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16 November 2020

Submission by Global Renewables Eastern Creek on Cleanaway's Western Sydney Energy & Resource Recovery Centre

SSD-10395

Background

Global Renewables Eastern Creek (GREC) is the owner of the Urban Resource – Reduction, Recovery and Recycling (UR-3R) Facility at Eastern Creek. Global Renewables is a privately-owned and operated Australian company which provides sustainable, high technology solutions for household waste management and avoids the significant environmental problems that are caused by the landfilling of waste. Since the commissioning of the UR-3R Facility in 2004, GREC has developed a unique Australian expertise in creating and recovering valuable products from municipal solid waste for the local communities' beneficial use. The UR-3R Facility currently processes 220,000 t/a or around 15% of Sydney's household waste.

This submission is in relation to the proposed State Significant Development known as "Cleanaway's Western Sydney Energy & Resource Recovery Centre" (the WSERRC or the Proposal). GREC's comments are based on the Environmental Impact Statement (EIS) and associated appendices and technical reports. GREC's interest in this project has two elements: general comments on the Proposal's interpretation of EPA policy and proposed approach to sourcing waste, and specific comments on the EIS and the predicted impacts on the UR-3R Facility and GREC's employees.

General Comments on Policy/Waste Sourcing

GREC supports Energy from Waste (EfW) as part of the complex solution to society's waste challenges. The waste hierarchy is a well-accepted model for prioritising waste management and recycling activities. While there are opportunities to improve waste reduction, reuse, and recycling efforts in NSW, the fact remains that a large portion of the state's waste goes to landfill, and infrastructure to recover energy from waste that cannot be recycled is required now and into the foreseeable future. In this regard the WSERRC proposal is a positive development for Western Sydney.

However, there are two key issues with the way that the WSERRC proposal intends to source waste for the EfW process.

Firstly, the EIS asserts in multiple places that energy recovery of unprocessed waste is permitted by the EfW policy. For example, in the Executive Summary, the EIS states:

> *"As permitted under the NSW EfW policy, residual waste from source separating generators will be accepted for energy recovery without initial processing."*

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This is not our understanding of the policy intent, or how the EPA has implemented this policy in the past. Rather the NSW Energy from Waste policy (EfW policy) states that the policy's objectives include:

> *[to] ensure only the residual from bona-fide resource recovery operations are eligible for use as a feedstock for an energy recovery facility.*

In Table 1 of the EfW policy, this is clarified as "No limit by weight of the waste stream received at a processing facility" for a "[f]acility processing mixed MSW waste where a council has separate collection systems for dry recyclables and food and garden waste." The EfW policy is explicit that material may only be sent to an EfW facility after it has been processed at another facility, and we understand that this is how the NSW EPA has interpreted this requirement in the past.

The key problem with the Proponent's interpretation of the EfW policy is that it assumes upstream resource recovery activities will be effective at maximising recovery. What percentage of organic material and recyclable items will be recovered? Even best practice FOGO systems divert only around 50% of household food waste. Commercial wastes with less potential for education of the waste generators could have even lower compliance. How would the Proponent ensure that the FOGO and other recycling services exceed best practice and have very high collection efficiency?

Secondly, the EIS contains a scenario (described as "scenario 2") where 95% of waste received by the proposed Erskine Park processing facility is sent to the WSERRC because the EPA grants the proponents an exemption from the Table 1 requirements.

The justification for this is explained in Table 5.1 of the EIS with the statement

> *"Genuine resource recovery at the levels specified in Table 1 of the NSW EfW policy is not considered technically and economically achievable in the context of current regulatory restrictions on the use of organics recovered from mixed waste and restrictions on the export of mixed or contaminated materials for recycling."*

This is contrary to how DPIE and EPA have applied the policy in other cases, including approved RDF production facilities such as GREC, and granting such an exemption would be a backward step for resource recovery in NSW.

