GREENPEACE ACTION

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September 28, 1990

Mr. Hugh Thompson
Deputy Executive Director of
Nuclear Material Safety and Operating Support
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Thompson;

I would like to voice my concern about the way in which "security" at the September 20 Nuclear Regulatory Commission meeting in Atlanta on Below Regulatory Concern (BRC) was conducted. The public meeting was held at the Westin Peachtree Plaza Hotel on the afternoon of September 20, 1990.

As I expressed to the hearing panel, on the record, the hotel security staff conducted themselves in a very unprofessional and threatening way to members of the public who wanted to attend the public hearing. Some people, who were absolutely not doing anything threatening or disruptive, nor had the slightest thought about doing anything of disruptive nature - including carrying signs, were told that they could not enter the meeting as it was being conducted on private property. I was not able to determine if all of those who wanted to were able to enter the meeting or not, but do feel that most of them were eventually able to enter.

Others, including myself, were followed in the hotel by security guards with radios. Several people had their way blocked by security personnel merely to intimidate them as they entered the meeting room.

As you well know, there was no type of disruptive act carried out in the meeting by anyone associated with my organization. And no other members of the public did anything during the meeting which could be construed as threatening. Yet the hotel security staff apparently had judged before the fact that some type of vilolent disturbance would occur during the meeting, thus, in their minds, justifying their bullying tactics. Or perhaps they just wanted to "have a little fun" in carrying out security directives from the NRC and hotel management.

I must add that I feel that a prohibition on the mere act of holding a sign during the meeting raises serious questions of free speech. It would seem to me that freedom of expression, including holding a sign, should be promoted rather than stifled by our government.

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The behavior by on September 20 of security personnel acting on behalf of the Nuclear Regulatory Commission is totally unacceptable. I hope that NRC policies do not in fact encourage such behavior and that the problems were due to miscommunication or to the hotel staff rather than to any instructions given by the NRC.

The whole situation also raises the question of holding public meetings at private facilities. If the staff of the private facility has dubious intentions regarding the holding of the meeting on their premises problems can arise. Such was the case on September 20 at the Westin Peachtree Plaza Hotel in Atlanta. I ask that in the future, if the NRC is holding a public meeting on private property, that the staff of the private facility be clearly instructed that they are not to interfere with law-abiding citizens who are trying to attend the meeting in question.

In closing, I ask that you do all within your power to insure that the atmosphere around future NRC meetings is more democratic and supportive of citizens' rights of participation and freedom of speech.

If you have any questions regarding my comments, please feel free to contact me at 404-876-8256.

Most sincerely,

Tom Clements

Tom Clements
Nuclear Campaigner
Greenpeace Action

cc: Mr. Kenneth Carr, Chairman, NRC
Mr. Philip Stohr, NRC - Atlanta
Mr. Rick Layton, Managing Director, Westin Peachtree Plaza

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 30 1990

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MEMORANDUM FOR: Robert M. Bernero, Director, NMSS
Thomas E. Murley, Director, NRR
Eric S. Beckjord, Director, RES
Thomas T. Martin, Regional Administrator, RI
Stewart D. Ebneter, Regional Administrator, RII
A. Bert Davis, Regional Administrator, RIII
Robert D. Martin, Regional Administrator, RIV
John B. Martin, Regional Administrator, RV

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: GUIDANCE ON FEDERAL REGISTER NOTIFICATION OF RULEMAKINGS AND LICENSING ACTIONS WHICH EXEMPT MATERIAL FROM REGULATORY CONTROL

The purpose of this memorandum is to provide interim guidance in light of the Commission's policy statement on "Below Regulatory Concern (BRC)", on Federal Register notification of rulemakings and licensing actions involving exemption decisions. The BRC policy statement states that opportunity for public comment will be provided through noticing in the Federal Register, for rulemakings and any new licensing actions involving the exemption of small quantities of radioactive materials from regulatory control where generic exemption provisions have not already been established. The statement permits the continued use of existing generic exemption provisions that do not require a Federal Register Notice until the generic exemption has been reviewed for consistency with the BRC policy. Licensing actions taken in accordance with such provisions may continue to be issued without such notice, unless notice is otherwise required (for example, Part 51 may require notice).

I have included as enclosures to this memorandum, interim guidance on how to proceed with exemption decisions in the near term. In preparing these enclosures, the staff has taken a broad look at existing exemption provisions and has identified all those which could be relevant to the BRC policy. Enclosure 1 provides guidance for NRR actions and Enclosure 2 provides guidance for NMSS and regional actions. Federal Register Notices required for regional actions should be prepared by the region following existing guidance. If you have any questions on this matter, please contact Lemoine J. Cunningham for NRR questions (492-1086) or John Hickey for NMSS questions (492-3425).

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James M. Taylor
Executive Director for Operations

Enclosures:
As stated

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ENCLOSURE 6

NRR GUIDELINES FOR PUBLIC NOTICE OF LICENSING ACTIONS RELATED TO THE BRC POLICY

POWER AND NON-POWER REACTOR LICENSEES
CONTACT: L. J. Cunningham, NRR, 492-1086

1. The following licensing actions do not need to be noticed in the Federal Register, unless there is a previously existing requirement for such notice; such as a Sholly Notice or 10 CFR 51:

   a. Authorizations based on regulations or guidance issued after June 27, 1990, if the regulations or guidance do not themselves require notice and were developed in accordance with the BRC policy and noticed for comment in the Federal Register.

   b. Authorizations in accordance with provisions of 10 CFR Section 20.303, 20.306, 30.15(a), 30.18, and 30.20.

   c. Onsite burials in non-Agreement States approved pursuant to 10 CFR Section 20.302.*

   d. Authorizations to release equipment or facilities for unrestricted use in accordance with the guidelines in Regulatory Guide 1.86, NRC Circular 81-07, Information Notice 85-92 or environmental lower limits of detection (LLD's) contained in NUREG-0472.

   e. Approvals of incineration pursuant to 10 CFR Section 20.305, if the ash is disposed as non-BRC radioactive waste, transferred to a licensed person, or contains non-detectable radioactivity.

2. The following licensing actions must be noticed in the Federal Register, with at least a 30-day comment period.

   a. Any action not covered by No. 1 which uses the BRC policy as justification for approval.

   b. Any exemption authorization involving transfer of radioactive material to unregulated status, not covered by 1(b) above, where a dose analysis is performed, and the projected doses exceed the BRC criteria.

   c. Any 20.302 off-site burial.*

   d. Any authorization for incineration which allows disposal of ash which contains detectable levels of radioactivity as BRC waste.

   e. Any NRR approval letter, license amendment or change in Technical Specifications that requires notice in the Federal Register (Sholly Notice).

*Note that actions under 20.302 do not remove material from regulatory control unless specifically so stated; thus 20.302 approvals may not be subject to BRC policy.

NMSS GUIDELINES FOR PUBLIC NOTICE OF LICENSING ACTIONS RELATED TO THE BRC POLICY

FUEL CYCLE AND MATERIAL LICENSEES
CONTACT: John Hickey, NMSS, 492-3425

1. The following licensing actions do not need to be noticed in the Federal Register, unless there is a previously existing requirement for such notice:

   a. Authorizations based on regulations or guidance issued after June 27, 1990, if the regulations or guidance do not themselves require notice and were developed in accordance with the BRC policy and noticed for comment in the Federal Register.

   b. Authorizations in accordance with provisions of 10 CFR Section 20.303, 20.306, 30.14, 30.15(a), 30.16, 30.18, 30.19, 30.20. 31.7, 31.11(f), 35.92, 39.47. 39.49, 39.77, 40.13, 40.22(b), and 40.25(e).

   c. Onsite burials approved pursuant to 10 CFR Section 20.302, in accordance with Policy and Guidance Directive FC 86-10, dated October 9, 1986, or the Federal Register notice entitled "Disposal or Onsite Storage of Thorium or Uranium Wastes," 46 FR 52061, October 23, 1981.*

   d. Authorizations to release equipment or facilities for unrestricted use in accordance with the guidelines in Policy and Guidance Directives FC 83-3, dated March 7, 1983, and FC 83-23, dated November 3, 1983.

   e. Authorizations to dispose of waste which has been held for decay to non-detectable radiation levels.

   f. Approvals of incineration pursuant to 10 CFR Section 20.305, if the ash is disposed as non-BRC radioactive waste, transferred to a licensed person, or contains non-detectable radioactivity.

