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Our ref: SEPP (Waters) Letter-L01Rev1

Department of Environment Land Water and Planning
Level 10, 8 Nicholson Street,
East Melbourne, VIC 3002

Water.SEPPreview@delwp.vic.gov.au

Attention: SEPP Waters Manager

Dear Sam

Re: Submission from Coffey Services Australia Pty Ltd regarding SEPP (Waters) Draft Policy

Please find attached notes which form the submission from Coffey Services Australia Pty Ltd (Coffey) regarding the draft policy SEPP (Waters)

We trust that this submission assists in the finalisation of SEPP (Waters). If anything in the submission is unclear, please contact the undersigned at your convenience.

For and on behalf of Coffey,

David Lam

Senior Principal Environmental Consultant

Attachments

Attachment A
Submission on draft policy SEPP (Waters)

Clause 6 Definitions

Several definitions are absent, such as ‘groundwater’ and ‘pollution’. We understand the general intent is not to reproduce definitions that are included in the Act, but that approach is not consistent (e.g. ‘beneficial use’ is defined in both).

The definition of ‘pollutant’ provides a list of things that are pollutants, but does so in the absence of the context of the definition of *pollution.* For instance you could read the one definition of pollutant to include “any liquid matter”.

‘High water’ is defined in relation to tide predictions for 1992-2011 – should (could?) this be updated to the current period?

‘Insufficient aquifer yield’ – see comment re Clause 15.

NAPL notifications are required by auditors where non-measurable sheens and concentrations above solubility are present (14.5 of EPA Publication 759.3). This may be important especially for DNAPL source zones where an identifiable separate layer may be elusive to find, but where NAPL presence may drive risk and remediation considerations. Should the definition of NAPL in SEPP Waters reflect the broader definition instructed to Auditors?

The definition of ‘beneficial use’ is different than in the Act. The definition in the Act suggests that a broader set of beneficial uses could be considered than those currently listed in Schedule 2 of the draft SEPP (see comments provided on Clauses 15 and 59).

Clause 12 – Assessing Practicability

Subclause 12 (1) sets out to define what is meant by ‘practicability’, but two of the three sub-points listed include the word “practicable” – isn’t this circular (practicable means practicable)?

Clause 15 Beneficial Uses of Groundwater

15 (1)

The beneficial uses “for” groundwater set out in the referred Table 2 of Schedule 2 reflect the existing SEPP in that it divides beneficial uses up between elements of the environment. SEPP PMCL describes ‘human health’ as a beneficial use “of land”. But it seems unusual to associate a general ‘human health’ beneficial use solely to land use activities, when groundwater (or surface water) pollution can also affect human health. While some health impact scenarios are included in the existing SEPP and the draft SEPP Waters (primary contact recreation and potable water), pollution of groundwater has other ways of potentially impacting human health. Examples include inhalation of vapours arising from contaminated groundwater, or direct contact with polluted water (for instance, by construction or maintenance workers working at/below the water table).

An effect of this is that where polluted groundwater contains volatile chemicals, and where the primary health or environmental risk issues are the potential for that groundwater to cause vapour or direct contact risks (e.g. a material risk to off-site residents via inhalation of impacted indoor air, or to maintenance workers in those areas), there is no mechanism in the draft SEPP Waters to recognise that specific impact to a beneficial use, or therefore to consider that groundwater polluted in respect of those uses.

Could the general beneficial use ‘human health’ be included in SEPP waters for groundwater in the way that it is included in SEPP PMCL? (A similar approach could also be taken for surface waters – an example for surface water is that while primary contact recreation might cover health impacts from exposure to water, this beneficial use would not strictly apply to anyone else contacting water – such as a construction worker.)

