COMMENT ON COMMONWEALTH AND STATE CONTROLS OVER URANIUM EXPLORATION AND PRODUCTION

By S. J. C. Wise

Mr. Nicholson's paper sets out in some detail the more significant statutory and regulatory control mechanisms available to government in Australia to regulate the uranium industry. I would like to confine my comments to two areas of control which have great impact in determining whether or not a project will be able to proceed. These two areas have a legislative base, but appear as government statements of policy from time to time per the medium of ministerial statement or administrative guideline rather than being enshrined in the statute books.

In this regard, it must be remembered that not all Federal controls are exercised in direct legislative or regulatory form and ministerial announcements of policy have played a large part in the indirect regulation of mining operations in Australia. Despite their non-statutory or regulatory nature use of Federal administrative procedures has continued over the years by governments of opposed political philosophies.

In an overview to a paper I delivered at the International Bar Association Seminar in Sydney last September I commented on the fact that legal controls over the mining and export of uranium in Australia were in their formative stage and had been subjected to frequent change, as political and foreign policy expediencies of the Australian Government dictated.

I suggested that unless State and Federal Governments were able to operate harmoniously, the possibility of overlap between Federal and State controls could create difficulties for project developers in the case of a State owned deposit and noted that in the final analysis, the ultimate degree of governmental control was likely to be based on political expediency as governments measured the interests of the community against the degree of future political support from that community.

Since writing that paper last year, there has been no statement of significance from the Federal Government with particular reference to uranium mining that could shed some light on the manner in which they are going to control the export of product from Australia. That is not to say that firm endeavours are not being made in Canberra to develop a policy.

I would like to briefly mention some of the issues which are to be taken into account in considering the difficulties facing the decision makers in Canberra.

Mr. Nicholson's paper refers to the June, 1978 statement to the Parliament of the Minister for Trade and Resources in which he outlined the various factors that would be relevant to an exercise of discretion by him pursuant to the Customs (Prohibited Export) Regulations in whether or not to approve a particular uranium export sales contract. You will recall that at the time, the Minister suggested that a Uranium Marketing Authority would be established as the medium for control of export sales of product.

Since the time of that statement, the Government has established the Australian Uranium Export Office, which is not an independent statutory authority as the June 1978 policy announcement suggested it might be, but is part of the

Department of Trade and Resources. The office is manned by a full time secretariat and although it is considered as part of the Department of Trade and Resources it could be looked upon as a separate and independent entity which will ultimately carry the responsibility for amongst other things, the monitoring of world market conditions. This would enable the Authority to make recommendations to the Minister who ultimately must exercise his discretion on whether or not to approve the terms of a proposed contract.

The market for uranium is complex with many factors to be taken into account in establishing just what is the current market price from time to time. The new Export Office therefore has an extremely important role to play in the future, as it weighs the reality of the market place against the policy goals of the Government, in making its recommendations to the Minister.

To appreciate some of the problems confronting the Export Office in formulating policy and ignoring future market factors, it is important to note two key areas of governmental policy which will influence the extent of export controls. Firstly, the American anti-trust scene. In the aftermath of the anti-trust case brought by Westinghouse Corporation against a large number of uranium producers throughout the world, including a number of Australian uranium companies, following on from the Grand Jury Enquiry in the United States a few years ago, the Australian Government has legislated by the Foreign Judgments (Restriction of Enforcement) Act 1979 to prevent enforcement in Australia of certain foreign anti-trust judgments. One effect is to reduce the possibility of large damages being extracted from an Australian company.

The Government is also mindful of the exposure a few years ago of certain Australian uranium producers to the grand jury enquiry in the United States into alleged arrangements made in 1972 for the marketing of uranium.

One of the defences that may be successfully pleaded to a prosecution following indictment by a grand jury is that the action of the defendant giving rise to the prosecution was compelled by government and is therefore to be construed as action of the State. If this defence of sovereign immunity is to be available and effective, in the future, the Australian Government will need to be seen to be directing and compelling producers not only as to the terms under which they may sell their product but also the manner under which they can negotiate for sales. This is a control that is not one of discretion and regulation but is one of direct intervention and involvement, whereby the Government will determine the manner in which product may be sold.

Now to the second key area of governmental policy. The Australian Government has announced that the corner stone of its policy for control over the export of Australian uranium is its concern with the safeguards concerning the ultimate use of Australian uranium for peaceful non-military purposes.

