"Seeing the Unforeseeable"

Risk Management aspects of Due Diligence in Environmental Management Systems

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ABSTRACT

Property and environmental degradation is more often than not the result of an "unavoidable" corporate accident which could have been avoided through the application of due care and operational resources. Expecting the unexpected is a precautionary strategy within a wider approach to corporate environmental management but a necessary factor to be considered in the overall risk management plan. This paper examines the incidence of corporate environmental negligence and highlights the advantages of establishing an effective environmental due diligence programme in the early stages of corporate operations. In the process the paper examines three classic examples where corporations have been exposed to environmental liability through their failure to fully appreciate the future environmental consequences of their activities. Risk management strategies are identified within the context of an environmental management system and the importance of the environmental audit is recognised as an instrument which can effectively reduce a corporation's exposure to liability.

Introduction

When an environment management system promotes the duty of care and absence of negligence as an operational standard, the elements of a due diligence plan begin to emerge in the risk management protocols implemented to negate the likelihood of environmental harm through corporate activities. Due diligence viewed from this perspective, is fundamentally a demonstration of reasonable care in action; a measure of prudence exemplified by vigilant attention to the operational conditions; an *appropriate* response to foreseeable risk. In legal terms it may be defined as "the measure of prudent, vigilant action exercised under the particular circumstances in order to extinguish the foreseeable risk of environmental harm". ¹

Some six decades ago we were enjoined by the law lords to take care to avoid acts or omissions which could have been reasonably foreseen to have injured our 'neighbour'. The question invariable asked, "who, then, in law is my neighbour?" was answered thus: "persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omission which are called to question". Subsequently, the requirement of "proximity," as a general prerequisite of a duty of care, has in Australia, superseded other tests in determining whether under common law a duty of care exists in any particular circumstance.

Common law class actions founded on the residual effects of contamination or environmental degradation could have a devastating impact on the financial resources of corporations where the 'proximity' test is successfully argued. If a corporation's vision is blinded to the foreseeable risks or the corporation carelessly underestimates its exposure to potential liability, it is questionable whether the corporation has adequately briefed its own risk assessment team or whether the assessment methods employed are sufficiently sophisticated to *look beyond* the standard procedures applied through environmental impact assessment, site testing and compliance auditing. To contemplate what the mind might reasonably see, however, "neither precludes nor dispenses with the need, in the interests of certainty, for particular rules or tests for determining whether that requirement [of proximity] is satisfied in the circumstances of any particular category or case".⁵

It is then for the sake of certainty, that 'rules and tests' espoused in *Donoghue v Stevenson* and other benchmark cases⁶ are applied to the factual circumstances in common law civil actions for negligence. Liability is limited to those "persons alone who were foreseeably imperiled, lest defendants be crushed by the burden of excessive liability for some quite trivial fault".⁷

The Scope of the Due Diligence Plan

The scope of the due diligence plan is by necessity expansive, inclusive and pervasive, requiring comprehensive identification of all potential risk situations. As each situation identifies persons and property 'foreseeably imperiled' by the harmful acts contemplated there will be the need to evaluate, at civil and criminal levels, the legal consequences of corporate culpability. In considering relevant state and federal legislation, due regard will have to be given to the likelihood the corporation will be prosecuted in a hostile forum. Prosecution on the basis of strict liability or absolute liability or wilful negligence is a foregone conclusion.⁸

By design, a due diligence plan requires considerable expertise from the corporate risk manager, lawyer and operations manager to conceive and then evaluate untested hypothetical situations which range from moderate to extreme limits of imaginable harm. "Imaginable" considerably extends the scope of "foreseeable" but if the *Donghue v Stevenson* concept of care for 'our neighbourhood' is to be regarded as a milestone in the development of negligence then surely precepts of law which extend that principle by legislation to 'our environment,' are further evidence that the evolution of the 'reasonable care' concept is advancing with the approach of the millennium.

The necessity to take an *expansive* view of what is foreseeable is well supported in case law and literature, but the view espoused is legalistic rather than operationally focussed and in many respects is too simplistic for the purpose to be served. Whilst identification of a class of persons within the foreseeable range of risk is (as noted by Fleming) more relevant than recognising the risk attributed to an identified individual within that class of persons, questions of 'proximity' and notions of foreseeability are often influenced by considerations which extend the 'imaginable' limits. Corporations face formidable difficulties when they seek to create an *all encompassing* due diligence plan, but the problems are not insurmountable. As the following cases demonstrate the 'foreseeable difficulties' are plainly visible when viewed retrospectively.

Cases Studies on Foreseeability

On 6th December, 1994, an Ohio (USA) jury awarded an aggregated sum of \$US6.7 million to 1,713 property owners in "stigma damages" in what the plaintiffs' lawyers claimed as the first verdict to owners of non-contaminated property based solely on 'proximity' to a hazardous site. In *De Sario v Industrial Excess Landfill Inc.*¹¹ the Court of Common Pleas found against the defendants, Bridgestone/Firestone Inc., F.F. Goodrich & Co., and Goodyear Tyre & Rubber Co. and demonstrated the way in

which hazardous waste disposal can be the proximate cause of real estate devaluation on a massive scale.

All of the plaintiffs owned property within 3.2 kilometres of the twelve hectare Uniontown landfill, which contained 300,000 tons of hazardous waste, including 52,000 '55 gallon drums' that were rusted, damaged or leaking. The homeowners argued that although their property was not contaminated, "stigma" prompted by some 600 newspaper articles had reduced property values by \$US28 million. It appears the citing of the landfill dump within reasonable 'proximity' of a residential zone created community perceptions which downgraded and devalued the residential amenity, even though the problems created by the siting of the landfill were not apparent during the years 1966 to 1980 when the landfill dump operated. The Court permitted the case to be pleaded on the basis of a 'stigma' claim after considering evidence of the public's perception of contamination but barred the plaintiffs from seeking punitive damages on the grounds that the defendant's conduct was not 'wilful and wanton'.