While the current regulatory restrictions are resulting in significant changes in the mixed waste processing market, existing Alternative Waste Treatment (AWT) operators are currently working with the NSW EPA for specific resource recovery orders and exemptions for mixed waste organic output related products, like land application, to transition to new and sustainable processing. GREC understands the EPA has issued a specific resource recovery exemption to at least one AWT operator in the time since the general exemption was revoked, and that other AWT operators are also applying for specific exemptions. While the content of these exemptions is not known, there is evidence that the AWT industry is finding ways to increase resource recovery and waste diversion despite the current restrictions. The practical and economically achievable levels of diversion are far from certain, and if this proposal was granted an exemption from pre-processing of MSW it could undercut all higher-order alternatives.

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In both cases there is no outlet for hazardous materials or other materials unsuitable/incompatible with the proposal's technology. Section 5.8 of the EIS defines certain wastes as incompatible with the EfW process, including "hazardous waste", "waste with a chlorine content of greater than 1%", and "Any car or industrial batteries". This section further acknowledges:

> *The nature of residual MSW and C&I waste is that it is heterogenous in composition and is reliant on human behaviour for its composition. Whilst every effort will be made to support the community on what waste should be deposited in what bin, not all contamination can practicably be removed from a heterogenous waste stream.*

However, the EIS then proceeds to assume that any contamination will be adequately handled by the flue gas controls. There is no commitment to QA/QC procedures being required for suppliers of waste to the facility. QA/QC procedures only apply at the point the waste arrives at the WSERRC, being:

- Automated radiation detection;
- A visual inspection of only 1 random waste load per day (with additional inspections for new suppliers at an unspecified frequency);
- Removal of unacceptable waste from the waste bunker using the crane;
- Sampling and laboratory testing on a quarterly basis (with no details provided of the number of samples to be collected or how this will ensure statistical validity).

Some forms of "hazardous waste" may be removed in this way, but with the wide definition of hazardous waste in NSW it is hard to confirm this will be adequate without further information. Based on our experience processing over 3.4 million tonnes of Sydney's household mixed waste, we believe the procedures as currently described are wholly inadequate for detecting and preventing "waste with a chlorine content of greater than 1%", and "Any car or industrial batteries" from entering the WSERRC.

The UR-3R Facility is the largest processing facility for MSW in NSW, and GREC's has developed significant expertise and proprietary data about waste composition over the 16 years of operation of that facility. In our opinion, the WSERRC EIS does not truly reflect the heterogenous nature of MSW and that no source separation system is fully effective in all cases.

One notable example from GREC, is that extensive waste audits prior to the design and construction of the UR-3R Facility did not detect a single car battery. The initial design for GREC allowed for hazardous waste to be removed by hand and mobile plant based on inspection of each load directly on the tipping floor. However, when the UR-3R Facility commenced operation, significant numbers of lead-acid batteries were found.

Only through the installation of a dedicated manual pre-sort was the battery issue brought under control. Now 16 years later, after extensive education campaigns and working with the battery industry to encourage the public to return batteries to collection points, there are still over 15,000 lead-acid batteries in the waste delivered to the UR-3R Facility each year.

Similarly, each month around 500 kg of gas bottles of various sizes are removed from the waste delivered to the UR-3R facility. We note that neither car batteries nor gas bottles can be realistically removed from the waste using a grapple or crane system under normal operating conditions.

Further, Appendix C of the EIS (Waste Management Report) states that the audit of MSW conducted in 2019 had an average content of 0.94% chlorine. A maximum value or standard deviation is not provided, nor is there any analysis of how chlorine level varied between different sources of MSW (e.g. LGAs with different collection systems, urban vs suburban LGAs, or coastal vs inland). Given this figure is very close to the limit of 1%, it is unclear how the proponents will ensure MSW with a chlorine content above 1% is not received and burned at the WSERRC, without a significant pre-processing focus.

Table 5.7 of the EIS compares the categories of waste between the Dublin reference facility and the audits conducted in 2019 to support the design of this proposal, but no quantitative (or even qualitative) comparison is provided between the percentage composition of each category. For example, Table 7 of Appendix C indicates that the expected level of "Electronic equipment, household chemicals and pharmaceuticals" in the WSERRC MSW is 1.1%; no comparison figure is provided for the Dublin reference facility categories of "Haz municipal waste (excl. WEEE & tubes)" and "WEEE & Tubes".