The effect of the present safeguards policy is that Australian yellow cake or U_3O_8 cannot be sold in that form and the Australian producer is therefore obliged to convert or up-grade it into a more concentrated form known as uranium hexafluoride or UF_6. The reason for this is that yellowcake as a product does not attract the safeguards monitoring and audit procedures of the International Atomic Energy Agency until it has been converted to uranium hexafluoride. These IAEA procedures are the fundamental basis of the Australian Government's safeguards policy.

As all conversion plants are located overseas, mostly in the United States, this means that Australian producers would have to retain title to product whilst it is in

another country and therefore could not pass risk to a purchaser at an FOB Australian port stage.

An insistence on this policy leads to a conflict for the Government. On the one hand, it has legislated to effectively prevent the Australian assets of Australian producers being seized in the United States by the enforcement of an anti-trust judgment through the Australian Courts, whilst on the other, it seems to be following a policy under which an Australian producer selling to a utility who wishes to have his product converted in the United States would not be able to avoid bringing Australian-owned product, which is capable of seizure, into the United States.

How this conflict will be resolved remains to be seen. It may depend on the extent to which the Government is prepared to modify its safeguards requirements on Australian ownership of yellowcake, so that the effect of the safeguards would be the same, but the administrative control mechanisms would alter. There is some possibility that the IAEA control and monitoring procedures could be extended to apply to shipments of yellowcake so as to enable title to product to be transferred from seller to buyer at an FOB Australian port stage.

A precendent for the Government and the IAEA may be provided by the March, 1977 Agreement between the IAEA and Pakistan which provided for the application of the IAEA safeguards to yellowcake concentrate shipped from Niger. If this were to occur in respect of Australian yellowcake, it is suggested that the safeguards position will not be weakened but rather that Australian producers would be placed in a more commercially secure position.

If the Government insists on product being sold only in the form of UF_6 which requires producers to become involved in the conversion process, additional commercial burdens are likely to be placed on the producers.

A further area of control that I wish to highlight concerns the manner in which export sales approval might be granted. The Minister has announced that Australian uranium producers must obtain the Minister's approval before making any firm offers or entering into any legal commitments in connection with the sale of Australian uranium and that in the final analysis, the Government would need to formally issue a determination as to the required terms of sale. The Government has still to announce the details of how this policy is to be administered other than to announce the establishment of the Australian Uranium Export Office.

An indication of governmental minerals export policy in other areas is however afforded by the recently announced tightening up of Federal export controls over certain key strategic minerals such as iron ore, coal, bauxite and alumina. Under those controls, which are in the form of administrative guidelines, the Minister forebade producers from negotiating any detail of an export contract without first receiving the Federal Government's approval to the proposal. Although these procedures were in certain respects operating on an informal basis prior to the announcement of the new guidelines, the desire of the Minister to formalise procedures has somewhat surprised both producers and customers. The impact on the market is difficult to measure.

Recently, there has been considerable coverage in the press of the conflict between the State Governments and the Federal Government over not only the formalisation but the very existence of these guidelines and the question of the extent to which the Federal Government should control the export of Australian minerals.

The Minister has been criticised for ignoring the short and long term effects of price intervention upon the quantities of products that will be sought by buyers.

This leads me to the second major aspect of Mr. Nicholson's paper which warrants comment: that is, the possibility of overlap between Federal and State controls in the case of State-owned deposits. From a legal point of view any overlap can be "controlled" in most areas where there is clear definition of the limits of legislative authority that the State and Federal Governments have over project development. However, the practice of policy implementation by administrative guideline and ministerial statement encourages the role of political influence and expediency and the extent of overlap tends to become blurred and creates uncertainty.

Clearly, the Federal Government has the power to control and regulate exports under s.51 of the Constitution. The extent to which it intends to use that power remains to be seen. It may be prepared to back down in enforcing its guidelines over the sale of certain other strategic minerals but it may not be prepared to do so for uranium.

In handing down his first report of the Ranger Enquiry Mr. Justice Fox recommended, and the Government accepted, that the Federal Government must be in a position to terminate uranium exports at any time in circumstances where considerations of the nature discussed in the Report, were involved. The precise circumstances in which this right to terminate should be exercisable have not so far been clearly established. The best that can be said at this stage is that the circumstances seem to be limited to a situation in which safeguards protection has been breached or is threatened.

