WATER MANAGEMENT AND
MINING LEGISLATION

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ON

WATER MANAGEMENT AND
MINING LEGISLATION

IN THE NORTHERN TERRITORY

by

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1. **THE PROBLEM**

1.1 The universal dependence of all life upon water has created numerous problems as the various activities of man compete for access to, and the use of water. As spheres of activity have become more highly regulated and as the State, in one guise or another, has intervened to promote, protect or undertake development, legislation relating to each area of activity has also sought to deal with water, insofar as it bears on that activity. Thus it has become common to find that important provisions concerning the rights of individuals to have access to, or to use water are not confined to Water Acts, or Acts dealing with urban supply, drainage or sewerage. They also appear in Acts about navigation, fisheries, forestry, irrigation, soil conservation, national parks and wildlife, industrial development, public health, tourism, planning, disposition of Crown lands, railways, roads, local government and many others. This "functional" or "sectoral" approach to legislation created few difficulties for water resources in times where there was no great competition for those resources, in either quantitative or qualitative terms. In the last forty years, however, fundamental changes to the philosophy of water management have occurred, spurred partly by a more intimate understanding of the management consequences implicit in the notion of the unity of the hydrological cycle and partly by increased competition between different activities for privileged access to the resource.

1.2 In theoretical terms, it is said that water management and more modern legislation has become "resource-based", rather than "functional" or "sectoral". In terms of practical management, the main shifts are towards treating each surface-water catchment as a whole and planning and granting rights to use both water and
land accordingly. This implies a heightened awareness of the interdependence of land and water, and of surface and groundwater. It also implies that there should be coherent policies for the management of each catchment and that all decisions which may have an impact on the quantity and quality of water in that catchment should be referable to, and consistent with, that policy.

1.3 This management philosophy, though widely adopted in principle, poses difficult problems of adjustment where the "functional" or "sectoral" approach to legislation is already well-entrenched, which is the case throughout Australia. This is because existing legislation gives numerous Ministers and authorities certain powers over water which are usually incidental to, but vital to the execution of, their primary responsibilities. Numerous factors intervene to prevent a rational re-allocation of these powers. They include rivalry between Ministers, rivalry between Departments, bureaucratic inertia, and expressed or assumed customer preferences. Much recent concern has thus been devoted to the means of ensuring that the maximum degree of co-ordination, consultation and co-operation occurs between various arms of government where, for one reason or another, re-allocation of responsibilities is impossible.

1.4 One of the classic areas where there has been clear sectoral responsibility for allocating certain rights to water is in mining. Indeed, it was in the context of the 1849 Gold rush in California that pressure to adapt the English common-law doctrine of riparian rights led to the system of prior appropriation, which now prevails in the western United States. In Australia, the Sludge Abatement Boards on the Victorian goldfields were amongst the first Australian statutory bodies to have specific powers relating to water. Getting water to and away from mines has thus historically been an integral part of the mining regime and, consistent with the sectoral responsibilities allocated to the Ministers, registrars, inspectors and wardens under Mining Acts, a system of allocating and adjusting rights to water has developed which is quite separate
from and independent of other legislative controls over both
surface and groundwater resources. The problem, in view of the
emerging philosophy of water management, described in paragraphs
1.2 and 1.3 above, is to ensure that all decisions taken with
respect to mining, which may have direct or indirect effects on the
quantity or quality of water in each catchment, are referable to,
and consistent with, the wider policies of water management
developed for that catchment. The problem is not unique to the
Northern Territory, even in the Australian context. In South
Australia, the considerable water demands of the proposed Roxbury
Downs project has made the satisfactory integration of water and
mining regimes a matter of intense current concern and the same is
true in relation to bauxite development in the south-west of
Western Australia. Again, the present coincidence of portfolios
of Water and Mines and Energy in Victoria means that the
unfortunate division of functions between the Water Commission and
Mines Department in relation to groundwater is likely to be
confronted and overcome.

2. TECHNIQUES OF RESOLVING PROBLEMS

2.1 Numerous legislative and administrative techniques have been used
to attempt to induce the necessary degree of co-ordination and to
ensure that the wider interests of water management are
observed. Where the problem has been confronted, it is rare that
the sectoral water management responsibilities of mining
authorities are allowed to continue unchecked, as there is general
acknowledgment that the concern and powers of mining authorities
are both site-specific and relatively limited in time, whereas the
effect of mining activities on the water regime can be observed far
beyond both the geographic and temporal confines of a particular
mining operation. They must thus be regulated and controlled
within the more general framework of water resource management.

2.2 The particular techniques adopted vary greatly with circumstances
and the important variables seem to be the pre-existing record of
satisfactory co-operation and co-ordination between mining and water authorities and the likelihood of such co-operation and co-ordination being maintained or achieved without formal legislative action. Where the past record and future predictions are doubtful, coercive measures of one sort or another are required. Where both agencies have confidence in their ability to sustain close consultation, it may still be necessary to insert legislative requirements concerning consultation, if only to ensure that it is not overlooked.

2.3 In general, however, it must be remembered that legislation exists to guard against the worst possible case where, for some unforeseen reason, normal informal procedures break down. Where agencies have to negotiate a division of powers, it is often difficult for one agency to adopt a "worst-possible-case" perspective without appearing to ascribe incompetence or lack of good faith to the other agency. When this occurs, rational negotiations often are deflected by human factors and important points of principle may be conceded because of the risk of causing further offence. In negotiating an appropriate regime for water resources required for mining purposes, it is important that this danger be foreseen by both parties at the outset. It is essential that a "worst-possible-case" stance be consistently adopted and that both parties understand that no untoward implications inhere in maintaining that stance.

2.4 In general, there are two broad responses to the problem, one which is ultimately satisfactory for the water regime, the other which is not - precisely because it does not seek to address the worst possible case. The first broad response is to ensure that, in addition to any requirements imposed by mining legislation, all those requirements laid down by general water legislation are also observed. The second response is to leave the ultimate power to control rights to water for mining purposes with the mining authorities but to require either the consent of, or consultation with, the water authorities prior to the power being exercised.
The difficulty with the latter response is that, unless the provisions are very carefully drawn, rights granted to miners will still be valid and enforceable even if prior consultation has not occurred.

2.5 Making general water legislation paramount

There are several gradations of response within this category.

2.5.1 Sometimes all powers to grant rights to water and to erect hydraulic structures are resumed from sectoral agencies and conferred on a central water agency. Rather than create an unnecessary parallel bureaucracy, however, the water agency is empowered to nominate delegate agencies to act on its behalf in relation to certain matters within limits prescribed and according to established guidelines. Accordingly, the relevant mining agency may be granted certain delegated powers, subject always to the ability of the water agency to give directions as to the way those powers are to be exercised.

2.5.2 Another technique is to ensure that any authorisations required under general water legislation are obtained in addition to any permits granted under relevant mining legislation. This is broadly the technique which the Northern Territory Mining Act and Uranium Mining (Environment Control) Act seek to adopt – but in both cases the mechanism is faulty. Thus, in the case of the Mining Act, different formulae are applied for different types of mining interest, which leaves open the possibility of adverse rules of statutory interpretation being applied to certain interests. Further, some conditions requiring the holder of a mining interest to comply with other relevant laws can be waived or varied at the sole discretion of the Minister for Mines.
If the technique of requiring compliance with other legislation is adopted, it is essential that there should be no dispensing power exercisable by mining authorities. Further, the obligation to comply with other legislation must be clear, apparent and explicit and drawn to the attention of applicants for mining interests by the mining authorities.

2.6 **Requiring consent of water authorities to the exercise of water-related powers by mining authorities**

Again, several responses are possible, but only the first contemplates the worst possible case and is thus acceptable in terms of water management.

2.6.1 It is possible to leave the substantive power to grant interests in water with mining authorities but to provide that interests may only be validly granted if the prior consent of the relevant water authority has first been obtained. This not only provides the water authority with an effective veto, but also ensures that no valid interest can be conferred without prior consent.

2.6.2 It is also possible merely to require prior consultation with water management authorities. This formulation is deficient as a grant is not necessarily invalid in the absence of prior consultation; nor is the discretion of the mining authority in any way constrained to follow the recommendations of the water authority. There is thus no firm guarantee that the supervening interests of water management are observed in each particular case.

2.6.3 A further variation is to place no legislative requirements upon mining authorities for prior consultation or consent but to leave such matters to informal inter-agency procedures. This is the least preferable alternative.
2.7 The ultimate choice of mechanism obviously depends very much on the particular circumstances of each jurisdiction; but on the premise that legislation should, in the final analysis, address the worst possible case, it is difficult to avoid the conclusion that the requirements of general water legislation should be made paramount. In view of the proposal for a new, forward-looking Water Act for the Northern Territory, it is thus appropriate that all the provisions of the existing legislation bearing on water should be examined, with a view to identifying the ways in which they may be regarded as deficient in terms of the criteria previously enunciated. It is anticipated that this will facilitate discussions between the relevant agencies and hopefully lead to appropriate amendments to the mining legislation.

