

Summary of submissions received during consultation on the Draft Waste Derived Soil Enhancer Standard

A total of eight submissions were received during consultation on the Draft Waste Derived Soil Enhancer Standard. Below is a table of the responses received relating to each part of the standard.

Part	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
General	-	-	4
Introduction	-	1	2
EPA statutory framework	-	-	-
Key considerations	2	-	5
Suitability for waste derived soil enhancers	-	-	4
Approvals and licensing	-	1	6
EPA submissions for Type B WDSE proposals	-	-	3
Glossary	-	-	2

General

It was suggested that the approach used in the Biosolids Guidelines with grading criteria and specific approval requirements for certain material quality could be used for WDSE. The Biosolids Guidelines are based on extensive research on a single waste stream and its particular behaviour.

In contrast, the standard is designed to address a specific use but covers a range of wastes. Due to the range of chemical substances potentially present in waste, the possible variation in behaviour (eg attenuation or adsorption), the standard requires assessment for each waste stream proposed for use as WDSE.

This standard provides a process by which to develop and assess WDSE. Once chemical limits for fertilisers are set at the national level for unrestricted agricultural use, these will be adopted under this standard. Individual site-specific assessment may still occur where those limits are not met.

However, the EPA will support an industry sector that wishes to develop an industry specific code of practice with specific criteria on source material, chemical and physical quality and beneficial uses. This could cover a range of uses and not be limited to use as a WDSE, but must meet the standard including its principles.

It was highlighted that the CSIRO report, *Methodology to assess the impact of contaminants in fertilisers and fertiliser ingredients, including industrial residues* has not been released publicly. This report was produced as part of a research project (CSIRO project) to assess the hazard posed by contaminants in fertilisers and industrial waste applied to agricultural land for the Primary Industries Ministerial Council (PIMC) and the Environment Protection and Heritage Council (EPHC).

An overview of this project is provided in Attachment 1 and some information is provided on the CSIRO website¹. This report is anticipated to be released following formal endorsement from PIMC and EPHC. Any limits derived from the CSIRO project will then be adopted by this standard. However, rather than await its release, the EPA has finalised the standard to outline the process for assessment in the absence of those limits. The standard will be aligned with the project once it is released.

It was suggested that the standard did not differentiate between the use of an industrial waste in a manufactured product and the use of unprocessed waste as a WDSE but that the criteria should be uniformly applied. The standard does not differentiate specifically but does cover both scenarios as suggested. The standard indicates in the scope that if waste is used for direct or indirect application as an ingredient in a WDSE, the same assessment requirements apply.

The issue of pasteurisation was raised both through the consultation period and earlier workshops. The EPA acknowledges the role that pasteurisation plays in reducing the risk of disease and pests and recommends that within the standard. However, biosecurity and farm health issues are managed by PIRSA and the EPA will not be mandating pasteurisation of all organic wastes (including farm wastes such as manure).

Part 1 Introduction

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Scope	-	1	2
Process outline	-	-	1
Using this standard	-	-	-

The example of interim arrangements applying to biosolids has been removed. The arrangements in place under the draft South Australian Biosolids Guidelines for the safe handling and reuse of biosolids will continue to operate. Clarification on the interim arrangements before the Environment Protection (Wastes to Resources) Policy becomes operational in September 2010 has been added.

1.1 Scope

The scope of the standard has been modified to include compost. Clarification was requested on whether the standard applies to effluent, spent litter and sludge generated from livestock industries. These wastes are within the scope of this document as Type A proposals. Although not specifically mentioned, they are included in the 'animal wastes that do not contain industrial waste or residues'.

Clarification was also requested on Water Treatment Solids (WTS). Where WTS are proposed for use as a waste derived soil enhancer, then they are included within the scope of the document. WTS used for any other purpose is not within the scope of this document. However, other reuses must be demonstrated as suitable to the satisfaction of the EPA following the same principles included in this standard, and standards for the production and use of refuse derived fuel and waste derived fill. That is reuse must be genuine, beneficial, have a sustainable market and must not cause harm to the environment or human health [refer *Waste-derived materials—guiding principles for determining approval processes and product standards* (2008)].