To conclude, it can be said that the key to the successful development of the Australian uranium industry lies very largely in the export policy of the Australian Government. The details of how that export policy is to be implemented through Federal governmental controls over the uranium industry are currently in the course of formulation.

The system of invoking controls through the vehicle or medium of administrative guideline or policy determination seems to be well established. Such a system of control allows for flexibility in the implementation of government policy. However, the fact that governments have a great deal of flexibility tends to increase the risks faced by foreign buyers and investors.

Such risks may be reflected in reduced prices for product and a reduction in the amount and an increase in the cost of foreign capital invested in Australia. The Government is therefore faced with a delicate trade off between higher prices for product against tonnages available for export. This trade off is complicated in the case of uranium because of safeguards considerations.

COMMENT ON COMMONWEALTH AND STATE CONTROLS OVER URANIUM EXPLORATION AND PRODUCTION

By A. J. Grey

In my commentary on Mr. Nicholson's paper I would like to expand on three areas which he touched upon. These are the legislative mechanisms which provide for right, title and interest in respect to uranium deposits, environmental controls over the development of uranium projects and foreign investment regulations as they apply to uranium.

1. Right Title and Interest

Since it has been the Government's policy to frame its legislative structure for the control and regulation of the development of Australia's uranium industry around the Ranger deposit in the Northern Territory, the Atomic Energy Act 1953 (Cth) was the first statute under which authorisation has been given for the development of the new generation of uranium deposits. The reason for this is that the October 1974 "Memorandum of Understanding" relating to the development of the Ranger deposit contemplated development pursuant to the Atomic Energy Act. This was the legislative vehicle favoured by the Whitlam Government which was in power at the time the "Memorandum of Understanding" was concluded. However, as Mr. Nicholson points out in his paper, even though the Commonwealth has the power to apply s.41 to all Northern Territory deposits, development under other Commonwealth legislation is allowed if the Commonwealth decides not to exercise its power.

The potential uranium producers in the Northern Territory other than Ranger have expressed serious misgivings about any extension of s.41 to encompass their development. One of the principal thrusts of their concern was that an authority granted pursuant to s.41 does not provide a right, title or interest which is capable of supporting a traditional legal charge as security for development loans.

The Commonwealth Government attempted to alleviate this deficiency by passing the Atomic Energy Amendment Act (No. 2) 1978 (Cth), which provides in effect that the holder of a s.41 authority may, with the Minister's consent assign the whole of his interest in the authority to another person. Where the Minister consents to the assignment, the name of the assignee shall be deemed, from the time of granting the consent, to be specified in the authority in lieu of the name of the assignor. This provision therefore establishes the mechanism for granting some form of security to a loan covenant. However it would constitute a novel type of charge and accordingly may be viewed by lenders as less satisfactory than a traditional assignment of a mining lease.

Under a s.41 authority the Commonwealth retains the ownership of the minerals and the only right of the holder of the authority is to carry on mining operations on behalf of the Commonwealth for a specified period and subject to the conditions and restrictions set out in the authority. There are no proprietary rights granted by the Atomic Energy Act. To the extent that a holder of a s.41 authority has any proprietary rights, they must be derived from a separate agreement between him and the Commonwealth or an instrumentality thereof. A s.41 authority is therefore merely an operating authority.

The Commonwealth Government has decided that only the Ranger project will be developed pursuant to the provisions of the Atomic Energy Act. The power conferred by s.41 may be exercised only in relation to substances situated or things done or proposed to be done in a Commonwealth Territory or for defence purposes.

For the time being at least, since the Government does not claim that defence purposes are involved, uranium deposits situated in the States will be governed by State mining legislation. As a matter of policy, the Government had decided that all uranium deposits other than Ranger, situated in the Northern Territory, will be developed pursuant to the Northern Territory Mining Act which has been appropriately amended to support the reservation to the Commonwealth of the control over the development of uranium in the Northern Territory, notwithstanding the grant of self government.

The Mining Ordinance (No.4) 1978 (N.T.), assented to on 3 January 1979, provides that the Act's Minister in exercising his powers shall act on the instructions of the Commonwealth Minister administering s.41 of the Atomic Energy Act 1953.