2. The following licensing actions, including renewals, must be noticed in the Federal Register, with at least a 30-day comment period.

   a. Any action not covered by No. 1 which uses the BRC policy as justification for approval.

   b. Any exemption authorization involving transfer of radioactive material to unregulated status, not covered by 1(b) above, where a dose analysis is performed, and the projected doses exceed the BRC criteria.

   c. Any 20.302 off-site burial or any burial which is not in accordance with Policy and Guidance Directive FC 86-10 or 46 FR 52061.*

   d. Any authorization for incineration which allows disposal of ash which contains detectable levels of radioactivity as BRC waste.

   e. Any authorization to distribute a new type of consumer product on a license-exempt basis which has not been previously authorized.

*Note that actions under 20.302 do not remove materials from regulatory control unless specifically so stated; thus 20.302 approvals may not be subject to BRC policy.

EXEMPTIONS FROM REGULATION

CATEGORY	EXEMPTION	REFERENCE	EFFECTIVE	NUCLIDES	COMMENTS
CONSUMER PRODUCTS	Exempt Concentrations	30.14	1960		[A]
	Timepieces (watches & clocks)	30.15(a)(1)	1961 1967	H-3 Pm-147	
	Automobile Lock Illuminators	30.15(a)(2)	1962 1965	H-3 Pm-147	
	Balances of Precision	30.15(a)(3)	1964	H-3	
	Automobile Shift Quadrants	30.15(a)(4)	1966	H-3	
	Marine Compasses and Navigational Instruments	30.15(a)(5)	1966	H-3	
	Thermostat Dials and Pointers	30.15(a)(6)	1966	H-3	
	Electron Tubes	30.15(a)(8)	1966	H-3; Co-60 Ni-63; Kr-85 Cs-137; Pm-147	
	Ionizing Radiation Measuring Instruments	30.15(a)(9)	1970		[B]
	Spark Gap Irradiators	30.15(a)(10)	1978	Co-60	
	Synthetic Plastic Resins for Sand Consolidation in Oil Wells	30.16	1967	Sc-46	
	Exempt Quantities	30.18	1970		[C]
	Self Luminous Products (Class Exemption)	30.19	1969	H-3; Kr-85 Pm-147	
	Gas and Aerosol Detectors (Smoke Detectors) (Class Exemption)	30.20	1969		
	Chemical Mixtures, compounds, solutions, or alloys containing ≤0.05% source material	40.13(a)	1961	U,Th	
	Incandescent Gas Mantles	40.13(c)(1)(i)	1947	Th	
	Vacuum Tubes	40.13(c)(1)(ii)	1947	Th	
	Welding Rods	40.13(c)(1)(iii)	1961	Th	
	Electric Lamps for Illuminating Purposes	40.13(c)(1)(iv)	1966	Th	
	Germicidal Lamps, Sunlamps, and Outdoor or Industrial Lighting	40.13(c)(1)(v)	1966	Th	
	Rare Earth Metals and Compounds	40.13(c)(1)(vi)	1947	U,Th	
	Personnel Neutron Dosimeters	40.13(c)(1)(vii)	1977	Th	
	Glazed Ceramic Tableware	40.13(c)(2)(i)	1947	U,Th	
	Piezoelectric Ceramic	40.13(c)(2)(ii)	1970	U,Th	
	Glassware	40.13(c)(2)(iii)	1947	U,Th	
	Glass Enamel & Glass Enamel Frit	40.13(c)(2)(iv)	1964	U,Th	[K]

ENCLOSURE 4

EXEMPTIONS FROM REGULATION

CATEGORY	EXEMPTION	REFERENCE	EFFECTIVE	NUCLIDES	COMMENTS
CONSUMER PRODUCTS	Photographic Film, Negatives & Prints	40.13(c)(3)	1947	U,Th	
	Finished Tungsten or Magnesium-Thorium Alloy Products or Parts	40.13(c)(4)	1949	Th	
	Uranium Counterweights for Use in Aircraft, Rockets, Projectiles & Missiles	40.13(c)(5)	1960	U	
	Uranium as Shielding in Shipping Containers	40.13(c)(6)	1961	U	
	Thorium in Finished Optical Lenses	40.13(c)(7)	1963	Th	
	Thorium in Finished Aircraft Engine Parts	40.13(c)(8)	1967	Th	
	Uranium in Fire Detection Units	40.13(d)	1964	U	
DISPOSAL	Method for Obtaining Approval of Proposed Disposal Procedures	20.302	1957		[D] [I] [J]
	Disposal by Release into Sanitary Sewage Systems	20.303	1957		[E] [I]
	Exemption of Patient Excreta from Sewage Limits	20.303	1957		[I]
	Disposal of Specific Wastes	20.306	1981	H-3; C-14	[F]
DIRECT FACILITY EFFLUENTS	Radioactivity in Effluents to Unrestricted Areas	20.106(a)	1957		[G] [I]
	Radioactivity in Effluents to Unrestricted Areas	20.106(b)	1957		[I] [J]
	Technical Specifications on Effluents from Nuclear Power Plants	50.36a (Appdx I)	1970		[H]
	Releases of Radioactive Material from HLW Repository during Operation	60.111(a)	1983		
	Protection of the General Population from Releases of Radioactivity	61.41	1982		
	Criteria for Radioactive Materials in Effluents from an ISFSI or MRS	72.104	1980		

COMMENTS

[A] Isotope Concentrations listed in 30.70, Schedule A

[B] Exempt Quantities per 30.71, Schedule B

[C] Isotope Quantities listed in 30.71, Schedule B

[D] Section previous., covered onsite disposal

[E] <10XAppdx C limits/day; or, <avg daily concentration of Appdx B, Table I, col2 limits; in any event <1 Ci/yr

[F] <0.05 µCi/gm liquid scintillation counting medium (or animal tissue) H-3 or C-14

[G] Average yearly concentrations up to limits in Appendix B, Table II

[H] Part 50, Appdx I provides dose design objectives; specific limits under 50.36(a) by case-by-case decision

