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Dear Ms Chang

Re: Draft NSW EPA Contaminant Limits Guide

The Waste Management and Resource Recovery Association of Australia (WMRR) welcomes the opportunity to comment on the draft NSW EPA Contaminant Limits Guide ("the draft guide"), which proposes a standardised, risk-based framework for determining contaminant limits in fill materials that are covered by specific resource recovery orders and exemptions (RRO/E). The draft guide responds to feedback received as part of the Wilkinson Resource Recovery Framework Review, and introduces land-use-based thresholds, leachable contaminant limits, and mandatory expert oversight among other requirements.

As the national peak body representing Australia's \$20 billion waste and resource recovery (WARR) sector, WMRR represents over 2,300 members across more than 380 organisations, spanning industry, government, research institutions and NGOs. Over a third of our membership is based within NSW, with WMRR representing more than 750 individual members from over 130 organisations. Based on the most recent economic assessment available, the WARR sector contributed more than \$5.31 billion to the NSW economy annually and employed over 14,500 people. The sector delivers the essential service of managing waste while reducing emissions through methane abatement, organics diversion, material recovery, recycled-content manufacturing, soil products and energy recovery.

WMRR notes that fill materials – including excavated soils, processed soils and materials related to ENM, recovered fines and recovered aggregate – reflect a significant area of resource recovery activity in which greater regulatory certainty is required in NSW. To facilitate the reinvestment of recovered resources across our one (1) national market, it is critical that the final guide is not read as a new standard for recovered engineering fill materials requiring addressing, when competing with virgin materials for use across projects (such as road foundations which may cross interstate boundaries), and most importantly, that it enhances resource recovery market opportunities rather than inhibiting them by imposing costly and timely burdens on proponents.

WMRR notes that feedback from the Wilkinson review indicated that the existing specific order and exemption process can be onerous and uncertain, with applicants required to fund extensive research, sampling, trials and technical reports without sufficient clarity about what evidence will ultimately satisfy the EPA that a proposed use is beneficial and fit for purpose.

As such, WMRR generally supports the publication of transparent and scientifically defensible contaminant criteria for recovered fill materials. To achieve that outcome, the framework must be proportionate, predictable and commercially workable. This includes recognising the difference between investigating contaminated land and assessing a defined recovered material for a specified use. Detailed obligations for industry must also be matched by clear criteria, timeframes and accountability for regulatory decision-making.

WMRR's primary concerns with the draft guide are:

- Expert costs should reflect the risk proportionality
- Approvals should be governed by predictable and transparent benchmarks/outcomes
- Conservative land assumptions should reflect the actual proposed use
- Defined site-specific pathways should be incorporated that consider actual land use, credible future use, depth, exposure pathways and durable controls
- The need for a separate compliance pathway for large-volume and continuous production
- It should be tested and clarified against representative industry scenarios before finalisation
- Implementation safeguards are needed (so as not to disadvantage industry).

i. Expert costs should reflect the risk proportionality

Front of mind for WMRR is that sampling, testing and expert requirements should be proportionate to actual risk and workable for commercial resource recovery operations. The draft requires accredited experts to approve sampling plans and results. It also allows ongoing expert review throughout a specific order and exemption, depending on the circumstances. As such, for an operator, the potential cost burden extends beyond the initial application, as there may be repeated consultant fees, report preparation and delays while material awaits approval. Whilst WMRR supports expert involvement, orders and exemptions should contain objective criteria explaining when ongoing expert approval is required and when it can be reduced or discontinued. The frequency and necessity of review should be earmarked against clear triggers – expert input may be appropriate initially or when material characteristics change, however repeated external approval is difficult to justify where an established process consistently produces compliant material that is used for the same purpose and delivered to similar sites.

In WMRR's view, the final guide should clarify the involvement of experts by clarifying that:

- initial expert approval of the sampling and quality assurance system is required;
- routine implementation can be undertaken by appropriately trained staff in accordance with the expert approved plan, with periodic expert audits; and
- additional expert review will be triggered by changed feedstock, process changes, exceedances or significant variability.

WMRR recommends that the EPA publish criteria explaining when ongoing expert approval would be necessary.

ii. Transparent benchmarks/outcomes are needed for proponents applying for a specific RRO/E

Section 2 says compliance with the guide does not guarantee approval, and the EPA will assess each application on its merits. WMRR appreciates that some discretion is reasonable given chemical compliance alone does not establish that every proposed use is suitable. However, WMRR's concern is whether an applicant can identify all the approval requirements before spending money on applying for the specific RRO/E. An operator could commission (costly) testing and expert reports, identify a customer and demonstrate compliance, yet still face additional information requests or refusal on grounds that were not clear at the outset. This creates potential commercial uncertainty for proponents over stockpile management, supply contracts and project timing.