The Mining Ordinance 1939-1978 (N.T.) provides that special mineral leases may be granted for the purpose of uranium mining development. Under general operation of law, proprietary rights pass to the lessee upon severance of the minerals from the ground. A special mineral lease is a lease of a defined parcel of land together with mines and deposits of specified minerals in or under the land for a term of years containing covenants on the part of the lessee, principally, to pay royalties and to conduct mining operations in accordance with conditions and restrictions set out therein (mainly in respect of environmental protection). The royalty in the case of the Nabarlek lease granted to Queensland Mines is an amount equal to 3¾ per cent of gross uranium sales (as defined). Since a royalty of 2½ per cent is payable to Aboriginal interests because the Nabarlek deposit is in an Aboriginal Reserve, the net royalty payable to the Commonwealth beneficially is 1¼ per cent. The total royalties payable by Queensland Mines are equal to 5¾ per cent, composed of 1¼ per cent payable to the Commonwealth beneficially and 4½ per cent for the benefit of Aboriginal interests. This special mineral lease is expected to act as a precedent for the other potential uranium producers in the Northern Territory still to receive approval for development, at least insofar as the net royalty of 1¼ per cent payable to the benefit of the Commonwealth is concerned. It should be noted that in the "Memorandum of Understanding" the Commonwealth agreed not to impose any royalties on the Ranger participating companies in respect of uranium mined from the Ranger project area.

2. Environmental Controls

Apart from the Environment Protection (Impact of Proposals) Act 1974 (Cth), the intricate and complex web of environmental legislation enacted to control the operations of the uranium industry in the Northern Territory has been generated largely from the recommendations of the Fox Commission.

There are two basic functions of environmental control which constitute the regime. They are:

(i) Means for the establishment of conditions and restrictions with respect to uranium mining operations in order to minimise their impact on the physical and social environment, and

(ii) Monitoring and enforcement mechanisms for the purpose of ensuring that the conditions and restrictions are complied with.

The means for establishing environmental conditions and restrictions are by legislation and by required agreement on the part of the developer with certain parties having an interest in the matter.

The Environment Protection (Impact of Proposals) Act 1974 (Cth) requires the developer to file and have accepted by the Minister an environmental impact statement setting out in detail, principally, a description of the existing environment, an outline of the proposed mining activities, an assessment of their environmental impact and the means proposed to be adopted in order to minimise impact. Utilising the final environmental impact statement as a base, environmental conditions and restrictions are drawn up by the relevant department. These form the substance of the environmental covenants which the developer must enter into with the Northern Territory as part of a special mineral lease issued under the Mining Ordinance of the Northern Territory. In addition, except in the case of the Jabiluka, Koongarra, Nabarlek and Ranger deposits, which do not and will not form part of the Kakadu National Park, all uranium deposits within the National Park together with the Jabiru town centre to be built to service the uranium mines in the region, are subject to the National Parks and Wildlife Conservation Act 1975 (Cth). This statute provides for a plan of management to be established to which all activity within the National Park must conform.

In addition to the covenants with the Northern Territory which must be entered into by the lessee of a special mineral lease, the developer of a uranium deposit that is situated on Aboriginal land is required under the Aboriginal Land Rights (Northern Territory) Act 1976 to enter into an agreement with the relevant Aboriginal Land Council containing such terms and conditions as are agreed on by the parties having regard to the effect of the grant of the mining interest on Aboriginals. These terms may include a requirement for the payment of the monies to the Land Council. To date two such agreements have been entered into, one with respect to the Ranger deposit and the other with respect to the Nabarlek deposit. Interestingly, by far the greatest time spent in the negotiations related to the settling of environmental terms and conditions rather than monetary payments.

The monitoring and enforcement of the environmental conditions and restrictions will be accomplished principally under the provisions of the Environment Protection (Alligator Rivers) Act 1978 (Cth) and the Environment Protection (Northern Territory Supreme Court) Act 1978 (Cth). The former Act provides for the appointment of a supervising scientist whose functions are to conduct programs for research and assessment of information relating to environmental impacts in the region from uranium mining operations, to develop environmental standards, practices and procedures, and measures for the protection and restoration of the environment from the effects of uranium mining. In addition provision is made for the establishment of a co-ordinating committee for the region to report and make recommendations to the supervising scientist in connection with environmental control matters. The co-ordinating committee consists of the supervising scientist, the Director of National Parks and Wildlife, two members appointed by the Minister on the nomination of the Northern Territory Administrator, one member appointed by the Minister on the nomination of the appropriate Aboriginal Land Council and such other members as are from time to time appointed by the Minister.