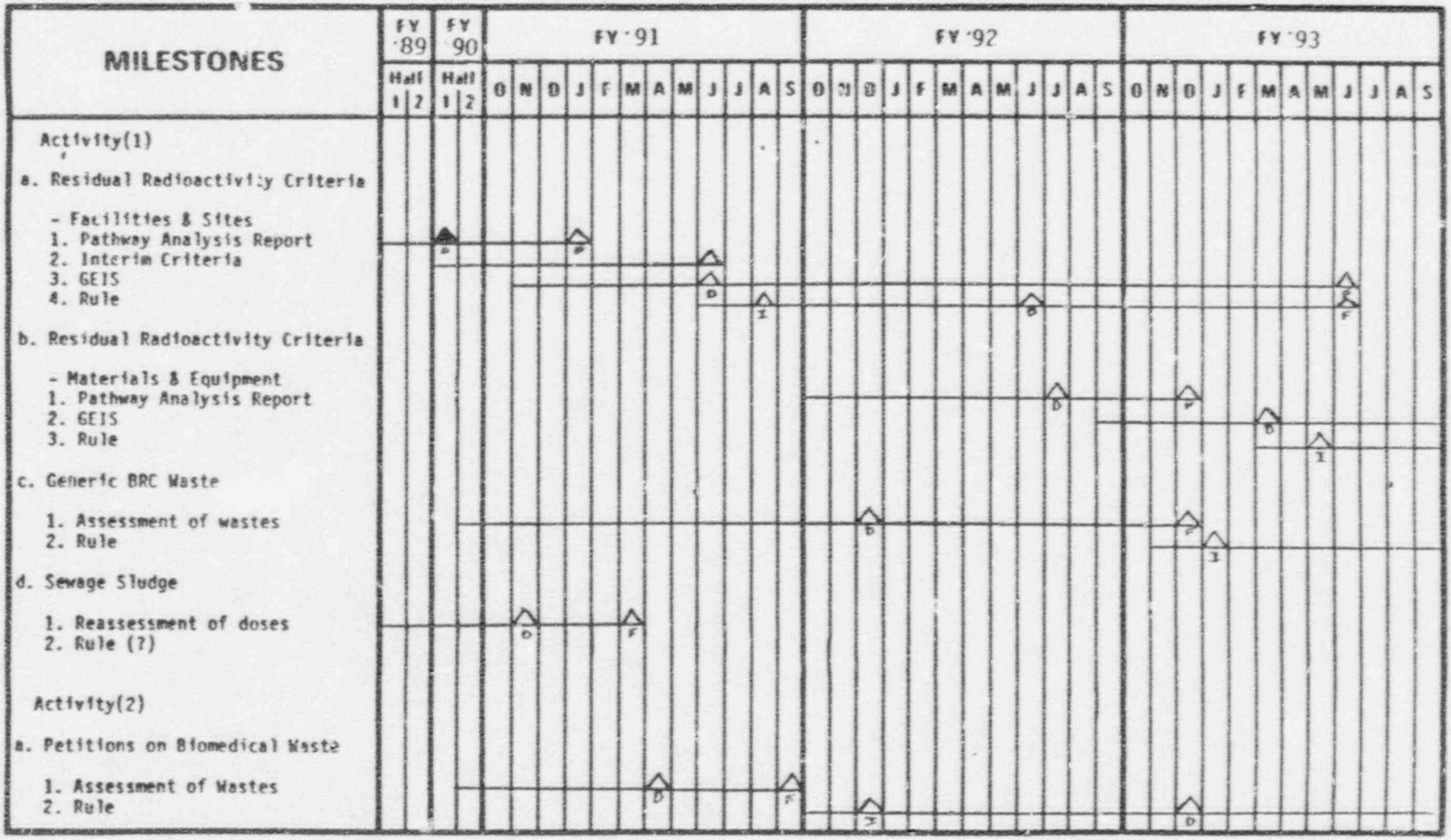
[I] Dates subject to verification

[J] Allows case specific exemptions

[K] This exemption was suspended in 1983 and amended in 1984 to exclude further distribution of the product.

ENCLOSURE 4

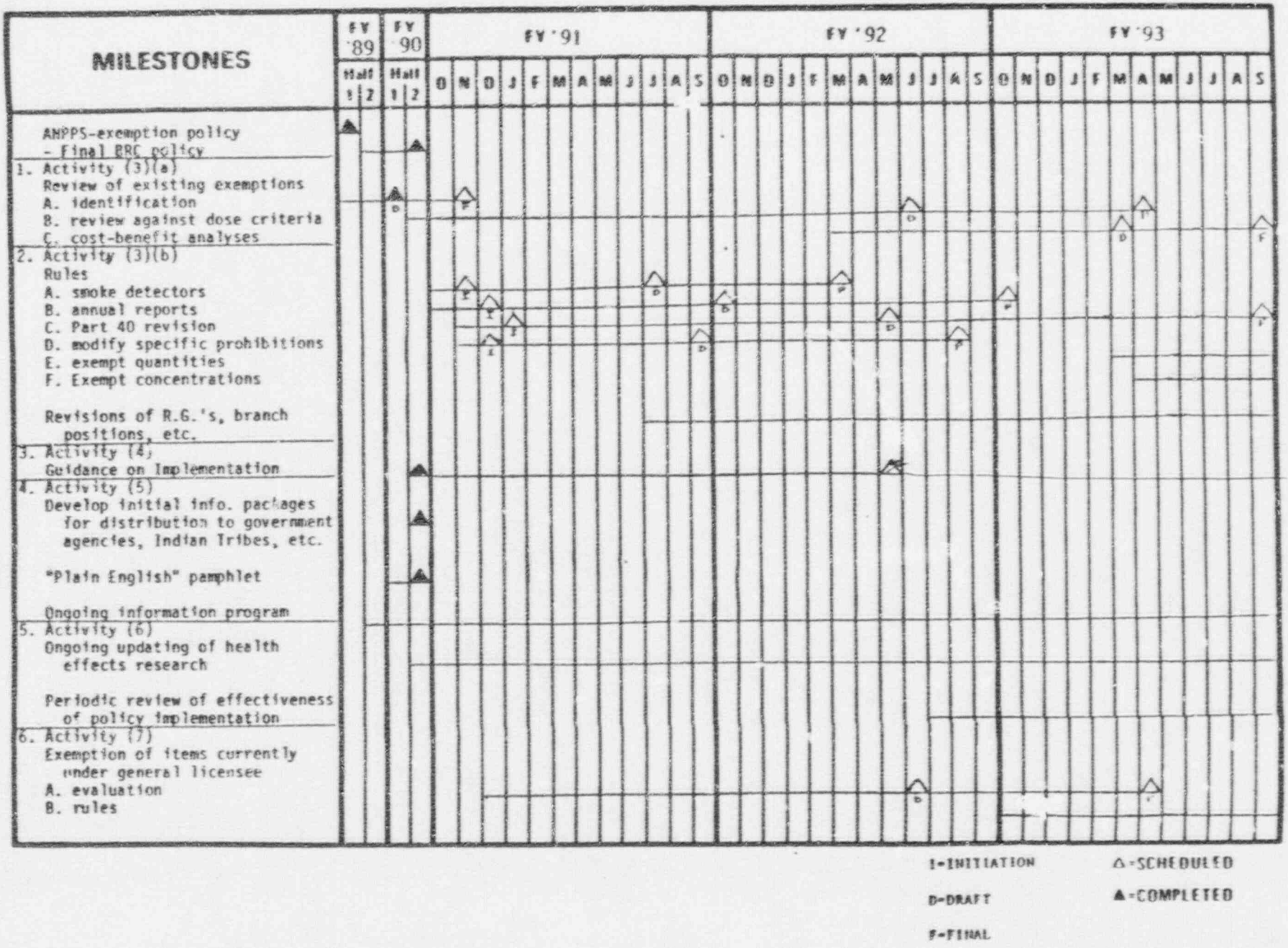
ACTIVITIES PLANNED PRIOR TO BRC POLICY



Enclosure 5

1

ACTIVITIES ADDRESSED IN RECENT SRM's



Enclosure 5

ROUTING AND TRANSMITTAL SLIP

Date: 9/12/90

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Peter J. Rabideau		
2.		
3.		
4.		
5.		

X	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

The attached Commission paper is ready for the EDO. The discussion regarding resources has been negotiated with your staff. I request that your phone concurrence to O.A. Cyl by COB 9/13

X 23785

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Patricia G. Norry	
	Phone No.

5041-102

* U.S. GPO: 1988 — 196-509

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

[redacted]

For: The Commissioners

From: James M. Taylor, Executive Director for Operations

Subject: STAFF ACTION PLAN FOR IMPLEMENTATION OF BELOW REGULATORY CONCERN POLICY

Purpose: To inform the Commission of the staff action plan for the implementation of the Below Regulatory Concern Policy (BRC) Statement. This plan was originally requested in the Staff Requirements Memorandum (SRM) of October 13, 1989, concerning the subject policy (Enclosure 1). The need for such a plan was reiterated in the (revised) SRM of June 28, 1990 (Enclosure 2). The Commission also requested an addition to the plan concerning some generally licensed products in an SRM of August 13, 1990 (Enclosure 3).

Summary: This paper presents resource estimates and projected schedules for activities related to implementation of the subject policy as requested by the Commission. It also describes the activities that have been initiated in these areas. The staff intends to proceed with the activities outlined in this action plan unless directed otherwise by the Commission. The resources known at this time to be necessary to implement this plan are included in the latest revision of the Five-Year Plan. Additional resource needs identified as a result of the studies (3(a) and 7(a) below) conducted under the plan will be included in future revisions of the Five-Year Plan.

Background: The Commission has recently published the policy statement on below regulatory concern (previously referred to as the exemption policy). The SRM of October 13, 1989, directed the staff to prepare an action plan to accomplish certain activities involved in implementing that policy. This plan covers those activities identified by the Commission at that time (items (3) through (6) below), previously initiated activities which also relate to implementing the policy (items (1) and (2) below), and plans to consider for exemption certain devices now generally licensed (item 7). The SRM of August 13, 1990, concerning the general license study (Enclosure 3) requested

Contact:
C. R. Mattsen, RES
492-3638

the staff to incorporate plans to consider exemptions of certain generally licensed devices into this overall plan for implementing the BRC policy.