To avoid this and enable a more predictable assessment process, WMRR recommends that the final guide includes:

- a complete, published assessment checklist covering matters beyond contaminant limits;

- provisions for written agreement (with transparent time frames) on the assessment scope before any testing begins;
- clear assessment timeframes and reasons that the EPA may request additional data or issue a refusal; and
- a straightforward pathway for compliant applications, with departures explained against published criteria.

Additional requirements should only be imposed where supported by matters such as source-site history, material composition, processing information, previous analytical results, a change in production or end use, or an identified non-compliance. WMRR emphasises that applicants should be able to propose an equivalent risk-based alternative under the resource recovery framework. This is particularly important for emerging contaminants where accepted limits and analytical methods may remain uncertain or potentially evolve as new evidence-based data becomes available.

iii. The use of contaminated-land criteria needs further clarification in the final guide

WMRR understands the EPA's use of health and ecological investigation and screening levels as an evidence base. However, contaminated-land investigation and screening levels were principally designed to identify whether further site assessment may be necessary – these were not developed as product specifications for recovered resources used in fit-for-purpose engineering fill and earthworks applications. The exposure assumptions, sampling scale, statistical approach and regulatory purpose of the two (2) frameworks differ.

It is WMRR's view that contaminated-land sampling requirements should not be brought into the resource recovery framework without adequately demonstrating their proportionality to the materials being assessed. The relevant question is whether a defined stockpile is suitable for its proposed beneficial use—not whether a contaminated site has been comprehensively characterised. The existing ENM Order provides a more relevant starting benchmark for stockpile sampling. EPA should allow sampling plans based on material provenance, processing controls, demonstrated variability and receiving-site exposure, with increased sampling where evidence identifies a greater risk. Any departure from that benchmark should be supported by a clear explanation of the additional protection achieved and an assessment of its cost and effect on viable recovery.

A further risk for incorporating contaminated land requirements within the guide is it could be interpreted by some as equating to the fill material being unsuitable for its safe reuse because some contaminant levels may be met. In particular, EPA should be cognisant of recognising relevant natural background concentrations of some contaminants in order to avoid classifying naturally occurring soils as unsuitable. If the EPA persists with referencing 'contaminated land' levels (which WMRR does not support), it should provide further information in the guide to explain how each investigation, or screening value from the contaminated land criteria, has been adapted for resource recovery. Furthermore, it should clearly distinguish between screening values and mandatory compliance limits, and account for material form, bioavailability and credible exposure pathways.

iv. Allow for a defined site-specific pathway that considers actual land use, credible future use, depth, exposure pathways and durable controls

WMRR notes that the draft has adopted conservative land assumptions with industrial uses able to be assessed against possible future housing development. Appendix A explains that residential Health Investigation Levels (HIL) and Health Screening Level (HSL)-B values were selected for commercial/industrial applications, citing hazardous-waste classification constraints and possible future rezoning to residential use. WMRR's concern is that an assumed future use may override the actual exposure conditions. I.e: A permanent road, paved industrial yard and site earmarked for apartments present different circumstances. WMRR queries if these should receive the same assumptions without a

route to demonstrate the key differences in the way the material is being used – noting that any higher limits would still need to satisfy legal restrictions and protect people and the environment.

The manner in which the material is used within possible residential use, is an assessment assumption that EPA should refine to avoid restricting material from being safely and beneficially reused. To be clear, WMRR acknowledges that hazardous-waste restrictions are legal constraints, and as such industrial screening values would not automatically permit reuse. Instead, a proportionate expert review of supporting technical evidence should be included as a pathway for seeking justified flexibility for land use assumptions.

v. Create a separate compliance pathway for large-volume and continuous production

It appears that the framework is primarily structured around discrete stockpiles and one-off projects. It does not adequately accommodate recycling facilities that continuously receive, process and supply materials, and the draft guide imposes a restriction on supplying statistically assessed material to multiple consumers.

WMRR advocates that the resource recovery framework must continue to adopt proportionate requirements based on material risk, consistency and production controls. It follows that resource recovery operators who are compliant with the framework should be able to supply statistically assessed material to multiple consumers. However, where the 95% UCL is used, material cannot be split and supplied to more than one (1) consumer, which doesn't suit a processing facility selling to multiple customers. Resource recovery facilities routinely produce defined product streams for supply to more than one (1) project. In WMRR's view, if the testing is representative of a properly defined and homogeneous product, the number of consumers does not alter the material's contaminant profile.

Instead of restricting supply to multiple consumers, a separate pathway should be developed for ongoing (*continuous*) production, as there is now for recovered fines, based on:

- production streams or defined time periods;
- input acceptance and source-control systems;
- operational quality assurance;
- moving-window datasets;
- risk-based verification frequencies;
- periodic independent audits; and
- escalation following non-compliance or material process changes.