The second case for discussion involved the 'pollution' of a water source in unusual Cambridge Water Company v Eastern Counties Leather PLC., 12 circumstances. reversed the English Court of Appeal judgment that held the appellant tannery liable in "strict liability" for ground water contamination. Eastern Counties Leather ["ECL"] operated a tannery at Sawston (about 8 kilometres south of Cambridge) and had been a producer of fine leather since 1879. In degreasing pelts at the tannery (which was situated approximately 2 kilometres from the Cambridge Water Co. ["CWC"] borehole), ECL used a chlorinated solvent in the manufacturing process (referred to in the Court proceedings as "P.C.E."). CWC water testing at the Sawston borehole showed traces of PCE above the maximum permissible limits established by health authorities. As a statutory water-supply corporation, CWC had the responsibility of providing an adequate supply of domestic water to 275,000 people, principally in the city of Cambridge. The corporation purchased the borehole premises at Sawston in 1976 with a view to augmenting the general water capacity from water obtained by abstraction from its Sawston borehole. CWC discovered in 1982 that the Sawston water had become unfit for human consumption when new standards for 'drinking water' set by the WHO in 1980 were introduced in England in 1982¹³ and claimed to have evidence that the solvent used by ECL had seeped into the ground beneath the ECL tannery, and contaminated the table of water which led into CWC's borehole. "There was not direct evidence of the actual manner in which P.C.E. was spilled at ECL's premises. However, the judge found that.... there were regular spillage's of relatively small amounts of P.C.E. [during the period up to 1976] onto the concrete floor of the tannery.... However... a reasonable supervisor of ECL would not have foreseen, in or before 1976, that such repeated spillage's of small quantities of solvent would lead to any environmental hazard or damage - i.e., that the solvent would enter the acquifer¹⁴ or that having done so, detectable quantities would

be found down-catchment. Even if he had foreseen that solvent might enter the aquifer, he would not have foreseen that such quantities would produce any sensible effect upon water taken down-catchment, or would otherwise be material or deserve the description of pollution....any spillage would have been expected to evaporate rapidly in the air, and would not have been expected to seep through the floor of the building into the soil below. The only harm that could have been foreseen from a spillage was that somebody might have been overcome by fumes from a spillage of a significant quantity." ¹⁵

In any event, the water so contaminated at Sawston Mill had 'never been held to be dangerous to health' but under the new criteria laid down by the World Health Organization (and introduced via an E.E.C. Directive) "the water so contaminated was [deemed to be] not "wholesome" and from 1985 could not be lawfully supplied as drinking water "16"

The Court of Appeal assessed damages at £956,937 (less £60,000 being the residual value to CWC of Sawston Mill) on the basis of strict liability in nuisance. On appeal to the House of Lords, ECL's appeal was ultimately successful because CWC was unable to establish that pollution of their water supply by the solvent was, in the circumstances, foreseeable. Lord Goff's judgment in the House of Lords (supported by Lords Jauncey, Lowry and Wolf) considered the question of foreseeability of damage under the rule in Rylands v Fletcher. His judgment referred to the celebrated statement of Blackburn J. in Fletcher v Rylands¹⁷ and to the particular passage where Blackburn J. spoke of "anything likely to do mischief if it escapes," and which a person "knows to be mischievous" if it enters upon a neighbouring property. In these circumstances the law imposed a liability on that person to "answer for the natural and anticipated consequences" of its escape. Lord Goff concluded: "The general tenor of his statement of principle is therefore that knowledge, or at least foreseeability of the risk, is a pre-requisite for the recovery of damages under the principle; but that the principle is one of strict liability notwithstanding that he has exercised all due care to prevent the escape from occuring."¹⁸

Turning to the facts of the present case Lord Goff was of the firm opinion "nobody at ECL could reasonably have foreseen the resultant damage at CWC's borehole at Sawston" and added "that the present case may be regarded as one of what is nowadays called historic pollution, in the sense that the relevant occurrence (the seepage of P.C.E. through the floor of ECL's premises) took place before the relevant legislation came into force and it appears that under the current philosophy, it is not envisaged that statutory liability" Goff L.J. was not persuaded that a common law principle "should be developed or rendered more strict to provide for liability in respect of such pollution and recognised the value of "well informed and carefully

structured legislation"²¹ in achieving a strict regime of environmental protection and preservation

The *third* case for discussion focuses on the foreseeable risk that a corporation's alleged violations of the environment in an undeveloped country could imperil the existence of its indigenous people resulting in a class action being brought by the indigenous people *in the jurisdiction of the corporation's foreign headquarters* for wilful negligence.

Since 1984 the western province of Papua New Guinea has hosted a consortium of American, German and Australian companies seeking to establish the Ok Tedi mine for the purpose of mining gold and copper by the extraction process. By 1992 Australia's BHP Ltd had gained a controlling interest in the joint venture company Ok Tedi Mining Limited (OTML) and managed the mine in consultation with its partners, the State of Papua New Guinea and Metal Mining Corporation (subsidiary of the German multi-national, Mettalgesellschaft).²² From the earliest operational years of the mine the intensity of the extractive process at Ok Tedi mines severely impacted on the environment affecting "30,000 Papuan and New Guinean subsistence villagers, growers and fishermen and women... along the entire river system."²³

"Each day OTML's treatment mill ejected 100,000 tonnes of tailings into the Ok Tedi River which runs into the Fly River then into the Gulf of Papua and the Torres Strait, about 1000 kilometres away. In terms of daily water flow this is one of the biggest river systems in the world. For the first four years, only gold was mined at Ok Tedi, extracted by a cyanide-based process. Over this period substantial quantities of untreated cyanide were serially released into the river system, killing fish, crocodiles and crustacea.