As such, it is impossible to determine whether the reference facilities regularly receive household hazardous waste (such as car batteries or household chemicals) in the same quantities that would be expected for the WSERRC proposal. This uncertainty also raises doubt regarding the outputs of the WSERRC. Notably, can the proponents have confidence in the classification of the ash if there is no (or minimal) pre-processing to remove heavy metals from the waste?

It appears that the WSERRC proposal relies (under both scenario 1 and scenario 2) on the assumption that source separation is perfect or near-perfect, including extremely high utilisation by residents and businesses with drop off centres such as CRCs and household chemical clean-out programs. Our real-world experience processing mixed waste does not support this conclusion.

All of these concerns could be adequately addressed by pre-processing of waste to prepare a fuel prior to use at the WSERRC. Simple techniques such as pre-sorting, size separation, and wind-sifting can effectively reduce the level of common household hazardous items. More technically complex (but still commercially available) techniques such as optical sorting for PVC can reduce chorine levels to a comfortable margin below the 1% limit.

We note that other approved and proposed EfW projects in the Sydney market all include an element of fuel preparation at a separate facility prior to use for EfW. An example of this are the requirements DPIE and EPA have placed on GREC as a fuel producer for EfW projects. These requirements, while strict, are appropriate given the early stage of development for EfW in NSW.

Recommendations

- DPIE and EPA should apply the EfW policy consistently, and require all waste to be pre-processed at a processing facility to recover additional recyclables and remove unsuitable/hazardous/incompatible materials.
- DPIE and EPA should not grant an exemption to the Table 1 criteria for the proponents. If there is a demonstrated need to adjust the Table 1 criteria due to changes in the regulatory environment, then that should be done through a process of formal review of the policy, not an ad-hoc process in response to a specific proposal.

- DPIE and EPA should require QA/QC procedures consistent or better than existing industry practice and comparable approved projects, to ensure inputs to the WSERRC comply with the design specification.
- The Project should be scaled at a size that does not require exemptions from the EfW Policy.

The stated benefits of the WSERRC, including in the community information provided to date, rely on incinerator bottom ash (IBA) reuse. GREC notes that the reuse of the bottom ash description of the proposed development is reliant on an offsite Bottom Ash processing facility. This is described as "related development", with the note:

> *If the resource recovery pathways have not been established for the IBA before commissioning of the WSERRC, bottom ash will be disposed at a suitably licenced landfill as general solid waste (non-putrescible), until a suitable reuse is arranged.*

This note is material. Given the comments above about the current regulatory restrictions on the use of organics recovered from mixed waste, we expect the EPA would be cautious and conservative in reviewing an application for land application of IBA. In our experience, this would likely be a complex and lengthy process with no assurance of a positive outcome. Even with EPA approval, there may be other barriers to market. Even relatively simple and consistent products such as coal ash or recovered glass fines have taken a significant time to be approved and accepted into construction. With the concerns noted above regarding the lack of pre-processing for the waste received by the WSERRC, the barriers to demonstrating the IBA is safe for use and fit for purpose are even more significant.

As such, the benefits of the proposal compared to other waste processing options are overstated.

Recommendations

- The benefits and impacts of the WSERRC should be clearly communicated on the basis of the current rules and regulations.
- Alternatively, the IBA processing facility should be linked to the approval of the WSERRC and the proposal should be conditional upon reuse of the IBA as described; if the EPA does not grant an exemption, or the IBA processing facility is not approved, then the WSERRC should not be constructed.

Risks/Impacts on the UR-3R Facility and GREC employees

GREC employs a staff of 100 people, including 76 direct employees and 24 subcontractors, and is seeking to ensure the proposal does not have an adverse impact on the health and wellbeing of our workforce, and that the impacts of the proposal can be clearly communicated to all parties.

