease in the approval area, low biodiversity value of the regrowth to be cleared, and highly disturbed nature of the site, BCS considers that the modification is unlikely to increase the impact on biodiversity values and therefore a BDAR is not required. BCS considers that the biodiversity assessment report accompanying the modification application adequately addresses biodiversity impacts.	Noted.
EPA	Based on the information provided, the proposal is subject to an environment protection licence under sections 43, 47, and 55 of the Protection of the Environment Operations Act 1997 (POEO Act). Mt Piper currently hold an environment protection licence (EPL 13007) for electricity generation and chemical storage under Schedule 1 of the POEO Act. If the modification to the current consent is approved EPL 13007 would require variation under Section 58 of the POEO Act.	EPL 13007 applies to the Mt Piper Power Station (MPPS) and includes LNAR as presented in Figures 1-1 and 1-2 of the Modification Report. There will be no changes to the EPL 13007 Premises boundary as a result of the Modification. EPL 13007 includes a range of monitoring requirements which are not proposed to be amended as a result of the modification. As such, a variation to EPL 13007 as a result of the modification is not required. EnergyAustralia will continue to consult with the EPA so that EPL13007 accurately reflects its activities as required.
	Matters to be addressed with conditions **a. Leachate Management System**	As the detailed design and installation of the liner will progress in a staged manner as set out in the Modification Report, EnergyAustralia proposes that the recommended condition of approval be amended to reflect this. Whilst

Agency	Submission	Response
	The Water Assessment indicates that the leachate management system would be designed consistent with the Environmental Guidelines, Solid Waste Landfills (EPA, 2016) and no discharge to waters is proposed. However, the assessment provides limited details of some aspects of the leachate management system. For example, the assessment indicates that the size and layout of the leachate collection dam/s would be determined at detailed design stage. To address residual surface water pollution risks, the following condition of approval is recommended. **Recommendation:** Prior to commencement of operation, the applicant must demonstrate that the design of the leachate management system is consistent with the Environmental Guidelines, Solid Waste Landfills (EPA, 2016), including: ■ The leachate barrier system, including liner and leachate collection system; ■ The leachate storage dam/s including freeboard, appropriate sizing and liner; and ■ Monitoring requirements **Recommendation:** Prior to commencement of operation the applicant must demonstrate that the leachate collection system is appropriately sized and consistent with the site water balance modelling.	EnergyAustralia supports the inclusion of the condition, it proposes the following amended wording (additions in red, deletions in ~~strikethrough~~): **Recommendation**: Prior to commencement of operation of each stage, the applicant must demonstrate that the design of the leachate management system for each stage is consistent with the Environmental Guidelines, Solid Waste Landfills (EPA, 2016), including: - The leachate barrier system, including liner and leachate collection system; and - The leachate storage dam/s including freeboard, appropriate sizing and liner.~~; and~~ · ~~Monitoring requirements~~ **Recommendation:** Monitoring of the leachate management system will be included in the updated OEMP. **Recommendation**: Prior to commencement of operation of each stage the applicant must demonstrate that the leachate collection system for each stage is appropriately sized and consistent with the site water balance modelling.
	Additional Comments: The modification proposes 'minor amendments to the approved LNAR footprint, including excising the Western Coal Services washery infrastructure'. The EPA does not support the excision of any portion of land, from within the currently approved footprint, which contains infrastructure crucial to the operation of the Mount Piper Power Station. The EPA would require further justification for the removal of any business-critical infrastructure from the approved premises.	The Western Coal Services land proposed to be excised from the LNAR footprint associated with the existing PA 09_0186, is Lot 102 DP 1240974. This allotment does not fall within the current EPL 13007 Premises (see Figures 1-1 and 1-2 of the Modification Report). The EPL Premises was previously amended to accommodate the Western Coal Services infrastructure whereby Lot 102 DP 1240974 was created and then excised from EPL 13007. Lot 102 DP 1240974 is now owned and occupied by Centennial Coal. Infrastructure at the Western Coal Services site relates solely to Centennial's coal washery operations pursuant to planning approval SSD 5579 and EPL 21229. The infrastructure currently situated on Lot 102 DP1240974 is critical for Centennial Coal operations as approved and is independent of ash placement activities at LNAR. Although the washery can supply coal to the MPPS, the two operations are operated independently and there is no crucial infrastructure that relates to operations at MPPS (or EPL 13007). The removal of the Western Coal Services land parcel (Lot 102 DP1240974) from PA 09_0186, in terms of the Modification, is an administrative change which is consistent with PA 09_0186.