2.8 The constant theme of the analysis will be to demonstrate where activities authorised pursuant to the Mining Act will also require independent approval pursuant to the new Water Act. Such instances of parallel requirements are manifold. Accordingly, a fundamental policy question needs to be addressed. That is whether applicants for mining tenements are better served (a) by a system where authorisations from different bodies must be obtained consecutively, or (b) by a system which provides for the various approvals of different agencies to be obtained prior to any grant being made to the applicant. From the point of view of the applicant the latter system may be simpler and has the definite advantage that he can approach his financiers with a complete and certain interest, which is not liable to be defeated by the unforeseen actions of another branch of government. From the Government's point of view, the latter system also has the advantage of allowing differences between agencies to be resolved in advance before any interest is conferred on the applicant.

In the event that the latter system is preferable, quite basic changes should be made to the Mining Act to ensure that discretions of those empowered to grant, renew, suspend or cancel interests under the Mining Act or to attach, waive or alter the conditions on which those interests are held,
(a) do not act until the relevant approvals have been obtained from other agencies;

(b) are required to act in accordance with the recommendations made by such other agencies.

It will be impractical to revert repeatedly to this point in the ensuing discussion. However, whenever in discussing the powers of the Minister, the Secretary or Director and mining registrars to make grants, attach conditions, renew or cancel interests, etc., likely conflict with the provisions of the Water Act is identified, the underlying issue which must be addressed in each instance is the issue raised by this paragraph.

2.9 In the ensuing discussion:--

"Director of Mines" or "Director of Water" connotes the senior public official responsible to the appropriate Minister for administering the Acts within that Minister's portfolio.

"Minister" without further description connotes the Minister for Mines.

"Secretary" connotes the Secretary for Mines.

"Water Division" is used to connote the responsible water management authority, however that may ultimately be constituted.

Wherever the section of an Act is referred to without a qualifying reference to a particular Act, the reference is to the Mining Act.

3. PROVISIONS PRESERVING OTHER APPLICABLE LAWS

3.1 As mentioned in paragraph 2.5.2, the general philosophy of the Mining Act appears to be to subject all interests which may be granted under the Mining Act to the parallel requirements of the
Control of Waters Act. Difficulty arises from a general drafting characteristic of the Mining Act which is that the numerous interests which may be granted under the Act are treated separately and the provisions concerning the primacy of other legislation differ from one interest to another. This internal inconsistency invites arguments about the precise differences between the formulae employed. Whereas the general intendment of all provisions may be thought to be the same, variations in formulae are generally presumed to be deliberate as a matter of interpretation and this can lead to artificial distinctions between the scope of different provisions.

3.2 Miner's right: s. 11

The rights of a holder of a miner's right are expressly made "subject to the Control of Waters Act and the Soil Conservation and Land Utilization Act". In comparison with the type of provision noted in paragraph 3.3, however, the implication may well be taken that a miner's right is not subject to other laws in force in the Territory and, in comparison with s. 166(1)(d) which does not apply to a miner's right, it seems that the holder of a miner's right would not be subject to any other Territory laws which may relate to the control and use of water or to soil conservation.

3.3 Exploration licences, exploration retention leases, extractive mineral permits and tailings licences: ss. 23, 43, 114, 126

The holder of each of these interests is authorised to do certain things "subject to the law in force in the Territory". If this provision stood alone, it may be an unambiguous statement that general legislation concerning water must be observed. In comparison with the previous more explicit provision concerning a miner's right, however, an argument might certainly be ventured that the omission of an express reference to the Control of Waters Act was deliberate.
It is probable that any doubts are quelled for most of these interests by the provision in s. 166(1)(d) (see paragraph 3.6 below) but it is important to note that that section does not apply to a tailings licence. Accordingly, the omission of that interest from the ambit of s. 166(1)(d) and the comparison with the explicit reference to the Control of Waters Act in s. 11, give rise to a strong argument that a tailings licence may not be subject to existing water legislation. This is a critical omission, given the pollutive propensity of tailings, both for surface waters and groundwater.

3.4 Mineral leases: s. 66(k)

Whereas, for previous interests, the qualification concerning other laws is attached to the substantive rights conferred on the holder of the interest, the comparable provision for mineral leases, s. 60, contains no such limitation. Instead, s. 66 provides that it shall be a condition of every mineral lease that the lessee will "comply with the provisions of, and directions lawfully given under, this Act and all other laws in force in the Territory, in relation to his activities on and occupation of the lease area". This provision is subject to the same reservations expressed in paragraph 3.3, but again, any doubts are possibly resolved by s. 166(1)(d). In the event that this is not so, s. 66(k) is open to two objections. The obligation to comply with other laws is not general, but merely relates to activities on and occupation of the lease area. If, as sometimes occurs - e.g. the Peko interest in question in the Daly River Aboriginal Land Claim - the source of water necessary for mining operations is not within the lease area, the obligation imposed by s. 66(k) would not, for example, apply to the sinking of the bore on lands remote from the lease. While failure to abide by water legislation applicable to that bore would carry its appointed penalties, there would not be the additional and important sanction that the mining lease itself may be cancelled for a breach of condition pursuant to s. 171(1).
Accordingly, the limited scope of the provision means that the penalty of cancellation of the mining interest is not always available, whereas it would be for the interests mentioned in paragraphs 3.2 and 3.3.

The second and more substantial objection is that s. 66 gives the Minister for Mines the power to waive, vary or suspend any condition attached to a mineral lease, including, apparently, the condition in (k) requiring the lessee to abide by other laws in force in the Territory. Such extraordinary suspending and dispensing powers lost kings their crowns in the 17th century and this provision is open to the objection that no Minister should have power to relieve a subject from the obligation to observe the law of the land. More narrowly, if such a provision is to be tolerated for some obscure reason, the Minister should only have power to relieve a lessee from obligations imposed by the Mining Act. If there are circumstances where obligations imposed by water or other legislation might be waived in the public interest, that should either be a matter for express exempting legislation, or for the relevant Minister acting under powers conferred by existing legislation.

3.5 Mineral claims and extractive mineral leases: ss. 87, 89; 101, 102

In defining the powers of the holder of a mineral lease, s. 87 makes no provision similar to those considered in paragraphs 3.2 and 3.3 and s. 89 attaches no conditions similar to that in paragraph 3.4. On the other hand, s. 89(c), (f) and (h) each envisages certain activities relevant to water management which might well be subject to control under water legislation. Similarly, ss. 101 and 102 fail to impose equivalent requirements in relation to extractive mineral leases, although s. 101(1)(b)(iv) and (c) both purport to grant substantive powers to a lessee which would certainly require authorisation under general water legislation.
The omission of any general requirement to abide by other laws sets these interests apart from those previously considered. If the provisions stood alone, unaided by s. 166, these interests would not be subject to general water legislation because the correct implication would be that the omission of specific mention of the applicability of other laws was intentional.

3.6 Generally applicable conditions: s. 166(1)

Section 166(1)(d) purports to apply to "exploration licences and mining tenements" and the definition of the latter phrase includes all operative interests, except a miner's right and a tailings licence. Those interest holders who are caught by the section are obliged to "comply with the law in force in the Territory relating to the control and use of water and to soil conservation".

The provision thus acts as a belt to the braces provided by the sections mentioned in paragraphs 3.3 and 3.4, although it is poor drafting practice to allow two or more provisions with the same general intendment, but which are differently expressed, to co-exist in the same legislation. The redundancies created in relation to these interests should be removed.

Section 166(1)(d) is, however, important to the interests mentioned in paragraph 3.6, for without it, they would not be subject to general legislation concerning water.

It must also be noted, however, that as s. 166(1)(d) does not apply either to miners' rights or tailings licences, the obligations of holders of those interests to comply with water legislation depends on the particular words of ss. 11 and 126 respectively.

It is important also to notice that the precise phrasing of s. 166(1)(d) may create problems of characterising legislation as laws relating to "the control and use of waters". Whether provisions prohibiting or controlling the discharge of solid wastes
or tailings to land could be characterised as provisions with respect to the "control and use of waters" must be doubted, although there is little doubt that improper management of such wastes may have a deleterious effect on both surface water and groundwater. Such ambiguities should be resolved.

For the interests to which it applies, then, s. 166(1)(d) may have the effect of making other water legislation paramount; but it is subject to the same critical flaw noted in relation to s. 66 in paragraph 3.4. Section 172 provides that, for all interests other than a miner's right, an extractive mineral permit or a tailings licence, the holder may apply to the Minister who may waive, vary, suspend or grant exemption from any condition attached to his interest. No limitation is placed on this dispensing power which accordingly applies to the obligation to abide by other laws contained in s. 166(1)(d).