Copper extraction was added to gold mining in 1988. Together with the gold and other constituents, copper concentrate is piped to the river port at Kiunga on the Fly River. Several breakages of the pipeline have caused concentrate to spread over a wide area of adjacent land. Only 85 per cent of copper is extracted from the ore. Tailings discharged into the river system therefore contain large quantities of copper, one of the most poisonous metals known when released into aquatic ecosystems.

Mining has also generated ten times more sediment than occurred naturally in the river system before mining started. This has made the waters opaque and unsuitable for fish life and for drinking and domestic use. As well, the riverbed has been elevated up to five times its original height, causing flooding over village garden areas relying on the river for irrigation. The spread of sediment has made the garden areas unsuitable for growing sago, the basic protein staple, and other vegetables.

To forestall such damage, the PNG Government had originally made it a condition of Ok Tedi's operation that a tailings dam be built for the waste discharging into the river system. But in early 1984, a few months before extracting was due to begin, a land slip covered the foundation work down for the dam.

OTML got permission from the PNG Government to start mining and discharge the tailings into the river system, provided plans for a new tailings dam were submitted. In 1989 the Government ruled it would take a decision on the question of tailings treatment for the mine. Two months prior to the date appointed for the decision, however, PNG experienced a 40 percent drop in export income following civil war in Bougainville and the closure of the Panguna mine there.

BHP estimated a tailings dam at Ok Tedi would cost in the vicinity of \$1.5 billion. If the consortium were required to build the dam, it claimed it would have to close the mine. This would cut export income by a further 20 per cent. The Cabinet granted BHP a dispensation to continue operating the mine without the need for a tailings dam, provided certain predictions of the future environmental damage were not exceeded.

One of the central questions in the litigation at that time is whether or not those predictions have, in fact, been exceeded and whether BHP and OTML are in breach of the conditions of the dispensation.²⁴

Proceedings were brought in the Supreme Court of Victoria (BHP has its corporate headquarters in Victoria) "by and on behalf of a number of persons who claimed to be injuriously affected by the discharge of certain by-products of the Ok Tedi copper mine into the Ok Tedi River." The defendants named in each proceeding were BHP and OTML. In the *Dagi, Maun and Ambetu* proceedings it was alleged that land adjacent to the Ok Tedi River had "become polluted and less useable for the purposes of those plaintiffs who lived on the flood plains adjacent to the river," as a result of the actions of BHP (as manager of the mine) causing intentionally or otherwise.... certain substances to be discharged into the Ok Tedi River with the consequence that the waters of the river have become polluted or their flow has been affected." The claims, in their reduced form, cited negligence and the failure of OTML to pay compensation under the heads of agreement between OTML and the State of PNG.

In September, 1995, Byrne J. ruled on the jurisdictional challenge to the Supreme Court of Victoria hearing the Ok Tedi claims (in Victoria) and "concluded that gravaman or foundation of the plaintiff's cause of action in negligence was the plaintiff's loss of amenity or enjoyment of the land" [as opposed to the loss of possessory or proprietary right to the land]²⁸ "Thus this was justifiable in accordance

with the analysis of the *Mozambique*²⁹ principle which he had expounded in his reasons for judgement."³⁰ The representative proceedings ("class action") in Victoria was made possible by the provisions of SS. 34 and 35 of the Supreme Court Act 1986 which "enabled a representative claim to be brought if the plaintiff's claims involved a common question of law or fact, arose out of the same transaction or series of transactions [and] where three or more persons have the right to the same or substantially the same relief against the same person..."³¹

Unless overturned on appeal, BHP and OTML would have been forced to defend their PNG environmental record in an Australian jurisdiction, even though the compensation claims concerned a representative action ostensibly on behalf of 30,000 PNG nationals and the actions which founded the claims all occurred in a foreign land.

In retrospect, the course of action instituted by the plaintiff's Australian lawyers, Slater & Gordon, would have been unwarranted if due regard had been given to events in PNG between 1984 and 1990 that eventually triggered the representative claims and had BHP responded to the active interest of the Australian people in environmental issues involving Australian companies. The foreseeable issues of accountability were poignantly summarised by Gordon:

"20 years ago, the effects of what is now a profitable mine on some subsistence villagers in the far Western part of Papua New Guinea might have rated a mention in "National Geographic" or anthropological journals, but the question must be asked why has the issue asserted such prominence that everyone from a US Presidential Candidate to the weekly network comedy programme "Full Frontal" have made their views known? In my view, it is a consequence of the active concern of the Australian people for important environmental issues within Australia or involving Australian companies, and the failure of BHP to recognise this concern and respond appropriately to it.

The first thing so say about Ok Tedi, in this context is that there has never been any legal compulsion, in the sense of statutory requirement, upon BHP to report on the environmental impacts of its operations at Ok Tedi, to the Australian Government or people (other than the usual requirements of the Stock Exchange to report matters which might influence the market and their share price). This contrasts with the requirement of the USA Government which requires BHP to report annually to the Securities and Exchange Commission on a wide range of matters, including overseas environmental regulation and performance, pursuant to Section 13 or Section 15(d) of the Securities Exchange Act 1934 (US).

This is, I think why this case study is so useful in the context of this discussion - the decision on what, if anything, to say to the Australian people about its environmental performance at Ok Tedi was purely voluntary. It was a response governed, not by the requirement to adhere to some statutory regulation, but purely by the company's own perception of what it should disclose about the environmental impacts of the mine.