Air Quality

A long list of receptors is included in the Air Quality Impact Assessment, but it is unclear in the summary sections whether commercial receptors (such as the UR-3R Facility) have been considered equally with residential receptors. Language refers only to "receptors" or "sensitive receptors" but it is not stated whether a different standard has been applied to commercial receptors (or if they have

been considered as "sensitive"). Clear communication in non-technical language is required so that GREC staff can have confidence that the modelling does not show risk to worker health.

GREC would also appreciate guidance on whether the models used are appropriate for generating accurate ground-level concentrations close to the proposed stack.

Recommendations

- The proponents should provide additional, clear communication on the impact of the proposed WSERRC emissions on the UR-3R Facility and its workforce.
- The model selection should be reviewed to ensure it is accurate for predictions at the UR-3R Facility.

Odour

The risk of odour (or perception of odour) needs to be carefully examined. Given the historic issues related to odour in the area (including an EPA investigation in 2012 known as the Western Sydney Regional Odour Assessment[1]), any new facility must have best-practice odour control systems. GREC and the other waste and recycling operators in the area have worked hard to address odour concerns of the local community. In the period since the Eastern Creek landfill ceased operation, odour complaints in the area have significantly reduced. It is important that the odour study is suitably conservative. In this regard, we note:

- The odour model states "An odour emission rate of 8.5ou/m2/s was used to represent the emissions from the waste material and the rear part of trucks at the facility". This figure is derived from another report by the same authors (Todoroski, 2018) which in turn references a range of other odour assessments. Notably, the 2018 report indicates there were a range of values for the odour emission rate from an active landfill face – between 0.1 and 40 ou.m3/m2/s, with an average of 8.5. No explanation is given for why the average is used instead of the maximum figure. There is also no justification for why the figure for waste in a static landfill face is also suitable for a waste bunker which is being mixed and transported with an overhead crane.
- The active carbon air filter on the waste bunker and tipping hall is not modelled as an odour source. The assessment should include information and/or commitments relating to the destructive efficiency of this control method to determine if it is reasonable to exclude it from the model.
- The ash handling is not considered as an odour source, despite the proposal including the statement "mechanical ventilation is provided by a dust extraction system that extracts from the bunkers". An assessment should be made of the potential for odour from the ash bunker ventilation and/or fugitive emissions.
- The modelling assumes that odour control is effective. A scenario or scenarios should be modelled for reasonably predictable failures of the odour control systems to see if the impact is significantly worse. This will be useful to inform the community of potential short-term impacts from control system failures, or provide a guide to further commitments that may be required.

1 https://www.epa.nsw.gov.au/reporting-and-incidents/report-pollution/contacts-chemical-radiation-pollution/western-sydney-odours

Recommendations

- The assumptions and commitments relating to odour should be reviewed to ensure the modelling is suitably conservative.
- Additional odour scenario or scenarios should be modelled to show the impact if odour control systems fail.

Dust

Dust is a significant concern for GREC for three reasons: the safety of our workforce, GREC's future plans to install solar panels on the roof of the GREC buildings, and the risk of contamination of rainwater run-off from the GREC roofs and sealed areas. Such contamination may make the rainwater collected unsuitable for reuse on site, and/or place additional obligations on GREC to treat the contaminated water.

The consideration of construction dust in the EIS is very brief and it appears GREC has not been included as a receptor in the construction dust assessment. In particular:

- Construction dust controls are not clearly defined. Table 6-16 of the AQIA lists "potential mitigation measures" but there is not a clear commitment to implement all such measures, just a general commitment to a Dust Management Plan.
- The isopleth figures 6-5 to 6-22 appear to show material incremental dust exposure for the GREC site. Without background or cumulative assessment, or a table comparing the results to a relevant standard, it is unclear whether GREC employees will be exposed to significant dust levels.
- As such, we cannot determine whether dust emission from the construction represents a risk to GREC activities.

