



A Submission to the

Ministry for the Environment

on

**The Proposed National Environmental Standard
For
Assessing and Managing Contaminants In Soil**

from

Ballance Agri-Nutrients Limited

19 April 2010

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KEY INFORMATION

Name of submitter / organisation:	Ballance Agri-Nutrients Limited
Industry / Area of interest / Organisation type:	Fertiliser Manufacture and Sales Agricultural Sector Supplier
Contact details	
Name:	Nigel Sadlier Environmental Manager
Physical Address:	Hewletts Road, Mt Maungnui
Postal Address:	Private Bag 12 503 Tauranga
Telephone:	(07) 572- 7874
Email:	nsadlier@ballance.co.nz

1 Executive Summary

- 1) Ballance opposes the Proposed NES as currently drafted.

Key Decisions Sought

Recommended deletions are indicated by ~~strike through~~, while additions are underlined.

- 2) Change the title of the Proposed NES to:

National Environmental Standard for Assessing and Managing Contaminants in Soil:
Associated with Subsurface Investigation, Development, Subdivision, or Use of Land
for the Protection of Human Health.

- 3) Make clear very early in the NES that the responsibilities for giving effect to, and enforcing this NES rest with district and city councils.
- 4) The Proposed NES should clearly and consistently state that the primary intent of the NES is the protection of human health. While also specifically stating that SGVs_(health) should not be utilised for determination of adverse effects on the wider environment under the RMA 1991.
- 5) The Proposed NES should require either the formation of National Working Groups to oversee or consider the development of any future SGVs_(environment), or public notification of any proposed SGVs_(environment), thereby enabling stakeholder scrutiny of any proposals early in the process. The Cadmium Working Group for the agriculture and food sectors is a clear example of such a collaborative process.
- 6) The objective and scope of the Proposed NES are supported.
- 7) Clearly define “subsurface investigation”, and exclude submission of reports to council associated with subsurface investigations where they are independent of a resource consent application for development, subdivision, or use of land.
- 8) Remove any reference to figure 6, page 58 of the Proposed NES discussion document, as the comparison between the toxicological risk of the SGVs_(health) and the effects based thresholds of the RMA 1991 is confusing and potentially misleading.
- 9) Implement a single, clear assessment process (there is currently a three step model and a nine step model).
- 10) We support the permitted activity (without conditions) scenarios, with amendment to scenarios 4 & 5, in association with them being adopted as new step number one in the assessment process as follows:

New Assessment Process Step 1: Exclude the following from any consideration:

- Any ongoing activities or occupation of the land for the same activity or existing use

- subdivision which is not associated with a change in use or a disturbance of the ground
 - landscaping fencing (but not retaining walls), and other minor actions which involves a minimum level off soil disturbance
 - internal and external additions and alterations to existing buildings that occur above ground level and ~~do not disturb~~ involve minimal disturbance to the ground
 - any activities on agricultural land used for the bulk production of food that are not associated with a change of use to residential, recreational, commercial or industrial land use. ~~a non-agricultural land use (for example, agricultural to residential).~~
- 11) Clearly identify or describe the type of activities on agricultural land used for the bulk production of food that are excluded from the assessment process i.e. storage of fertiliser in bins on farm, airstrips and related fertiliser loading facilities utilised for aerial top-dressing, farmyards and associated buildings, fuel storage.
- 12) Clearly define SGVs_(health) as an “Investigation Level” for the purpose of initiating further risk management investigations.
- 13) Remove any reference to standard activity scenario “Rural / lifestyle blocks”.
- 14) Remove any reference to 50% produce with particular regard to Cadmium.

2 Company Overview

- 15) Ballance Agri-Nutrients Limited (Ballance) is a 100-percent farmer owned co-operative, and one of New Zealand's leading fertiliser specialists, owning and operating super-phosphate manufacturing plants located in Whangarei, Tauranga and Invercargill, as well as an ammonia-urea manufacturing plant located at Kapuni in Taranaki.
- 16) Ballance also owns and operates Super Air one of the country's largest agricultural aviation companies, and Summit Quinphos New Zealand's third largest fertiliser company.
- 17) Ballance places a strong emphasis on delivering value to its shareholders and on the use of a scientific approach to sustainable nutrient management.