The exclusion has also been modified to indicate that the agricultural products not included in the scope of the document are those that are commercially produced but not derived from waste (ie superphosphate chemical fertilisers). These

¹ <www.clw.csiro.au/research/biogeochemistry/organics/projects/contaminants-in-fertilisers.html>

products may still however be subject to any limits that are imposed for fertilisers, for example under the *Agricultural and Veterinary Products (Control of Use) Regulations 2004* (AgVet Regulations).

1.2 Process outline

The scope of materials for use as WDSE is not designed to capture all types of waste. Those wastes listed have specifically been identified as possibly being suitable for use as or in a WDSE.

Part 2 EPA's statutory framework

No comments were received on the EPA's statutory framework and no significant changes made.

Part 3 Key considerations

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Waste hierarchy	-	-	1
Immediate market	-	1	-
Risk-based approach	-	-	1
Prevention and minimised potential for harm	-	1	1
Demonstration of beneficial purposes	-	-	2
No dilution of waste or chemical substances	2	-	4
Consistent approach to regulation	-	-	1

3.1 The importance of support for the waste hierarchy

It was suggested that excluding wastes that have a higher-order reuse does not take into account economic factors or environmental responsibility. An example was provided where Company A recycles and reuses waste on site resulting in small quantities of highly contaminated waste. Company B chooses not to recycle and produces more waste but at a much lower level of contamination. It was suggested that Company B has ignored the waste hierarchy yet is rewarded by being able to use the waste as a WDSE while Company A cannot use their waste as a WDSE.

The waste hierarchy is meant to be an integrated waste management system and provides options in order of preference. The intent of this standard is to ensure that in recycling the waste for use as a WDSE, it is not at the expense of reducing the production of waste or reusing within the industrial process. It should also not drive increased waste production.

In the example, Company A has demonstrated that the waste can be reused within the process. The waste from Company B could also be reused within the process which is higher-order reuse and that option would be preferred over use in a WDSE. In addition, the standard does not say that neither Company A's highly contaminated waste nor Company B's lower contaminated waste could be used as WDSE. Each would require individual assessment to determine suitability and would be assessed on merit inline with this standard.

3.2 The need for an immediate market

The need for an immediate market was questioned however no changes were made to this requirement. Any new application needs to have investigated likely potential markets to ensure success. The EPA supports the waste hierarchy and diversion of waste from landfill should occur provided it is safe and sustainable to do so. The diversion of waste and production of a WDSE with no market could result in speculative stockpiling and avoidance of disposal costs. This leaves a risk of abandoned waste with no future use which is, in effect, illegal disposal.

The EPA does recognise that, within a known project, there may be need to stockpile material for a period of time in preparation, and under these circumstances, appropriate materials balance and flow management need to be in place. Producers will need to be able to demonstrate responsible and sustainable management of the WDSE rather than continuous production and stockpiling.

3.3 The requirement for a risk-based approach

While the risk-based approach was supported, concern was raised over the Auditor Protocol. No changes were made to the standard as the Auditor Protocol only applies for Type B WDSE proposals when the WDSE is not suitable for broad application (ie due to higher levels of contaminants) but may be suitable for use at a specific site (ie one lacking in those particular elements). Due to the site-specific nature of this type of use, the Auditor Protocol is required to ensure the use of WDSE will prove beneficial and will not cause harm.

The Auditor Protocol is not required for Type B WDSE proposals suitable for non-site specific agricultural application if:

- it is demonstrated as suitable by a robust and comprehensive risk assessment by the proponent and supported by sound science, or
- it meets the limits developed by the CSIRO project (once adopted) regarding contaminants in fertilisers.

Clarification was added to this section to highlight that all testing and risk assessment must occur prior to transport and reuse at the receiving site.

3.4 Prevention and minimised potential for harm

The restriction that increasing concentrations of chemical substances at a site up to the investigation levels is not condoned or permitted was questioned. In particular, concern was raised that WDSE is likely to include chemical substances that may increase soil concentrations.

The limitation is from clause 6(3) of the *National Environment Protection (Assessment of Site Contamination) Measure* (NEPM) and is supported by the EPA. However, the NEPM clause recognises that certain activities will lead to the addition of substances to the soil which can raise the background levels of soils and states that these are valid where they are undertaken according to relevant laws and best practice guidelines.