In addition, with respect to areas inside the Kakadu National Park, the Director of National Parks and Wildlife together with his staff have widespread rights and duties with respect to environmental monitoring and control.

The Environment Protection (Northern Territory Supreme Court) Act facilitates the enforcement of environmental conditions and restrictions. Under that act, the Supreme Court of the Northern Territory has jurisdiction, at the suit of the Director of National Parks and Wildlife, the Territory Parks and Wildlife Commission or an Aboriginal Land Council to make orders in respect of the enforcement of any requirement under a "prescribed instrument" in relation to uranium mining operations in the Alligator Rivers Region. "Prescribed instrument" means a law of the Commonwealth or of the Northern Territory or an instrument made under any such law including a permit, licence or lease, an Atomic Energy s.41 authority, an agreement with an Aboriginal Land Council under the Aboriginal Land Rights (Northern Territory) Act 1976 or an instrument granted under the National Parks and Wildlife Conservation Act 1975. The remedies which the Supreme Court may grant include an injunction (including a mandatory injunction) and an order requiring the offender or authorising another person (which may be at the cost of the offender) to remedy the contravention.

3. Foreign Investment

As Mr Nicholson has pointed out in his paper, compliance with the Government's foreign investment policy is one of the relevant factors in the exercise of ministerial discretion whether to grant an export approval for a uranium shipment under the Customs (Prohibited Exports) Regulations 1958 (Cth).

The Government's administration of its foreign investment policy is based on the Foreign Takeovers Act 1975 (Cth), the powers available to it under Exchange Control legislation and regulations and other export control powers. In his statement to the House of Representatives on 1 April 1976 the Treasurer, referring to what he described as the unique status of uranium, announced that the Government would apply special conditions to foreign investment in uranium. These are that a uranium project involving investment by foreign interests not already in production will only be allowed to proceed if it has a minimum of 75 per cent Australian equity and is Australian controlled. This is to be achieved by the time the project comes into production. Consequently during the exploration phase there is no limitation on foreign ownership. For the purpose of determining Australian equity, the Government will have regard to foreign portfolio investment.

In a statement dated 28 May 1976, the Deputy Prime Minister clarified what was meant by the reference to foreign portfolio investment. It was not the Government's intention to set requirements which would interfere with market transactions involving relatively small holdings of shares. Accordingly individual foreign portfolio shareholdings of less than 10 per cent in an Australian uranium company will be disregarded unless there are special circumstances that would need to be taken into consideration in a particular case. These circumstances presumably would cover the situation where there is an unacceptable number of shares held in foreign hands notwithstanding the fact that they are in the form of individual portfolio holdings of less than 10 per cent. An extreme case would be where an Australian incorporated company has eleven foreign portfolio shareholders each holding 9 per cent of the shares. It would be absurd to deem such a corporation to be Australian just because individual foreign portfolio holdings of less than 10 per cent are to be ignored.

Uranium enrichment and other investments in the nuclear fuel cycle apart from mining and production in the yellowcake stage, are not covered by the 75 per cent rule and will be looked at separately.

There is no definition of "foreign interests" or "Australian equity" in the policy. Perhaps the Foreign Takeovers Act could provide assistance in defining these terms. Under that statute a foreign person means an individual not ordinarily resident in Australia or a corporation in which non-resident individuals or foreign corporations hold an aggregate controlling interest. The holding of 15 per cent or more of the voting power or shares of a corporation by a single person or the holding of 40 per cent or more in the aggregate by two or more persons is deemed to be a controlling interest. Limited use however can be made of the Foreign Takeovers Act because of the provision in the Government's policy to disregard individual foreign portfolio holdings of less than 10 per cent. This provision limits the application of the 40 per cent test to cases where the holdings are greater than 10 per cent.

I would like at this point to comment that the level of Australian ownership in the Jabiluka joint venture mentioned by Mr. Nicholson in his paper is not correct. Because Pancontinental is an Australian incorporated company with an Australian resident board and management, a substantial majority of its shares are Australian held, and no single foreign shareholder owns or controls 10 per cent or more of the shares it is, for the purpose of the 75 per cent test governing uranium ventures, 100 per cent Australian. Pancontinental owns 65 per cent of Jabiluka, 35 per cent being owned by Getty Oil Company, a foreign corporation. Accordingly the Jabiluka project is 65 per cent Australian owned at the present.