The activities covered by this plan are:

(1) Rulemaking and associated tasks currently planned or in progress that fall within the framework of the policy;

(2) Evaluation of and action on petitions for rulemaking to establish or modify exemption levels;

(3) (a) A systematic assessment of existing exemptions in the regulations for conformance with the policy, and

(b) Revision of those regulations identified in the systematic assessment that require modification to be consistent with the policy;

(4) Development of guidance on consistent implementation of the policy in licensing actions and rulemaking;

(5) Development of a program of information dissemination concerning the policy and its implementation;

(6) Development of a program to ensure that necessary health effects research is conducted and the results used to monitor the effectiveness of policy implementation; and

(7) (a) Evaluation of five identified generally licensed devices for possible exemption under the policy, and

(b) Rulemaking as appropriate to exempt these devices.

Discussion: Activity (1) includes: (a) development of interim guidance and rulemaking on residual radioactivity criteria for the release to unrestricted use of facilities and sites (decommissioning); (b) development of residual radioactivity criteria for equipment and materials (recycling); (c) contractor study and eventual generic rulemaking for BRC waste (in accordance with the December 2, 1986, advance notice of proposed rulemaking); and (d) evaluation of potential doses from reconcentration of radionuclides in sewage sludge to provide input to a reconsideration of sewage limits.

Activity (2) includes plans to evaluate and respond to anticipated petitions for rulemaking to exempt waste streams from regulatory control. Two such petitions from Rockefeller Institute and one from the University of Utah related to biomedical wastes have been received. A petition that had been anticipated from NUMARC, requesting exemption of certain reactor waste streams, now is not expected in the foreseeable future.

Activity (3)(a), the systematic assessment of existing exemptions, involves two steps. The first step, identification of existing exemptions in the regulations, is essentially complete. The list of exemptions is included as Enclosure 4. The list includes only those exemptions contained in the regulations to which the policy statement could be applicable; that is, those that involve release of radioactive material from regulatory control in some manner. Some exemptions are not written explicitly as exemptions from specific regulations, rather they are requirements pertaining to releases of radioactive material. All such regulations are included in Enclosure 4 for completeness. However, based on some preliminary considerations, certain of these will not need to be reevaluated in order to assure consistency of the regulations. For example, as noted in Enclosure 4, three of the cited paragraphs, §§ 20.302, 20.106(b), and 50.36a, allow for case specific exemptions and do not contain specific criteria which could be deemed inconsistent with the policy.

In addition, certain of these regulations; namely, §§ 20.106(a) (which governs effluents to air and water) and 20.303 (which governs releases into sanitary sewage systems) are intended to ensure compliance with the overall dose limit and not to generically define as low as is reasonably achievable (ALARA) releases. Other effluent release limits either incorporate ALARA considerations generically or are otherwise lower than the overall dose limit because of generally applicable environmental standards of the EPA. In all cases, effluent limits provide an upper bound on controlled releases to which ALARA measures are to be applied by individual licensees. A revision of the overall limits for effluents presently contained in §§ 20.106 and 20.303 is included in the overall revision of 10 CFR Part 20 which has been approved by the Commission and is undergoing detailed revisions in wording by the staff. (This rulemaking would also add to 10 CFR Part 20 the requirement that ALARA be applied by all individual licensees.) Because these limits are so broad in their application, it is probably not practical nor desirable to attempt to apply ALARA generically as would be done for the more practice-specific regulations which were the focus of the policy statement.

However, as noted above, activity (1) includes a reevaluation of potential doses associated with sewage limits (§ 20.303).

A contractor study was initiated in 1987 and is scheduled for completion by early 1991 (as shown in Enclosure 5). The staff will consider whether further modifications to § 20.303 are appropriate at that time.

Another regulation governing effluents, Part 50, Appendix I, was developed as a generic ALARA regulation. Although technology may be somewhat improved since the original analysis, no major flaw has appeared in the original basis for these ALARA criteria. Therefore, the staff does not believe that these criteria should be reexamined further.

The second step to be undertaken is to systematically assess the doses for each exemption. This task will be accomplished with contractor assistance. In those cases where the exemption results in doses that exceed the individual and/or collective dose criteria of the policy, a cost-benefit analysis will be performed to determine whether the doses resulting from the exemption are ALARA. After these dose estimates and subsequent analyses are completed, the staff will be in a position to determine which exemption regulations are candidates for revision in order to achieve consistency with the policy. Examination of the principal literature on previous estimates of doses from specific exemptions has been initiated. Existing dose estimates, if judged adequate, could be the basis for determining that the dose criteria of the policy are unlikely to be exceeded. Also, existing analyses may provide at least a partial basis for decisions on whether ALARA is met for exemptions exceeding the dose criteria. However, for consistency, dose estimation should be conducted as uniformly as practical with a consistent, up-to-date model and modeling assumptions. As indicated in Enclosure 5, the preliminary schedule for completion of the assessment of existing exemptions is September 1993; however, this depends on the number and complexity of the ALARA analyses needed.

Activity (3)(b) will involve the rulemaking actions necessary to revise exemptions for consistency with the policy statement. The number and extent of these rulemaking actions cannot be precisely determined until the systematic assessment has been completed. However, preliminary reviews suggest that at least six rulemakings are likely to be needed. The effort necessary to conduct these rulemakings is included in the staff's resource estimate. Any other rulemaking actions determined to be necessary as a result of the systematic assessment will require additional resources in the period 1993 and beyond. The order of the six rulemakings discussed below is not meant as an indication of their priorities.

One rulemaking that has been identified by the preliminary review as a candidate for conforming the regulations to the policy would be reducing the specific individual dose criterion in 10 CFR § 32.28 applicable to gas and aerosol detectors (smoke detectors) from 5 mrem/year to 1 mrem/year. The 5 mrem/year criterion was part of the initial rulemaking for smoke detectors in 1969 and was compatible with the developing industry's practice for the quantities of Am-241 used per detector at the time. As a result of advancements in the design of smoke detectors and the issuance in 1977 of the internationally accepted Nuclear Energy Agency (NEA) smoke detector standard with its recommended limit of 1 microcurie of Am-241 per detector, manufacturers are generally making smoke detectors which meet the 1 mrem/year criterion. Given the present situation, an ALARA analysis would not support the continued use of a 5 mrem/year criterion. Thus a rather straightforward rulemaking would make this regulation consistent with the interim criterion for practices involving widespread distribution of materials in the policy statement. It would preclude unnecessary increases in doses in the future and would also be generally more consistent with the international regulatory community.

The second rulemaking that would appear to be necessary to conform the regulations to the policy is a revision of 10 CFR Part 40, "Domestic Licensing of Source Material," to upgrade the safety requirements and to improve tracking of exemptions by the Commission. The staff has been aware for a number of years that such a rulemaking is desirable. In addition to updating the safety requirements for the source material exemptions, revision of the rule would appear to be critical to the ability of the Commission to monitor the effectiveness of the policy and maintain total exposures from multiple sources within the appropriate limit. A rulemaking to revise 10 CFR Part 40 would probably involve revamping the regulation to make it more consistent with the approach taken in 10 CFR Part 30 for the regulation of byproduct material and should reconsider other aspects of source material licensing beyond the exemptions. Concerning the source material exemptions in Part 40, requirements similar to those applicable to the distribution of materials and products exempt from licensing under Part 30, such as quality assurance, should be considered. Better controls and information on distribution of source materials to unrestricted use may be especially important to the Commission's stated intent to control "multiple" exposures since the consumer products previously estimated to produce the greatest collective exposures contain source material. Before initiating this rulemaking, a preliminary research and cost effectiveness study would be conducted to determine the most effective approach.

A third potential rulemaking that may be necessary to achieve consistency of the regulations with the policy statement would be modifications of references to an outright prohibition of the use of radioactive material in food, beverages, cosmetics, drugs, toys, adornments, or otherwise designed for ingestion, inhalation, or application to the human body. Some part of this prohibition appears at least four places in the regulations (§§ 30.14, 30.19, 32.11(c), and 32.18(b)). Although this may be a relatively simple rulemaking, it may also be controversial and raise public opposition. Also, other agencies such as the Food and Drug Administration and the Consumer Product Safety Commission may have a regulatory interest in such modifications.

