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PROPOSED NATIONAL ENVIRONMENTAL STANDARD FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL

SUBMISSION TO THE MINISTRY FOR THE ENVIRONMENT

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BACKGROUND

The Institution of Professional Engineers New Zealand (IPENZ) is the lead national professional body representing the engineering profession in New Zealand. It has approximately 11,500 Members; this includes a cross-section including engineering students, practising engineers and senior Members in positions of responsibility in business. IPENZ is non-aligned and seeks to contribute to the community in matters of national interest giving a learned view on important issues, independent of any commercial interest.

EXECUTIVE SUMMARY

IPENZ recognises there is still some major work to be done to identify, assess and remedy contaminated sites in New Zealand, although some regions have been very active in this respect. Contaminated site identification, assessment and remediation is a significant cost to regional councils and territorial authorities. We recommend the Ministry for the Environment consider whether the Contaminated Sites Remediation Fund provides sufficient support to regional councils and territorial authorities.

IPENZ considers the problem definition for the proposed National Environmental Standard (NES) is appropriate. In the medium term we recommend the Ministry for the Environment consider whether it can develop national guidance on the basis of environmental protection as well as to protect human health.

IPENZ notes the NES highlights the need for “appropriately experienced and qualified practitioners”. We think Chartered Professional Engineers in relevant fields and with appropriate experience should be considered “appropriately experienced and qualified practitioners”. We would be pleased to discuss this in more detail with officials.

IPENZ supports the permitted activity status for subsurface investigations on the basis that controls will be in place to manage other issues such as dust and noise.

IPENZ considers the permitted activity status is appropriate for the use, development and subdivision of land where no evidence of soil contamination is found, assuming controls are in place to manage issues such as dust and noise. We think the NES should include a provision to enable councils to recover their costs.

IPENZ questions the interpretation of the Soil Guideline Values. We think the Soil Guideline Values will be interpreted as “contaminate up to”, rather than “clean-up down to”. If this is not the intended interpretation, we recommend that the Ministry make the NES wording clearer.

SUBMISSION

1. Have the priority problems been defined correctly?

Page 7 of the *Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil Discussion Document* says the problem to be addressed is that “New Zealand has a legacy of soil contamination that requires to be identified and assessed. To ensure this land is safe for human use, land affected by contaminants in soil should, if necessary, be remediated or contained at the time of being developed. However, the existing controls are either absent, inadequate or inconsistently or inappropriately applied.”

IPENZ notes and supports this problem definition, as we recognise there is still a great deal of work to be done in this area. We suggest the problem statement be clarified by replacing “requires to be identified and assessed” with “requires identification and assessment”.

It is important to note that local government is already very active in identifying, assessing and managing contaminated sites. In this respect, Figure 3 on page 11 of the *Discussion Document* shows both Taranaki and Hawke’s Bay have identified significant numbers of contaminated sites and that all of the sites in these regions have been cleaned/managed. This is a major achievement.

We note the proposed NES for contaminants focuses on protecting human health, rather than protecting the environment. However Section 5 of the Resource Management Act 1991 states the Act’s purpose is to “promote the sustainable management of natural and physical resources”; sustainable management is defined very broadly.

While we appreciate a broad definition can enable an NES to protect human health, IPENZ considers the Resource Management Act’s key focus is on the environment. This interpretation seems consistent with the Resource Management Act’s definition of contaminated land which “means land that has a hazardous substance in or on it that (a) has significant adverse effects on the environment; or (b) is reasonably likely to have significant adverse effects on the environment.”

We understand that creating an NES focussed on protecting the environment would be problematic, particularly given the complexity in setting Soil Guideline Values (SGVs). We also note further research is required to guide SGV development. We think that in the medium term the Ministry should consider developing national guidance on the basis of environmental protection. If developed the guidance could take the form of a National Guideline, incorporating all health-related guidance and standards developed in the meantime. Subsequently it may be practical to develop an NES with an environmental focus.

2. Are there other problems you can think of that need to be addressed as a priority?

We think the problem statement should define what is meant by “human use”. For example, it is unclear as to whether by being fit for human use, the land would also be safe for companion animals.