A side effect of such a change could be the broader use of a warning/control mechanism (currently limited to a GQRUZ, which is a warning mechanism applicable for only extractive use risks) for circumstances where (for example) vapour/contact risks from groundwater may exist in the event of, for instance:

- Deep construction works at or below the water table (in respect of worker contact with water)
- Basement or other sub-surface construction (in respect of vapour transport)

Warnings regarding risks in broader plume areas might be more sensible if the plume area zones were described per the original 1997 SEPP Groundwaters of Victoria, which used the term "Polluted Groundwater Zone" rather than GQRUZ. If such a mechanism could be used to advise not only water authorities, but also councils in respect of planning applications which may allow recognition of risks for construction works and users of basements or other structures which arise as a result of those works. Such a broad risk-recognition mechanism might also be sent to utility owners or all applicants to conduct sub-surface work via Dial-Before-You-Dig, to further manage vapour/contact risks associated with polluted groundwater.

15 (2) (a)

The inapplicability of some beneficial uses based on insufficient yield appears a common sense approach that prevents unnecessary clean up where groundwater would not be used anyway. However, this will require guidance to define what is considered reasonable to represent as "insufficient yield" for auditors, consultants and site owners/occupiers. There is a possibility some areas will be considered to have insufficient yield, but a person may attempt to install a bore anyway – and may strike locally higher and sustainable yield conditions. For example, some consider the Melbourne mudstone to have insufficient yield for extractive use, but during the last drought ending 2010, a number of extraction bores were installed into the mudstone.

15 (2) (c)

The potential for the Authority to determine that beneficial uses "do not apply" to groundwater within a GQRUZ (or attenuation zone), may be problematic. The problem is that Clause 59 (3) of the draft SEPP states that the Authority may require a person to clean up, to the extent practicable, groundwater to protect "the beneficial uses set out in this policy".

This introduces a potential problem (which also exists in the current SEPP). It could be argued that the identification of a GQRUZ can be used as a basis for beneficial uses ***not to apply***. But if beneficial uses do not apply, groundwater concentrations exceeding the inapplicable beneficial use criteria could be considered not to constitute pollution. For instance, there could be a scenario in which CUTEP was considered to have been achieved in a plume emanating from a source site and affecting several properties above (say) potable use criteria. If a GQRUZ was identified, and a monitoring plan implemented, it would be a reasonable question to consider what criteria should be adopted for comparison with monitoring results. If one or more beneficial uses can be said – under the SEPP, and the GQRUZ – not to apply, a consultant could reasonably exclude criteria associated with those inapplicable beneficial uses from the reporting of results.

It makes more sense to say beneficial uses may be considered to "not apply" based on yield, soil properties preventing reasonable application by irrigation, within a landfill cell, or where background conditions otherwise prevent reasonable use of the groundwater anyway. However, where the pollution prevents use of the groundwater, it may be better to say that the beneficial use is 'precluded by pollution'. Then the SEPP would be saying that a protected beneficial use is precluded, so practicable clean up is required to restore the protected beneficial use. (Rather than the SEPP saying a beneficial use does not apply, but clean up is required to restore an *inapplicable* beneficial use – which seems illogical.)

15 (2) (e)

Unclear why cave/subterranean ecosystems are singled out. If the intent is to recognise that it is impracticable in almost all circumstances to protect generally non-existent subterranean ecosystems, could this be included in the explanatory note? Otherwise the rationale for this clause is not clear.

15 (2) (f)

Should “or” be “of”?

15 (3) (b) (ii)

How is “no significant impact to groundwater beneficial uses” defined?

Clause 17. The environmental quality indicators and objectives

Page 19, 3rd para. The intent is discernible, but this appears to be worded informally for a policy document (e.g. “polluted up” with quotation marks, versus “degraded down” without quotation marks). Could this not be more simply reworded to say that background levels of environmental quality indicators must be maintained within existing ranges?

It appears the intent of this paragraph is for future changes that may be planned for. That is, a discharge to a waterway should not be planned and considered acceptable where it changes environmental quality indicators to beyond their background ranges, just because the quality objectives are broader than the background range. This is noted because where assessing a water body for whether or not pollution exists (and whether remedial action may be required), there will be many instances where true ’background’ ranges are exceeded, but where pollution is not considered to exist – and remediation would not typically be expected to be required.