For example it may be appropriate when the background level of a nutrient in soil is deficient. The standard addresses this by requiring assessment of the WDSE, giving consideration to potentially toxic elements within the WDSE and the potential for accumulation along with assessment of beneficial constituents and appropriate application rates with respect to expected or recommended use.

It was also suggested that fertilisers may not fall within the scope of the *Agricultural and Veterinary Products (Control of Use) Act 2002* (AgVet Act). This Act outlines requirements for agricultural products which are defined as 'an agricultural chemical product or a fertiliser'.

The AgVet Act and associated regulations can control use and specify labelling requirements and chemical concentration limits for fertilisers. It is understood that the contaminant limits developed by the CSIRO project will also be considered for adoption within the AgVet legislation.

3.5 Demonstration of beneficial purposes

The example of improved soil chemistry was changed to cation exchange capacity.

3.6 No dilution of waste or chemical substances

Clarification has been added to indicate that section 4.2 lists key aspects of risk to be assessed and does not provide guidance on acceptable levels of potential contaminants.

It was suggested that the standard should provide minimum thresholds, below which further investigation or risk analysis is not warranted. The waste fill criteria were suggested for this use.

However, waste fill criteria are not applicable as they are for use as fill. Fill is a once-off application and will result in a single chemical load. WDSE is likely to be repeatedly applied such that accumulation and other associated risks (in the soil as well as biological) needs to be taken into account. Therefore suitable chemical concentrations are likely to be lower.

The CSIRO project is working on developing limits that, once released, will be incorporated into the standard. These will be used as thresholds, above which the Auditor Protocol will apply. WDSE not exceeding these thresholds will still require submission of the other information for non-site specific application including details of QA/QC procedures.

Some confusion arose with an error in the draft *South Australian Biosolids Guideline for the safe handling and reuse of biosolids* which states that dilution is allowed. The EPA allows the mixing of ingredients when each has beneficial properties; however combining multiple substances for the purposes of contaminant dilution is not permitted. This principle is consistent with the CSIRO project.

When looking at concentrations of a particular substance within WDSE, there is a need to determine if the substance can provide a benefit (ie is a suitable constituent or ingredient) or if it is a contaminant (and does not provide any benefit). Materials must not be mixed to dilute concentrations of contaminants. However, if the substance is considered an ingredient, blending may occur. For example, combining compost and biosolids to enhance the beneficial effect. Any material combined with biosolids becomes classified as biosolids. In this case, the compost must be managed as biosolids.

It has been clarified that wastes can be included in WDSE except prohibited or unacceptable wastes or substances.

Clarification was requested on whether bioremediation is considered as dilution (note no changes were required for this point in the standard). Bioremediation is a process where materials are mixed for the purpose of breaking down or altering the contaminants. This results in the reduction of the overall load of contaminants through removal or the breakdown and conversion to less harmful substances. When assessing the success of bioremediation, the overall reduction in contaminants needs to be related to any volume changes that are associated with that treatment. In contrast, dilution reduces the concentration but does not impact on the overall load of contaminants.

3.7 A consistent approach to regulation

It was suggested that the standard imposed restrictions on WDSE that did not apply to manufactured soil enhancers (ie fertilisers) and that this was not a consistent approach to regulation.

The approach to WDSE and manufactured fertilisers will differ as WDSE is produced from waste, which may contain a variety of chemical substances, while manufactured fertilisers are produced from targeted components. Due to the potential for other substances present, WDSE requires testing and quality controls. However, one of the aims of the CSIRO project is to recommend values for contaminants in all fertilisers. The EPA will adopt these as limits and it is understood that PIRSA will also consider adopting these values under the AgVet Regulations. As such the approach will be consistent.

Part 4 Demonstrating suitability for waste derived soil enhancers

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Prohibited wastes	-	-	3
Important aspects for waste derived soil enhancers	-	-	4

4.1 Prohibited wastes

Clarification was requested on why wastes treated by immobilisation or fixation should be listed as prohibited wastes. It was suggested that these processes would reduce the bioavailability of a potential contaminant, making it suitable for use in WSDE. No changes were made to the document and these wastes are still listed as prohibited wastes.

