Attachment 1

Accounting for Hazardous Substances and Genetically Modified Organisms

What are the implications of accounting for environmental obligations in light of FRS-15: Provisions, Contingent Liabilities and Contingent Assets, and other existing standards? ***Wendy McGuinness*** *(right), with the assistance of* ***Susannah Sharpe****, discusses the issues.*

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Note: Text identified by asterisks reflects the author's personal opinions.

SIMPLY *claiming* you are "clean" is no longer enough. Investors, shareholders, bankers and other stakeholders want to ensure businesses *are in fact* clean. This means taking a very pro-active look at the land you own, the business you are in and where your liabilities lie. Being seen to be clean is about being credible; it's about documenting where you are and what you are doing, rather than making unsubstantiated claims about being clean and green. Public relations statements will only be relevant if they are supported by convincing evidence, and it is the "reporting of the evidence" that this article is all about.

The Financial Reporting Standards Board of the Institute has issued FRS-15: *Provisions, Contingent Liabilities and Contingent Assets.* This standard applies to general purpose financial reports covering periods ending on or after 31 October 2001.

The requirements of FRS-15 are largely consistent with the requirements of International Accounting Standard IAS-37: *Provisions, Contingent Liabilities and Contingent Assets.*

Existing standards also require accountants to continuously evaluate reporting practices to reflect the information needs of users. This is not an add-on to the 1993 definition of the objectives of general purpose financial reports (refer italics below), but a continuing assessment of who the user is and the type of information they want to know.

> *The objectives of general purpose financial reporting are to provide information to assist users in:*
>
> *(a) assessing the reporting entity's financial and service performance, financial position and cash flows;*
>
> *(b) assessing the reporting entity's compliance with legislation, regulations, common law and contractual arrangements, as these relate to the assessment of the reporting entity's financial and service performance, financial position and cash flows; and*
>
> *(c) making decisions about providing resources to, or doing business with, the reporting entity. [Statement of Concepts 1993: 3.1]*

The challenge for accountants will be to apply the current financial reporting framework to "environmental obligations and risks" so that the needs of "all users" are met. Accountants should examine the new framework. *Figure 1* reflects my broad understanding of the framework.

Figure 1: Accounting for Environmental Obligations — Key Questions

Question 1: Should the environmental obligation be recognised as a provision in the financial statements in accordance with FRS-15? If no, got to question 2.

Question 2: Should the environmental obligation be disclosed as a contingent liability in the notes to the financial statements in accordance with FRS-15? If no, go to question 3.

Question 3: Should the environmental obligations be disclosed in notes to the financial statements under the requirement of any other financial reporting standard (such as FRS-9) or to meet the objectives of general purpose financial reporting?

(Adapted from FRS-15 — Appendix 2, FRS-9 and SC)

However, it is essential to understand that as "accounting for environmental obligations" is new, complex and of considerable interest to the wider community, this article may stimulate debate both inside and outside the Institute.

Consequently this article should be read as a personal view that is exploring new terrain.

Risk management

Applying risk-management practice may ultimately lead to the identification of potential liabilities. Compliance with risk-management methodology and standards is now common practice. Key standards are the Australian and New Zealand Risk Management Standard (being AS/NZS 4360:1999 — as discussed in the December 2000 *Journal*) and the New Zealand Institute of Directors' "Best Practice" standards (being BP 2001/2).

In Australia, from 15 December 2001, companies could face federal criminal penalties for disasters that occur as a result of risk-management failures. Out and out negligence aside, a key defence to any prosecution would be to demonstrate the implementation of sound risk-management programmes which ensure that "a culture of compliance exists", and that the breach was an aberration (Standards Australia).

> ***The difficulty for accountants is that if insurance companies are not prepared to insure the risk, we must question whether we are obliged to reflect this risk in the accounts.***

In New Zealand, under the Resource Management Act 1991 (sections 339 and 340), officers and directors are liable for fines up to $200,000 and up to two years imprisonment.

Accounting for environmental obligations

The introduction of FRS-15 will ensure consistency in accounting for environmental obligations and is likely to increase the number of provisions recognised and contingent liabilities disclosed. Accounting for environmental obligations will therefore be a key focus for stakeholders.

Auditors also need to be aware of a recently issued Audit Guidance Statement (AGS-1010) 2001, *The Consideration of Environmental Matters in the Audit of a Financial Report.*

The New Zealand Society of Local Government Managers (SOLGM) has also prepared guidelines — *Accounting for Environmental Obligations.* This will help local authorities apply FRS-15. Below are two examples that attempt to examine the accounting for environmental obligations from a wider perspective.

Example one: hazardous substances

Up until now, examples of contamination have in many cases been site related, covering a very small area. Generally, such sites are considered to be low risk in terms of human health and are relatively easy to clean up. They have therefore not been very costly in financial or health terms. In some cases, however, the nature of the contamination can be complex and have considerable effects.