Additionally, a rulemaking which should be seriously considered would be to resume annual reporting of quantities of materials and products distributed to exempt persons. Such a requirement would be in keeping with the Commission's stated intent that it will maintain cognizance over the types of exemptions granted and the quantities of material distributed under exemptions. Since 1983, reports have been required only every 5 years without the requirement to break the data down by years. This has made it difficult for the staff to maintain a clear picture of distribution trends of materials and products to exempt persons. Information of this type will be important if the NRC is to keep current on the amount of materials being released to unrestricted use and to carry out the stated intent to ensure that the exposures of the public from all sources controlled by the NRC do not exceed 100 mrem/yr. Keeping up with information on the distribution of materials on an annual basis will also be important in achieving an effective continuing public information program.

In addition to these four rulemakings, the staff believes that two rulemakings to revise the exempt quantities and exempt concentration tables of 10 CFR Part 30 will be necessary after completion of the assessment and calculation of doses based upon updated models and scientific information. However, these and other amendments and revisions to specific exemption regulations can only be initiated after completion of the review and assessment of the respective individual exemptions for consistency with the policy statement.

In addition to rule changes, there are other documents, such as regulatory guides, standard review plans, and possibly branch positions that may also need revision because of inconsistencies either with the policy itself or with the amendments made to the regulations. The staff has not yet identified all the specific revisions that might be needed and thus cannot estimate at this time what level of effort will be necessary. A somewhat lower priority will be given to these tasks. Those revisions that reflect changes to existing

regulations governing exemptions or any new guidance needed for new exemptions would be initiated after the associated rulemaking is well underway. One document that has been identified is Standard Review Plan 11.6, "Method for Obtaining Approval of Proposed Disposal Procedures," which is presently under development by NRR. This SRP addresses requests for approval under § 20.302 to dispose of licensed material in a manner not otherwise authorized in the regulations. Since NMSS, NRR, the Regional offices within NRC, and the Agreement States can authorize these disposals, a formal review-plan with uniform criteria is needed in order to provide a consistent agency approach in staff evaluations. One issue to be resolved is whether BRC criteria are applicable to actions taken under § 20.302 which do not relieve licensees from possible future requirements, i.e., some actions under § 20.302 do not remove materials from regulatory control. A plan to deal with this issue, and others related to § 20.302 disposals, is the subject of a separate Commission paper being prepared by the staff.

The remaining three areas of effort of the four that were specifically requested by the Commission in the October 13, 1989, SRM (activities (4) through (6)) are relatively straightforward. Resource estimates for these activities do not depend to any extent on the outcome of the systematic assessment and associated rulemaking tasks.

For activity (4), the development of guidance for the staff to ensure consistent implementation of the policy, a task force approach has been used, involving knowledgeable staff from the various offices whose work will need to incorporate the policy. Federal Register notification of rulemakings and licensing actions was distributed on July 30, 1990 (Enclosure 6). Other guidance will be developed in a similar manner. As distinct from the development of Regulatory Guides associated with specific regulations, activity (4) is to develop generic guidance on BRC issues, e.g., criteria for defining a practice.

In regard to activity (5) concerning information dissemination, GPA has prepared and is distributing the "plain English" pamphlet on exemptions. In addition to that and other planned information dissemination, the staff has been and will continue to be responding to many letters of inquiry, including a large number of Congressional requests. Besides the written documents, the staff is actively presenting and explaining the policy in various technical, professional, and public forums. This requires travel funds in addition to the staff time and effort. Furthermore, the staff will maintain cognizance of efforts involved in a Committee on Interagency Radiation

Research and Policy Coordination (CIRRPC) initiative to develop a national policy on education of the public regarding the risks from radiation.

In regard to activity (6), concerning health effects research, there are currently several initiatives underway. These include examination of effects from high-LET radiation for incorporation into NUREG/CR-4214 and confirmatory research on effects of hot particles on the skin. In addition, the NRC staff participates formally in several authoritative committees and panels such as the CIRRPC Science Panel. There are also other ongoing activities, such as attending professional meetings and symposia and keeping informed about other involved agencies' activities, through which the staff currently keeps abreast of and encourages appropriate health effects research. The task called for in this plan is to review, maintain, and possibly augment the ongoing program to assure staff cognizance of health effects research and ensure that necessary research is conducted. In addition, this information will be utilized in evaluating the implementation of the BRC policy. The staff recognizes, in view of the invaluable potential information on human health effects arising from the accident at Chernobyl and the dramatic advances in molecular and cellular biology in the last 15 years, the need to maintain cognizance of the field and to reflect the new information in NRC's regulatory program. The importance of these events is described below.

The health effects from the Chernobyl release could be expected to provide information on the health effects of concern to the NRC, although only in the long term. The Soviets are willing to provide the opportunity to gather health effects data. However, they appear to have limited economic resources and thus plan only limited national support for this research. The US-USSR Joint Coordinating Committee for Civilian Nuclear Reactor Safety is currently preparing research protocols for work with the Soviets.

In regard to the need for evaluating the advances in biology, the staff is aware that a significant reduction in the uncertainties associated with risk coefficients might be achieved with a better understanding of the basic processes of radiation carcinogenesis and mutagenesis through studies on radiation effects at the molecular and cellular levels. Of course, the Departments of Energy and Health and Human Services have the major responsibility for health effects research. However, it is important that expertise in contemporary radiobiology be maintained within the staff to properly advise the Commission on and take advantage of advances in this science.

To this end, a research program is now underway assessing the utility of such studies to NRC programs and will be a catalyst for future cooperative research efforts in this area.

The infeasibility of conducting a scientifically valid research program that could measure health effects, if any, due to BRC levels of radiation precludes direct, periodic monitoring of the health effects resulting from implementation of the BRC policy. However, the effectiveness of the BRC policy can be evaluated with a periodic review of the dose estimates from the aggregate of all the actual BRC practices that have been approved by the Commission. The results of this periodic, aggregated evaluation coupled with continous monitoring of the progress in radiobiology in the above examples, will provide scientifically valid and current information on the effects, if any, of the implementation of the BRC policy on health. The frequency of the periodic evaluation of the aggregated doses should depend on the number and kinds of BRC practices that the Commission approves and that are implemented. If the number of approved BRC practices grows significantly, the requirement for additional resources could be expected, either in the form of contractor or staff support, or both.

In regard to activity (7)(a), the evaluation of certain generally licensed devices for possible exemption under the policy statement, the analyses necessary are essentially the same as for the reevaluation of existing exemptions. Five devices were identified by the staff in SECY-90-175 as candidates for exemption: (i) static eliminators containing krypton-85; (ii) beta backscatter devices; (iii) gas chromatographs containing nickel-63; (iv) x-ray fluorescence analyzers containing cadmium-109 and iron-55, but excluding those containing curium-244 and americium-241; and (v) certain calibration and reference sources having small activities. Dose estimates will be made for comparison with the BRC criteria, and if necessary cost/benefit analyses will also be done. Because the work to be done on this task is the same as that for the reevaluation of existing exemptions and because of the importance of using a consistent approach, activities (3)(a) and (7)(a) will be carried out in combination with the assistance of a contractor.

Presuming that the above assessment indicates that certain generally licensed devices should be exempted under the BRC policy, appropriate rulemakings (activity (7)(b)) will be initiated in FY 1993 as shown in Enclosure 5. As many as five separate rulemakings may eventually be undertaken. Resource estimates for these rulemakings will be included in the next update of the Five-Year Plan if the evaluations demonstrate that exemptions are indeed appropriate.

Resources: The FY 1991-1995 Five-Year Plan includes resources to carry out all of the known activities described above. The FTE resources by Office for these activities are shown below:

	FY 91	FY 92	FY 93	FY 94	FY 95
RES FTE	7.0*	7.0	7.0	7.0	7.0
NMSS FTE	1.0	1.0	1.0	1.0	1.0
GPA FTE	1.9	1.6	1.4	0.3	0.3
ADM FTE	0.2	0.2	0.2	0.2	0.2
TOTAL	10.1	9.8	9.6	8.5	8.5

* Includes 2 overhire positions.