Operational dust impacts are also unclear. In particular, dust from handling, storage and loading of ash is not adequately considered. The Air Quality assessment includes a statement "Ash residue will be handled in sealed conditions within the facility" however elsewhere it is stated that the bottom ash bunker will have mechanical ventilation to extract air, and that both the bottom ash and flue gas treatment residues (FGTr) will be transported offsite. It is unclear whether the storage, loading or transport of these will generate ash that might impact the GREC site. Robust controls will be needed, including:

- Controls to prevent ash from the bottom ash storage escaping the buildings;
- Clearly defined loading and transport procedures for the bottom ash, to ensure these are not a source of dust; and
- Management for spills of FGTr during loading or maintenance activities for the FGTr storage and loading system, to prevent hazardous dust from being distributed onto the GREC site and exposing GREC workers to risk.

If these controls cannot be ensured, then modelling of the worst-case dust emissions during the operations phase should be required.

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Recommendations

- The impact of construction dust of the GREC site should be more clearly communicated to determine if this represents a material change from the current levels.
- Construction dust commitments should be made more explicit.
- Operational dust controls should be expanded, and/or operational dust should be modelled.

Human Health Risk to GREC Workforce

GREC notes the overall conclusion that the health risk associated with the WSERRC is very low. However, in the interests of providing accurate information to the GREC workforce, we request additional clarifications on the health risk assessment:

- The HHRA shows a material contribution to SOx (Table 12) and in the worst-case scenario (Table 19) the risk index (RI) is very close to the threshold (0.94 vs 1). This could indicate more careful examination of the underlying assumptions is required. Although we note that other tables show much lower RI, this worst-case scenario will be of great interest to the GREC workforce.

- GREC requests additional attention is paid to those pollutants that make up a significant portion of the RI in the worst-case scenario (e.g. HCl, Benzene, and heavy metals). The model includes an assumption about the distribution of heavy metals which is important to determine whether this RI is sufficiently conservative.

- A comparison between the selected air guidelines and the occupational exposure guidelines would be valuable for GREC's internal communication, and would assist other commercial receptors in assessing the WSERRC impacts.

- The phrase "maximum off-site impact" is used in the health assessment, but the location of this maximum point is not clear. Is it on the GREC site or somewhere that GREC workers visit regularly? The air quality assessment contains diagrams which show the GREC site is relatively highly impacted compared to surrounding areas, but it's not clear where the maximum impact is located. A clarification of this would be valuable.

Recommendations

- DPIE/EPA should review the assumptions that impact the worst-case scenario, and request:
    - additional scenarios around these assumptions, and/or
    - commitments to prevent exceedance of the limits for specific pollutants (such as heavy metals) that are material to the overall health risk.
- The proponents should provide additional, non-technical information to clarify the potential health impact for workers in neighbouring facilities, including comparison between the selected air guidelines and the occupational exposure guidelines, and clarification of where the maximum off-site impact occurs.

Overshadowing

GREC notes that the visual impact report notes some predicted overshadowing of the GREC site. GREC would appreciate further analysis of the potential impact of this overshadowing on future solar panels on the GREC roof areas.

Recommendations

- The proponents should provide GREC with analysis of the potential reduction in electricity generation from future solar panels due to overshadowing of the site.

Traffic

The traffic report relies on an upgrade to the Austral Bricks Rd/Wallgrove Rd intersection by others (Gazcorp 2021). If the Gazcorp development does not proceed or is modified, there will be an increased risk for GREC workforce of accidents around the relevant intersection due to construction vehicles and trucks turning onto Wallgrove Rd without traffic lights.

Recommendations

- If the intersection upgrade described in Gazcorp 2021 does not occur before the construction starts on the WSERRC, then the WSERRC proponents should be required to provide equivalent upgrade to the Austral Bricks Rd/Wallgrove Rd intersection.

Noise and Vibration

The noise assessment appears to predict extremely high levels of noise across the UR-3R Facility in the construction phase, and elevated levels in the operational phase. The proposal should include additional controls to prevent noise impacts on the GREC workforce.

GREC has been characterised as an industrial receptor, rather than commercial, for the purposes of the assessment. This permits a higher level of noise. The UR-3R Facility includes an office with 14 employees, as such should be considered as a commercial site in accordance with the relevant guidelines.