For the reasons advanced in paragraph 3.4, such a power in the Minister is indefensible as a matter of general principle and, in this particular instance, has the unfortunate effect of making the paramountcy of water legislation subject to the whim of the Minister, who has no responsibility for the administration of that legislation.

3.7 Offences and penalties: s. 190(1)

Section 190 has a limited impact on rendering general water legislation paramount, by making it an offence "to explore for or mine minerals or extractive minerals...otherwise than in accordance with...other law in force in the Territory". The efficacy of this measure, depending on proof and prosecution, is necessarily limited. It is necessary to prevent improper or inappropriate activities prior to their execution and penalties subsequent to prosecution are inadequate substitutes for those powers.
3.8 Recommendations

It is necessary to confront and to deal with the ambiguities created by the proliferation of different provisions concerning different types of interests and to ensure that all interests are made subject to the same overriding general requirements. In so doing, it would be wise to take account of the fact that mining interests should also be subject to the paramount operation of laws other than those merely relating to water. This could best be done by removing the references to other laws in ss. 11, 23, 43, 66, 114 and 126 and replacing the provision in s. 166(1)(d) by a general provision applicable to all interests which cannot be dispensed with pursuant to s. 172. Because of the restrictive definition of "mining tenement" contained in the Act, it would either be necessary to amend that definition, or to supplement that phrase by specific reference to miners' rights, tailings licences and any other interests which may be granted under the Act but which are not "mining tenements" as presently defined.

Alternatively, a more generic phrase, such as "any interest granted pursuant to this Act" might be employed.

A possible provision might be along the following lines:

"(1) The holder of any interest granted pursuant to this Act shall comply with the provisions of, and directions lawfully given under, or requirements lawfully imposed pursuant to, this Act and all other laws in force in the Territory.

(2) Without prejudice to the generality of the preceding subsection, the holder of any such interest shall comply with the provisions of and directions lawfully given under or requirements lawfully imposed pursuant to any law concerning:

(a) the investigation, use, control, protection, management or administration of water and related land resources;
(b) the use of land and the conservation of soil and land resources; ...".

Further paragraphs might be appended if it is thought desirable to draw particular attention to other areas of paramount concern.

3.9 Uranium Mining (Environment Control) Act: ss. 4, 8

The apparent philosophy of these provisions is to make mining for prescribed substances subject not only to the authorisation provisions imposed by the Act, but also the requirements of the Soil Conservation and Land Utilization Act and the Control of Waters Act. This is primarily done by s. 4 which prohibits such mining "except in accordance with any requirements imposed by or under" the Act itself and "the relevant law".

There are three difficulties concerning the definition of "relevant law". The first is that, by nominating two particular Acts, the definition may prove to be unduly restrictive in the event that further legislation is passed, to which mining for prescribed substances should also be subject.

The second is that the formula concerning "any regulation made...and any requirement imposed by or under either of those Acts or any such regulations" invites comparisons with provisions such as s. 66(k) of the Mining Act which refers simply to "provisions of, and directions lawfully given under" certain laws. It would be preferable if a uniform, all-embracing formula applied in such closely allied Acts. If a provision such as that proposed in paragraph 3.8 were also added to the Mining Act, it would be preferable if the formula there employed also conformed.

The final difficulty is that the definition of "relevant law", in conjunction with s. 4(b), leads to the conclusion that a person may not mine "except in accordance with any requirements imposed by or under" (s. 4) "any requirement imposed by or under" the Acts or regulations (s. 3). Such circuitry is surely undesirable drafting.
Greater difficulty of interpretation is presented by s. 8. Section 8(1) contains two elements: a prohibition and a privilege. Mining without an authorisation is prohibited; mining with an authorisation is permitted. In view of this double effect, s. 8(2) is frankly impenetrable, for it purports to limit the applicability of subsection (1) in certain circumstances, but is unclear whether it is the prohibition or the privilege contained in subsection (1) which is limited. The confusion is compounded by the fact that it is stated that "subsection (1) applies in relation to an authorisation...only to the extent that the authorisation is capable of operating concurrently with a requirement" of, say, the Control of Waters Act. From this, it seems that it is the privilege in subsection (1) which is qualified by subsection (2).

Accordingly, it would seem that the privilege granted pursuant to an authorisation will cease to exist wherever that authorisation is not "capable of operating concurrently" with the requirement imposed by the Control of Waters Act. The general intention would thus seem to be to make requirements imposed by the Control of Waters Act paramount. There is some evidence, however, that in certain quarters the provision is read as having an opposite effect; namely, that an authorisation granted under the Uranium Mining (Environment Control) Act has paramount force. If so, this bears out the prima facie impression that the section is regrettably obscure.

There are three further difficulties with subsection (2). The first is the ambiguity inherent in the words "capable of operating concurrently".

The second concerns the phrase "requirement imposed by" the relevant law. If the Control of Waters Act prohibits certain acts, it can be argued that a prohibition is not a requirement and it is certainly not "an authority granted under the relevant law". Accordingly, an authorisation which is contrary to a prohibition contained in the Control of Waters Act would not have limited effect.
under the section, because there is no "requirement" imposed by the relevant law.

The final difficulty is that s. 8(2) appears to go beyond both the definition of "relevant" law in s. 3 and the prohibition contained in s. 4(b). The latter provisions embrace the Acts, regulations made thereunder and requirements pursuant thereto; but s. 8(2) also refers to an "authority granted under" the relevant law. What the precise effect of this variation may be is difficult to assess.

The provisions of s. 8 are so obscure that it seems essential that it be re-drafted in the light of precise instructions as to what the object of the provision is thought to be. If its real purpose is to make the Control of Waters Act paramount, it would be preferable if subsection (2) provided that, to the extent that any authorisation granted pursuant to s. 13 is inconsistent or in conflict with the provisions of the relevant law, or the exercise of any powers pursuant thereto, the authorisation shall be void and of no effect.

4. DEFINITION OF MINERALS

Section 4(1) of the Mining Act presently defines "mineral" to mean any "naturally occurring...inorganic element or compound...obtainable from land by mining, whether carried out under or on the surface of land", but does not include an extractive mineral, which is also defined.

This definition presents certain difficulties in view of the provisions seeking to make the Control of Waters Act paramount, for on its face it includes water as a mineral pursuant to the Act. Accordingly the regime of the Act might be applied to, say, the working and mining of groundwater deposits.

Further confusion is created by the fact that numerous sections of the Act purport to confer rights on the holders of interests to use water in a manner which implies that rights to win and work water would not
automatically be included in a mining interest. Finally, provisions concerning the presentation of the environment seek to protect certain physical factors from direct or indirect harm from mining operations - and s. 4(1) defines "environment" to include water.

To minimise confusion, it would be preferable if the words "or water" were added at the end of the present definition of "mineral" in s. 4(1), after the words "extractive mineral".

5. **PROVISIONS CONCERNING DATA**

5.1 **Data on groundwater occurrence**

The key to future planning for water resources is appropriate data as to the occurrence and quality of both surface water and groundwater. Acquisition of data concerning surface water is relatively simple; but it has not been possible to begin to assess the occurrence and characteristics of groundwater resources in Australia without enlisting the aid of the private sector.

In a number of jurisdictions, this is done by requiring licensed drillers to file returns relating to every bore sunk for the purpose of seeking water, and making the continuation of the licence dependent upon such returns. Indeed, the system of registration of drillers which exists under the *Control of Waters Act* was introduced precisely for the purpose of acquiring data. These provisions will be enhanced under the proposed new *Water Act* and a statutory water resources investigation programme introduced.

Without in any way impinging upon justifiable commercial confidentiality of pertinent data for the duration of certain mining tenements, it is desirable to ensure that:-

(a) all data relevant to the occurrence of water encountered during mining exploration and proving operations are duly recorded; and
(b) that data are made available for the use of the Water Division as a matter of course and without restriction.

Detailed discussions should be instituted between the relevant authorities to ensure that the necessary flow of returns and for access to core samples or the relevant lithography thereof is possible and that the resulting data can be incorporated into the Water Division's new information storage and retrieval system in a way which does not prejudice confidentiality. Some means should be found to make it possible for the Water Division to obtain such data - either from the Mines Department or the relevant interest-holder. There is no need, nor intention, to require details of the mineral analysis of core samples.

5.2 Data on emissions and water quality

Another area, which has increased in importance in other jurisdictions, concerns the task of monitoring emissions from mining operations. This involves problems about who should be responsible for taking and analysing samples; which agencies should be provided with the results of analysis; and which agencies should be responsible for requiring any necessary remedial action to be taken.