Agency	Submission	Response
TfNSW	TfNSW notes the applicant's commitment to provide an updated Operational Environmental Management Plan incorporating mitigation and management measures in relation to potential traffic impacts.	**Noted.** Agree. As committed to in the Modification Report, the existing LNAR OEMP will be updated to incorporate mitigation and management measures relating to potential traffic impacts.
	TfNSW provides the following recommendations for consideration by the consent authority. ■ The existing daily traffic volumes and mix of vehicles (as approved in the development consents) are not be permitted to increase beyond currently approved levels. ■ The size of the design vehicle is limited to a PBS truck and dog trailer or PBS prime mover and semi-trailer configurations with a maximum length of 20 metres. ■ Prior to commencement of haulage in association with liner material the applicant is to implement an updated Operational Environmental Management Plan incorporating mitigation and management measures in relation to potential traffic impacts including; – Measures to manage the number of vehicle movements in accordance with the approved development consents. – Measures to ensure the haul routes proposed are communicated to contractors and staff and complied with. – Measures to limit impacts associated with peak traffic such scheduling of haulage vehicle movements to occur outside of daily commuter peak periods, local special event times, school bus (both in rural and town areas) and school zone operating hours. – Measures to limit impacts associated with traffic queuing at intersections such as scheduling to avoid convoys. – Incorporation of a Driver Code of Conduct for the task of transporting materials on public roads, this is to apply to any haulage undertaken via contractors and staff. The Driver Code of Conduct is to be submitted and approved to the satisfaction of the consent authority. The document is to cover the matters referred to within the Driver Code of Conduct Annexure (attached). The development is to be carried out in accordance with the approved Code of Conduct at all times.	**<u>Summary of traffic impact assessment:</u>** Traffic impacts associated with the modification are discussed in Section 7.5 of the Modification Report, which notes: ■ **Minimal Traffic Volumes**: During liner installation, on average, around three to four (3 - 4) truck deliveries could occur per day, associated with the delivery of drainage aggregate from local suppliers and liner materials, with installation periods generally around three to four (3 - 4) months per stage not including weather delays. ■ **Within Existing Approved Traffic Movements**: The estimated number of trucking movements is well within the range of that previously assessed and approved as part of both the Mt Piper Ash Placement Project (LNAR and LSAR) PA 09_0186 and MPPS development consent 80-10060. The MPPS development consent (80-10060) provides for coal truck deliveries to MPPS in the order of 100 trucks per day. However, there are limited, if any, coal truck deliveries to MPPS as most of the coal is currently delivered via overland conveyor. The worst case average of three to four (3 - 4) truck deliveries per day to MPPS is well below the 100 trucks authorised and will not result in (cumulatively) an exceedance of the 100 trucks per day authorised. ■ **Utilisation of existing approved heavy vehicle haulage routes:** The transport route for any aggregates required will be via existing approved heavy haulage routes, including the Great Western Highway and Castlereagh Highway, and via Boulder Road to MPPS. This transport route and intersection use is consistent with existing heavy haulage transport routes (RMS-approved 19 m B-double route) and within the approved coal truck movements to MPPS under development approval 80-10060. ■ **Management and Mitigation:** The potential traffic impacts from the Modification relate to the minor truck movements associated with the importation of the liner and drainage aggregate, anticipated to be worst case three to four (3 - 4) truck deliveries per day. This is negligible and will not result in an increase to the existing approved truck volumes under MPPS development consent (80-10060) which allows for around 100 trucks per day. Delivery of the liner and drainage aggregate materials and associated mitigation and management measures will be undertaken in accordance with the updated OEMP.