We consider the Ministry should be doing all it can to encourage and support regional councils and territorial authorities in identifying and managing contaminated sites. We note the cost of identifying, assessing and remediating or containing contaminated sites can be very high and puts pressure on regional councils and territorial authorities. We support the presence of the Contaminated Sites Remediation Fund but question whether this fund provides sufficient assistance to regional councils and territorial authorities given their leading, important roles in protecting the community from contaminated sites. We recommend the Ministry consider whether the size of the Contaminated Sites Remediation Fund is sufficient.

3. Do you agree with the policy objective?

IPENZ supports the policy objective. However we again note that there needs to be clarity as to what “human use” covers.

4. Should the objective be limited to ensuring that land is safe for human use? If not, why not?

As stated above, we seek clarity as to what “safe for human use” is interpreted to mean.

Also as stated above, IPENZ thinks that in the medium term the Ministry should consider the development of national guidance on the basis of environmental protection. This is needed to ensure waterways, groundwater, marine and other sensitive environments are protected. This is also imperative as these environments can impact on human health – for example through people using contaminated groundwater and becoming ill.

5. Do you agree with the preferred option?

We note the five options presented in Section 3 of the *Discussion Document* and consider that the development of a National Environmental Standard is the most appropriate option.

We also note that the consideration of an NES on page 22 of the *Discussion Document* is unbalanced as it does not list any disadvantages of an NES. The list should include the costs that are listed in the Cost-Benefit Analysis on pages 43 to 47. In addition the loss of local decision-making discretion (which is listed on page 22 as an advantage of an NES) could also be interpreted as a disadvantage of an NES, depending on your point of view.

6. Is there an alternative option that has not been considered?

7. Are you aware of any other costs or benefits of the alternative options?

8. Do you see any problems complying with the proposed NES or with enforcing it?

IPENZ has no response in relation to questions 6 to 8.

9. Are the thresholds for determining whether resource consent is required clear and appropriate?

IPENZ is unclear as to how it is determined whether resource consent is required for a particular site.

10. Is the permitted activity – subsurface investigation requirement to provide a site investigation report appropriate?

IPENZ supports the permitted activity status for subsurface investigations. We assume controls will still be in place to ensure management of associated issues such as noise and dust.

IPENZ supports the information requirements as set out on page 26 but notes it will be difficult for councils to know what investigations are going on. Despite this we think the proposed requirements strike an appropriate balance which will ensure they are not a deterrent to people undertaking site investigations.

11. Have we adequately defined the land that should be subject to a condition requiring site investigation?

We consider that the statement in paragraph two on page 28 of the *Discussion Document* is sufficiently clear at this stage. Further clarification may be required as the proposed National Environment Standard proceeds.

12. Have we adequately provided for activities that should not be caught by the requirement of this NES?

IPENZ has no response in relation to this particular question.

However, in relation to the discussion on page 28, we note that the discussion states that “requiring all land to be assessed...would impose an unjustified administrative burden on councils, landowners and developers...”. While we agree with this statement, we also note the major value that site investigations can have and the fact that there are still many undiscovered contaminated sites (particularly sheep dip sites) in New Zealand. It is very important to correctly balance the amount of information gleaned with the amount of effort/burden.

13. How do you think the NES should ensure the adequacy of site investigation?

IPENZ supports comments in the discussion on page 29 in relation to the adequacy of site investigations. It is important that site investigations and associated reports provide the same level and detail of information. In addition, we think it vital that councils apply the requirements of this NES consistently, and consider the Ministry should provide councils with information resources and training once this NES is finalised.

IPENZ notes the reference to reports being prepared by an “appropriately experienced and qualified practitioner”. We question how someone needing a site investigation will know whether the person they hire is appropriately experienced and qualified. We note that at the Wellington public meeting about this proposed NES the Ministry representative commented that an accreditation scheme is being developed. IPENZ would support such a scheme. We would also seek to have engineers (in the relevant fields with appropriate experience) who are Chartered Professional Engineers acknowledged as being appropriately experienced and qualified. We would be pleased to discuss this in more detail with officials.

14. Is the permitted activity – use, development and subdivision better provided as a controlled activity or other alternative?

IPENZ considers the permitted activity is appropriate but recommends the NES include the provision for councils to be able to recover their costs. The recovery of costs is essential as councils will be required to review site investigation reports carefully.