Some of these difficulties are already being experienced in the Northern Territory and arise from provisions such as 16L and 16M of the Control of Waters Act concerning Drainage Areas and the powers enjoyed by an inspector, the Director of Mines and the Minister of Mines under s. 19 of the Uranium Mining (Environment Control) Act to assess and to deal with infractions of the Control of Waters Act.

Under the proposed new Water Act a framework will be established for comprehensive annual licensing of discharges which will depend upon appropriate monitoring procedures and cross-availability of data. It will be necessary for that regime to be dovetailed with existing requirements under the Mining Act and the Uranium Mining (Environment Control) Act. These matters should be noted as requiring future discussion between agencies.
5.3 Existing legislative provisions

5.3.1 Exploration licences and exploration retention leases:

ss. 24, 34-37; 45, 51-53

The most elaborate provisions concerning the lodging of reports and acquisition of data concern these two interests which, not surprisingly, have to do with the investigation phase of mineral development. The interests which lead mining authorities to require that reports and data be submitted concerning mineral occurrence are, in part, identical with the interests which water authorities have in seeking similar data concerning water occurrence.

Sections 24(h) and 45(g), as a condition of the interest, require the holder to obtain and send to the Secretary such water samples and data on underground water encountered during exploratory drilling as the Secretary, in writing, directs. From the Water Division's perspective, these provisions are deficient in the following respects:-

(a) the obligation to provide data does not exist unless required ad hoc in writing. The obligation should be a general one, perhaps specified in regulations, with a power to add specific matters for report by written direction, where necessary;

(b) the obligation exists only at the discretion of the Secretary. Where a discretion is required (see (a) above), it should either be that of the Director of Water or exercised by the Director of Mines at the request of and in the manner proposed by, the Director of Water;

(c) the data and water samples are furnished to the Mines Department. It is important that such samples or the
results of their analysis and such data be provided to the Water Division, either directly by the holder of the interest or by the Mines Department. If the Mines Department also has an interest in such data and it is therefore appropriate for the holder to lodge samples and data with that Department, then there should be a statutory obligation to pass on such data to the Director of Water Resources, to cover the worst-case hypothesis. This could be done either by an amendment to the Mines Act, or by a provision in the new Water Act empowering the Director of Water Resources to require certain types of data and reports lodged under the Mining Act to be referred to him.

(d) The Minister has power in either case to dispense with the obligation to provide data through his general power to waive, vary or suspend a condition. Insofar as this power relates to the acquisition of data, it is thought that it should not exist. If it does exist, it should only be capable of being exercised on the recommendation of the Minister for Water.

Sections 34(2) and 51(2) require the licensee to lodge annual reports with the Secretary which embrace all drilling and other activities. Sections 35 and 52(1) provide that such reports are open to inspection at the Secretary's office during office hours, subject to certain exceptions.

Those exceptions concern confidential information. Put simply, data and reports concerning land which the holder proposes to convert into a mining lease or other mining tenement are not available for inspection and will not be available for inspection for the duration of any subsequent mining tenement, except with the written permission of the licensee: ss. 36, 52.
Apart from such reports, ss. 37 and 53 require the holders of interests to notify the Secretary of all core samples which are recovered and to lodge those samples with the Secretary once any subsequent mining tenement has expired. Prior to that time any drill core which is deposited with the Secretary or any other person may only be inspected with the written permission of the interest-holder.

These provisions are deficient in the following respects:-

(a) One narrow interpretation of ss. 35 and 52 might be thought to justify not making data generally available to the Water Division for storage and used by it. This depends on a literal reading that inspection can only take place at the Secretary's office during normal hours. Such a reading is, of course, opposed to the true purpose of the provision which is to increase, rather than restrict, the availability of data.

(b) Although material contained in reports filed under ss. 34 and 51 are freely available to Mines Department officials for analysis, one reading of the confidentiality provision is that other departments of government, like the public, are unable to have access to such reports until the subsequent mining tenement has expired which may be twenty years or more. Such a result is not only not in the best long-term interests of proper water management but also against the short-term public interest, for it prevents the custodians of the public interest in the water sector from obtaining information which may be most pertinent to any representations which may need to be made on behalf of that interest in proceedings before a mining warden to determine if either interest should be succeeded by a mineral lease. It is important that
the Water Division have both the power and the necessary information to intervene in a hearing under s. 58, if only because the mining warden has power under s. 58(6) to require studies to be undertaken as to the likely or possible effect that mining may have on water resources on or in the vicinity of the proposed lease. The Water Division should be in a position to offer proper evidence either in support of, or in opposition to, such a proposal, as the circumstances require (see paragraph 10.2 below).

(c) It is a matter of some concern that ss. 37(2) and 53(2) contemplate the possibility that a core sample might be "disposed of" by the interest-holder with the consent of the Secretary. These words embrace the possibility that core samples will not be retained in certain instances, although ss. 37(5) and 53(5) carry an indirect implication that the words "disposed of" are intended merely to envisage lodging the core with somebody other than the interest-holder or the Secretary. As perverse interpretation of other provisions of the Act has occurred in some quarters, it would be wiser if the possible implication of destruction implicit in the words "disposed of" were removed.

(d) It is not important for the Water Division to have access to core samples, provided that it does receive information sufficient to establish the lithology of such samples as have been taken and to determine the permeability of water-bearing and overlying strata and the quantity, quality occurrence and characteristics of groundwater. If, on the other hand, it is not possible to qualify the provisions of ss. 36 and 52 to ensure
(i) that reports made pursuant to ss. 34 and 51 contain all relevant data concerning groundwater; and

(ii) that all such data is made available to the Water Division,

it may be necessary to ensure that the Water Division has access to core samples as a matter of last resort.

5.3.2 Mineral leases and mineral claims: ss. 79, 81; 93, 95

Annual reports of operations pursuant to such interests must be lodged but generally concern details of production. Such reports must, however, include "such other information as is prescribed": ss. 79, 93. This in turn, means prescribed by regulations or administrative fiat.

Certain data concerning groundwater encountered in mining operations would be relevant for the Water Division if it were complementary to, or additional to, information received during the exploratory phase. However, the more valuable data which may be revealed by annual reports could concern the monitoring of discharges and the disposition of tailings and wastes. It is possible that such matters might be dealt with under separate licences required under the new Water Act. It is important to note, however, that ss. 79 and 93 provide another means of requiring that information.

It would be preferable, however, if in addition to providing information on matters prescribed by regulation, the sections also allowed additional matters to be required by directions given in writing.
Sections 81 and 95 provide that inspection may take place at the Secretary's office, but only with the consent of the interest-holder while the area is subject to a mining tenement. These provisions are thus subject to the same objections voiced in relation to ss. 35 and 52 and also ss. 36 and 52 in paragraph 5.3.1, at least insofar as such reports presently contain information relevant to water management or may do so in the future.

Mineral claims create an additional problem, for s. 87(a) empowers a holder not merely to produce, but to carry out further exploration. Incidental to this, further trial drilling and the production of cores might be expected. To be consistent, therefore, the more extensive data provisions applying to exploration licences and exploration retention leases (paragraph 5.3.1) should also be applicable to exploration activities under a mineral claim.

5.4 Recommendations

Certain specific amendments would be necessary to overcome such narrow problems as eliminating perverse readings of provisions concerning inspection in the Secretary's office or "disposing" of core samples. The more general problem of access to data could be handled in a number of ways. Thus, the proposed Water Act could require the Secretary, notwithstanding the nominated sections in the Mining Act concerning confidentiality, to provide the Director of Water with copies of reports lodged under specified sections. Another companion provision might allow the Director of Water, either personally or probably through the Secretary, to require particular information to be included in reports lodged under the Mining Act. A third possibility would be to provide that the written consent of an interest-holder is either unnecessary or shall not be withheld where the Director seeks access to reports lodged under the Mining Act. This possibility may be deficient, however, for it does not provide for the flow of data to the Director as a matter of course.
6. PROVISIONS CONCERNING THE MINISTER'S POWERS

Numerous powers of the Minister for Mines bear on water management. The general objective, referred to in paragraph 1.2, of ensuring that all sectoral responsibilities are exercised in ways which conform to general water management plans, requires that autonomous powers of the Minister should only be exercised consistently with those plans. Again, it is necessary to assume the worst possible case to assess how those powers need to be qualified. The issue raised in paragraph 2.8 above underlies all of the following discussion.

6.1 Power to grant interests

6.1.1 Mineral leases and extractive mineral leases: ss. 60, 101

These sections confer power on the Minister to grant interests for a term of twenty-five and ten years respectively. The provisions are very similar although, as noted in paragraph 4, because water is technically defined as a mineral, though not an extractive mineral, there is the theoretical possibility that the Minister could grant a mineral lease to take groundwater for twenty-five years under s. 60.