Agency	Submission	Response
		Response to TfNSW Submission: TfNSW recommends no increase in traffic volumes above that approved under existing development consents, i.e. Mt Piper Ash Placement Project (LNAR and LSAR) PA 09_0186 and MPPS development consent 80-10060. As detailed in the Modification Report and summarised above, the proposed worst case traffic volumes associated with the importation of aggregates and liner materials is 3 – 4 truck movements day, well within the currently approved volumes. In addition to the recommendation regarding traffic volumes and mix of vehicles not increasing beyond currently approved levels, TfNSW has recommended a range of additional controls, limitations and requirements, including: ■ Scheduling of haulage vehicle movements outside of daily commuter peak periods, local special events time and school zones operating hours / bus times and avoidance of convoys and queuing at intersections. It is noted that the *currently approved* traffic volumes for MPPS are enabled under a separate development consent, and it is highly unlikely that the 3-4 vehicles per day associated with the Modification would impact those matters set out above. ■ Preparation of a Driver Code of Conduct which TfNSW provided as Annexure A attached to their letter dated 8/06/2021, the contents of which appears to be for a full Traffic Management Plan (TMP) to be prepared. EnergyAustralia does not disagree with preparing and issuing an appropriate Driver Code of Conduct for the 3 – 4 deliveries, however the list at Annexure A (as referenced above), appears to be disproportionate and is not warranted for the limited vehicle movements associated with the Modification. EnergyAustralia considers the additional controls recommended by TfNSW relating to truck movement scheduling restrictions and preparation of a Traffic Management Plan are unreasonable in the context of: ■ Traffic volumes are negligible, being worst case on average 3 – 4 trucks per day. This is negligible in the context of the existing approved truck volumes under MPPS development consent (80-10060) which allows for in the order of 100 trucks per day, noting limited, if any, coal truck deliveries occur. ■ The three to four (3 - 4) vehicles per day (worst case) will result in a negligible increase in heavy vehicle traffic along the Great Western Highway (approximately 0.1 – 0.2% increase), Castlereagh Highway (1 - 2% increase) and Boulder Road (3 - 5% increase) noting that these additional vehicles will only be for a limited time over the life of the repository, restricted to such times as when the liner is being installed.

Agency	Submission	Response
		■ Existing approved heavy vehicle haulage routes will be utilised. ■ The existing limits on traffic movements are already approved under a separate development consent for MPPS. EnergyAustralia is committed to truck movements associated with the LNAR liner installation being within the existing approved traffic volumes. EnergyAustralia proposes that traffic mitigation and management measures will be detailed within an updated OEMP, including the preparation of a Driver Code of Conduct (not a TMP), and including protocols to mitigate and manage potential impacts to daily commuter peak periods, local special event times, school bus (both in rural and town areas) and school zone operating hours, and avoidance of convoys, as relevant.
Dams Safety	Dams Safety NSW appreciates the opportunity to comment on the modification application for Mount Piper Power Station Ash Placement Project MOD 1. DSNSW has reviewed the document and the proposed emplacement structure is an old mining void with no proposed manmade embankments. The emplacement structure is therefore not a 'dam'. Consequently Dams Safety NSW has no comments on the proposed project and no recommendations at this stage.	Noted.
Resources Regulator	**Assessment** Based on the review of the modification report, the Resources Regulator advises that it has no specific comments regarding mine safety or mine rehabilitation matters in relation to the proposal	Noted.
	Regulatory requirements if approved The proponent will be required to comply with rehabilitation requirements under the mining authorisation(s) when undertaking works associated with the proposal. The Resources Regulator may undertake assessments of the mine operators' proposed mining activities under the Work Health and Safety (Mines and Petroleum Sites) Act 2013 and Regulation as well as other WHS regulatory obligations	EnergyAustralia will not hold any mining authorisation within the footprint of the LNAR as modified. The above comment from the Resources Regulator which states that the Resources Regulator has *"no specific comments regarding mine safety and mine rehabilitation matters in relation to the proposal"* is noted. However, the following information is provided in response to the additional comment in the Resources Regulator's submission regarding these two matters. Consolidated Coal Lease 733 (CCL 33) exists over the southern portion of LNAR. This area has been subject to mining activities by Western Coal Services (Centennial). This area is to be handed back to EnergyAustralia by Centennial prior to future LNAR ash placement activities. Centennial will relinquish its mining authorisation prior to EnergyAustralia developing this area as an ash repository.