There could be as many as 7,200 contaminated sites in New Zealand, of which some 1,580 sites are expected to be of high risk to human health and/or the environment — see *Table 1.*

Table 1: Potentially Contaminated Sites in New Zealand

Industry/Land Use	*North Island*	*South Island*	*Total*
Chemical Manuf/Form	120	46	166
Drycleaners	170	84	254
Electroplaters	235	56	291
Engine works	620	258	878
Landfill sites	426	290	716
Oil prod/storage	278	156	434
Power/gen&dist	133	90	223
Scrap yards	395	95	490
Service stations	1943	673	2616
Smelting/refining	216	86	302
Other	553	277	830
Total	5,089	2,111	7,200

[Adapted from Worley, 1992 — Table 5.1]

Many regional councils can list identified contamination sites, and the Government has established a fund of $2.59 million for cleaning up "orphan sites", or sites where no party can be fixed with legal liability or where the liable party is unable to fund the clean up. Guidelines for managing sites are available from the Ministry for the Environment (MFE).

One would expect organisations to know if they:

- own contaminated land;
- have contaminated someone else's land; or
- have previously owned land that they or someone else has contaminated. Consequently, one would also expect that directors would know whether they are liable and if so, the potential liability. The clean-up costs can be substantial — for example, the Mapua site, considered to be New Zealand's worst contaminated site, is expected to cost $6.5 million (*The Dominion*).

A key question is how to account for such sites. The requirements of FRS-15 are briefly discussed here, but for a more in-depth understanding of the requirements please refer directly to the standards.

- A provision must be recognised in the financial statements if:

  (a) it is more likely than not that the organisation has a present legal or constructive obligation (the entity indicates it will accept responsibility through its actions and therefore creates valid expectations that it will settle the obligation);

(b) it is more likely than not that money will pass hands (that is, probable outflow) to settle the obligation; and

(c) a reliable estimate can be made of the amount of the obligation (refer FRS-15: 5.1).

- A contingent liability must be disclosed, unless settlement of the obligation is remote, where there is:

(a) a present obligation that is not recognised as a provision (because outflow is not probable or cannot be measured reliably); or

(b) a possible obligation arising from past events which will be confirmed by uncertain future events not wholly within the control of the entity (refer FRS-15: 4.3 and 11.3).

- Where settlement of the obligation is remote, disclosure of a contingent liability is still required, where practicable, if knowledge of the transaction is necessary to achieve the objectives of general purpose financial reporting (refer FRS-15: 11.10).

*In my view, we should expect to see all "high-risk" sites either recognised as a provision or disclosed as a contingent liability in the financial statements of liable or potentially liable organisations.

Example two: genetically modified organisms in the environment

The use of genetically modified organisms (GMOs) in field trials and the commercial release of GMOs in New Zealand pastures and soils, could have potentially adverse effects and lead to potential liability issues.

Unlike hazardous substances, there is a lot less known about the negative effects of GMOs in the environment. The extent of the potential contamination (for example, via bees/pollen) and the ability to clean up the site (because of the irreversible nature of the contamination) are also unknowns.

Many scientists who are experts in this technology are warning the public about the potential risks.

The Royal Commission, for example, acknowledged that risks of horizontal gene transfer may exist, and that the use of antibiotic resistance genes (often inserted into GMO as a marker gene), may negatively impact on the health of humans and the environment *(Report of the Royal Commission on Genetic Modification, New Scientist* and *Institute of Science in Society).*

The debate over GMO will continue until the degree of uncertainty about probabilities and consequences is substantially reduced. However, if New Zealand decides to allow genetically modified organisms to be tested in the field or released into the environment, we must consider how to reflect this new business risk in the financial statements of organisations.

Applying the requirements of FRS-15 to field trials and releases of GMOs will require a case-by-case analysis of each trial or release. This is beyond the bounds of this article. However, a general narrative disclosure in the "notes to the financial statements" should be considered and is discussed below.

The difficulty for accountants is that if insurance companies are not prepared to insure the risk, we must question whether we are obliged to reflect this risk in the accounts.

This inability to measure the risk is best summed up by the recent *Report of the Royal Commission on Genetic Modification,* which stated:

> *It appears that on present levels of understanding the leading overseas insurers cannot assess the level of any risk fully enough to accept and price it adequately or to spread the risk by reinsurance.*
>
> *Not enough is known about the degree of any danger and the extent, if any, to which there is potential for widespread consequences. So it is likely that the insurance industry will introduce changes in liability policies excluding cover for harm caused by genetic modification.*

*Consequently, if organisations cannot insure against a risk because that risk is exceptional in nature, it can be strongly argued that such a risk should therefore be disclosed in the financial statements in order for accountants to meet the requirements of current standards (refer below), as well as to meet the objectives of general purpose financial reporting.