Both interests are stated to embrace, for their respective periods,

(i) the erection of structures for the impounding and retaining of waste resulting from the mining, treatment, processing or refining (ss. 60(1)(b)(iv), 101(1)(b)(iv));

(ii) the erection of structures for the stacking and storage of specified minerals (ss. 60(1)(b)(v), 101(1)(b)(v));
(iii) the boring or sinking for, or pumping or raising of, water to be used for or in connection with the mining or processing of specified minerals on the lease (ss. 60(1)(e), 101(1)(e));

(iv) such other matters as the Minister sees fit and specifies in the lease.

In addition, the grant of a mineral lease may be for the cutting and construction of water races, drains, dams and roads to be used in connection with mining.

It is apparent that the Water Division has substantial interests in the adequacy and appropriateness of structures erected for the purposes envisaged in items (i) and (ii). If the structures are to contain solid matter, they will be concerned at the possibility of deleterious materials penetrating groundwater reserves, or surface waters via natural run-off.

If the structures are by way of tailings or retention dams, or other structures to control fluids, while the ultimate concern is again to contain pollution, different factors concerning the siting and construction of structures will also be of interest.

In relation to structures to contain solids, it would be preferable if a lease for that purpose could not be granted until approval of the Water Division had been obtained. In practical terms, however, it is unlikely that the precise details of all such structures will be settled at the time a lease is granted and there is always the possibility that, for one reason or another, designs may change after that time. To cover these practical difficulties it would be desirable if there was either an independent statutory requirement that the approval of the Water Division be
obtained prior to construction, or such a condition were attached as a matter of practice pursuant to s. 166. To achieve this, it may be appropriate to amend s. 166(2) to embrace the approval of the Director of Water.

If the structure is to contain fluids, whether erected pursuant to items (i) or (ii) above or a mineral lease which purports to authorise the cutting or construction of a water race or dam, that structure will be an hydraulic structure within the meaning of the new Water Act and, as such, its construction will require an independent permit. Failure to obtain such a permit or to adhere to its terms may result in an order to remove or repair the structure. Such permits will be of limited duration and the structure must generally be erected within the life of the permit.

It is apparent that the provisions of this legislation will overlap or conflict with these provisions of the Mining Act and, if the general principle of giving full faith and credit to the operation of the Control of Waters Act is retained, it would be better that the matters referred to should not be made the subject of a mineral lease or an extractive mineral lease, at least insofar as they relate to hydraulic structures.

The same is true of item (iii) above. The sinking of bores for groundwater will be independently licensed under the new Water Act and that work will only be able to be done by licensed drillers. Again, the actual extraction and use of such water will also be independently licensed in certain circumstances. Where extraction licences are required, they will only be granted for one year periods and not for twenty-five or ten years. Accordingly, it would be preferable if the purposes mentioned in item (iii) could not be made the subject of a lease under either of these sections.
Item (iv) also creates potential difficulties, for the Minister is given broad powers to make any other "purposes" in connection with mining the subject-matter of the relevant lease. Such a catch-all provision is, of course, inserted because those giving instructions to the Legislative Draftsman are uncertain of their foresight; but the plenitude of the power is substantially unfettered and could conceivably embrace matters of intimate concern to the Water Division. It is difficult to suggest a satisfactory means of limiting that discretion which is not cumbersome to some degree.

Insofar as ss. 60(2) and 101(2) purport specifically to empower the holder to do all the things implicit in the purposes for which the lease is granted, it is essential that they be qualified in the light of the foregoing discussion. If water-related matters are removed from the ambit of the lease, a consequential literal alteration to these sections would be required. If water-related matters are not removed from the ambit of the lease, then it will be necessary to make ss. 60(2) and 101(2) expressly subject to the provisions of the Water Act if this is not already achieved by s. 166(1). It should be noted that, insofar as there is doubt as to the effect of s. 166(1), the provisions of ss. 60 and 101, insofar as they relate to water, will probably be impliedly repealed by the passage of the Water Act. It is better, however, not to rely on such implied repeal but to tidy up statutory anachronisms when they are perceived.

6.1.2 Mineral claims and tailings licences: ss. 86, 87; 125, 126

Section 86, empowering the Minister to grant a mineral claim, is different from the other similar provisions for it requires the Minister to be "satisfied that the applicant is not in breach of this Act or the regulations". This,
itself, is unremarkable. There are two important points to be made, however.

(a) The omission of such a prefatory requirement in relation to other interests creates the unfortunate argument that prior failure to observe the provisions of the Act would be insufficient grounds for refusing to grant an application for an interest. This is unfortunate, for a breach of the Act is sufficient grounds for cancelling a subsisting interest and should clearly be a bar to granting a new interest.

(b) As the general philosophy of the provisions considered in paragraph 3 is to make observance of the Control of Waters Act paramount, failure to observe the provisions of that Act in the exploratory phase should also be a bar to the granting of a subsequent tenement.

Sections 87 and 126 specify the powers conferred on the holder of each interest, but in fairly broad general terms. A mineral claim implies power to carry out all operations and works "as are reasonably necessary" for exploration and mining, including the removal and treatment of tailings. The latter power is also implied in a tailings licence. As noted in paragraph 3.3, the power conferred by s. 126 on the holder of a tailings licence is specifically "subject to the law in force in the Territory", but any such qualification of s. 87 is left to the general operation of s. 166.

Insofar as the extraction of groundwater or diversion of surface water may be operations reasonably necessary for mining, it is apparent that there is a potential conflict between s. 87 and the Water Act. Further, incidental to the power to explore for minerals, trial drilling might presumably be employed. However, the data acquisition
provisions which attach to exploration licences and exploration retention leases (ss. 24, 34-37; 45, 51-53 and paragraph 5.3.1 above) do not apply to these activities which seems to be an important deficiency in the data network. Such trial drilling may also conflict with provisions of the Water Act. Similarly, the power to remove and treat tailings conferred by both ss. 87 and 126 are potentially pollutive and the dumping, storage, treatment and resultant discharge of wastes may also require licences pursuant to the new anti-pollution provisions of the Water Act.

6.1.3 Power to authorise drains and water pipes: s. 182

This provision primarily appears to protect areas occupied under interests granted pursuant to the Act other than miner's rights or tailings licences, but is couched in terms which could also be read as conferring on the Minister power to authorise the construction of drains, water pipes, tailings and slurry pipes. The combined implication from ss. 182(4) and 166 would seem to be that the substantive right to erect such hydraulic structures might be conferred by other laws - e.g. the new Water Act - but rights of entry across mining tenements can only be obtained pursuant to this section.

No difficulties would thus seem to exist where the application is made by a private person. On the other hand, it might be undesirable if a proper reading of the section required the Water Division independently to obtain the consent of the Minister to a proposal to carry a public water-supply pipe through an area subject to a mining tenement.
6.1.4  **Power to grant authorisations under the Uranium Mining (Environment Control) Act: ss. 13, 18**

Although ss. 4 and 8 seek to make the *Control of Waters Act* paramount (see paragraph 3.9), the power of the Minister to grant an authorisation under s. 13 is controlled by the requirement in s. 18 that he must have regard to certain matters. These include:—

(i) the location of any tailings dam, retention pond or evaporation ponds (s. 18(1)(d)(ii));

(ii) advice sought by the Minister from persons nominated in subsection (2) or the applicant for the authorisations.

Item (i) is deficient in that the Minister is only obliged to consider the location of the tailings dam, etc. when the authorisation concerns the storage or use of explosives. On the other hand, s. 8 provides that all works, processes and equipment must be authorised including, presumably, the tailings dam and other works referred to in s. 18(1)(d)(ii). The negative implication of that provision, however, is that the Minister is not statutorily obliged to have regard to the proposed location of a tailings dam, etc. when deciding whether or not to authorise it. This seems unfortunate, to say the least.

Item (ii) is deficient in the sense that ss. 18(2) and 18(3) do not empower the Minister to seek the advice of the Ministers administering the "relevant laws", e.g. the *Control of Waters Act* and the *Soil Conservation and Land Utilization Act*, in deciding whether to grant an authorisation. This seems to be a remarkable oversight. Accordingly, s. 18(2) should be amended:—
(a) to empower the Minister to seek advice from the Ministers administering the relevant laws;

(b) to oblige the Minister to seek that advice in every case;

(c) to require the Minister to act on the advice proffered in the event that it proposes that an authorisation be refused or conditions attached thereto.

6.1.5 Powers under the Mining Assistance Act: ss. 26, 27, 28

These provisions are similar in principle to those of the Water Supplies Development Act, whereby the Minister may pay the whole cost of, or part of the cost of, boring for gold, minerals or water. Section 28 further empowers the Minister to purchase and hire out drilling rigs.

These provisions potentially conflict with the Water Act in the sense that the construction of bores will require a permit under that Act. Further, the hire of equipment will have to be controlled as bores for water will only be able to be sunk by licensed drillers.