This prohibition is intended to prevent, for example, hazardous wastes and wastes that exceed disposal criteria from being used in WDSE. These wastes should be treated by immobilisation or fixation to stabilise the waste to reduce leachability prior to disposal at a landfill. The EPA would not expect such wastes and contaminants to be suitable given there will still be a high total load of contaminant and may in effect be the disposal of waste rather than a beneficial application.

For clarity, the following items were added to the list of prohibited wastes:

- ,treated timber
- any chemical substance, including waste material, that the CSIRO project recommends should not be permitted ingredients or components in fertilisers.

Clarification was requested on the difference between Waste Activated Sludge (WAS) and biosolids. WAS is unstabilised and unclassified sludge. It is considered a waste and not suitable for use as a WDSE unless it is stabilised and graded. Biosolids have been through a stabilisation process, analysed and allocated a stabilisation and a contamination grade. These grades determine its suitability for specific purposes.

4.2 Important aspects for waste derived soil enhancers

It was clarified in the standard that the lists of inorganic, organic and biological contaminants are examples of potential contaminants. While this list is broad, producers and users of WDSE need to be aware of the risks associated with those types of contaminants. Not all contaminants will be present in all wastes, however Type B WDSE proposals will need to assess the full nature of the material, including assessment of any contaminants known or likely to be present.

Other clarifications include:

- specifying detrimental bacteria as the potential biological contaminant of interest
- expanding the list of key nutrients
- correcting the definition of nanoparticles
- adding additional information on the definition of contaminant
- adding definitions for:
 - constituent
 - Fertiliser Contaminant Trigger Value
 - persistence.

It was requested that a recommended methodology for risk assessment and some guidelines on the rigour of demonstrating suitability be added. The general approach as outlined in standard is consistent with the CSIRO project and would be considered a suitable methodology. This includes the following steps in order to determine acceptable limits as part of the WDSE specification:

- identifying beneficial constituents and contaminants
- determining whether the contaminants have potential to accumulate
- assessing the hazard they pose.

It was suggested that in addition to the cadmium limit, a lead limit should also be considered. The cadmium limit is a result of a national study conducted by the National Cadmium Minimisation Committee (NMC). It is likely a lead limit will be among those that result from the CSIRO project. However, fertilisers are currently subject to the limits imposed under the AgVet Regulations for lead, cadmium and mercury and these should be considered. In relation to cadmium, the concentration should meet the limit recommended by the NMC.

Clarification was requested on whether all users should conduct their own assessment when applying WDSE. No changes were made to this point. It is recommended that all users assess the needs of their land in relation to the proposed WDSE. This includes determining the nutrients lacking on the site and if the WDSE will meet those needs as well as determining the relevant application rate. The level of assessment required will differ based on the type of WDSE used (eg Type A reuse guidance versus Type B reuse including Auditor Protocol that requires a full site specific assessment for WDSE that is not suitable for broad application).

Part 5 Approvals and licensing

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
Approvals and licensing	-	-	1
Type A WDSE proposals	-	-	3
Type B WDSE proposals	-	1	5
General responsibilities	-	-	-

The introductory information for section 5 has been modified to improve readability.

5.1 Type A WDSE proposals

Clarification was requested on whether soil application of animal wastes can apply without using the standard as long as existing guidelines such as the *Manual for spreading nutrient-rich wastes on agricultural land* (the Manual) are observed. No changes were made to the standard however, animal wastes are considered WDSE and as such need to meet the overarching principles of the standard. The standard then refers readers to existing guidance (eg the Manual) for details of testing and application rates and any approvals that may be required (eg Biosolids guidelines).

It was suggested that under Type A approval requirements, it should be clearly stated within the document when approval was not required. Due to the level of detail in the existing guidance, the approval information was not duplicated within the standard, and producers and users are advised to read the existing guidance in full. In general, approval of a reuse proposal may be required where reuse of a waste to land forms part of a Development Approval or licence if it is required for the principal activity.

It was asked if the *National Environmental Management System for the Meat Chicken Industry* (Meat Chicken EMS) would be accepted as an alternative to the document. No guideline would be accepted as an 'alternative' to the

document. The guidelines listed within the document are recognised as being consistent with the overarching principles of WDSE and contain the specific requirements for a particular waste stream. However, the industry made a formal request to the EPA stating how the Meat Chicken EMS and the *Guidelines for the safe and sustainable utilisation of spent litter from meat chicken sheds* align with the standard and requesting that they are referred to in the standard. Following assessment of the document, these documents were added to the section on further information.