In one sense, this is a harder question because it brings to bear the exercise of value judgments and an understanding of what Australians feel entitled to know. In another sense, however, that task should have been easy given the mood in Australia concerning environmental issues over the last 10 years. This mine has operated since mid-1984.

It has to be said that BHP created some of the problem for itself because it claimed Ok Tedi as such a significant achievement in its promotional advertising, including "The Big Australian" campaign. Not only are we capable of such fantastic achievements and high standards of engineering excellence, the company was seen to be saying, but we are doing it for Australia. It hardly needs to be said that when you purport to be acting for all Australians you render yourself accountable for the same."³²

There were *four specific incidents* between 1984 and 1990 that spurred the plaintiff's into pursuing legal action. The first two incidents (in 1984) involved a cyanide discharge and the loss of cyanide drums.

"In June, 1984, a barge transporting OTML chemicals overturned 15 kilometres north-east of Umuda Island in the Fly River Estuary losing 2700, 60 litre drums of cyanide, the single largest loss of the world's most dangerous poison. Only 117 cyanide drums were salvaged. In the same month a bypass valve opened for 2 hours and 12 minutes, releasing 1000 cubic metres of highly concentrated cyanide waste into the Ok Tedi River, a spill that OTML were silent about for 2 weeks until dead fish, prawns, turtles, and crocodiles, started floating downstream of the mine as far as Ningerum." 33

The significance of there environmental catastrophes should have singled to the mine operators, a warning of the problems to come:

"Coming within a month of the mine entering full production, and within 6 months after the consortium had convinced the PNG Government to operate on an interim licence, without a tailings dam, (the foundations for which had been buried under a landslide in January 1984), it was a defining moment in terms of how the mine's environment record would be perceived."³⁴

The *third* incident concerned the 1989 Environment Report and Tailings Dam debate:

"BHP was required to submit to the PNG Government in 1989, a complete environmental report on the likely future environmental consequence of the Ok Tedi Mining operations, which subsequent to 1988, were largely copper related. A report was prepared and submitted to the PNG Government. The PNG Government then had to decide which tailings containment option, if any, to impose upon the mine. Shortly prior to this decision, the Bougainville Copper Mine was closed, effectively cutting off 30% of PNG's export earnings. Ok Tedi became the single biggest resource earner for the country.

Clearly, this was a critical point in the history of the mine. Press reports of the time quote BHP sources as telling the PNG Government that the mine could not afford to build a dam to contain the tailings and waste rock. OTML literature says this would cost in excess of 1 billion kina and the mine would have to close. In the event, the PNG Government elected not to impose any tailings containment on the mine, and agreed to continue to allow the tailings and waste rock to be dumped into the river" 35

The *final* incident concerned the "1990 Petition by the Landowners to the Company" [OTML]. Local indigenous landowners petitioned OTML on 19 December, 1990, seeking compensation back dated to 1984, transfer of Government equity in the project to the affected tribal clans, bank loan guarantees for local businesses and employment opportunities in OTML to local people and enterprises as a priority to local people. Gordon asserts that "by failing to engage the landowners in serious discussions at this time regarding the issues raised in their petition, events were set in train that led to the issuing of litigation [proceedings].....in Melbourne in May 1994."³⁶

The BHP - Ok Tedi saga produced considerable documentation unflattering to the defendants and eventually the dispute was settled on terms favourable to the indigenous people. The case re-emphasises the wisdom of those public companies who "conduct all their business on the basis that one day the discussions and debates they have will become public." ³⁷

Foreseeable 'accountability' is not a prescription for future environmental transgression. Corporations have a responsibility to their shareholders and to the communities in which they operate to be accountable for their environmental performance. Indeed that principle is supported generally by the Business Council's policy "to protect the environment by seeking to reduce any adverse impact of the business's operations and products on air, water, land and living organisms to a level where the cost to society of further reductions are no longer offset by the benefits," 38 and *specifically* by the policies of some of Australia's largest corporations.

Western Mining Corporation Limited, for example, recently published a series of "Group Policies"³⁹ covering such areas as the *Environment, Indigenous Peoples* and *Safety and Health* that together with WMC's *Code of Conduct*, expressly commits the corporation to a set of fundamental values guiding "the way [WMC] will carry out [its] business."⁴⁰ WMC's stated "Code of Conduct Objective" is unequivocal: "We care about how we get results."⁴¹ Its *Code of Conduct* concludes by reassuring its constituency: "We are responsible for our actions and accountable for their consequence."⁴²

Ultimately the success or failure of a corporate environmental policy will depend on management's ability to spell out specific objectives for employees, ⁴³ but initially, management will need to assess the corporations exposure to environmental risk at every level of corporate operations and from all foreseeable avenues of legal liability.

The legally mandated process of "discovery" is one avenue often successfully exploited by litigants to strip away the veil of corporate secrecy. 44 Court administrated "discovery" could unearth documents or information particularly damaging to a corporation's defence case. How privileged should a corporation's documents be? Can directors claim privilege against self-incrimination in environmental prosecutions? Prior to *Environment Protection Authority v Caltex Refining Co. Pty Ltd*⁴⁵. the common law was unclear on the question of corporate self-incrimination. To lift the "corporate veil," environmental protection legislation expressly held directors personally liable for the acts or omissions of their corporations unless "all due diligence" was exercised by the director. 46

In *Caltex* the High Court of Australia decided that privilege against self-incrimination did not extend to corporations required by valid process to produce documents in their possession. McHugh J summarised the distinction between the individual and the corporation thus: "Furthermore, an individual witness is not entitled to the benefit of the privilege against self-incrimination if the only ground for the claim is that he or she will be adversely affected by the production of evidence. Members of a corporation may be adversely affected by the conviction of a corporation, but *they* are not convicted. It is difficult to see why an adverse effect on the members should entitle the corporation to refuse to produce evidence."