Unlike the Mining Act, there are no general provisions subjecting this Act to the provisions of the Control of Waters Act; however as ss. 26 and 27 do not purport to grant the right to drill for water, there is no substantive conflict with that Act in this respect.

6.2 Power to attach conditions to interests: Mining Act, ss. 102, 125; Uranium Mining (Environment Control) Act, ss. 13, 14

Most mining tenements are issued subject to certain conditions which are specified for each type of tenement (e.g. ss. 24, 45, 66, 89) and also to general conditions which apply to all interests other than a miner's right and a tailings licence (s. 166).
Two circumstances in which there is, however, a plenary power in the Minister to attach conditions are for extractive mineral leases (s. 102) and a tailings licence (s. 125(2)). In the case of the former interest, s. 101 contemplates that an extractive mineral lease may authorise certain works for impounding waste and for taking groundwater. Certain reservations have been expressed about the unqualified nature of these powers in paragraph 6.1.1. Equally, it would seem that it is inappropriate for the Minister to attach conditions to interests relating to water use without prior reference to the Water Division. The possibility of conflict between the Water Act and conditions which may be specified by the Minister can easily be contemplated.

Section 13 of the Uranium Mining (Environment Control) Act empowers the Minister to grant authorisations conditionally or unconditionally. Section 14, without limiting the generality of that power provides that the Minister may impose conditions with respect to:

(a) measures to protect the environment, which presumably includes water, although unlike the Mining Act, "environment" is surprisingly not defined;

(b) the manner and standard of construction of dams and retention ponds;

(c) the use of dams and ponds;

(d) the management of seepages from dams or ponds;

(e) the rehabilitation and revegetation of sites.

Manifestly, there is room for conflict between such provisions and the requirements of the Control of Waters Act or its successor, whose operation is preserved by s. 8(2) and it is important that procedures should exist for preventing or reconciling differences in
the requirements imposed under that Act and these provisions. As noted in paragraph 6.1.4, however, while s. 18(2) empowers the Minister to seek the advice of certain nominated authorities in exercising his powers, the Ministers or authorities administering the Control of Waters Act and Soil Conservation and Land Utilization Acts are not among them.

6.3 Power to request the surrender of interests: s. 30

Section 30 empowers the Minister to request the surrender of any land included in an exploration licence for public recreation or amusement, the protection of coastal foreshores, water conservation purposes and the construction of drains and pipelines. As these matters may all involve questions of water management, it is possible that the initiating Minister may well be the Minister for Water. However, there is no formal mechanism for consultation; nor is the Minister obliged to act upon the request of another Minister.

As the express power only exists in relation to an exploration licence, the correct implication seems to be that it is impossible for the Minister to make such a request in relation to lands held under any other form of mining tenement. This omission seems unfortunate, as the only other possibility is to go through processes of re-acquiring part of the tenement for public purposes. Yet circumstances can readily be envisaged where the holder of a tenement may readily surrender a portion of this claim without seeking compensation, e.g. if a pipeline, or storage or recreational lake is to serve his mining town. The power to request a surrender should thus exist in relation to other mining tenements as well.
6.4 Power to waive, vary or suspend general conditions: ss. 24, 45, 66(k), 67, 89, 166, 172; Uranium Mining (Environment Control) Act, s. 15

6.4.1 Powers concerning conditions attached to specific interests

Sections 24, 45, 66 and 89 specify particular conditions which are to attach to an exploration licence, an exploration retention lease, a mineral lease and a mineral claim respectively. Each of these conditions concerns certain matters of importance to water managers; e.g. plans for disposing of wastes, plans for substantial disturbance of the surface area, activities concerning groundwater and the erection of pipelines, dams and reservoirs. In each case, however, the relevant condition is only to apply "unless expressly waived, varied or suspended in writing by the Minister".

It is thought most important that the Minister should not be entitled to waive, vary or suspend any condition relevant to water management without the prior approval of the Minister for Water.

There are further particular difficulties with ss. 67 and 66(k) concerning mineral leases. Section 67 generally empowers the Minister to vary the minerals embraced by the lease and to vary or impose conditions attached to the lease. This power is presently unfettered but should only be exercised in relation to matters concerning water after approval of the Minister for Water.

The particular difficulty created by s. 66(k) has already been mentioned in paragraph 3.4. It is quite inappropriate that the Minister for Mines should have power to dispense with the obligation to observe other laws in force.
6.4.2 Powers concerning generally applicable conditions

In paragraph 3.6, the provisions of s. 166(1)(d) have been considered. Section 166 purports to impose certain conditions applicable to all interests with the exception of miners' rights and tailings licences. Some of these expressly concern water, particularly s. 166(1)(d) which is an obligation to comply with other laws in force in the Territory.

The nominated conditions in paragraphs (a) to (g) are supplemented by a general obligation to observe other conditions which may be endorsed on the interest by the person granting it. Although this is the obvious intendment of the final paragraph of the section, it is apparent that a critical verb ("observe"?) has been omitted after the word "and" in the first line after the end of paragraph (g). Without that verb, no obligation is imposed and the final paragraph is meaningless.

Section 172, however, purports to empower the holder of interests other than a miner's right, an extractive mineral permit or a tailings licence to apply for a waiver, variation, suspension of, or exemption from, any condition attached to his interest and empowers the Minister to grant that application. The Minister thus has unfettered power to dispense with the operation of all or any conditions, including the generally applicable obligation in s. 166(1)(d) to observe other laws in force.

It is thought that a general power to exempt from the operation of other laws is intolerable (see paragraph 3.6 above). Further, it ought not be possible for the Minister to waive, vary, suspend or grant exemptions concerning any water-related condition without the prior consent of the Minister for Water.
6.4.3 **Powers concerning the Uranium Mining (Environment Control) Act**

Section 15(1) empowers the Minister, on his own initiative, to alter the terms of an authorisation if he is satisfied that this "will assist in protecting the environment from harmful effects of mining". Again, s. 18(2) empowers him to consult certain persons, not including the Minister for Water, in deciding whether to use his powers (see paragraph 6.1.4).

It would be preferable if the power to alter an authorisation:-

(a) could not be used without the prior consent of the Minister for Water;

(b) could be initiated by the Minister for Water.

6.5 **Power to renew interests: ss. 46, 68, 90, 103, 127**

Sections 46, 90, 103 and 127 contain straightforward powers in the Minister to grant applications for renewal of exploration leases, mineral claims, extractive mineral leases and tailings licences for five, ten and one years respectively. In each case the Minister is empowered to attach the same or altered conditions to the renewed interest, although for no adequate reason the precise formula applied in s. 46(3) varies from that employed in other sections, as it contemplates only additional conditions and seems not to permit the variation of previous conditions.

It is thought that any proposed variation in existing conditions, or any additional conditions which may have an effect on water resources should be approved by the Minister for Water.
Section 68 contains more elaborate provisions concerning the renewal of a mineral lease. The application must be accompanied by certain reports, including particulars of works, of rehabilitation and steps taken to minimise disturbance to the environment. The Minister's power to attach additional or varied conditions to a twenty-five year renewal is more constrained than in the previous sections. A renewal can only be granted "where the Minister is satisfied that the lessee has, during the current period of the lease, complied with all the provisions of this Act and the conditions to which the lease is subject".

The omission of this element from the powers to renew other interests is regrettable, for it carries the possible implication that breaches of the Act and conditions of these interests are not barriers to their renewal.

Given the premise that the operation of other legislation must be preserved (paragraph 2.7 above), the provision also raises the question whether failure to observe other laws (which, in most instances, is a condition of the specific interest) ought not be equally expressly made a barrier to the renewal of an interest. Given that it should be a barrier, some formal or informal mechanism should exist for ensuring that the Minister is properly advised whether the applicant has duly observed other laws.

6.6 Power to make prescriptions and give directions: ss. 11(c), 23(d); Uranium Mining (Environment Control) Act, s. 11

Although expressed to be subject to the Control of Waters Act, s. 11(1)(c) purports to allow the holder of a miner's right "to exercise as prescribed a right to take, use and dispose of water on any Crown land for a purpose connected with mining or his own domestic use". Why the provision is cast in terms of a power "to exercise...a right to take" water, rather than merely a power "to take" water is uncertain and unfortunate as it raises the implication that the "right" may be constituted by another
provision. If such a provision were pursuant to the *Control of Waters Act*, no difficulty would arise; except the obtrusion of the notion of "rights" into paragraphs (c) and (f) does create unnecessary jurisprudential complexity.

The main difficulty is that, by s. 18 of the *Interpretation Act*, "prescribed" denotes prescription in any "instrument of a legislative or administrative character made under the Act". Accordingly, it would be within the power of the Minister, without reference to the Minister for Water, to regulate the mode of taking, using and disposing of surface water or groundwater on Crown lands by the holder of a miner's right. The express saving of the operation of the *Control of Waters Act* creates an obvious possibility of conflict which is undesirable.