Regardless of which class of resource consent applies, we assume controls will still be in place to ensure associated issues such as noise and dust are appropriately managed.

15. How should the NES address naturally occurring elements in soil?

IPENZ appreciates the dilemma these elements present but has no recommendations as to the handling of naturally occurring elements in soil.

16. Have we accurately reflected the range of costs and benefits arising from the proposals for an NES, and who might bear the costs or receive the benefits?

17. Are there any costs and benefits we have overlooked?

18. Do you have information that you would like to see included in the cost-benefit analysis that will be carried out after the submissions are received and analysed?

IPENZ has no response in relation to questions 16 to 18.

OTHER COMMENTS

We have a number of comments in relation to the SGVs presented in Section 8.2, as follows.

Interpretation of the SGVs

Section 8.2 on page 58 states the SGVs are “not to be promoted as desirable soil quality criterion nor as levels up to which contamination may be allowed to occur”. At the Wellington public meeting about this proposed NES, the Ministry representative stated that the SGVs are the values to remediate down to.

We think it likely that the SGVs will be perceived to represent upper values for contaminants on a site. Thus, it is possible that those supplying and accepting soil onto a site will consider that as long as the soil is within the SGVs then it is acceptable for the purposes of protecting human health.

Put more simply, we consider SGVs will be interpreted as “contaminate up to”, rather than “clean-up down to”. If this is not intended interpretation then we recommend that the Ministry make the NES wording clearer.

Another way to solve this issue would be to introduce two sets of SGVs – one for contaminated sites to be cleaned down to (the proposed NES SGVs) and another, more stringent, set of SGVs for which it is acceptable to contaminate up to.

Magnitude of the SGVs

To consider the magnitude of the SGVs we have compared the SGVs in the proposed NES with values from the Biosolids Guidelines. In the table below we have included the most stringent figures for type Aa biosolids.

	all in mg/kg							
	Arsenic	Boron	Cadmium	Chromium		Copper	Inorganic Lead	Inorganic Mercury
				III	VI			
Range of SGVs in proposed NES	20 to 100	34,000 to 400,000	5 to 1,600	280,000 to no limit	560 to 6,300	32,000 to 290,000	730 to 7,000	380 to 4,200

Biosolids Guidelines ¹ -Aa biosolids	20	Not listed	1	600	100	300	1
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We note and accept that the proposed NES SGVs may use more recent research data and are focussed solely on human health while the Biosolids Guidelines were focused on protecting human health and the environment. However, we wish to draw attention to the difference in values for copper, inorganic lead and inorganic mercury. The Biosolids Guidelines values for these contaminants are significantly lower than even the SGVs for rural residential or residential land. IPENZ does not have the expertise to comment on the basis of the SGVs or which value is best to apply – we simply note the significant difference in the figures and the inconsistency that will exist between the various Ministry supported documents.

At the Wellington public meeting about this proposed NES there was comment by an attendee that the copper SGV for rural residential and residential does not make sense. This is because the SGV assumes 10 per cent of the produce the residents eat will have been grown onsite. However, the attendee also noted that with copper levels of 32,000mg/kg no produce would grow anyway.

Also at the Wellington public meeting the technical session was told that boron is not particularly toxic to humans and that it is in the proposed NES as a legacy from the timber treatment guidelines. This does not seem consistent with the purpose of the proposed NES which is to ensure “that land affects by contaminants in soil is appropriately identified and assessed....and if necessary remediated, or the contaminants contained, to make the land safe for human use”.

Need to update SGVs in an NES

We note comments made at the Wellington public meeting that the World Health Organisation and the Food and Agriculture Organisation of the United Nations are reviewing the toxicology of cadmium in June and that this proposed NES would need to reflect the review findings.

We recommend the SGVs in the NES be a live document and that it be updated as better information becomes available. We are unsure as to the ease of updating figures in an NES but consider it important that the NES contains the most up to date and correct information.

CONCLUSION

IPENZ appreciates the opportunity to make this submission and is able to provide further clarification if required.

Tim Davin, Director - Policy

¹ From Water NZ website -

http://www.waternz.org.nz/documents/publications/books_guides/biosolids_guidelines.pdf