3 Introduction

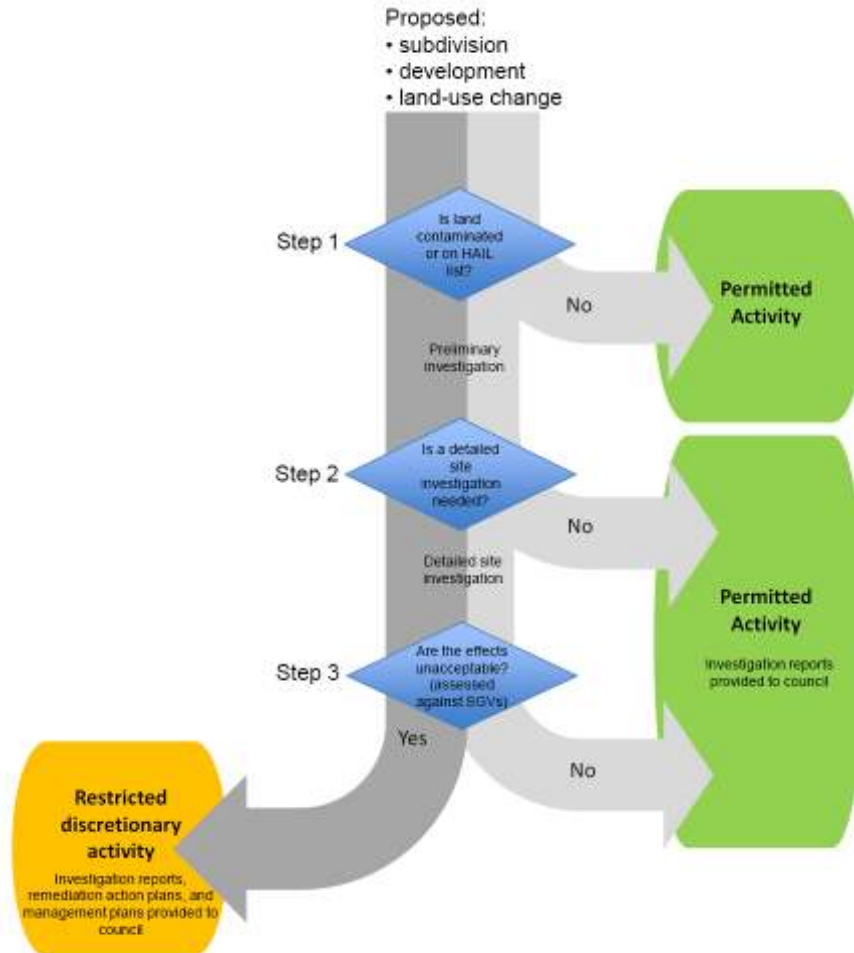
- 18) Ballance would like to thank the Ministry for the Environment for the opportunity to make this submission on the Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil (*Proposed NES*).
- 19) This submission is made on the Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil Discussion Document (Publication Number ME977). In preparing our submission we have also considered the Draft Methodology for Deriving Soil Guideline Values Protective of Human Health (Publication Number ME979).
- 20) The submission structure is set out as follows:
 - Section 1 outlines the key decisions sought in relation to the Proposed NES.
 - Section 4 provides an overview and summary of our understanding of the proposal
 - Section 5.1 includes our assessment and recommendations in relation to the intent of the Proposed NES
 - Section 5.2 includes our assessment and recommendations in relation to the assessment process of the Proposed NES

4 Understanding of the Proposal

- 21) **New Zealand has a legacy of soil contamination** that requires identification and assessment. To ensure the 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. (p. 7)
- 22) **Contaminants are a problem** when hazardous substances are at a concentration and a place where they have, or are reasonable likely to have, an adverse effect on human health and the environment. (p. 8).
- 23) **The amount of contaminated land in New Zealand is uncertain**, with information collected to date indicating that 472 sites are confirmed as contaminated, 669 sites have been remediated, 754 sites are under management to limit environmental effects. (p. 9)
- 24) **Local government are responsible** for the day-to-day management of the effects of activities on land, with specific functions under the RMA 1991, whereby:
 - a) Regional councils are required to undertake the investigation of land for the purposes of identifying and monitoring contaminated land
 - b) District and City Councils are required to prevent or mitigate any adverse effects associated with the development, subdivision, or use of contaminated land.
- 25) **Contaminated land means land that has a hazardous substance in or on it** that, has significant adverse effects on the environment, or is reasonably likely to have significant adverse effects on the environment, (RMA, 1991)
- 26) **The meaning of environment** includes; ecosystems and their constituent parts, including people and communities, all natural and physical resources, amenity values, and the social, economic, aesthetic, and cultural conditions which affect the previous matters (RMA 1991).
- 27) **The options considered to address the problem** [of assessment and managing contaminants in soil] have included, amending the RMA 1991, developing a national policy statement under the RMA 1991, directing plan changes under the RMA 1991, providing non-regulatory national guidance, and developing an NES under the RMA 1991. Development of an NES is considered the preferred option. (s. 3.0)
- 28) **The benefits of an NES** include ensuring a nationally consistent approach and providing more certainty in the management of risks from contaminants in soil to human health and the environment. (p. 23)
- 29) **The objective of the Proposed NES** is to ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make the land safe for human use. (p. 17)
- 30) **The scope of the Proposed NES** is to assess and manage the adverse effects of contaminants in soil on human health from subsurface investigations, or the use, development