5. RESPONSES TO COMMUNITY SUBMISSIONS

Matters raised by the community are addressed in Table 5-1.

Table 5-1: Response to Community Submissions

Theme	Submission Summary	Response
Site Suitability	The site is inappropriate for ash emplacement and storage.	The Ash Repositories at MPPS, including LNAR, are existing approved ash repositories that have been subject to previous environmental impact assessment and merit based approvals under the EP&A Act. The Modification does not seek to change the approved use, rather it seeks to implement substantially improved environmental controls for enhanced environmental outcomes.
Interactions	In absence of planning approval for the Groundwater Interception Project, further detail is required on the interactions between the two respective ash emplacement areas, and the proposed addition of liners and how this affects the movement of leachate.	The Modification seeks to install a liner with very low permeability and an associated leachate management system for LNAR. The LNAR leachate management system is intended to mitigate the potential for future leachate migration from the LNAR. The Groundwater Interception Project is a separate project, is not subject to PA 09_0186 and will not interact with the LNAR as modified. The LNAR and associated leachate management system is separate to the MPAR, which is operated independently under its own planning approval (PA 09_0186) and in accordance with approved practices, management and reporting requirements. The LNAR leachate management system is unlikely to have interactions with the MPAR, with the exception of common plant and staff which will operate between the Ash Repositories.

Theme	Submission Summary	Response
Leachate Management	Effectiveness of the leachate management system to contain leachate, including onsite leachate storage ponds and transport pipelines	The liner and associated leachate management system will be designed, installed and operated in accordance with existing approved practices and the requirements of the Environmental Guidelines: Solid Waste Landfills (EPA, 2016) ('Guidelines'). These Guidelines are state specific and industry best practice, intended to inform the design of leachate management systems in a way that results in effective management and containment of leachate. Implementation of each stage of the proposed leachate management system in accordance with the minimum standards presented in the Guidelines will mitigate the potential for adverse impacts to the surrounding surface water or groundwater.
	Monitoring of the liner and leachate management system	The revised OEMP will document groundwater and surface water management and monitoring requirements associated with implementing the Modification, including monitoring requirements for leachate, groundwater and surface water levels and water quality in the LNAR and surrounding area, including; ■ monitoring network (i.e. for groundwater and surface water); ■ leachate monitoring (levels, quality, production and storage volumes); ■ leak detection bores (i.e. for leachate storage infrastructure); ■ frequency and schedule of monitoring; ■ monitoring methodologies (i.e. field methods, decontamination procedures, quality control / quality assurance procedures); and, ■ monitoring parameters (i.e. water levels, flow rates, physical and chemical properties).
	Intercepting the leaching into Wangcol creek and returning it to the ash repository	The Modification seeks to install a liner with very low permeability and an associated leachate management system for LNAR. The leachate management system will capture, store and transfer leachate generated from above the liner to suitably sized double HDPE lined ponds for subsequent treatment or reuse.