Should this explanatory note include reference to exceptions elsewhere in the draft SEPP (e.g. Clause 23 on mixing zones, and Clause 24 on offset measures, and possibly Clause 25 on wastewater discharges of benefit)?

Clause 24. Use of offset measures to protect beneficial uses

Could the explanatory notes include a practical example?

Clause 27. Management of sewerage systems

Explanatory notes state that “chronic leakages and overflows which occur in dry weather are unacceptable”. While overflows occurring in dry weather as a result of maintenance problems may be managed, practically all ring-jointed sewer pipelines will be associated with chronic leakage.

Clause 29 (6) Councils to develop a domestic wastewater management plan

Reference to an audit in the clause could be considered to imply a (for instance) S53V environmental audit. The explanatory note contains the terms ‘internally audit’, but the nature of this ‘audit’ is unclear. Would it be clearer to say: “The council must prepare a report on progress of the…”?

Clause 34 Urban Stormwater

Subclauses (2) and (3) identify the different responsibilities of councils (new developments) and “owners and managers of assets created to protect water quality” (which could include councils or water corporations), but subclause (4) places an obligation to develop plans only on councils (albeit in consultation with other parties). Are there no circumstances where there should be a direct obligation on a water corporation or other party to develop such plans?

Subclause (2) relates only to new developments. While it is understandable that focus should be on measures to reduce impacts to stormwater in new development areas, is there not also an obligation to manage urban stormwater in existing developed areas?

In contrast to subclause (2), subclause (3) relates only to existing assets. While 3 (d) allows for renewal/replacement of existing assets, none of the subclauses caters for a situation where a need for an asset may be identified, but none yet exists.

Clause 54 Direct waste discharge to groundwater

Subclause 54 (3) allows the Authority to permit injection of "uncontaminated water, groundwater treated as part of site remediation, or remediation chemicals" under three conditions.

The subclause does not allow consideration of the merits of injection which may be associated with certain remediation technologies such as use of untreated groundwater to utilise microbial communities to encourage biodegradation in contamination source zones (bioaugmentation using native microbes). Such technologies may be beneficial in some circumstances. As well, it is possible that hydraulic containment strategies may be developed which rely on reinjection of untreated groundwater in order to control migration of more contaminated water. Could the subclause be broadened to allow such technologies?

Subclause 54 (3) (a) does not appear to allow for clean up to the extent practicable which may not, despite best efforts, restore all beneficial uses.

Should Subclause 54 (3) (b) include the word 'detrimental' before the word 'impact'? It is noted that if this subclause is implemented strictly, then some best practice remediation technologies may be eliminated. For instance, enhanced in situ bioremediation of chlorinated hydrocarbons such as TCE in groundwater may in some circumstances produce short term by-products of degradation (daughter products such as VC and methane) before ultimately delivering a cleaner plume. Could the explanatory notes include some general notes to this effect (that the "no detrimental impact to beneficial uses" may consider overall net benefit of the prospective injection remedy?

Clause 55 Non-aqueous phase liquids

Subclause 55 (1) places obligation on "an occupier of premises". While Clause 62 (c) of the Act allows the Authority to presume that an occupier on any premises on which there is conducted any commercial or industrial undertaking is responsible for contamination ("deposit, discharge or emission") the Act recognises an exception – where the occupier proves that the contamination was unrelated to the commercial or industrial undertaking. The clause now written in the draft SEPP makes no allowance for a property owner to avoid a clean up obligation, even where (for instance) the NAPL pollution migrated onto their site from elsewhere, or (for instance) was known to have been caused by a former owner/occupier. Other clauses in the draft SEPP (e.g. Clause 59) use the term "a person" for the party which may be held responsible – should "a person" also be used in Clause 55 (1)?