The Task of Protecting Confidential Information

If a corporation is subjected to criminal sanctions as a result of its self-incrimination there is no doubt that both the business and its officers suffer the consequences, ⁴⁹ particularly when corporations are relatively small enterprises. *Caltex* has made the task of protecting company environmental audit findings more difficult. "Self monitoring by industry is the cornerstone of the current system of pollution control.

The EPA does not have the resources to conduct its own monitoring and is largely reliant on self-monitoring by industry. Accordingly, the EPA would be placed in a position of great difficulty in attempting to enforce pollution control statutes if industry self-monitoring records were unavailable for use in criminal proceedings." The task of retaining self-audit information in a privileged status is challenging, if not daunting.

Once again it is incumbent on the corporation concerned to *foresee the risk* in creating documents when the information contained therein may be used by an adverse party as admissions against the corporation. Where particulars of self-evaluation audits are the subject matter at risk the challenge is to establish lawyer - client privilege protecting disclosure. Senior lawyers in environmental litigation recommend the engagement of outside counsel at the commencement of the audit process to work in close co-ordination with the in-house lawyers and the consulting firm conducting the audit or site assessment.⁵¹ The process of establishing lawyer - client privilege is outlined as follows: "The consultant should report directly to counsel for the purposes of protecting the information gathered as privileged and to control the type of record being assembled. All draft and final reports should be submitted to outside counsel for review and distribution. Distribution of such reports should be limited within the company on a need-to-know basis, and confidential materials should be labelled and segregated from non-privileged materials."⁵²

Prior to the commencement of the audit, staff need to be briefed on the confidentiality of the process which gathers information for the purpose of obtaining legal advice from counsel. It is fundamental to the objectives of the exercise that staff understand:

- (a) Communications to an outside consultant, who is acting as the agent of counsel, are to remain confidential;
- (b) the communications are being made at the direction of the employees' corporate supervisors;
- (c) the communications are within the scope of the employees' duties; and
- (d) the information is being gathered so that the company can obtain legal advice from counsel based upon the information in the audit report.⁵³

Environmental regulators could find themselves in difficult situations if they fail to extend at least qualified privilege to documents that are created in order to initiate self-improvement and self-evaluative reports. The question will be whether the public interest is served or harmed by the disclosure of internal reviews. There is the suggestion environmental audits may be protected if the audit: "(1) is prepared with an eye towards furthering the public interest and with a statement regarding the

company's environmental policy, (2) conforms with and advances internal corporate policy, as well as applicable federal, state and local laws, (3) is held strictly confidential, (4) is written to reflect the internal self-evaluation and self-analytical nature of the process, and (5) is prepared so that the factual and evaluation portions can be separated."⁵⁴

Government attitudes to environmental prosecution based on disclosure, co-operation and compliance will foreseeably differ between countries and sovereign states. Whilst Australia has established comprehensive guidelines for the assessment and remediation of contaminated land through ANZECC and the National Environmental Protection Council (NEPC)⁵⁵ which supports the 'polluter pays principle' the NEPC has yet to publish National policy guidelines on the subject of qualified corporate privilege attached to voluntary audits and self-evaluative reports. In New South Wales a specific section of the NSW "EPA Prosecution Guidelines" is devoted to "Disclosure, Co-operation and Compliance." According to the manager litigation, "the general message emanating from legal practitioners in NSW to their clients was that to co-operate with the EPA, in the course of an investigation, was tantamount to putting a noose over one's head." "57"

The guidelines indicate that an offenders willingness to make available to the EPA all relevant information (including the complete results of any internal or external investigation and the identity of all potential witnesses) is to be encouraged and hence is a factor which will be considered along with all of the other relevant factors in deciding whether to bring a prosecution. By contrast the Victorian EPA can require an industrial licensee or an occupier of industrial premises generating industrial waste to undertake and provide to the Victorian EPA the results of an independent environmental audit or (in the case of a waste generator) the results of an independent waste audit usually carried out in conjunction with the preparation of a waste management plan. The 'Exposure draft' of the Protection of the Environment Operations Bill 1996 indicates that New South Wales will in future legislation incorporate provisions for mandatory audits and environmental management plans in an endeavour to reduce foreseeable environmental harm.

Risk Management Strategies

The term "risk" in the context of environmental protection refers to the variable or probabilistic losses of a company's financial resources as a direct result of its corporate operations. The distinction between *risk* (which is quantifiable) and uncertainty (which is not) has much to do with the substantial possibility that harm, danger, hazard or loss will *actually* occur. Inherent in the 'substantial possibility' is the recognition that a *real* risk situation exists.

What is a *real* risk? "A real risk is one that a reasonable person would not brush aside as being far-fetched or fanciful" and indeed "if a defendant has not taken reasonable steps to eliminate a real risk that person has breached their duty of care and will be liable for any damage caused by that breach". 63

"Risk" is concerned with the chance of an event happening and the magnitude of the harm caused by the event. Even if the magnitude of the risk is considered to be small it does not follow it is justifiable to neglect a risk of such a small magnitude. A *reasonable* man would only neglect such a risk if he had some valid reason for doing so; e.g., that it would involve considerable expense to eliminate the risk, but first he would weigh the risk against the difficulty of eliminating it.⁶⁴

In the *Wagon Mound No. 2 Case* ⁶⁵ a large quantity of bunkering oil spilled from the ship, the *Wagon Mound*, into Sydney Harbour and onto the foreshore near a wharf operated by Overseas Tankship [U.K.] Ltd.