Theme	Submission Summary	Response
Leachate Management	Use of liners to prevent leachate in only one portion of the overall ash emplacement area is inadequate.	The Modification seeks to install a liner with very low permeability and an associated leachate management system for LNAR under PA 09_0186. Legacy leachate management associated with the MPAR is subject to separate development consent (80-10060) under the EP&A Act, which is not the subject of the LNAR Modification. Planning and assessment for the cessation of ash placement activities and related legacy issues at the MPAR is ongoing.
Ash Reuse	Alternatives to ash placement – beneficial reuse of ash.	The currently approved ash placement requirements limit the ability for reuse of ash that is placed in the LNAR due to the co-placement of BCA and WCA. Within the LNAR, BCA is currently approved to be emplaced on top of WCA above a Relative Level (RL) of 946 m Australia Height Datum (AHD) and encapsulated within compacted WCA. Therefore, as currently approved, a lot of ash is required for the disposal of brine at LNAR. EnergyAustralia is very supportive of the reuse of ash where practical and supports a number of initiatives in this regard. The Modification provides for an increased opportunity for the future beneficial reuse of WCA that would have otherwise been used to encapsulate and construct the LNAR to RL 946m AHD, which would have likely sterilised the WCA for beneficial reuse. Careful placement of WCA within LNAR will allow for its recovery providing a positive environmental outcome. The Modification is proposing to strengthen the controls around ash placement and leachate management to minimise the potential for BCA to impact upon WCA and the surrounding environment, maximising the potential for reuse of ash placed in the modified LNAR. This is also likely to provide increased future opportunity for maximising the longevity of LNAR.
Remediation	Potential long-term liabilities related to the Ash Repositories	The Modification seeks to install and encapsulate ash within a liner with very low permeability. The base liner will intercept leachate moving through the ash placement area during operations and the capping liner will limit water moving into the ash placement area once it is rehabilitated. The encapsulation of the ash repository using the liner materials will minimise the long-term liability of the repository. Furthermore, PA 09_0186 Condition D3(f) requires the preparation of a Site Rehabilitation Management Plan outlining measures to stabilise and rehabilitate the site following project completion of ash placement activities. The Site Rehabilitation Management Plan is to be developed in consultation with WaterNSW (formerly Sydney Catchment Authority), including details of restoration, rehabilitation and revegetation, and a program and timeframe for monitoring rehabilitated areas.

Theme	Submission Summary	Response
		Further, PA 09_0186 Condition F1 requires the preparation of a Project Completion Management Plan, inclusive of details of rehabilitation, revegetation, groundwater and surface water monitoring program and contingency plans..
Geotechnical stability	Geotechnical stability of LNAR noting former underground mining operations and impacts to the performance of the liner	The majority of the LNAR footprint has been subject to open cut mining activities and subsequent backfill. There is a small area near the western boundary of the LNAR that retains some remnant pillars from historic underground mining activities (see Figure 2-1 of the Modification report). To minimise the consequence of potential mine subsidence associated with these remnant pillars, the Modification includes a leachate barrier support system consisting of additional liner layers installed beneath the leachate barrier system in areas of potential mine subsidence risk. It may be possible to avoid these areas and this will be assessed during the detailed design phase of the LNAR liner components. The integrity of the underground workings near the western boundary of the LNAR will be further considered during the detailed design process as the LNAR stages are progressed as necessary. A geotechnical assessment will be undertaken for each stage, the outcomes of which will be incorporated into the detailed engineering design of the liner and associate leachate management system.
	Long term stability of the LNAR in terms of vibration, subsidence and earthquakes	Stability assessments will be undertaken for each stage of the LNAR to assess the long-term integrity of the detailed design before it is finalised. These assessments will consider and assess the stability of the design as a result of events causing vibration. The outcome from these assessments will inform the final detailed design for each stage of the LNAR.
Coal Fired Power Generation	Coal power be established as a last-resort source of dispatchable energy, so as to reduce the production of ash; and that this condition be written into approval for this Modification, so that it does not oblige the government to give maximum life to the power station.	The existing MPPS coal fired power station operates under development consent (80-10060) under the EP&A Act, which is not the subject of the Modification.
	There be a timeline for the closure of Mount Piper	The existing MPPS coal fired power station operates under separate development consent (80-10060) under the EP&A Act, which is not the subject of the Modification.
Emissions	Cumulative impacts, including emissions with proposed Energy from Waste Project and exposed coal and coal ash stockpiles	LNAR is an approved ash repository (PA 09_0186). The existing LNAR approval was subject to an environmental impact assessment, inclusive of a quantitative air quality assessment. The Modification seeks to enable the installation of a liner and associated leachate management system.