(* Incidentally, the wording of Clause 62 (c) of the Act could be considered problematic, as the exception relates only to the activity and not the responsible party. For instance, if a service station tenant leases a service station on which there is pre-existing known and reported (even if notified to EPA) pollution, that subsequent tenant (who may be considered the "occupier" under the Act) cannot demonstrate that the pollution did not result from service station activities, and the fact that another party may be known to have caused the pollution therefore provides such a tenant no relief from responsibility which clearly, to any reasonable person, would not be theirs.)

Subclause 55 (1) (b) appears to relate to relate to removal of NAPL from the aquifer (with Subclause 55 (1) (a) appearing to relate to the leak source such as leaking tank or pipe). If that is the case, use of the term "pollution" may invite some parties to argue that NAPL – if not causing a demonstrable risk to receptors – may be considered contamination but not pollution. It is unclear if this is the intent of the subclause (it may be the intent to take a more risk-based approach to the need to clean up NAPL, but this is not clear one way or the other). The term "pollution" was not present in the previous SEPP clause addressing NAPL.

Clause 58 Groundwater Attenuation Zones

Is the intent to include these zones similarly to GQRUZs – as they (similar to a GQRUZ) will describe areas where groundwater objectives are not met (that is, beneficial uses are not protected).

Sub-clause 2(d) allows designation of a groundwater attenuation zone only where "there is no significant risk to beneficial uses". How is "significant" defined?

Clause 59 Groundwater quality restricted use zones

It is recognised that the original 1997 SEPP (Groundwaters of Victoria) description of 'Polluted Groundwater Zones' was changed to 'Groundwater Quality Restricted Use Zones'. However, a recent concern which has been discussed at Groundwater Approvals Working Group meetings (between EPA a some auditors) revolves around the limited ways in which councils or owners or occupiers of land over groundwater contamination plumes may be warned of vapour risks from groundwater. In some cases, there may be no risk until a basement is built, but there is no mechanism to warn a council contemplating issuing a permit, or an owner contemplating building such a basement of that risk.

If the original wording was reinstated ('Polluted Groundwater Zone'), there may be some risk of increased community concern regarding existing managed risks in terms of groundwater extraction, but there would also be an opportunity to introduce a mechanism to warn of other groundwater risks, such as via vapour inhalation or direct contact. Currently GQRUZ maps are made publically available via the internet, and water authorities responsible for groundwater bore licensing are made aware of GQRUZs. Similar mechanisms could be expanded to advise (for example) councils regarding potential risks to possible future basement structures, as a way of avoiding manageable and foreseeable health risks.

It is noted that the GQRUZ identification process does not depend on CUTEP, nor does it depend on an audit process, making identification possible at any time, per Publication 862.

Clause 59 (3)

See comments on 15 (2) (c).

Schedule 2

Figure 1 does not show the Urban segment.

3 Segment definitions

3 (3) (e) is confusing with respect to the urban segment. In 3 (3) (e) (i) the segment is said to include "the lowlands of the Yarra, Maribyrnong and Werribee rivers", however the explanatory notes state that that the "Urban segment also excludes the mainstem of the Yarra, Maribyrnong and Werribee Rivers to protect better quality of these waterways". The explanatory note is the only place where this important component of the definition of the segment is outlined, and a reader who reads only the clauses and not the notes would not understand that definition. Should not the clause make the definition clear? The explanatory note does not clarify what is intended for those "mainstem" parts of those waterways, nor does it define the extent of the "mainstem" (exactly what reaches constititue the mainstem?). Presumably (per Figure 1) they are considered part of Central Foothills and Coastal Plains, but this could be stated for clarity, and the exact reaches applicable defined.

Based on the assumption that the "mainstem" of the three noted urban rivers are considered part of Cleared Hills and Coastal Plains, this would mean that the lower port area of the Yarra and lower Maribyrnong could require high levels of protection (for example 95% Species Protection levels, rather than 90% Species Protection levels might apply). This would be as major change compared with the existing SEPP, and it is not clear that this is intended. For example, the existing SEPP describes the Yarra downstream of Dight's Falls as highly modified (and requires 90% of species protection), but the exclusion of the "mainstem" from the proposed 'Urban Segment' suggests that higher water quality objectives could now apply to that section of the river.