In the ministerial statements enunciating the 75 per cent rule affecting uranium no provision is made for flexibility in application as there is with respect to the rule regarding 50 per cent Australian equity in natural resource ventures other than uranium. In the case of the 50 per cent rule, the unavailability of Australian equity on reasonable terms and conditions will not prevent a worthwhile project from proceeding. In such a case the Government will seek arrangements for Australian equity to be increased to at least 50 per cent within an agreed period. This relaxation is not available to uranium ventures. Even though the 75 per cent rule governing uranium appears rigid, some scope for desirable flexibility may exist in the imprecise nature of the phrases "Australian equity" and "foreign interests" contained in the text.

In conclusion, I would like to say, the multifarious statutes, administrative bodies and regulations described today demonstrate with undeniable clarity that if it was the intention of the Commonwealth Government to establish sufficient control over the development and operation of the uranium industry in Australia, its obvious achievement must mark the high water of governmental success.

COMMENT ON COMMONWEALTH AND STATE CONTROLS OVER URANIUM EXPLORATION AND PRODUCTION

By. J. N. Creer

My commentary can be considered to be supplemental to Mr. Nicholson's observations in that I have devoted my remarks to those legal aspects which primarily touch upon the production of enriched uranium.

In December 1978 the Minister for Trade and Resources announced that the establishment of a uranium enrichment plant in Australia would be consistent with the Government's wish to see the maximum upgrading of Australian minerals before they were exported. He went on to say that there would be considerable economic benefits for Australia in uranium enrichment and virtually all State Governments were interested in such a project.

While I cannot but agree with Mr. Nicholson's remark that it is very early days in terms of legal controls on the utilisation of the fuel cycle, I am strongly of the view that, if Australia is to gain the obvious economic value added benefits which will flow from the export of enriched uranium by the end of the 1980's, our Federal and State legislators will have to devise comprehensive and co-ordinated legislative programmes with maximum haste. If, for instance, Australia was to acquire URENCO's technology for a centrifuge enrichment plant it is likely to take at least eight years before such a plant could go into first production. The same lead time would be involved if Australia was to use United States centrifuge technology[2] but if we were to use the French gaseous diffusion technology[3] the time scale would be 10 years.

There is an overwhelming case for the closest of co-operation and consultation between the Commonwealth and all the States and the Northern Territory in order to ensure that the constitutional and other possible obstacles, to which Mr. Nicholson refers, are overcome without undue delay in the national interest. There are obvious compelling reasons for the States and the Northern Territory to pass uniform laws dealing with the development and exploitation of all aspects of the fuel cycle. Paramount to these considerations is the need to establish a single statutory regulatory body.

In reaching these views, my prime reasons are fourfold:

1. Australia is a member state of the International Atomic Energy Agency (IAEA).[4] IAEA regards it as essential that the government of a member state implementing a nuclear programme should establish a regulatory body and to start planning for such a body and enact legislation well in advance of the construction of its first plant. At this point of time there is no legislation or regulatory body which meets this requirement.
2. The responsibilities which the Commonwealth Government has accepted as a result of Australia's international obligations as a member state of IAEA and as a member of the Nuclear Energy Agency of OECD[5] which is concerned with international safeguards.
3. There are sensitive Commonwealth/State constitutional issues which will have to be resolved concerning the legislative framework and the relative roles of the State and Commonwealth governments in the establishment and control of the regulatory body. It obviously will take some time to sort out these problems.

4. The additional obligations Australia is likely to accept arising from its participation in the International Nuclear Fuel Cycle Evaluation (INFCE) study at present being conducted under the auspices of IAEA.

The purpose of the legislation would be to provide:

(a) the statutory basis for establishing the regulatory body;

(b) the legal basis for ensuring that enrichment plants and other nuclear installations are constructed and operated without undue radiological risk to public health and safety, to site personnel and with proper regard to protecting the environment;

(c) financial indemnification for third parties in the event of a nuclear accident, taking into consideration the potential magnitude of damage and injury which could arise from such accidents;

(d) principles and conditions under which proponents seek authorisation from the regulatory body;

(e) powers required by the regulatory body to enforce compliance with its regulators;

(f) penalties for contravention of licences.