Theme	Submission Summary	Response
		Operational activities at LNAR will continue in accordance with existing approved practices and the LNAR OEMP. No changes are proposed to broader ash management and stockpiles, which will continue in accordance with the existing MPPS (80-10060) and LNAR (PA09_0186) approvals. The proposed Mt Piper Energy Recovery Project is subject to a separate development application and merit assessment under the EP&A Act, including consideration of cumulative impacts.
	Objection to the current method of maintaining dust control with residual brine and current required monitoring.	Brine is not currently used for dust control at the LNAR. The modified LNAR includes staged installation of double HDPE lined multipurpose storage ponds to manage leachate collected from BCA placement at LNAR, as well as water intercepted from other areas of the LNAR. Where possible, leachate will be recycled for dust suppression within the lined areas or transferred to MPPS for treatment and used in electricity generation. The reuse of leachate in dust suppression will occur only within lined areas, ensuring ongoing management of the leachate within the leachate management system. The reuse of leachate in this manner will likely reduce MPPS's demand for make up water. Groundwater and surface monitoring will continue to be undertaken in accordance with the LNAR OEMP and the requirements of EPL 13007.
Monitoring	That all of the station's land, air and water emissions are publicly, and at least annually, reported.	EnergyAustralia publicly reports the results of environmental monitoring in accordance with the requirements of EPL 13007 and the requirements of PA 09_0186 on the MPPS website: Mt Piper EPA Reports | EnergyAustralia and Mt Piper Brine in Ash Co-Placement | EnergyAustralia
	Watching and accountable for the daily monitoring of bores not being used in the vicinity	EnergyAustralia undertakes groundwater monitoring in accordance with its legislative requirements under the LNAR OEMP and EPL 13007.
Waste	Objection to increasing non-recyclable plastic, wooden & cotton ash	The Modification does not involve increasing non-recyclable plastic, wooden and cotton ash. The comment appears to relate to the proposed Mt Piper Energy Recovery Project which is subject to a separate development application and merit assessment under the EP&A Act. The comment is therefore not relevant to the Modification.
Legislation	■ Objection to the current legislation not requiring fees to dump ash residual ■ Objection to the current legislation not requiring all ash to be resourced and removed with no residual ash on site	The setting of legislative provisions is a matter for the NSW Government. The Modification is subject to current legislative provisions set by the NSW Government.

Theme	Submission Summary	Response
	■ Legislate that our waterways within the surrounding location be NorBE and meet the same background levels of the headwaters of the Coxs River.	WaterNSW has reviewed the Modification Report and associated assessment reports and considers that the modification can achieve a Neutral or Beneficial Effect on Water Quality (NorBE), if all proposed management measures are appropriately implemented.
	■ Legislate health warning signage along any waterways within the location or downstream	The Modification seeks to install a liner with very low permeability and an associated leachate management system for LNAR under PA 09_0186. It is unclear as to how signage along any waterways relates to the Modification.
	■ Legislate transition to 100% renewables by 2025 – 2030.	The transition to renewable energy by 2025 – 2030 is outside of the scope of this Modification.
	■ Legislate that MPPS required to monitoring all emissions 24/7 with independent monitoring station to reduce its emissions to zero	The Modification seeks to install a liner with very low permeability and an associated leachate management system for LNAR under PA 09_0186. The LNAR monitoring program includes several depositional dust gauges that monitor air emissions 24/7. This monitoring will continue. All monitoring associated with the LNAR will be set out in the OEMP. The existing MPPS coal fired power station operates under development consent (80-10060) under the EP&A Act, which is not the subject of the Modification
	■ Legislate the requirement to remediate areas if MPPS goes into caretaker mode	The relevant Project Approvals, development consents and the EPL 13007 will continue to apply to the MPPS if it goes into caretaker mode. All these authorisations contain provisions for the remediation of lands. In relation to remediation of the LNAR, PA 09_0186 Condition D3(f) requires the preparation of a Site Rehabilitation Management Plan outlining measures to stabilise and rehabilitate the site following project completion of ash placement activities. The Site Rehabilitation Management Plan is to be developed in consultation with WaterNSW (formerly Sydney Catchment Authority), including details of restoration, rehabilitation and revegetation, and a program and timeframe for monitoring rehabilitated areas. Further, PA 09_0186 Condition F1 requires the preparation of a Project Completion Management Plan, inclusive of details of rehabilitation, revegetation, groundwater and surface water monitoring program and contingency plans.
Traffic	Objection to increase of trucks to carry waste refuse, more emissions	The comment appears to relate to the proposed Mt Piper Energy Recovery Project which is subject to a separate development application and merit assessment under the EP&A Act. The comment is therefore not relevant to the Modification. The Modification does not involve any transport of waste refuse.