Sparks from a welding operation on the wharf ignited the floating oil. The resulting fire damaged the wharf and a vessel under repair. When the case came before the Privy Council on appeal Lord Reid noted:

"there was no justification what ever for discharging the oil into Sydney Harbour. Not only was it an offence to do so but it involved considerable loss financially. If the ship's engineer had thought about the matter there could have been no question of balancing the advantages and disadvantages. From every point of view it was both his duty and his interest to stop the discharge immediately.

It follows that in their Lordships' view the only question is whether a reasonable man having the knowledge and experience to be expected of the chief engineer of the Wagon Mound would have known that there was a real risk of the oil on the water catching fire in some way: if it did, serious damage to ships or other property was not only foreseeable but very likely.

In their Lordships' view a properly qualified and alert chief engineer would have realised there was a real risk here. If a real risk is one which would occur to the mind of a reasonable man in the position of the defendant's servant and which he would not brush aside as far-fetched and if the criterion is to be what that reasonable man would have done in the circumstances, then surely he would not neglect such a risk if action to eliminate it presented no difficulty, involved no disadvantage, and required no expense.

In the present case the evidence shows that the discharge of so much oil onto the water must have taken a considerable time, and a vigilant ship's engineer would have noticed the discharge at an early stage. The findings show that he ought to have known that it is possible to ignite this kind of oil on water, and that the ship's engineer probably ought to have known that this had in fact happened before. The most that can be said to justify inaction is that he would have known that this could only happen in very exceptional circumstances. But that does not mean that a reasonable man would dismiss such a risk from his mind and do nothing when it was so easy to prevent it. If it is clear that the reasonable man would have realised or foreseen and prevented the risk then it must follow that the appellants are liable in damages."⁶⁶

A risk management programme brings together the basic risk techniques with alternative methods of treating risk. Whilst *recognition*, *avoidance* and *reduction* remain the pivotal points of any risk management plan, a corporation needs strategies to treat both expected (*foreseeable*) and unexpected risks, including those risks which are uninsurable. With risk management, the options are often generated by the more frequently asked questions: should we avoid or transfer risk?... should we retain and manage risk? Knowing how to design and develop an environmental self assessment programme, how to prioritise sectors within the domain of corporate operations and how to encourage a culture of environmental risk awareness throughout the organisation are some of the key features of a risk management plan.

In risk management strategy the object of the exercise is to minimise costs (*liability*) by managing risk and the "the word management implies informed control; it does not necessarily mean removing the cause of the risk". To achieve a high level of success in the development of an Environmental Due Diligence Programme it will be necessary to integrate the basic risk management protocols with the management processes which are used by corporations to avoid or manage environmental risks and potential liabilities. The essential risk management steps have changed very little over the decades:

- (1) Identify the risk
- (2) Quantify the risk
- (3) Choose the appropriate risk reduction methodology
- (4) Implement the risk reduction programme
- (5) Monitor the performance of the risk management procedures
- (6) Allocate resources to fund the remaining risks

Risk identification incorporates elements of environmental auditing, assessment against documented control standards pertinent to environmental exposures⁶⁸ and insight into hypothetical risk exposure. Audits of plant, operations and compliance procedures are undertaken at different levels of intensity depending on the perceived need to verify the extent of the potential environmental liability. "Many corporations undertake a phase one audit to gain a preliminary assessment of the environmental risks associated with their activities and determine priorities for the gradual development of a comprehensive environmental due diligence programme. environmental audits can only provide a satisfactory component of an Environmental Due Diligence Programme if they properly identify environmental risks and relevant law, adequately assess existing compliance and the recommendations for improved levels or system of compliance are implemented by the corporation." 69 Craig suggests the typical stages of an environmental audit are:⁷⁰

Stage 1	Problem Recognition	The organisation recognises that it needs to identify its compliance with environmental requirements and its risk profile.
Stage 2	Audit Team Selection:	The organisation selects personnel to commission and oversee the conduct of the audit.
Stage 3	Risk Identification	The audit team must be made aware of the types of environmental risks that may arise.
Stage 4	Baseline Information:	The audit team may conduct some preliminary inspections of typical facilities and send out preliminary questionnaires to plant managers. Relevant environmental laws will be reviewed.
Stage 5	Audit Inspections:	The inspections should follow a comprehensive protocol appropriate for the facility, industry, site and relevant environmental laws.
Stage 6	Scoping Further Environmental Investigations:	Problems may be identified in the audit inspection, which require further investigation and testing.

Stage Reporting:

The audit team receives the completed site inspection protocols or reports, compiles the information and provides a report on environmental compliance. The reports should be submitted to relevant management, and summarised to the Board, as a basis for preparation/revision of an

Environmental Due Diligence Programme.

It is important to stress the need for a comprehensive approach to environmental audit in order to verify the existence or otherwise of a requisite state of affairs. "If the [audit] protocol is not comprehensive, then risk or compliance issues identified may not be the subject of an audit inspection."

Where voluntary auditing of sites is regularly undertaken, corporations should ensure the audit protocol addresses the investigation of environmental management issues to the satisfaction of the regulatory authority which in New South Wales is the NSW Environment Protection Authority.