Section 23(d) is an analogous power whereby the holder of an exploration licence "subject to the law in force in the Territory" may take surface water flowing through, or groundwater underlying, the area subject to the licence for either domestic or exploration purposes. This power is expressed to be "subject to the directions of the Minister". Again there is an obvious possibility of conflict between his unfettered power to give directions and the requirements of the *Control of Waters Act*.

Section 11 of the *Uranium Mining (Environment Control) Act* empowers the Minister to require any "mine, waste rock dump" or any land disturbed by mining to be rehabilitated in the manner specified by him. It must again be noticed that s. 18 neither empowers nor obliges the Minister to seek or to receive advice from the Minister for Water on the manner in which rehabilitation is to be executed. This is regarded as a substantial oversight, as plans for rehabilitation must be formulated in the light of potential effects on the water regime.
7. **PROVISIONS CONCERNING THE SECRETARY OR DIRECTOR OF MINES**

7.1 **Power to attach conditions: s. 166**

Section 166(2) provides that any condition attached to interests other than a miner's right, an extractive mineral permit or a tailings licence may make the Secretary's approval a pre-condition of doing any Act, and may further empower the Secretary to impose conditions on the doing of that action.

It is obviously undesirable if conditions empower the Secretary to give approval to actions which bear upon water management without prior agreement by the Water Division.

On the other hand, the technique exemplified by this provision might be an important means of ensuring that other Acts are duly observed. Consideration should thus be given to broadening the scope of s. 166(2) to allow the approval, etc. of other officers, such as the Director of Water, to be made a pre-condition to the doing of certain acts relating to water. If this were done, the present policy which, for some reason or other, excludes miners' rights, extractive mineral permits and tailings licences from the ambit of the section, should be re-examined.

7.2 **Power to give directions: ss. 24, 45, 66, 89, 166**

Sections 24(f) and 45(c) require the holders of an exploration licence or exploration retention lease to advise the Secretary of proposed methods of disposing of waste from base-camps and to comply with any directions given by the Secretary. Sections 24(h) and 45(g) empower the Secretary to direct holders which samples and data relating to groundwater encountered during drilling are to be collected and submitted.

Sections 66(f) and 89(f) require the holder of a mineral lease or mineral claim to abide by any directions given by the Secretary
where groundwater on the area is to be used for human consumption. Sections 45(b) and 89(c) require the holder of an exploration retention lease or a mineral claim to abide by the directions of the Secretary to protect the environment in carrying out any programme involving substantial disturbance of the surface of the claim. An analogous provision in s. 166(1)(a), which relates to all interests other than miners' rights and tailings licences, empowers the Secretary to give directions to minimise or make good damage to the environment, including rehabilitation of the disturbed surface of the land.

It is apparent that there is considerable internal inconsistency between the provisions applying to different sorts of interest. Apart from this, it is generally undesirable that the Secretary should have an unfettered power to give directions on matters so closely affecting the water regime. If the power is to exist, it should only be exercised with the prior consent of the Director of Water. If not, potential conflict between legislative requirements can be foreseen. Further, there are apparent areas of potential conflict with the Public Health Act: e.g. ss. 66(f) and 89(f) concerning the use of groundwater for human consumption.

7.3 Power to confirm, vary or revoke directions: Uranium Mining (Environment Control) Act, s. 19

Section 19(2) of the Uranium Mining (Environment Control) Act envisages an appeal from directions given by an inspector concerning breaches of the Act, an authorisation or the Control of Waters Act or the Soil Conservation and Land Utilization Act (see paragraph 9.1 below). Under s. 19(3) the Director is given power to confirm, vary or revoke such a direction. It is thought that the power to confirm, vary or revoke a direction:—

(a) in the case of a breach of the Uranium Mining (Environment Control) Act or an authorisation thereunder, ought only be exercised with the prior consent of the authorities
administering the **Control of Waters Act** and the **Soil Conservation and Land Utilization Act**;

(b) in the case of a breach of one of these "relevant law(s)", ought to be exercised by the authority administering those laws and that the Director of Mines ought have no say in the matter. To give the Director of Mines a discretion in the matter when he is not responsible to the Minister administering the relevant Act is to disregard basic principles of Ministerial responsibility.

8. **PROVISIONS CONCERNING MINING REGISTRARS**

8.1 Power to grant interests and attach conditions: s. 112

In the case of an extractive mineral permit, as distinct from an extractive mineral lease, it is the mining registrar, rather than the Minister, who is empowered to grant the interest for a period up to twelve months and to attach conditions.

Insofar as such interests are often granted in relation to stream beds, it is most important that the conflict with s. 16J of the **Control of Waters Act**, be resolved. That provision provides for the extraction of substances from the bed and banks of a watercourse pursuant to a permit issued by the Minister for Water. However, a permit is not required if the taking of a substance is authorised by "some other Ordinance or law in force in the Territory".

As the **Mining Act** purports to preserve the integral operation of the **Control of Waters Act** which, in this case, appears to give way to the **Mining Act**, there is considerable confusion as to the operative provision. Whichever way the matter is resolved, it is desirable that the interests of the Water Division should be ascertained and preserved prior to making a grant. Present practice is for applications concerning stream beds to be referred to the Water Division. If this can be properly provided for, it would possibly
be sensible for the present provisions of s. 16J of the Control of Waters Act to be repealed and the task of issuing all such permits to be undertaken pursuant to the Mining Act.

It is also conceivable that an application for an extractive mineral permit may be in areas away from stream beds. It is still necessary for the interests of water managers to be protected in such circumstances, because of the effect which surface excavations may have on patterns of surface flow and the groundwater regime. The issue of automatically referring all applications to the Water Division, discussed in paragraph 10.1, is equally relevant to applications for extractive mineral permits under s. 108.

8.2 Power to renew interests: s. 115

Section 115 allows an extractive mineral permit to be renewed for one twelve-month period and for the registrar to attach additional conditions or to vary existing conditions. Again, the interests of the Water Division should be ascertained and protected, before these powers are exercised (c.f. paragraph 6.2).

9. PROVISIONS CONCERNING INSPECTORS AND OTHER OFFICIALS

9.1 Power to give directions: s. 66; Uranium Mining (Environment Control) Act, s. 19

An inspector is given power, in relation to mineral leases:

(a) to give directions as to the construction and maintenance of dams, basins and works for impounding and retaining waste, and as to its treatment prior to disposal (s. 66(c));

(b) to approve of, and give directions concerning the manner of disposal of all industrial and domestic waste (s. 66(d)).
It is noticeable that no comparable provisions exist in relation to other mining tenements. It is apparent that both of these matters are likely to be of substantial concern to the Water Division. Further, the erection of hydraulic structures and the discharge of waste will be independently subject to licensing requirements under the proposed Water Act.

As well as accommodating the interests of the Water Division, these provisions should also require compliance with requirements under the Public Health Act.

Section 19 of the Uranium Mining (Environment Control) Act also gives an inspector power to give directions to ensure compliance with that Act, with any authorisation given under that Act and with the provisions of the Control of Waters Act and the Soil Conservation and Land Utilization Act. Certain rights of appeal from such a direction lie to the Director of Mines and the Minister. The same reservations expressed in paragraph 7.3 concerning the power of the Director to confirm, vary or revoke an inspector's direction also apply to the initial imposition of that direction by an inspector.

9.2 Power to conduct inquiries: Uranium Mining (Environment Control) Act, s. 21

Ancillary to the powers conferred by s. 19, an inspector is empowered by s. 21 to "conduct such inquiries and examinations as he thinks fit for the purpose of ascertaining whether this Act and the relevant law are being complied with in relation to a mine".

As a question of policy, it may not be thought generally desirable that an officer responsible to one Minister should be empowered to enquire into infractions of legislation within the portfolio of another Minister; for this amounts to an inquiry, at a junior officer level, of the administration by another Minister of legislation for which he is responsible.
Nevertheless, apart from this issue, the power of inquiry is not, in itself, objectionable from the water management point of view. It is the subsequent powers to take action by direction or prosecution which are undesirable.

9.3 Power to certify safety of structures: Mines Safety Control Regulations, reg. 392

This regulation empowers the Chief Mining Engineer to approve the design and proposed method of construction of dams and to arrange for their annual inspection by "an approved person" and subsequent certification.

The provisions are sketchy and do not contain adequate powers to take action to remedy any deficiencies in construction or maintenance. For present purposes, however, the erection of such structures in connection with mining operations will have to be separately licensed under the new Water Act.