The above resource estimates generally represent minimum requirements which could be higher depending on the difficulty of the specific tasks identified. In addition to the NRC staff resources, an additional $0.5 million per year in contractor assistance has been included in the Five-Year Plan for the dose evaluations and the cost-benefit analyses of activities (3)(a) and (7)(a). However, the total cost of these activities cannot be determined at this time. The actual cost of the dose assessments will depend on the availability of expertise and on the extent that existing information can show consistency with the policy without extensive reevaluation. The total cost for the cost-benefit analyses and environmental assessments or impact statements will depend on the number of exemptions (and potential exemptions) with doses exceeding the criteria, on the complexities associated with the specific exemptions involved, and on the depth of the analysis necessary to determine consistency with the policy statement. Based upon previous experience, a full-blown Environmental Impact Statement, if necessary for one of the more difficult exemptions, could cost $2 million. However, reexamination of some of the consumer products on a cost-benefit basis could be relatively simple in some cases and considerably less costly.

In addition, these estimates include resources for development of the rules described above but do not include resources for associated licensing and inspection activities. Resource

requirements for these activities will be estimated in the regulatory analysis for each rule in accordance with standard procedure and cannot be foreseen in sufficient detail at this time to provide useful estimates.

As noted above, additional resources may also be needed: (1) as a result of the systematic assessment of existing exemptions, (2) if rulemakings are deemed appropriate for exempting certain generally licensed products, or (3) if a large number of documents such as regulatory guides, SRP's, branch positions are determined to need revision.

The FY 1991-1995 Five-Year Plan that was recently submitted to the Commission includes resources known to be needed to carry out the activities described in this plan. For 1991, one new FTE had been previously authorized for BRC, and RES is to be allowed two FTE's as overage positions. Starting in 1992, two FTE's per year will be reprogrammed from the high level waste program plus one additional FTE authorized to RES for BRC, a total of three additional FTE's per year. Since a shortage of qualified experienced personnel may make it difficult to carry out this plan according to the proposed schedules as well as meet other responsibilities, I have authorized the Director, RES, to begin hiring an additional three FTE's for BRC work.

Some details of the assignments and specific tasks will have to be determined as the program proceeds and the results of the systematic assessment of existing exemptions and the evaluation of generally licensed devices become available. The staff will prepare a summary of these assessments for Commission review when this effort is completed and the recommendations regarding rulemaking and regulatory guidance revisions are available.

Coordination: GPA has concurred in this staff plan. The Office of the General Counsel has no legal objection.

Recommendations: That the Commission note that:

1) The staff plans to proceed with the implementation of this plan unless otherwise directed by the Commission.

2) The resources necessary to implement known activities of this plan have been included in the FY 1991 - 1995 Five-Year Plan.

James M. Taylor
Executive Director
for Operations

Enclosures:
1. SRM dated 10/13/89
2. SRM dated 6/28/90
3. SRM dated 8/13/90
4. List of Exemptions
5. Schedules
6. Guidance on Federal Register Notification dated 7/30/90

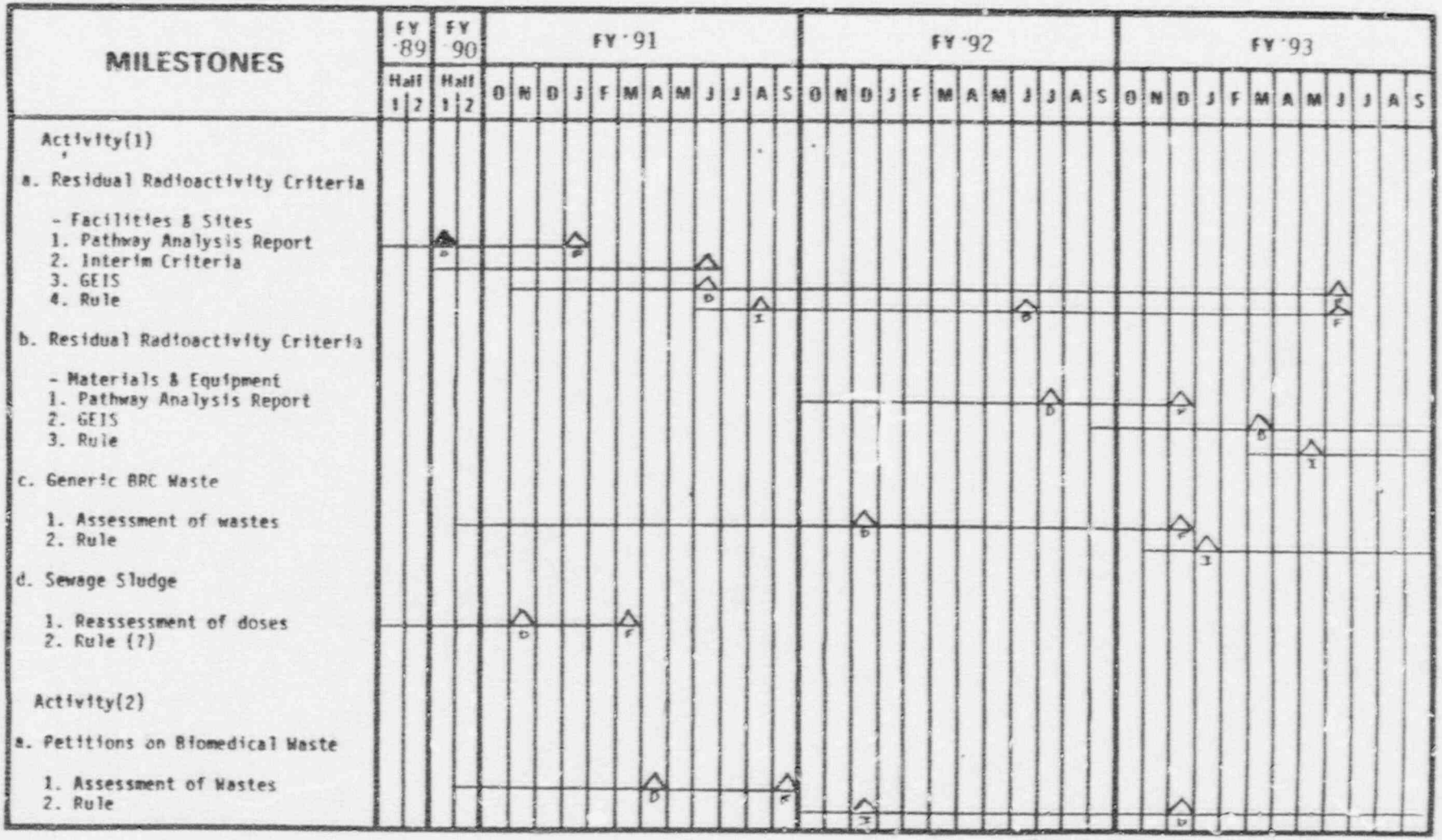
Document Name:
STAFF ACTION PLAN/EDO CHANGES