In the interest of introducing uniformity to the reporting of investigations of potentially contaminated sites, the NSW EPA documented the audit protocol to be utilised by consultants when investigating these sites and published the step-by-step protocol in 1995.⁷²

At the preliminary site investigation [Stage 1] the audit is concerned with identifying all past and present potentially contaminating activities, reporting on the site condition, assessing possible site contamination and recommending any further investigations which are deemed to be necessary in the circumstances. Following a detailed site investigation [Stage 2] a remedial action plan is considered necessary if "the site poses unacceptable risks for human health or the environment, on-site or off-site, and with either the present or proposed land use."⁷³

Overall, environmental audits effectively assist corporate management to achieve a number of objectives by:

- (1) Measuring the extent of the corporation's compliance with environmental legislation and current environmental standards;
- (2) Benchmarking progress towards sustainable development and the efficient use of energy resources;

(3) Facilitating an exchange of information with local community and relevant environmental authority regarding the appropriateness of a plant's current operating procedures.⁷⁴

The process of risk quantification or evaluation relies heavily on a series of assumptions, which must be made in order to prioritise the allocation of limited corporate resources. Assumptions will be made about the significance of one risk over another but arguably the "most serious risks are those which occasion physical harm as well as economic loss." For example the pollution of a river system can precipitate both an ecological and financial disaster, destroying marine life and the river's ecosystems, causing financial hardship to the local industry and the community reliant upon the integrity of the river system for health and prosperity. ⁷⁶

The probability that a claim will arise from the storage or transport of hazardous chemicals is based on claims data together with assumptions which could be made on the capability of the storage facilities and accident rate of the prime transporters. Every leak or spillage presents a scenario of variable outcomes related to the magnitude of the leak or spillage, the degree of containment and the cost of remediation. Risk managers utilise the term "expected value" to express in monetary terms the risk losses expected over a period of time from corporate operations. The "expected value" takes into consideration "a determination of the probability or chance that losses will occur; the impact the losses would have upon the financial affairs of the company, should they occur, and the ability to predict the losses that will actually occur during the budget period." "77

Jenkins & Collins⁷⁸cited the example of a company with 30 underground tanks which were installed 10-15 years ago and considered the "expected value" of the risk on a 50% probability that a leak from each tank had contaminated the surrounding soil, requiring remediation at a cost of \$10,000 per tank. In this case the "expected value" of the risk is calculated at \$150,000 (i.e. 30 x .5 x 10,000). However the methodology employed in the calculation "is, of necessity, often based on many assumptions."

When risk is prioritised on a cost-benefit basis there is also an underlying assumption "that cost and benefit can be measured in the same units (dollars) and that all competing interventions can be costed and produce dollar benefits." Whether the cost of denigrating the environment of future generations has a price calculable with any accuracy is debatable, but "the use of expected values and cost-benefit analysis will certainly provide a first approximation to the question of where to spend risk management dollars."

Conclusion

In practice, corporations inevitably decide to explore the range of risk reduction options available or at least consider the cost-benefit basis of any improvement to the existing environmental management system. By emphasising the management of risk through *informed* control, risk management becomes an educative process, assisting the preservation of environmental integrity.

If "the primary object of risk management is to institute preventative measures which will minimise the occurrence of risk or if possible, virtually eliminate it," what options are then available to minimise or eliminate risk? Insurance may effectively transfer the risk but will not of itself prevent loss. In the first place, the risk is unlikely to be insured unless all the pre-requisites of an efficient environmental management system are demonstrably present. On the other hand it maybe possible to transfer the risk by contracting out the hazardous elements of the manufacturing process or by transferring the risk exposure liability through the incorporation of indemnity clauses in legal contracts. Ultimately, risk can be avoided by substitution of a non-hazardous material for a hazardous one or by changing the process to eliminate, through the introduction of new technology, exposure to a specific risk. If substitution or process change will not solve the exposure problem then termination of the particular risk hazard may well be safest, if not most satisfying option, to safeguard the environment.

Endnotes

- See the author's definitions presented in Chapter Two of this paper
- Donoghue v Stevenson [1932] AC 562 at 580 (paraphrased
- 3 Ibid per Lord Atkin
- See Duncan & Traves discussion on Donoghue v Stevenson, Note 54 Page 16 and the judgment of Deane J in Sutherland Shire Council v Heyman (1985) 157 CLR424
- ⁵ Donoghue v Stevenson [1982] AC 562 at 581
- 6 Ibid
- Fleming op cit note 23 at 142
- For example the 'Three Tier' categorisation of offences under the Environmental Offences and Penalties Act 1989 (NSW) establishes the prosecution protocol
- See the discussion in Fleming, note 23 at pages 144-145
- Ibid at 144 "It is not required that the plaintiff be foreseeable as an identified individual, he need only belong to a class of persons within the foreseeable range."
- Ohio Ct Cm Pls, No. 89-570 6 December 1994 (Stark County) The case is extracted from The Bureau of
 National Affairs Inc., Washington, DC, "BNA's Environmental Due Diligence Guide" Vol 4, No. 1, 1995.
- ¹² [1994] 2 WLR 53; [1994] 1 ALL ER 53
- Water standards at the time of purchase of the borehole in 1976 were not as rigorous as the new standards set by the World Health Organisation in 1980. By 1982 the Department of Environment had informed the water industry that the maximum admissible concentration of organochlorin compounds was one microgramme per litre. Eventually the regulations setting water quality standards were included in the Water Industry Act 1991.
- An aquifer is a layer of chalk rock beneath the earth's surface which holds water but allows the water to percolate to the surface intermittently.
- 15 Cambridge Water Co. v Eastern Counties Leather PLC. [1994] 2 WLR 53 at 67
- 16 Ibid at 67
- ¹⁷ (1866) L.R.I Ex. 265 at pp 279-280
- Cambridge Water Co v Eastern Counties Leather PLC. (1994) 2 WLR 53 at 77
- 19 *Ibid at 8*
- Ibid. Lord Goff also referred to the Council of Europe's Draft Convention on Civil Liability for damage resulting from activities dangerous to the environment (Strasbourg 26 January 1993) article 5.1 and paragraph 48 of the Explanatory Report.
- 21 *Ibid at 80*
- See N. Moshinsky OC "The Ok Tedi mime dispute" (1995) 69 L.I.J. 1114
- See J Gordon "Ok Tedi: The law sickens from a poisoned environment," (1995) 33 Law Society Journal 58
- ²⁴ *Ibid* 58-60
- ²⁵ See Note 256 at 1114
- ²⁶ Ibid No 5782 of 1994 (Dagi); No 6861 of 1994 (AMBETU); No 6862 of 1994 (Maun)
- 27 Ibia
- ²⁸ *Ibid at 1119*
- ²⁹ Ibid See British South Africa Co. v Companhia de Mocambique [1893] AC602
- 30 Ibid
- 31 Ibid
- John Gordon "Avoiding litigation by Voluntary Public Accountability The Ok Tedi and Asbestos Case Studies" NIS Environmental Reporting Seminar, Melbourne 8 May, 1996
- Hyndman "Zipping down the Fly on the Ok Tedi Project" in Connell J and Howitt R (Eds) Mining and Indigenous Peoples in Australasia (Sydney University Press 1991)
- Supra note 32
- 35 *Ibid* 36
- 36 Ibid
- 37 Ibid
- Business Council of Australia (1992) "Principles of Environmental Management," page 10, "1.
 Environmental Protection" and see page 14: "10. Assessment and Management of Environmental Risk: (a)
 Assess, to the extent practicable using available methods and technology, the potential environmental