6. REVISED SUMMARY OF MANAGEMENT AND MITIGATION MEASURES

Environmental safeguards outlined in this Section would be incorporated into an updated OEMP, should the Modification proceed. These safeguards will limit potential adverse impacts arising from the Modification on the surrounding environment. The safeguards and management measures are summarised Table 6-1 below.

All other environmental aspects will continue to be managed in accordance with the existing environmental management and mitigation measures within the OEMP.

Table 6-1 Updated Summary of Environmental Safeguards and Mitigation Measures

Plan	Environmental Safeguards and Mitigation Measures
Lamberts North Operational Environmental Management Plan	**OEMP** ■ General updates applicable for each stage to incorporate the Modification; ■ Updates to the relevant mapping and plans to incorporate the Modification; ■ Define the roles, responsibilities, authority and accountability of key personnel involved in environmental management for the LNAR; and ■ Describe stakeholder and community engagement measures to be implemented to inform the local community and relevant stakeholders regarding the installation and operational performance of the LNAR. **Water Management Updates** Water quality outcomes will be developed with respect to the specific context of the Modification objectives and operations. The existing water quality outcomes presented in the OEMP (EnergyAustralia, 2019), will be revised to account for the Modification. Erosion and sediment controls are already contained within the OEMP. The Modification is unlikely to require changes to these approved controls. The revised OEMP will document groundwater and surface water management and monitoring requirements associated with the modified LNAR, including those set out in Section 7.2.3 of the Modification Report. Detailed design of the modified LNAR, for all stages will incorporate the principle of clean and dirty water separation. **Traffic Management Updates** Preparation of a Driver Code of Conduct, and including protocols to mitigate and manage potential traffic impacts to daily commuter peak periods, local special event times, school bus (both in rural and town areas) and school zone operating hours, and avoidance of convoys, as relevant.

Detailed Design	■ Detailed design of the leachate barrier system (liner) for each stage of the LNAR will be prepared prior to the installation of liner materials. This will generally include:
	  ■ geotechnical assessment;
	  ■ leachate pond sizing and location;
	  ■ general water management logistics (i.e. pumping requirements, storage locations and drainage logistics);
	  ■ liner material requirements;
	  ■ liner staging including installation procedure and logistics; and
	  ■ liner installation quality assurance and quality control procedures.
	■ NSW EPA (2016) requirements pertaining to stormwater management, leachate management, installation quality assurance (QA) requirements (including a QA Plan), aesthetics, capping and closure requirements will also be addressed by the detailed design for the LNAR (as modified).
	■ As is currently outlined in the OEMP, the LNAR Principle Contractor will operate the LNAR and will update their management plans and procedures to incorporate the necessary changes as a result of the detailed design.

7. REFERENCES

EPA, 2016. Environmental Guidelines - Solid Waste Landfills, Sydney South: NSW Environmental Protection Authority.

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Tanzania
Thailand
UAE
UK
US
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ERM's Newcastle Office
Level 1, Watt Street Commercial Centre
45 Watt Street
Newcastle NSW 2300

T: +61 02 4903 5500
F: +61 02 4929 5363

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