It was suggested that the section on wastewaters be removed as it is excluded from the scope of the document. This section was retained in the document as it simply explains that wastewater is generally used for irrigation rather than as a WDSE and directs readers to guidance on irrigation for clarity.

5.2 Type B WDSE proposals

Concern was raised over the land title notification being a potential market barrier. The requirement for answering questions related to the existence of environmental assessments and audit reports is regulated under the *Land and Business (Sale and Conveyancing) Act 1994*. The standard only requires environmental assessments and audit reports for site-specific proposals when the WDSE is not suitable for broad application to agricultural land. The questions relating to disclosure already exist and are not a new requirement imposed by this standard. The standard simply highlights these legal requirements.

During initial consultation workshops on the WDSE concept, the representatives of farming industries indicated that they were very supportive of such information being available. The example provided at the time by the representative was that this information could be used to provide evidence of appropriate practices if queried (eg by overseas markets checking for 'green' practices).

Clarification has been added to Table 3 to indicate the circumstances where waste materials can be included in WDSE, ie to enhance beneficial effects.

Figure 3 was updated to reflect when reuse is permitted.

Clarification was sought on enforcement action being considered in conjunction with the protocol for products. Clarification has been added to the standard to indicate that proponents currently using WDSE should already have submitted a proposal to the EPA for assessment and endorsement (where required) or be following existing guidelines and standards. In either case, no further action will be needed. Where this is not the case, the EPA should be contacted and an environment improvement program (EIP) or other compliance tool available under the EP Act may be required.

Where enforcement action is required, the EPA will apply the compliance and enforcement principles.

Part 6 EPA submissions for Type B WDSE proposals

Concept	No. of supporting submissions	No. of opposing submissions	No. of submissions seeking clarification
EPA submissions for Type B WDSE proposals	-	-	3
Required information for broad application	-	-	-
Required for site-specific application	-	-	3
General responsibilities	-	-	1

6.1 Required information for broad application (non-site specific application)

Changes were made to this section to improve readability.

6.2 Required information for site-specific application (Auditor Protocol)

It was questioned if users needed to undertake sampling, assessment, record keeping and have a management plan for the use of WDSE. The level of record keeping will vary depending on the type of WDSE. For site-specific application of Type B WDSE, a site-specific assessment including testing will need to be conducted. In this case, detailed records need to be maintained by the user to demonstrate compliance.

For Type A WDSE the requirements vary but the user should maintain records to show they are applying the WDSE in a sustainable manner (ie through calculation of application rates) for reasons such as their own knowledge of the quality and management of their productive land, for due diligence to their customers and to demonstrate their any actions they undertake in support of their general environmental duty.

The document has been modified to clarify the role of auditors. The process outlined in the document is consistent with the auditor process for waste derived fill and site contamination. An auditor is the appropriate person to review and endorse information, including site management plans, due to their high level of responsibility and liability. However, the plan can be prepared by a suitably qualified consultant (ie soil scientists, agronomists). Auditors have been included in the consultation on this document and will be involved in implementation.

6.3 General responsibilities

The user responsibilities have been modified to indicate records are to be maintained to demonstrate compliance with relevant guidelines and their general environmental duty.

Glossary

Definitions were modified to be consistent with the EPA Guideline, *Waste definitions* and existing legislation.

Clarification on 'suitably qualified consultants' was requested. The EPA has accredited auditors but does not accredit consultants. The onus is on the proponent to ensure they engage someone with suitable experience and qualifications. Consideration should be given to previous work undertaken, opinions of previous tenderers, research bodies and possibility of independent verification of their work. The EPA has guidance available on engaging site contamination auditors and consultants and undertaking independent verifications (refer section 7 of the standard).

The definitions of contaminant and inorganic contaminants were questioned however these were sourced from the CSIRO project and retained.

The definition of radionuclide was questioned. The definition has been modified according to the Macquarie dictionary.