10. PROVISIONS CONCERNING MINING WARDENS

10.1 Provisions for referring applications: ss. 55, 57; 83, 84; 97, 99

Applications for mineral leases, mineral claims, extractive mineral leases, although all production tenements, must include different information. Nevertheless, ss. 55(g) and (h), 97(f) and (h) require information about the applicants' proposals for rehabilitation and environment protection to be included in the application. In all cases, proposals concerning the proposed work on, and development of, the site are also required.

Sections 57, 84 and 99 respectively require the mining registrar to serve notice on such persons "as he thinks may be affected" by the grant of the application, thereby giving them an opportunity to object to the issuance of the interest and to give evidence before a mining warden.
It is thought that, at this stage of the proceedings, it is necessary that formal procedures should exist to ensure that the Water Division is fully acquainted with the details of the application. It need not be by formal notification of the registrar; indeed, in many cases it will be preferable for the Water Division to be consulted earlier in the process leading to such an application, so that appropriate arrangements can be made concerning the supply of water, waste disposal, etc. Some appropriate formal means should exist of bringing the Water Division into the proceedings at this stage, for if insuperable difficulties exist which would prevent necessary permits or licences from being granted pursuant to the Water Act, it would be better to forestall the need for proceedings before a mining warden.

10.2 Proceedings before a mining warden: ss. 58, 163

The power of objection to an application conferred by s. 163 rests in any person. It nevertheless does not seem to be the general intention of the legislation that the Minister for Water or officers of the Water Division should be formal objectors to an application. Without lodging such an objection, however, it is possible that the Water Division may not have standing to be heard on such important matters as, say, the need for additional environmental studies to be executed (see s. 58(6)). In the event that there are no objections, the warden may dispense with a hearing (s. 58(8)) and the need for additional environmental studies may go by default if the Water Division fails to object.

In the event that no objection is made by the Water Division, the only possibility of its interests being further considered are:

(a) by making representations to the Minister at the time he considers the report of the mining warden;

(b) by using its separate licensing powers under the Water Act to ensure that all relevant water objectives are met.
The obvious difficulty with (a) is that it is supposed to be the task of the mining warden to balance all competing interests and to make an informed recommendation to the Minister. It is preferable that all relevant factors, including matters concerning water management, be addressed by him. The difficulty with (b) is that sequential licensing procedures are rarely satisfactory from an investor's point of view and should, if possible, be avoided.

The policy concerning the way in which governmental concerns with mining applications are to be co-ordinated and addressed should be carefully considered. If it is thought that the concerns of other government authorities should be weighed by the mining warden, then it seems important that:-

(a) the mining registrar should be obliged to advise other departments both of the fact, and of the details, of any application;

(b) that other departments should have the right to present written or oral evidence to the warden without having to adopt the formal stance of an objector to the application. The power to present such evidence to the warden should exist as of right and should not be subject to his discretion.

10.3 Provisions concerning the jurisdiction of warden's courts: ss. 145(c); 149

Section 145(c) purports to confer unlimited jurisdiction on a warden's court concerning water. Specifically, there is power "to hear and determine actions, suits and other proceedings cognisable by a court of civil jurisdiction concerning...questions or disputes relating to water or water rights".

There are several difficulties with this provision. First, the jurisdiction is apparently unlimited, although an argument might be made that the general context requires that it be limited to
disputes concerning water which arise in relation to a mining claim. Where the plaintiff is the holder of a mining tenement but the defendant is not, however, it is by no means clear whether the defendant is obliged to submit to the jurisdiction of a mining warden. He may well be disadvantaged by so doing, as s. 149 deprives him of certain defences which he would have available to him in an ordinary court of civil jurisdiction.

Secondly, on the premise that the substantive right to divert, use, retain or dispose of water will be governed by the provisions of the new Water Act and that a special Tribunal will be created under that Act to deal with certain disputes relating to water, it is undesirable that such a conflicting jurisdiction should remain with the mining warden.

Finally, the phrase "water rights" is not defined in the Mining Act and only has meaning in the context of transitional provisions in s. 191(20), where six separate types of right granted under the previous Ordinance to water are preserved. Thought will have to be given to the question whether these rights should be allowed to survive the introduction of a new Water Act, or whether new interests should be granted under that Act. On the premise that the warden should relinquish jurisdiction over such interests in favour of the new Water Act Tribunal, it would be better if these interests were converted into interests held under the Water Act.

11. MISCELLANEOUS PROVISIONS

Certain other isolated matters require particular mention.

11.1 Conditions concerning the retention of wastes, etc.

These matters have been dealt with at different points above in the context of considering the powers of various officers. The unifying propositions are:-
(a) that it would be inappropriate for powers under mining legislation in relation to such matters to be exercised without the prior consent of the water authorities;

(b) that the pollution control regime and licensing of hydraulic structures provided for by the new Water Act will require the erection of dams and ponds, the retention of wastes therein and the discharge of fluids therefrom to be independently licensed.

Relevant provisions are ss. 24(f), 45(c), 66(c), 66(d), 101(b)(iv) and (v); Mines Safety Control Regulations, regs. 388-391; Uranium Mining (Environment Control) Act, ss. 14(f), (g), (j) and (k). In suitable cases, provision should also be made to accommodate the requirements of the Public Health Act.

11.2 Powers of landowners to consent to water use

Section 72(c) prohibits the granting of a mineral lease, without the landowner's written approval, within 200 metres of "any natural or artificial accumulation or storage of water or the artificially constructed surface orifice from...which water may be obtained". This formula would embrace natural lakes or swamps and wells or bores.

It is thought that prior permission of the Water Division should also be necessary in such cases as interests wider than those merely of the owner of the land may be affected.

Again, s. 77 allows a private landowner to permit the holder of a mineral lease over that land to use water artificially conserved by that landowner. It is thought that approval of the Water Division should be required, either because the water artificially conserved by the private landowner may originally be surface water or groundwater, the rights to which would have been granted to the landowner for other purposes; or because the new Water Act will lay emphasis on the conjunctive use of water and may deny a landowner
power to take river waters or groundwater if other sources of water are available to him.

11.3 **Power to make regulations**

Section 192(v) permits the making of regulations under the *Mining Act* prescribing the mode in which the rights of the holders of mining tenements are to be exercised and protecting them in the exercise and enjoyment of those rights. Insofar as such regulations may bear on ancillary rights to use water, there is an obvious interest in the Water Division.

11.4 **Power of prosecution**

A quite extraordinary provision appears in s. 23 of the *Uranium Mining (Environment Control) Act*. The apparent purpose was to ensure that infractions of that legislation which lead to long-term environmental damage could be prosecuted whenever the damage is discovered and regardless of the operation of the Statute of Limitations. Infelicitous drafting, however, leads to the result whereby a prosecution for any infringement of either the *Control of Waters Act* or the *Soil Conservation and Land Utilization Act* may now be launched at any time, without regard to the normal provision of the Statute of Limitations. This result can scarcely have been intended and should be remedied.

11.5 **Provisions concerning water rights**

In paragraph 10.3 mention was made of the anachronistic jurisdiction of the mining warden over "water rights" which were interests granted under the previous Mining Ordinance and which are preserved by the transitional provisions of s. 191(20).

The same anachronistic interests are invoked by ss. 21(2)(b) and 25(b), both of which contemplate the possibility of the holder of a mining tenement "obtaining water rights" over land which is the
subject of an application for an exploration licence, or over which such a licence has been granted. No provision now exists under the Mining Act for granting such interests and, apart from interests previously granted and preserved by s. 191(20), all such interests have apparently been abolished.

Under the new Water Act, special procedures will exist for obtaining the right to conduct water over the lands of another and it is envisaged that these would apply to the type of interests envisaged by ss. 21(2)(b) and 25(b). It would be better, however, if these sections were amended to remove reference to particular interests which may no longer be granted.

11.6 Rights of access

Section 179 purports automatically to confer a right of access over intervening land to the nearest road, railway or waterway on the holder of any mining tenement and to confer the necessary power to construct the appropriate right of way, whatever it may be.

Disputes over compensation are to be determined by a mining warden, but the exercise of the right should be further controlled. From the Water Division's point of view, it is important that approval be given for bridges over waterways or for any structures within drainage lines or potential obstructions within flood plains. The plenitude of the existing power should thus be qualified.

11.7 Right to remove timber

Section 180 similarly confers plenary power on the holder of a mining tenement to cut and remove timber on the tenement or from Crown land for purposes related to mining. Although subsection (3) prohibits cutting timber within three kilometers of a "watering place", this phrase is not necessarily synonymous with "river bank". There are important land and water conservation interests at stake.
and it would be appropriate if the present power were qualified to accommodate inputs from both water and soil conservation authorities.
### TABLE OF PROVISIONS RELEVANT TO WATER MANAGEMENT

Each of the provisions listed below is of potential concern to water managers and each should be independently addressed in any joint discussions.

**Mining Act 1980**

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