The Environmental Protection (Nuclear Codes) Act could provide a legislative umbrella for much of the necessary complementary State legislation required to regulate and set standards for the uranium enrichment industry. Section 9(d) of the Environment Protection (Nuclear Codes) Act provides the mechanism for specifically devising a code dealing with the licensing and supervision of nuclear activities. Procedures for licensing and regulating enrichment plants and other nuclear installations are well established overseas and are adequately covered in the IAEA Code of Practice on Governmental Organisation for the Regulation of Nuclear Power Plants. It is doubtful whether Australia would be justified in departing significantly from the basic IAEA recommendations.

As Mr. Nicholson mentions, Western Australia so far has been the only State to introduce complementary legislation to the Environment Protection (Nuclear Codes) Act, namely, the Nuclear Activities Regulation Act 1978. The latter Act could well serve as model legislation for the other States and Northern Territory. It must however be remembered that the Act does not give the codes in themselves the force of law. Implementation will have to be achieved through the States enacting complementary legislation.

I understand that the Commonwealth in close consultation with the States is currently working on the preparation of three Codes:

(a) Code of Practice on radiation protection in the mining and milling of radioactive ores (Health Code).

(b) Code of Practice on the transport of radioactive materials.

(c) Code of Practice on the management of nuclear wastes arising in the mining and milling of uranium ores.

It is understandable that priority has been given to the preparation of Codes dealing with uranium mining and milling operations since there is some urgency in this area. However, I believe that the Commonwealth departments concerned with the initiation of Codes are aware of the longer term needs of the nuclear industry in Australia and are now giving their attention to possible Codes applicable to enrichment plants and reactors.

A comprehensive regulatory process should be established desirably before Australia actively commits itself to undertake the enrichment of uranium.

The fact that Australia has no legislation comparable with other western countries which have significant nuclear energy programmes, which establishes government regulatory control over nuclear installations, has to be resolved as soon as possible. It does not appear, from the little I have been able to find on the subject, that a regulatory body could be established through the legislative framework of the Environment Protection (Nuclear Codes) Act.

Australia's clearest course will be to invest in a single statutory body the responsibilities for surveillance and control concerned with all matters relevant to nuclear-related health and safety and environmental protection in the siting, construction, commissioning, operation and decommissioning of all nuclear installations, including those at present operated by the Australian Atomic Energy Commission. In addition, the regulatory body should have the separate responsibility for the maintenance of effective systems for accounting and control of nuclear materials in Australia.

The establishment of such a regulatory body, it seems to me, could only be achieved by each of the States and the Northern Territory reaching agreement with the Commonwealth to pass complementary legislation to invest in the Commonwealth the statutory power to create the regulatory body. While at first glance this suggestion may appear to bristle with political and interstate rivalry problems, I believe these could be overcome if the enabling legislation provided for the State or the Territory, in which it was proposed to site an enrichment plant or other nuclear facility, that such State or Territory (as the case may be) would have the exclusive power to decide whether to agree or refuse to accept the siting of the facility within its territorial boundaries. My suggestion may be considered to be overly simplistic but I think the checks and balances inherent in such a proposal would provide a satisfactory solution.

When one considers the alternatives, they appear bleak indeed. If the Commonwealth is not empowered to regulate the nuclear industry, it is almost ludicrous to contemplate each State and the Northern Territory establishing its own regulatory body. The immense cost to the nation, the inevitable lack of uniformity of regulations dealing with such complex matters as design, operation, maintenance and plant safety, the practical difficulties of recruiting experienced scientists and engineers, the adequate enforcement of health safeguards, the compliance with Australia's international treaty obligations,[6] the considerations associated with the need to provide adequate third party liability cover for damage caused by a nuclear facility, to mention but a few of the problems, would have to be faced up to by each State and the Northern Territory. Common sense dictates that this situation could not work.

There are indications that the States and Northern Territory may be willing to co-operate with the Commonwealth to establish a single regulatory body of the type described earlier. In this regard, it is noteworthy that the States appear to have accepted the establishment of the Australian Safeguards Office which was originally formed within the AAC but now reports independently to the Minister for National Development. The Safeguards Office is responsible for the monitoring of the nuclear industry in the areas of safeguards and security. These are matters subject to treaty obligations.