Response to other comments

The EPA is well placed to administer this standard as well as the *Guideline for stockpiling, Standard for the production and use of refuse derived fuel* and *Standard for the production and use of waste derived fill*. The EPA will implement this standard on a priority and risk basis in a practical manner.

Comments received on the draft Environment Protection (Waste to Resources) Policy were forwarded to the relevant project manager although consultation on this document had already closed.

Waste tracking is important to ensure that waste reaches appropriate treatment or disposal facilities. The EPA waste tracking forms are reviewed, entered into an electronic storage system and validated. Anomalies are identified and investigated. The EPA will continue to investigate alternative options for the future of waste tracking.

Attachment 1 CSIRO Project

CSIRO is conducting a research project on behalf of the Primary Industries Ministerial Council (PIMC) and the Environment Protection and Heritage Council (EPHC) to assess the hazard posed by contaminants in fertilisers and industrial waste applied to agricultural land.

A background report entitled *Background and scope for establishing a list of prohibited substances and guideline limits for levels of contaminants in fertilisers*, was produced in 2005 by the CSIRO Land and Water, Centre for Environmental Contaminants Research.

Following this the EPHC released a guideline in September 2006 entitled *Guidance for assessing the beneficial reuse of industrial residues to land management applications—A national approach*. The EPA based the approach used within these guidelines in line with the principles and framework within that EPHC guideline.

The CSIRO then produced a report entitled *Methodology to assess the environmental impacts of mineral fertilisers, including industrial residues* (Sovari *et al* 2008). This established the methodology for deriving contaminant limits in fertilisers. That approach is also reflected within this guideline.

Finally, in June 2009, Sovari *et al* produced a report entitled *Investigation into the impacts of contaminants in mineral fertilisers, fertiliser ingredients and industrial residues and the derivation of guidelines for contaminants*. The EPA is advised that this report contains trigger values that have been established as a result of the methodology for use as default limits for industrial residues used as a fertiliser (ie a waste derived soil enhancer).

The EPA intends to adopt those trigger values for the same purpose once they are released. These values will apply for any proposed non-site-specific reuse. Where these limits are exceeded or where there is no specific limit for an identified contaminant, then a site-specific reuse may be permitted if suitable assessment demonstrates that this is genuine beneficial and will not cause harm. Otherwise the reuse of that waste as a soil enhancer will not be permitted.

The aim of the CSIRO project is to protect ecosystem health, human health, plant and animal (livestock) health and the sustainability of agricultural and aquaculture production systems for a period of at least 100 years from any adverse effects associated with the application of mineral fertilisers and industrial residues (ie wastes or by-products) to agricultural land. This will be achieved by establishing guidelines and a procedure to assess the potential hazards posed by mineral fertilisers and industrial residues.

The methodology that will be developed is considered suitable to assess any new fertilisers or industrial residues that proponents wish to apply to agricultural soil and is based on a tiered procedure which consists of five steps:

- 1 Data collection
- 2 Beneficial effects identification
- 3 Contaminant identification
- 4 Contaminant accumulation potential assessment
- 5 Hazard assessment.