Without this pathway, sampling costs and approval delays may make large-volume recovery commercially unviable.

vi. Test the draft guide against representative industry scenarios before finalisation

The final guide should protect human health and the environment while supporting—not unintentionally obstructing—the recovery of suitable materials. Moving away from a single conservative set of generic limits to limits that reflect land use and exposure pathways should best enable the safe beneficial reuse of materials that are currently prevented from being recovered.

In principle, the mandatory Australian Standard Leaching Procedure (ASLP) leachate testing for metals is reasonable, as it necessitates much tighter limits where fill will be in frequent contact with water. This regulatory change is welcomed given recovered fill products are being applied directly onto or into land (rather than, for example, buried deep in a municipal landfill wrapped in rotting organic garbage). However, leachate limits could prove problematic for C&D products with drainage, pipe bedding and backfill uses, and in WMRR's view, this needs further clarity in the final guide.

WMRR cannot, however, endorse all proposed numerical limits without further technical validation and industry testing. Ideally, the EPA should publish the derivation, assumptions and sensitivity analysis for each limit and test them against representative datasets from industry. For example, it has come to WMRR's attention that the total recoverable hydrocarbons (TRH) limit in the draft guide is lower when applied at depth than the current limit, but is much higher when applied to a public open space. At this stage, it is not clear what the impact will be for industry until it can be assessed whether inbound material for recovery is within these limits. As such, WMRR recommends that the EPA test the proposed framework against one-off excavation projects, facilities receiving materials from multiple sources, continuous recovered-fines production and major infrastructure projects before finalisation. These would form useful case studies to include in Appendix B.

WMRR also notes there appear to be some apparent technical and numerical errors in the draft which should be reviewed and clarified. These include:

- *Case study 1 contradicts the draft guide's own limit tables* - The reuse conclusions on pages 39–40 appear inconsistent with the analytical results in Table B1:
 - Stockpile 1 records TRH F2 of 950 mg/kg, which exceeds the proposed depth limit of 440 mg/kg.
 - Stockpile 2 records TRH F1 of 150 mg/kg, exceeding 110 mg/kg.
 - Stockpile 2 records TRH F2 of 250 mg/kg, exceeding the proposed surface limit of 110 mg/kg.
- The Table 6 specifies 300 samples for a 5,000 m³ stockpile under the one-sample-per-25 m³ column. Applying that rate would produce 200 samples. The EPA should clarify whether 300 is a drafting error or an intentional additional requirement and, if intentional, provide the technical basis.
- WMRR also queries whether an inconsistent copper leachate limit has been applied in (0.1 mg/L in Table 3 vs 0.14 mg/kg in Table A2) or whether this is an impact of 'rounding' the figures.

vii. Apply implementation safeguards so as not to disadvantage industry

WMRR also recommends that the EPA:

- *Establish clear responsibility across the supply chain*
Responsibility should be transferred appropriately once compliant material has been lawfully supplied and placed. A producer or recovery operator should not retain indefinite liability for later land-use changes or disturbance outside its control. This means that source information should come from generators and receiving-site conditions should be verified by those controlling that site.
- *Explain transitional arrangements*
Proponents need to understand whether the guide will influence future amendments to general orders, avoiding uncertainty about existing investments. Applicants may need to consider the orders and exemptions framework, resource recovery sampling guidance, contaminated-land sampling guidance and the ASC NEPM in addition to the new guide. This creates a risk of duplication, inconsistent terminology and uncertainty about which document prevails. Thus, in the final guide, the EPA should explain the hierarchy and relationship among the relevant instruments, how inconsistencies will be resolved, whether the guide will influence future amendments to general orders; how existing investment decisions will be protected (i.e.: the final guide should not retrospectively affect existing approvals or substantially completed applications); and which requirements are mandatory and which are advisory.

- *Assess the economic impacts and recovery outcomes for fill materials*

WMRR recommends that the EPA undertake a regulatory and economic impact assessment before finalising the guide to test whether the combined sampling, expert and approval requirements make otherwise safe reuse uneconomic—and consequently increase disposal and demand for virgin material. This should quantify:

- the proportion of material currently recovered that would fail the proposed framework;
- the resulting increase in landfill disposal;
- additional demand for virgin materials;
- sampling, laboratory and expert costs; and
- the effect on major infrastructure and regional projects.

Furthermore, the EPA should review the guide after 12–24 months in consultation with industry to ensure that the intended outcomes of aiding understanding of how the EPA determines contaminant limits, maximum allowable contaminant limits, sampling and testing expectations and expert requirements.

WMRR trusts that the EPA will find these comments helpful in shaping the final guide. Please contact the undersigned if you wish to further discuss WMRR's comments.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Gayle Sloan".

Gayle Sloan

Chief Executive Officer

Waste Management and Resource Recovery Association of Australia