Requestor's ID:
MENDIOLA

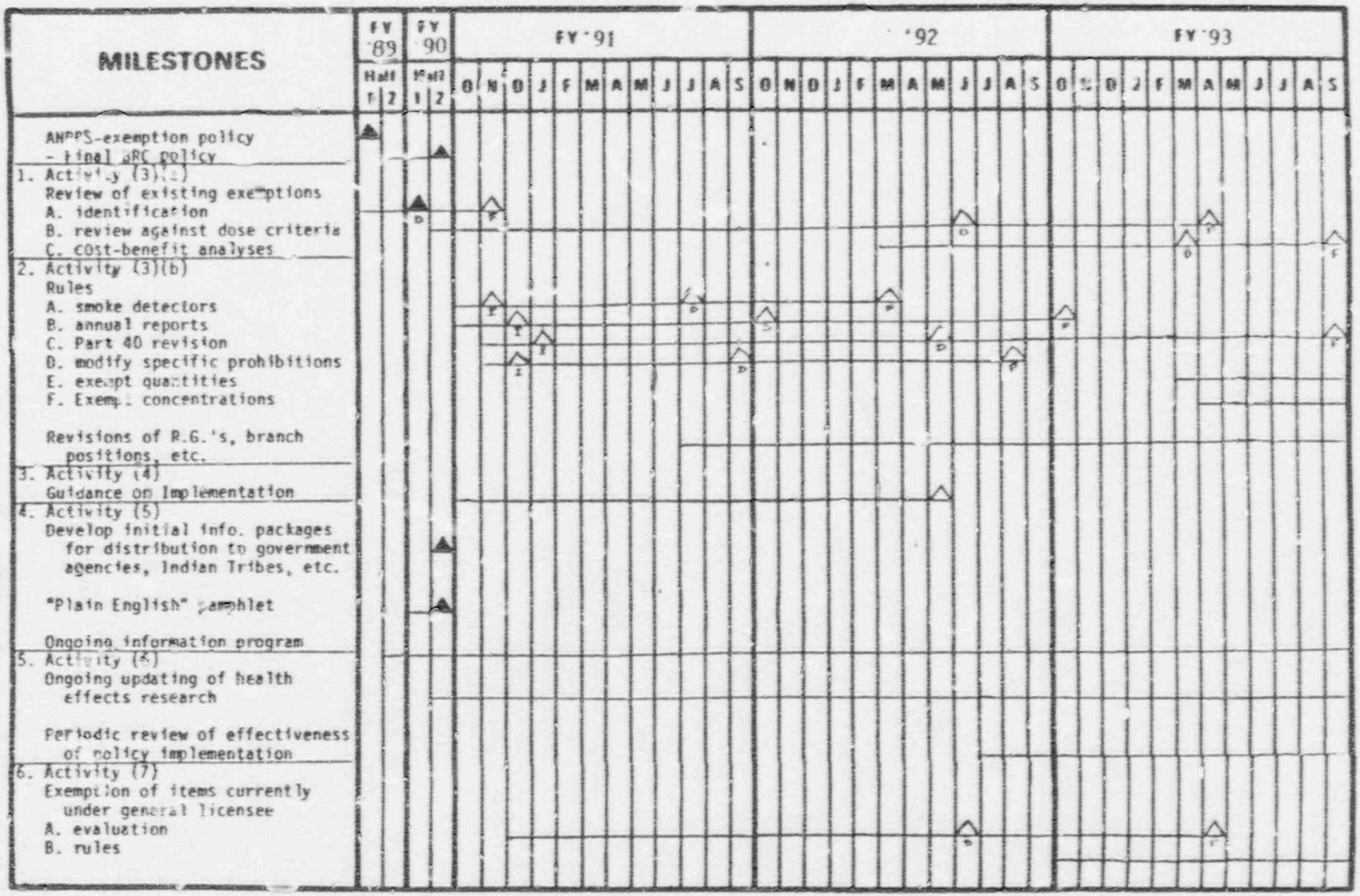
Author's Name:
Mattsen, C.

Document Comments:
nrcres mendiola Cookie 4/5/90

ACTIVITIES PLANNED PRIOR TO BRC POLICY



ACTVITIES ADDRESSED IN RECENT SRM's



Enclosure 5

SRP 20.302 - doesn't exist
20.302 - under BRC or not
09/12/90

For: The Commissioners

From: James M. Taylor, Executive Director for Operations

Subject: STAFF ACTION PLAN FOR IMPLEMENTATION OF BELOW REGULATORY CONCERN POLICY

Purpose: To inform the Commission of the staff action plan for the implementation of the Below Regulatory Concern Policy (BRC) Statement. This plan was originally requested in the Staff Requirements Memorandum (SRM) of October 13, 1989, concerning the subject policy (Enclosure 1). The need for such a plan was reiterated in the (revised) SRM of June 28, 1990 (Enclosure 2). The Commission also requested an addition to the plan concerning some generally licensed products in an SRM of August 13, 1990 (Enclosure 3).

Summary: This paper presents resource estimates and projected schedules for activities related to implementation of the subject policy as requested by the Commission. It also describes the activities that have been initiated in these areas. The staff intends to proceed with the activities outlined in this action plan unless directed otherwise by the Commission. The resources known at this time to be necessary to implement this plan are included in the latest revision of the Five-Year Plan. Additional resource needs identified as a result of the studies (3(a) and 7(a) below) conducted under the plan will be included in future revisions of the Five-Year Plan.

Background: The Commission has recently published the policy statement on below regulatory concern (previously referred to as the exemption policy). The SRM of October 13, 1989, directed the staff to prepare an action plan to accomplish certain activities involved in implementing that policy. This plan covers those activities identified by the Commission at that time (items (3) through (6) below), previously initiated activities which also relate to implementing the policy (items (1) and (2) below), and (3) consistent with ~~and plans to consider for exemption certain devices now generally licensed (item 7). The SRM of August 13, 1990, concerning the general license stud, (Enclosur 3) requested~~

Contact:
C. R. Mattsen, RES
492-3638

~~the staff to incorporate plans to~~ consider exemptions of certain generally licensed devices ~~into this overall plan for implementing the BRC policy.~~ (item 7).

The activities covered by this plan are:

(1) Rulemaking and associated tasks currently planned or in progress that fall within the framework of the policy;

(2) Evaluation of and action on petitions for rulemaking to establish or modify exemption levels;

(3) (a) A systematic assessment of existing exemptions in the regulations for conformance with the policy, and

(b) Revision of those regulations identified in the systematic assessment that require modification to be consistent with the policy;

(4) Development of guidance on consistent implementation of the policy in licensing actions and rulemaking;

(5) Development of a program of information dissemination concerning the policy and its implementation;

(6) Development of a program to ensure that necessary health effects research is conducted and the results used to monitor the effectiveness of policy implementation; and

(7) (a) Evaluation of five identified generally licensed devices for possible exemption under the policy, and

(b) Rulemaking as appropriate to exempt these devices.

Discussion: Activity (1) includes: (a) development of interim guidance and rulemaking on residual radioactivity criteria for the release to unrestricted use of facilities and sites (decommissioning); (b) development of residual radioactivity criteria for equipment and materials (recycling); (c) contractor study and eventual generic rulemaking for BRC waste (in accordance with the December 2, 1986, advance notice of proposed rulemaking); and (d) evaluation of potential doses from reconcentration of radionuclides in sewage sludge to provide input to a reconsideration of sewage limits.

Activity (2) includes plans to evaluate and respond to anticipated petitions for rulemaking to exempt waste streams from regulatory control. Two such petitions from Rockefeller Institute and one from the University of Utah related to biomedical wastes have been received. A petition that had been anticipated from NUMARC, requesting exemption of certain reactor waste streams, now is not expected in the foreseeable future.

Activity (3)(a), the systematic assessment of existing exemptions, involves two steps. The first step, identification of existing exemptions in the regulations, is essentially complete. The list of exemptions is included as Enclosure 4. The list includes only those exemptions contained in the regulations to which the policy statement could be applicable; that is, those that involve release of radioactive material from regulatory control in some manner. Some exemptions are not written explicitly as exemptions from specific regulations, rather they are requirements pertaining to releases of radioactive material. All such regulations are included in Enclosure 4 for completeness. However, based on some preliminary considerations, certain of these will not need to be reevaluated in order to assure consistency of the regulations. For example, as noted in Enclosure 4, three of the cited paragraphs, §§ 20.302, 20.106(b), and 50.36a, allow for case specific exemptions and do not contain specific criteria which ~~could be~~ deemed inconsistent with the policy.

In addition, certain of these regulations; namely, §§ 20.106(a) (which governs effluents to air and water) and 20.303 (which governs releases into sanitary sewage systems) are intended to ensure compliance with the overall dose limit and not to generically define as low as is reasonably achievable (ALARA) releases. Other effluent release limits either incorporate ALARA considerations generically or are otherwise lower than the overall dose limit because of generally applicable environmental standards of the EPA. In all cases, effluent limits provide an upper bound on controlled releases to which ALARA measures are to be applied by individual licensees. A revision of the overall limits for effluents presently contained in §§ 20.106 and 20.303 is included in the overall revision of 10 CFR Part 20 which has been approved by the Commission and is undergoing detailed revisions in wording by the staff. (This rulemaking would also add to 10 CFR Part 20 the requirement that ALARA be applied by all individual licensees.) Because these limits are so broad in their application, it is probably not practical nor desirable to attempt to apply ALARA generically as would be done for the more practice-specific regulations which were the focus of the policy statement.

However, as noted above, activity (1) includes a reevaluation of potential doses associated with sewage limits (§ 20.303).

(91)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 22 1989

The Honorable Carl Levin
United States Senate
Washington, DC 20510

Dear Senator Levin:

I am responding to your latest letter, dated October 23, 1989, which requested our views on the issues raised in a petition from Michigan residents who are opposed to any deregulation of low-level radioactive waste. The petition, submitted by Ms. Kay Haffner, had previously been sent to us in response to an advance notice of policy development which we issued on December 12, 1988 (53 FR 49886). This notice is the one we enclosed in our May 2, 1989, response to you, which addressed similar concerns expressed by other Michigan citizens.