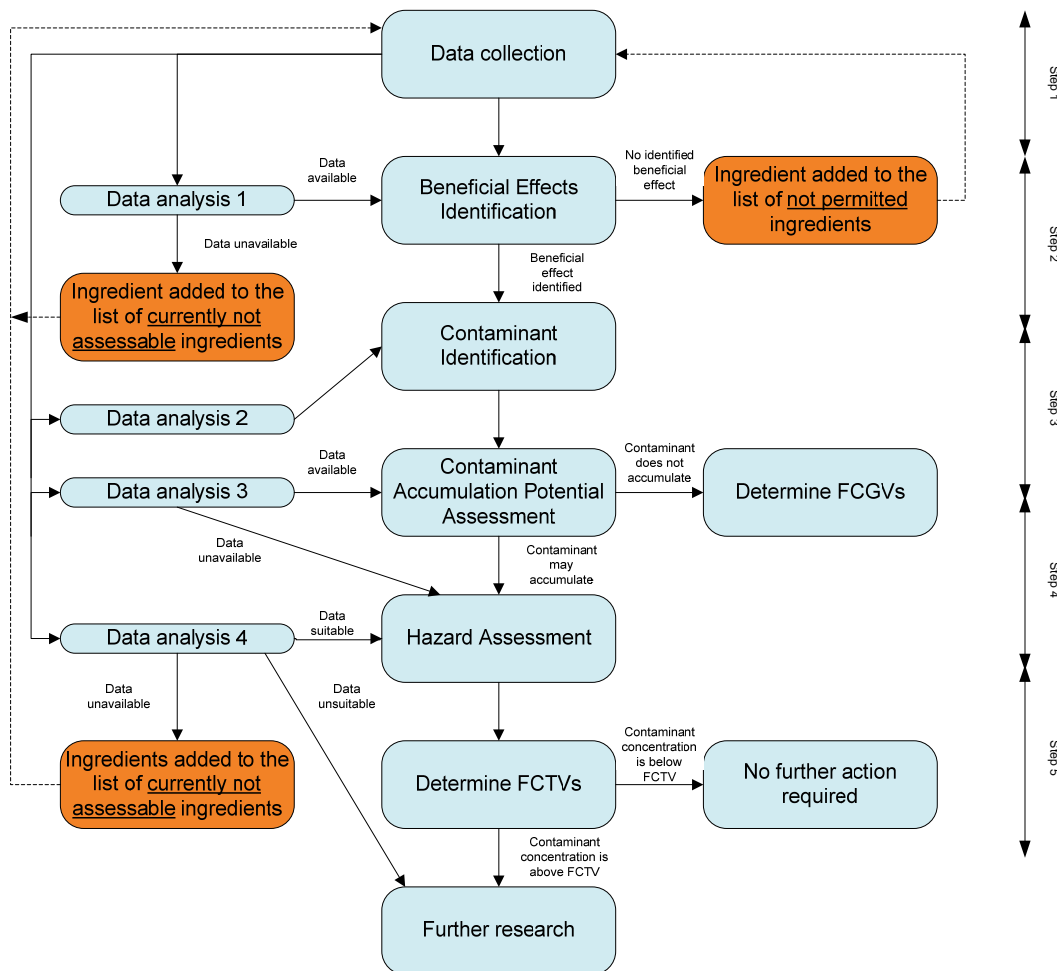


Figure 1 Overview of the CSIRO methodology

Figure 1 is sourced from the CSIRO report (Sovari *et al* 2009) outlines the approach taken by the CSIRO. This approach should be used as the framework for any assessments conducted by a proponent in the absence of published contaminant limits.

The deliverables for the CSIRO project were:

- guideline values for contaminants in fertilisers including assessment of suitability for industrial residues
- lists of substances that are:
 - not permitted as ingredients
 - permitted as ingredients
 - not assessable
- lists of contaminants that:
 - pose minimal risk
 - have a potential risk and thus require further assessment
 - have insufficient data
- description of data requirements and guidance for future assessments.

The reports contain the following essential information as considerations in the establishment of trigger values:

- All ingredients must have identified beneficial qualities, otherwise they are placed on the 'not permitted list'. This was to ensure that waste is not included as ingredients in fertilisers for the purposes of dilution, dumping or disposal, which are principles set out at the start of the CSIRO project. This list can be changed if new information shows a clear benefit is achievable.
- The data used in the CSIRO project were collected from Australian fertiliser companies and industries generating industrial residues, considering information including ingredients used, concentrations of contaminants and typical application rates.
- By default, any chemical that is not on the 'permitted ingredients list' or the 'currently not assessable' list, means that it is considered as being on the 'not permitted' list.
- Fertilisers Contaminant Trigger Values (FCTVs) were established after conducting probabilistic hazard assessments on those contaminants that were identified as having the potential to accumulate above background levels. The FCTVs are based on ensuring with 95% confidence that none of the environmental compartments that were considered (soil, surface water, groundwater, plants, sediments, fish, seafood and livestock) will exceed established protection benchmarks.
- Contaminant Values for industrial residues are based on a specific application rate and thus adjustments must be made accordingly if applications differ from that provided.

The project deliverables will be presented in the final report. They are expected to provide the scientific basis of a federal, state and territory policy response on how to address the issue of potentially adverse impacts of contaminants associated with the application of fertilisers and industrial residues to agricultural land.