The location of GREC as a receptor in the model seems to be a random point in the carpark, rather than any of the work areas. It is therefore difficult to tell whether the modelling is presenting a reasonable prediction for workers on the GREC site.

Specifically, relating to construction noise:

- Even with the industrial classification, the predicted noise from construction is far in excess of the permitted levels. Table 13.4 of the Noise Assessment shows predicted levels at GREC range from 85 to 90 dB throughout the construction phase. Because sound is measured on a logarithmic scale, the predicted levels would be perceived as 2-3 times as loud as the guideline threshold (which is already very loud).
- The text of the EIS tries to justify this construction noise as being intermittent and not continuous noise, but the threshold is taken from construction noise guidelines which already account for the intermittent nature of construction noise. There is no reason to believe the construction of the WSERRC will be different in nature to other construction. Further, the noise assessment states that the construction period will be 3 full years, far in excess of most construction projects. Therefore, the guidelines should be followed, not dismissed.
- The noise assessment claims that all 'feasible and reasonable' mitigation measures have been included in the construction, but the commitments are vague and generic. No specific commitments are included regarding reducing noise at the GREC site.
- Even the generic commitments are difficult to interpret. For example, "location of stationary plant (concrete pumps, air-compressors, generators, etc.) as far away as possible from sensitive receivers" cannot be practically achieved when the two identified industrial receptors, the Austral Bricks commercial site, and the residential receptors are all on different sides of the proposal site. Will noisy equipment be placed close to the GREC boundary in order to make it far away from residential receivers, increasing the noise impact on the GREC workforce?

Relating to operational noise:

- The operational noise assessment indicates levels close to the relevant threshold for GREC. These would be exceedances if GREC was considered as a commercial rather than industrial receptor. More assessment is needed to determine if the noise exposure for office workers at GREC exceeds the commercial thresholds.

- This could take the form of near-field noise modelling that takes into account the GREC buildings and shows the noise impacts on different parts of the GREC site (such as the western road, biofilter, pre-sort, and office building).
- Given the placement of noisy equipment (air cooled condensers) close to the GREC boundary, and how close the predicted noise levels are to the relevant thresholds, the conditions of the approval should include strict conditions to ensure the noise modelling is reflected in reality.

There is a commitment to monitoring vibration during construction to reduce risk to the Warragamba pipelines, but no equivalent protection for GREC's structures. There is no consideration if the GREC biofilter is at risk of compaction or shifting due to vibration from the construction. The UR-3R Facility also includes underground services such as ventilation piping underneath the compost hall. The potential for vibration impact on these structures should be considered.

Recommendations

- Additional, explicit commitments should be required to prevent construction noise impacts on the GREC workforce.
- More assessment is needed to determine if the noise exposure for office workers at GREC exceeds the commercial thresholds during the operational period.
- The potential for vibration impact on the UR-3R Facility should be considered, and appropriate mitigations proposed.

Flood Risk

The Proposal includes significant changes to the drainage line on the boundary between the WSERRC site and the UR-3R Facility. The flood study claims this will result in an improvement in most flood scenarios:

> *"…will not result in an increase in flood levels at adjacent properties for events up to and including the 1% AEP and will not increase flood hazard at adjacent properties for events up to and including the PMF."*

However, the PMF scenario shows increased flood depth and velocity on the UR-3R Facility western access road and at the south-western corner of the site (around the GREC biofilter), as shown in Figures 19-21, 37-39, and 44 of the flood study. Without further scenarios, it is unclear why there is a change from "no increase at 1% AEP" to "increase at PMF". Does this reverse at 0.9% AEP, 0.5% AEP, 0.01% AEP?

More investigation is required to determine the cause and appropriate mitigation for the increased flood levels in the SW corner of the UR-3R Facility under the PMF scenario.

Given the significant flooding around the NW corner of the GREC site under all scenarios, and the fact that this proposal increases the area of impermeable surfaces, more assessment should be required to demonstrate the claim that the flooding in the NW corner of the GREC site will not increase. It is unclear whether the existing scenario modelled in the flood study accurately reflects the various environmental approvals for GREC, the increased intensity/frequency of flood events since the UR-3R Facility was constructed, and discharge from the GREC roof and sealed areas.