- impacts of business operations, products and services so that available environmental problems can be prevented."
- December 1996, "Living WMC's Core Values," Policies and statements
- Western Mining Corporation Limited "Code of Conduct" October 1993
- 41 Ibid
- 42 Ibid
- Supra note 272 page 11
- In TPC v Abbco Iceworks (1994) 52 FCR 96, Burchett J (at 116) noted: "Where both a corporation and its officers are at risk of prosecution, to require discovery of the corporation is to make available documents which may accuse its officers. But their privilege has never been, nor should it be a shield against the use of incriminating evidence only a right to decline to be themselves the authors of their own destruction by producing the evidence."
- ⁴⁵ (1993) 178 CLR 477
- See S.10 Environmental Offences and Penalties Act 1989 (NSW) or S.66B(1) Environmental Protection Act 1970 (Vic)
- See Rules of the Supreme Court of NSW Part 36 Rules 13 & 16 and Page 518 of the Judgement.
- 48 Supra Note 279 at 547
- See Puls J., "Corporate Privilege Do Directors Really have a Right to Silence since Caltex and ABBCO Iceworks?" (1996) 13 EP LJ 364 at 368
- See Lipman Z., & Roots L., "Protecting the Environment through Criminal Sanctions: The Environmental Offences and Penalties Act 1989 (NSW)" (1995) 12 EPLJ 16 at 28
- See Kris & Vannalli op cit note 174 at pages 245 248
- 52 *Ibid at 248*
- 53 *Ibid at 247*
- See Frost & Siegel, "Environmental Audits: How to Protect them from Disclosure," 5 Toxic L. Rep. (BNA) 1211 (Feb. 27, 1991).
- 55 See Note 191.
- Environment Protection Authority (NSW) "EPA Prosecution Guidelines," July 1993.
- Pinch. D, "Gaining Management Commitment," address presented at the Environmental Due Diligence seminar, Sydney 26 November 1993.
- See "EPA Prosecution Guidelines" pages 25-26
- The powers given to the Victorian EPA are made possible through the provisions of the Environment Protection (General Amendment) Act 1989 (Vic) and the Industrial Waste Management (Waste Minimisation) Policy declared under the Environmental Protection Act.
- S. Jenkins & J. Collins "Assessing the Environmental Risk of Operations," Environmental Due Diligence Seminar, Sydney, 26 November, 1993, National Management Education Centre.
- See generally the observations in Bolton v Stone [1951] A.C. 850
- Overseas Tankship (UK) Ltd v Miller Steamship Co Pty Ltd (The Wagon Mound No. 2) [1967] 1A.C.617
- 63 Wyong Shire Council v Shirt (1980) 146 CLR40; 29 ALR 217
- 64 See Note 296 supra per Lord Reid
- 65 Ibid
- 66 Ibid
- 67 Supra Note 294
- Jenkins & Collins (see Note 294) cite for example "building drain intercepts, air emission, scrubbers and tanker loading" as typical 'exposure' points and add "some standards are expressed in legislation or regulations; others are embodied in internationally accepted standards, others belong to the general technical literature."
- Donna Craig "Environmental Law Corporate Responsibilities and Commercial Transactions" in Environmental Outlook, Law and Policy (1994) Boer, Fowler & Gunningham (Eds), Federation Press.
- 70 Ibid
- 71 Ibid
- NSWEPA "Draft Guidelines for Consultants Reporting on Contaminated Sites," August 1995
- 73 Ibid
- See Jenkins & Collins at Note 294
- See Duncan & Traves "Due Diligence" Note 54 at page 27

- In 1996 Wallis Lake in New South Wales became polluted through the unlawful discharge of effluent from septic tanks causing a serious outbreak of hepatitis in NSW for consumers of Wallis Lake oysters. Apart from the obvious health implications the livelihood of the oyster farmers was severely disrupted.
- B. Simpson "Risk Management" Australian & New Zealand Insurance Reporter, looseleaf, CCH, para 37-100.
- ⁷⁸ *Op. Cit. Note* 294
- 79 *Ibid*
- 80 Ibid
- 81 Ibid
- See Duncan & Traves Note at page 35
- See Jenkins & Collins Note 294. The authors cite the example of a glass fibre factory which opted to subcontract its production to a reputable chemical formulating business.
- The closing of the USA Nuclear Power station at Three Mile Island is the classic example cited by Jenkins & Collins. The New South Wales Governments decision to prohibit mining near Lake Cowal, because the risk of pollution through the extraction process could not be eliminated, is a further example.