and subdivision of land. Effects from contaminants in soil on the wider environment (beyond human health) are proposed to be excluded from the scope of the NES. (p. 25)

- 31) **The assessment process** for land use, development, or subdivision is proposed to occur broadly as shown in the following diagram (p. 52)



- 32) **In summary**, it has been identified that contaminants in soil require effective management and control to reduce the risk to human health. With the amount and extent of contaminants in soil in New Zealand currently being uncertain, an NES has been proposed to manage and assess development, subdivision, or use of land with regard to effects on human health, **but not** the wider environment. Resource consent applications for future subsurface investigations, development, subdivision, or use of land will also require assessment by district and city councils against the Proposed NES, which has the primary goal of ensuring the protection of human health.

5 Submissions & Decisions Sought

5.1 The Intent of the Proposed NES

33) The overarching intent of the Proposed NES is to provide a “tool” under the Resource Management Act 1991 (RMA 1991) for district and city councils to use when assessing any proposals for subsurface investigation, development, subdivision or use of land, for the primary purpose of protecting human health.

34) The objective of the Proposed NES clearly identifies this intent as follows:

Ensuring that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make the land safe for human use.

35) Furthermore, the scope of the Proposed NES further supports this intent as follows:

The national environmental standard proposal applies to assessing and managing the actual or potential adverse effects of contaminants in soil on human health from the following activities:

- *subsurface investigations*
- *the use, development, and subdivision of land*

The NES proposal does not apply to assessing and managing the actual or potential adverse effects on other receptors including:

- *the on-site and off-site ecology*
- *the on-site and off-site effects on surface water*
- *groundwater – including human drinking-water sources*
- *amenity values*

36) However, as currently drafted the intent to apply the Proposed NES only to the protection of human health at the time of development, subdivision, or use of land, and not the wider environment may potentially be misunderstood, particularly with regard to the inclusion within the discussion document of numerous references to the management of adverse effects on the environment (pages vi, 8, 14, 15, 16, 38, 39, 53).

37) In particular we are concerned that the current $SGVs_{(health)}$ may be misinterpreted as a threshold value, identifying risk of adverse effect under the RMA 1991 (see also figure 6 page 58).

38) We also recognise that regional council functions under section 30 of the RMA 1991 will continue to require investigation of land for the purposes of identifying and monitoring contaminated land, with particular regard to the wider environment – quite outside the scope of this Proposed NES. In the absence of an NES for assessment on the wider environment we are concerned that future $SGVs_{(environment)}$ may be inappropriately derived.

- 39) If the primary intent is to apply a consistent national standard under the Resource Management Act 1991 (RMA 1991) to better assess and manage contaminants in soil associated with development, subdivision, or use of land in a way that provides for the protection of human health, then the NES should clearly state this as the case. While also specifically stating that $SGVs_{(health)}$ should not be utilised for determination of adverse effects on the wider environment under the RMA 1991.
- 40) To provide greater certainty with regard to development or application of any future $SGVs_{(environment)}$ which may be required to address assessments of effects on the wider environment, which are beyond the scope of this NES, we recommend the Proposed NES require either the formation of National Working Groups to oversee or consider the development of any future $SGVs_{(environment)}$, or public notification of any proposed $SGVs_{(environment)}$, thereby enabling stakeholder scrutiny of any proposals early in the process. The Cadmium Working Group for the agriculture and food sectors is a clear example of such a collaborative process.
- 41) Finally, we are concerned about the requirements associated with subsurface investigations, and exactly what is defined as “subsurface investigation.”
- 42) We believe subsurface investigations that do not require land use consent with district or city council, or that meet the permitted activities (without conditions) classifications, should not require lodging of reports with council.