Figure 15 of the Flood Impact Assessment Report indicates that the downstream modelling stops near the weighbridge operated by Waste Assets Management Corporation (WAMC). It is critical that the flood study determine whether the weighbridge area could be exposed to increased flooding, as increased flooding in this area could block access to the UR-3R Facility, the green waste composting operations, and the closed landfill site.

Finally, the EIS is unclear about several elements of the proposed drainage system, specifically:

- What is proposed to happen to the existing drainage line on the GREC side of the fence line? Will the proponents fill or otherwise restore this area when the drainage line is diverted, or will it become a problem for back-flow, pooling water, etc.
- The improved drainage channel only covers the southern section of the WSERRC site. The northern section of the site is unchanged. Why is the northern section not similarly improved to ensure the water flow is directed towards the Reedy Creek rather than allowed to spread once the drainage channel ends?

Recommendations

- More investigation is required to determine the cause and appropriate mitigation for the increased flood levels in the SW corner and along the western access road of the UR-3R Facility under the PMF scenario.
- The proponents should provide clear information on the assumptions made in the flood study relating to water flowing from the UR-3R Facility.
- The flood modelling should be extended to the area around the WAMC weighbridge, to ensure that the proposal will not increase the risk of blocking the access/egress for neighbouring facilities.
- The proponents should clarify the drainage system design.

Groundwater Contamination

The EIS identifies a risk of drawing contaminated groundwater towards the site during construction:

> *"Given the proximity to the landfill, located around 50m from the north-east corner of the site, it is possible that the current groundwater flow direction is temporarily reversed, and contaminants maybe drawn onto the site. To address this risk, continued rounds of soil, gas and groundwater sampling shall occur before and during construction."*

However, the impact on GREC in this scenario is not considered. GREC has existing concerns about landfill gas migration onto the GREC site and we are investigating this. Any change in the groundwater flow could seriously increase the risk of this migration.

Requirements should be placed on the proponent to ensure that, in the event of groundwater flow changes during construction, the proponent is responsible for remediation of neighbouring sites. This could include additional monitoring on neighbouring sites during the construction of the bunker, as well as suitable obligations to cease work, mitigate, and remediate if groundwater changes are detected. This is currently addressed through mitigation action GW6, but the report lacks detail of what monitoring and contingency measures would apply.

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Similarly, operation-phase groundwater monitoring should be required. The waste bunker will be deep in the ground and very close to the boundary with the UR-3R Facility. Any leaks from the bunker must be detected so that they can be addressed before they leave the WSERRC site and create contamination on neighbouring sites.

Recommendations

- The proponents should provide additional, clear commitments on the monitoring and mitigation measures to prevent the construction of the WSERRC from causing contamination of the UR-3R Facility site.
- Groundwater monitoring during the operating phase should be required.

Other Construction Impacts

The WSERRC proposal includes a waste bunker excavation, 15 m deep and around 100 m from the GREC buildings. This could be a risk to the GREC buildings. The proponents should provide an independent specialist assessment of the risk associated with this excavation.

There is known asbestos on site, which will be managed through a future Remediation Action Plan (RAP). GREC requests to be included as a stakeholder for the finalisation of the RAP to ensure GREC workforce safety is appropriately considered in the RAP.

Recommendations

- The proponents should be required to provide an independent specialist assessment of the risk to the UR-3R Facility associated with the excavation of the waste bunker.
- GREC should be included as a stakeholder for the finalisation of the RAP.

We reiterate our support for the development of advanced infrastructure that improves resource recovery and reduces waste to landfill, including our support for Energy from Waste in accordance with the commonly accepted principles of the waste hierarchy. We believe that, if the issues set out in this paper are addressed, then the WSERRC could become an important piece of infrastructure for Western Sydney.

We will be pleased to meet with the Proponents to review the items raised in this submission.

Yours Sincerely,

CHIEF EXECUTIVE OFFICER

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