Entities shall disclose information from which it is possible to identify and evaluate exceptional risks of operating. (FRS-9: 8.14) This would involve disclosing in the accounts if an organisation is using technology in such a way that is considered an exceptional risk, and/or is likely to influence users of financial reports in making decisions.

Many stakeholders would strongly consider that information about whether an organisation is in the business of completing field trials and/or releasing genetically modified organisms into the environment is relevant when making decisions about providing resources or doing business with that organisation in the future (as per Statement of Concepts for General Purpose Financial Reporting 1993 or, SC: 3.1 (c)).

In contrast, information about whether an organisation carries out laboratory research into genetic modification may not necessarily be considered material because stakeholders and scientists appear less concerned about such experiments.

If accountants initially consider that recognising a provision or disclosing a contingent liability relating to field trials and releases of genetically modified organisms is not necessary, they should question whether green investors, bankers, neighbours, risk-averse investors and the general public would consider such information useful for assessing and making decisions about the reporting entity (as per SC 3.1).

*In my view, all GMOs tested or released in the environment should be disclosed as a separate note in the "notes to the financial statements".

I suggest this should continue until the degree of certainty increases. Time will prove whether the risks do not exist, do exist but can be managed, or that the risks cannot be managed (in which case the field trials or releases would be stopped).

I consider this disclosure could take many forms, however, the most appropriate method may be to record all relevant information about such risks as a narrative note to the financial statements under the heading "Environmental Risks".

The narrative statement should include information on:

- the type of field tests and/or releases carried out;
- a brief description of the modified organism;
- the dates of the field trial or the date of release;
- the ERMA approval number (in line with SC: 3.1 (b)); and
- the steps taken to minimise potential risks.

In reality, this is no different from disclosing other business and financial risks of an organisation — for example, credit, foreign exchange rate and/or interest risks.

Who is liable?

In a very broad sense, under current law any business that pollutes land, owns or occupies land which is polluted (even if they did not contaminate it or did not know about the contamination on purchase), or has carried out a business that may have affected water, soil or air, or the health of employees, consumers or neighbours, is open to potential liability.

This could include organisations that have been in the business of making and/or supplying such products as fertiliser, petroleum, genetically modified organisms and hazardous substances, and organisations in the waste disposal business.

Various remedies exist, including orders under the Resource Management Act 1991 which may require contaminated sites to be cleaned up by the owner, occupier and/or person responsible for the contamination.

Government organisations could also be subject to challenge if they are culpably involved in the series of actions that have led to the risk occurring. At one end of the scale, government organisations may have their decisions legally reviewed or in the case of Environmental Risk Management Authority (ERMA), appealed if they apply insufficient rigour in their decision-making process, including their assessment of risks. For example, in the recent successful appeal to the High Court against a decision of ERMA (Bleakley v ERMA), the court found that ERMA had failed to apply the methodology required under the Hazardous Substances and New Organisms Act 1996.

At the other extreme, government organisations could also be sued as a result of failures in their operational functions, arising from contract or tortious (for instance, negligent) liabilities where they are, for example, actively involved in the monitoring of risks and/or approval of facilities.

With respect to contaminated sites, government organisations could also be liable as the polluter, owner or occupier of a site, or they may have historic responsibility as a regulator to ensure that problems of past contamination are cleared up — for example, where a government agency required or promoted the use of a specific chemical.

In regard to genetically modified organisms in the environment, two recent reports are relevant.

The Parliamentary Commissioner of the Environment paper, *Caught in the Headlights*, advocated "a clear course of redress" for those adversely affected and the Royal Commission's report acknowledged, "liability issues are difficult" and may require "more intensive study".

The reality is that a robust, transparent, comprehensive legislative framework designed for those who may be adversely affected is in all the stakeholders' interests. Otherwise, a small number of organisations using this technology are asking other businesses and the public to take a risk without ensuring a high standard of legislation exists to provide access to compensation if an adverse effect occurs. Consequently, accountants will also need such a legislative framework for determining "legal obligation" as defined in FRS-15: 4.6.

Relevance to organisations

Intelligent organisations will react quickly to this new climate and position themselves as being "squeaky clean".

This will not only send the message that the organisation is socially and environmentally responsible, which can only be positive in terms of attracting investors and consumers, but will also send signals to bankers and shareholders that the management is focused on reflecting an accurate picture of the organisation. This will show that the governing body is actively managing future profits by maximising its revenue and reputation; and minimising potential costs and liabilities.

In contrast, an organisation that is or has been in a line of business that may have damaged the environment, and yet does not account for or disclose any potential liabilities or environmental risks, should raise questions in the minds of both consumers and investors as to its credibility. What is not in doubt, is that the time to "come clean" is now.

References are available from the author.