Decisions Sought

Recommended deletions are indicated by ~~striketrough~~, while additions are underlined.

- a) Change the title of the Proposed NES to:

National Environmental Standard for Assessing and Managing Contaminants in Soil:
Associated with Subsurface Investigation, Development, Subdivision, or Use of Land
for the Protection of Human Health.
- b) It should be considered very clear from the recommended title that the NES is primarily relevant to territorial council functions with regard given to section 31 of the RMA 1991. Therefore it should also be made very clear early in the document that responsibilities for giving effect to, and enforcing the NES rests with district and city councils.
- c) The Proposed NES should clearly and consistently state that the primary intent of the NES is the protection of human health. While also specifically stating that $SGVs_{(health)}$ should not be utilised for determination of adverse effects on the wider environment under the RMA 1991.
- d) The Proposed NES should require either the formation of National Working Groups to oversee or consider the development of any future $SGVs_{(environment)}$, or public notification of any proposed $SGVs_{(environment)}$, thereby enabling stakeholder scrutiny of

any proposals early in the process. The Cadmium Working Group for the agriculture and food sectors is a clear example of such a collaborative process.

- e) The objective and scope of the Proposed NES are supported.
- f) Clearly define “subsurface investigation”, and exclude submission of reports to council associated with subsurface investigations where they are independent of a resource consent application for development, subdivision, or use of land.
- g) Remove any reference to figure 6, page 58 of the Proposed NES discussion document, as the comparison between the toxicological risk of the SGVs_(health) and the effects based thresholds of the RMA 1991 is confusing and potentially misleading.

5.2 Proposed Assessment Process

- 43) The process for assessment and management of contaminants in soil associated with all future resource consent applications for subsurface investigations, development, subdivision, or use of land is a little confusing by being described in **three key steps** (p. 52 – 54)
1. Determine whether the land is potentially effected by contaminants
 2. Determine whether a detailed site investigation is required
 3. Determine whether the site exceeds the SGVs_(health)
- and also in **nine key steps** (p. 61 – 64) as follows:
- 44) **Step 1** of the assessment process requires any development, subdivision, or use of land to include an assessment of the land’s potential to be affected by soil contaminants, with reference to applicable council Land Use Register’s, HAIL, and known historic uses of the land. If, following the assessment, the land is found not to be affected by soil contaminants, then the proposal shall be considered “Permitted” with regard to ongoing management of contaminants in soil. Thereby continuing through the normal regulatory channels (for the proposed development, subdivision, or use of land) without further requirement for assessment or management of contaminants in soil.
- 45) **Step 2** of the assessment process requires any development, subdivision, or use of land, if identified in step 1 to be potentially affected by contaminants in soil, to include a preliminary investigation as defined in MfE’s Contaminated Land Management Guideline No. 1.
- 46) **Step 3** of the assessment process requires (“Tier 1”) assessment of the proposed land development, subdivision, or use against the (Table 1) SGVs_(health), relative to four standard activity scenarios, which include: 1. Residential, 2. High-density residential, 3. Parks / recreational, and 4. Commercial / industrial outdoor worker (unpaved). A fifth standard activity scenario has been provided for reference only (p.68), being Rural / lifestyle blocks. Detailed site investigations are to be undertaken in accordance with MfE’s Contaminated Land Management Guidelines No. 5.

Table 1: Standard Exposure Scenarios and Related SGVs_(health)

STANDARD ACTIVITY SCENARIOS	INORGANIC SUBSTANCES														ORGANIC SUBSTANCES					
	Arsenic	Boron	Cadmium (pH)							Chromium		Copper	Inorganic Lead	Inorganic Mercury	BaP	DDT	Dieldrin	PCP	Dioxin (µg/kg TEQ)	
			5	5.5	6	6.5	7	7.5	8	III	IV								TCDD	Dioxin-like PCBs
Rural residential / lifestyle block 10% produce	20	34000	5.1	8.1	13	20	29	41	57	280000	560	32000	730	380	85	90	3.1	70	0.19	0.15
Residential 10% produce	24	34000	5.1	8.1	13	20	29	41	57	280000	560	32000	730	380	100	90	3.1	70	0.19	0.15
High Density Residential	50	75000	369	369	369	369	369	369	369	890000	1800	60000	1600	1200	240	270	50	130	0.41	0.38
Recreation	100	220000	1077	1077	1077	1077	1077	1077	1077	NL	5200	170000	4700	3500	440	750	110	230	1.1	0.9
Commercial / Industrial outdoor worker	70	400000	1644	1644	1644	1644	1644	1644	1644	NL	6300	290000	7000	4200	300	1000	160	360	1.4	1.2