The Australian Atomic Energy Commission (AAEC), as constituted under the Atomic Energy Act 1953, has a diversity of statutory functions and powers (see pp.35–38 of Mr. Nicholson's Paper). As mentioned above, the Commission's

functions in the areas of safeguards and security since 1978 have been handled by the Australian Safeguards Office (which at present has no statutory authority). Taking the establishment of the Safeguards Office as a lead, I believe the Commonwealth Government, as and when the States agree to pass the requisite legislation to constitute a regulatory body under the Commonwealth's control, should hive-off two of the Commission's activities, namely, those related to the policing of the safeguards required by international treaties and those related to regulations of the Australian nuclear industry in the areas concerned with protecting the public from any adverse impacts caused by the industry. I do not mean to infer from the abovementioned comments that the Commission has the *de jure* responsibility under the Atomic Energy Act for all these activities at present. However, I understand as a matter of practicability, the Commission does perform a number of these functions arising from the fact that almost the sole source of nuclear expertise available to the Government is reposed in the Commission.

If my suggestions were viable, I would envisage the AAEC retaining the remainder of its functions including, most importantly, its role in research and development. It is significant that in November 1978, the Minister for National Development announced there was to be a review of the research and development activities of AAEC's Research Establishment by the National Energy Research, Development and Demonstration Council (NERDDC) to establish (*inter alia*) the Commission's capacity to re-orientate its R & D role to meet the Government's energy policies and broader energy objectives. With this in view, it seems now is the logical and opportune time for the Government to also consider the hiving-off of the executive (regulatory) side of the AAEC to coincide with the establishment of the regulatory body. The regulatory body would have two branches, each with its separate area of responsibility as described in the last paragraph. Most of its staff would be found from the hived-off section of the AAEC.

In conclusion, I think it is important to mention, if Australia is to establish a uranium enrichment industry, this should not be undertaken by the Commonwealth or any State Government instrumentality alone. Development of the industry should be in the hands of free enterprise. This readily could be achieved under the umbrella of appropriate Commonwealth laws and, where necessary, uniform State laws to cover such basic matters as the transfer of governmentally classified technology, secrecy arrangements, plant security, insurance indemnification arrangements (possibly under the Paris Convention)[7] and so forth. The industry would be subject to internationally accepted standards and controls. The enforcement of these standards and controls would be in the hands of the Commonwealth regulatory body.

FOOTNOTES

1. URENCO was established in 1971 through the collaboration of Great Britain, Holland and West Germany under the Treaty of Almelo (U.K. Treaty Series No. 69 (1971)). URENCO's principal business is the design, construction, ownership and operation of centrifuge plants for the enrichment of uranium. Australia in 1973 joined an international study group known as the Association of Centrifuge Enrichment (ACE) which entitled Australia to be privy to unclassified details concerning URENCO's technology.
2. Although the United States Atomic Energy Act 1954 contains provisions to enable the transfer of U.S. technology under certain specifically prescribed circumstances, the prime impediment to the transfer of classified United States

enrichment technology to Australia is Article III.B. of the United States-Australian agreement for co-operation, (8 UST 738, TIAS 3830). The impediment can only be overcome by means of an amendment to the present agreement or a new agreement for co-operation which would have to be reviewed by Congress.

3. In quantifying the respective lead times of eight years for a centrifuge enrichment plant and ten years for a gaseous diffusion plant, I have allowed in both cases two years for treaty negotiation and the passing of the requisite legislation and two years for site selection and planning. It would take approximately four years to construct and reach first production of a centrifuge plant and six years to construct and reach first production of a French designed gaseous diffusion plant.

4. Statute of the International Atomic Energy Commission was signed by seventy governments in 1956 under the auspices of the United Nations. The Statute's objectives are to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world and, to ensure, so far as it is able that assistance provided by the Agency or at its request or under its supervision or control, is not used in such a way as to further any military purpose.

5. Organisation for Economic Co-operation and Development.

6. Australia's treaties are set out below:

(a) Statute of the International Atomic Energy Agency (1956).

(b) Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer-space and Underwater (1963).

(c) Treaty on Non-proliferation of Nuclear Weapons (1968).

(d) Agreement between IAEA and Australia on Safeguards (1973).

(e) Treaty on the Prohibition of Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Seabed (1971).

(f) Regional Co-operative Arrangement for Research, Development and Training related to Nuclear Science and Technology (1972).

7. Paris Convention on Third Party Liability. (See also the Price-Anderson Act, as amended 1975 — Indemnification and Limitation of Liability — United States Atomic Energy Act s.170).