In 3 (3) (e) (ii) exclusions from the Urban segment are made for "undeveloped urban land in Urban Growth Zones and the Low Density Urban Residential Zone". These exclusions may make sense for ensuring requirements for managing urban stormwater in the relevant *land areas*, but lead to ambiguity in relation to levels of protection required for reaches of the actual *waterways* within or adjacent to those areas. For example, an urban creek such as the Darebin Creek might have some undeveloped or Low Density Residential zoned land adjacent to it. Is that part of the Creek considered 'Urban Segment' or 'Cleared Hills and Coastal Plains' (per Table 3)? How are beneficial uses selected from Table 3 where undeveloped or low density residential land exists to one side of a waterway, but high density or commercial development (for example) exists on the other side of the waterway (or upstream)

Schedule 2, Table 1

What is covered by Traditional Owners' and Aboriginal Victorians' cultural values that is not covered by other beneficial uses (which cover, for instance, aquaculture, human consumption of aquatic foods, and water dependent ecosystems)?

What is meant by "filtration of holistic water holes/camps"?

In practice, how is impact to "Traditional Owners' and Aboriginal Victorians' cultural values" and "Cultural and spiritual values" to be assessed? That is, what sources of assessment criteria would be used,

Schedule 2, Table 5

It is understood that water based primary contact recreation is not considered a beneficial use to the south west of the Werribee river (in the area of the Western Treatment Plant) because water quality cannot be guaranteed in what is effectively a mixing zone within Port Philip Bay. However, it seems inconsistent that this is not the subject of warnings regarding the inapplicability of such activities (swimming etc.) in that area, when there is an equivalent warning process for groundwater – GQRUZs.

It is understood that the exclusion of the beneficial use 'Human consumption of aquatic foods' is not a beneficial use within reserves except where 'the activity' is permitted, on the basis that seafood species cannot be taken for consumption from aquatic reserves. However, if the beneficial use seeks to protect humans from consuming affected seafood species, should it be recognised that these species may migrate across reserve boundaries? The exclusion could lead to a situation where a spill of chemicals within an aquatic reserve (where seafood species may not be consumed) would not be considered 'pollution' with respect to human consumption, even if (say) contaminated fish were able to be caught at the reserve boundary.

It is unclear why the exclusion regarding Human consumption of aquatic foods is limited to Port Philip Bay aquatic reserves – what is the difference for aquatic reserves outside Port Philip Bay?

The exclusion of Human consumption of aquatic foods (molluscs only) with respect to the part of Port Philip Bay between Werribee River and Point Wilson, and in Corio Bay west of a line between Point Lillias and Point Henry is understood to be based on the mixing zone from Western Treatment Plant, and legacy contamination present in Corio Bay. However, this does not appear to recognise that consumption of molluscs (including recreationally and commercially caught squid) may occur from edible species taken from some of these areas (there is a ban effective 1 March 2018 on commercial netting for the relevant part of Corio Bay under section 153E(1)(a) of the Fisheries Act 1995, but not the Werribee section of Port Philip Bay. There is no known ban on recreational fishing for squid in Corio Bay, and this may be a common activity.

Also, the zone where Human consumption of aquatic foods (molluscs only) is not a protected beneficial use appears to include the area of the Kirk Point/ Werribee Fisheries Aquaculture Reserve (KPW). It seems incongruous that molluscs may be commercially grown in an area where consumption of molluscs is not a beneficial use in the SEPP.

Schedule 3, Clause 1 (5) (b)

It may be clearer if the explanatory notes included a reference to the need to change the adopted value for the various % of Species Protection values used, where bioaccumulation/biomagnification is of concern.

Schedule 3, Clause 1 (5) (c) and (d)

Should the word "in" follow "toxicants", in both sub-clauses?

END SUBMISSION