Reference: Draft Methodology for Deriving Soil Guideline Values Protective of Human Health. Appendix 2

- 47) **Step 4** of the assessment process requires further investigation if the results exceed the SGVs_(health), meaning the SGVs_(health) represent (in effect) an investigation level. If the results do not exceed the SGVs_(health) then risk associated with the proposal is considered acceptable, and

no restrictions with regard to management of contaminants in soil associated with the proposal are required.

- 48) **Step 5** of the assessment process requires a choice between either a site-specific exposure assessment (step 6), or remediation of the site, i.e. reduction of the concentration of contaminants to reduce risk (step 8).
- 49) **Step 6** of the assessment process requires a site-specific (“Tier 2”) assessment to modify the generic standard exposure scenarios to more accurately estimate the exposure and risk to human health for any particular situation. Tier 2 assessments are therefore required to be carried out by qualified and experienced professionals, “who have an intimate knowledge of the derivation methodology required to vary factors used in the derivation of the guideline values.” (p. 69)
- 50) **Step 7** of the assessment process requires a comparison of the Tier 2 site investigation results against the $SGVs_{(health)}$ (as in step 4). If the site results do not exceed the $SGVs_{(health)}$ then risk associated with the proposal is considered acceptable, and no restrictions with regard to management of contaminants in soil associated with the proposal are required.
- 51) **Step 8** of the assessment process requires the implementation of a method for managing the risk associated with contaminants present in soil. Options may include remediation, containment, or behaviour controls.
- 52) **Step 9** of the assessment process requires management of the risk associated with the proposed development, subdivision, or use through either demonstration of suitable remediation, or inclusion of controls in the form of conditions of resource consent as a “Restricted Discretionary Activity.”
- 53) **Importantly**, five standard activity scenarios are to be “permitted without conditions” under the Proposed NES, being:
1. any ongoing activities or occupation of the land for the same activity or existing use
 2. subdivision which is not associated with a change in use or a disturbance of the ground
 3. landscaping fencing (but not retaining walls), and other minor actions which involves a minimum level off soil disturbance
 4. internal and external additions and alterations to existing buildings that occur above ground level and do not disturb the ground
 5. any activities on agricultural land used for the bulk production of food that are not associated with a change of use to a non-agricultural land use (for example, agricultural to residential).
- 54) Permitted activity scenario number 5 specifically excludes any activities on agricultural land, not associated with a change of land use to non-agricultural land. We understand this to

specifically include (and therefore exclude from consideration) activities such as storage of fertiliser within bins on farm, airstrips and related fertiliser loading facilities utilised for aerial top-dressing, farmyards and associated buildings, fuel storage.

Decisions Sought

Recommended deletions are indicated by ~~striketrough~~, while additions are underlined.

- a) Implement a single, clear assessment process (there is currently a three step model and a nine step model).
- b) We support the permitted activity (without conditions) scenarios, with amendment to scenarios 4 & 5, in association with them being adopted as new step number one in the assessment process as follows:

New Assessment Process Step 1: Exclude the following from any consideration:

- Any ongoing activities or occupation of the land for the same activity or existing use
 - subdivision which is not associated with a change in use or a disturbance of the ground
 - landscaping fencing (but not retaining walls), and other minor actions which involves a minimum level off soil disturbance
 - internal and external additions and alterations to existing buildings that occur above ground level and ~~do not disturb~~ involve minimal disturbance to the ground
 - any activities on agricultural land used for the bulk production of food that are not associated with a change of use to residential, recreational, commercial or industrial land use. ~~a non-agricultural land use (for example, agricultural to residential).~~
- c) Clearly identify the type of activities on agricultural land used for the bulk production of food that are excluded from the assessment process i.e. storage of fertiliser in bins on farm, airstrips and related fertiliser loading facilities utilised for aerial top-dressing, farmyards and associated buildings, fuel storage.
 - d) Clearly define $SGVs_{(health)}$ as an "Investigation Level" for the purpose of initiating further risk management investigations
 - e) Remove any reference to standard activity scenario "Rural / lifestyle blocks".
 - f) Remove any reference to 50% produce with particular regard to Cadmium.