In responding to Ms. Haffner, I would point out that any low-level waste considered to be "below regulatory concern" (BRC) under the provisions of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (P.L. 99-240), would only involve materials with the lowest levels of radioactivity content. As a result, the implication that more hazardous radioactive low-level waste could be disposed of as BRC waste is incorrect. In fact, the level of radioactivity for some potential BRC wastes may be such a small fraction of natural background radiation that it may not be readily detectable.

In further addressing the concerns of Ms. Haffner and the other petition signers, it may be helpful to summarize the typical exposures which we all routinely receive from a variety of sources of radiation. These exposures occur from radiation that is natural in origin as well as from sources which involve man-made uses of radioactive material. In total, as estimated by the National Council on Radiation Protection and Measurements (NCRP Report No. 93), the effective dose equivalent received by the United States population averages about 360 millirem per year. Of this total, about 300 millirem per year (or over 80% of the total) is a result of natural sources, including radon and its decay products while medical exposures contribute an estimated 53 millirem per year. Other man-made sources contribute the remaining 1 to 2% of the total exposure, including the sources of concern mentioned by Ms. Haffner (i.e., nuclear fallout and nuclear power plant effluents). I am presenting this total exposure "picture" to provide a perspective on the hypothetical risks which may be associated with potential BRC waste disposal practices. This perspective is one of several that the Commission believes are relevant to its decisions involving regulatory resource allocations to control the potential radiological risks associated with the use of radioactive materials.

With regard to Ms. Haffner's concerns on reconcentration mechanisms, I would point out that the Commission considers these concentration mechanisms when it calculates the doses which potentially could be received through the food-pathway. Similar consideration is given to the long half-life radioisotopes and to the chemical and/or physical form of the radioactive material.

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In closing, I believe that the issue of proper and reasonable disposal of all our society's waste is one upon which the public's attention is, and should continue to be, rightly focused. The Commission's goal is to resolve the issue for radioactive materials - providing for public health and safety and protecting the environment while using the nation's resources in an optimum fashion. As I have mentioned in my previous letters, we take our mandate to protect the health and safety of the public very seriously. As a result, the issues raised by Ms. Haffner are carefully considered.

Sincerely,

Original Signed By:
James M. Taylor

James M. Taylor
Acting Executive Director
for Operations

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*See previous concurrences

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MAR 7 - 1990

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

February 7, 1990

The Honorable Kenneth M. Carr
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Carr:

It has come to my attention that the Commission is in the process of developing a policy statement concerning the exemption from regulatory control of certain practices, including the disposal of certain low-level radioactive wastes. This issue is commonly referred to as "Below Regulatory Concern" (BRC). Of particular interest to me are the differing views within the NRC staff on BRC and the different BRC approaches supported by other entities, in the United States and abroad. I am also interested in a number of other issues, including what consideration the NRC has given to the question of what type of inspection, enforcement, penalties, and monitoring might be necessary if BRC exemptions are granted in the future.

In order to assist me in my review of these issues, I request that the Commission provide the following documents and information. For the purposes of this request the term BRC refers to the "exemptions from regulatory control" policy and all related issues and the "below regulatory concern" policy and any and all related issues:

1) According to the Commission's Federal Register notice of December 12, 1988, pg. 49888, "the Commission is aware that there are differing views within the NRC staff on the selection of numerical criteria for BRC." At a briefing for the Interior Committee staff on January 29, 1990, NRC representatives stated that staff views on the "magnitude of individual dose" range from 0.1 to 10 millirem per year, with Mr. John Austin supporting 0.1 millirem.

Please provide any and all documents dated subsequent to January 1, 1986 (draft and final), including, but not limited to, SECY papers, memoranda, notes of meetings, notes of phone conversations, memos to the file, correspondence and electronic files, concerning the selection of numerical

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criteria for the Commission's BRC policy and/or the acceptable magnitude of individual dose for this policy.

2) Please provide a description of the BRC standards and policies adopted or recommended by the U.S. Environmental Protection Agency, International Atomic Energy Agency, the National Council on Radiation Protection, Canada, the United Kingdom, West Germany, France, and other nations or organizations that have considered this issue. Please explain any differences between these BRC policies and the one currently under consideration by the NRC.

3) In response to a question from an Interior Committee staff member at the January 29, 1990 briefing, NRC representatives stated that the Commission had devoted very little attention to the issue of whether additional enforcement and penalties would be necessary in order to effectively implement a BRC policy. Please provide a full description of any and all analyses or assessments the NRC has done between January 1, 1986 and January 31, 1990 on the question of what type of additional enforcement, monitoring, and civil and criminal penalties might be necessary to ensure full compliance with NRC laws, regulations, policies, and guidelines in the event BRC exemptions are granted in the future.

4) Please provide any and all correspondence and communications (draft and final), including but not limited to memoranda, memos to the file, electronic files, notes of meetings and notes of phone conversations, dated subsequent to January 1, 1988 between the NRC and the Electric Power Research Institute (EPRI), the Nuclear Utilities Management and Resources Council (NUMARC), the Edison Electric Institute (EEI) and the Environmental Protection Agency (EPA) regarding BRC.

5) Please provide a list of activities already exempt from regulatory control under 10 CFR Part 30.

6) Please provide a copy of the most recent staff draft of the exemptions from regulatory control policy.

7) Please provide copies of all transcripts of meetings of the Commissioners and copies of all Commissioner notation votes concerning BRC and related issues subsequent to January 1, 1988.

8) In an October 13, 1989 Memorandum, entitled "Staff Requirements- SECY-89-184- Proposed Commission Policy Statement on Exemptions From Regulatory Control" the Commission requests the staff to prepare a plan for a "proactive program for disseminating information on the NRC policy." Please provide any and all documents (draft and final), dated subsequent to October 13, 1989 concerning this "proactive program for disseminating information" including, but not limited to, SECY papers, memoranda, memos to the file, electronic files, correspondence, notes of meetings, and notes of phone conversations.

Please provide the requested documents and information by March 1, 1990. If your staff has any questions regarding this matter please have them call Dan Adamson of my staff at (202) 225-1064.

Thank you for your consideration.

Sincerely,

George Miller

George Miller
Member
Subcommittee on Energy and the Environment

(29)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 8, 1990

The Honorable Newt Gingrich
United States House of Representatives
Washington, DC 20515

Dear Congressman Gingrich:

I am responding to your letter of June 8, 1990, in which you requested consideration of issues raised by several of your constituents. The concerns relate to the disposal of low-level radioactive waste (LLW) which could be categorized as below regulatory concern or BRC.

As you may be aware, on July 3, 1990, the Commission issued a Below Regulatory Concern Policy Statement. I have enclosed a copy of this statement and an explanatory booklet for your information (Enclosures 1 and 2). I would point out that the policy is not self-executing and does not, by itself, deregulate any LLW. Rather, the policy states the principles and criteria that would apply to Commission decisions which would allow licensed radioactive material to be released to the environment or to the general public. Any specific exemption decision would be accomplished through rulemaking or licensing actions during which opportuinity for public comment would be provided in those situations where generic exemption provisions have not already been established. Furthermore, the policy has implications beyond waste disposals in that it would also provide the basis for decommissioning decisions involving the release of lands, structures, or recycled materials for unrestricted use as well as decisions regarding consumer product exemptions. Any of these decisions would include record keeping requirements and the possibility of other appropriate controls or constraints against which inspections, compliance determinations and enforcement actions could be taken.

This policy can be considered an outgrowth of the concepts articulated in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (Pub. L. 99-240). That Act (i.e., Section 10) directed the Nuclear Regulatory Commission (NRC) to "... establish standards and procedures ... and develop the technical capability for considering and acting upon petitions to exempt specific radioactive waste streams from regulation ... due to the presence of radionuclides in such waste streams in sufficiently low concentrations or quantities as to be below regulatory concern." In response to the legislation, NRC developed and published in 1986 a Statement of Policy and Procedures which outlines the criteria for considering such petitions. I have enclosed a copy of that statement which you may find informative (Enclosure 3). I believe our recently issued broad policy statement reflects much of the basic radiation protection framework described in this earlier Commission policy. The Commission, in both actions, has acted in the belief that the nation's best interests would be served by policies that establish a consistent risk framework within which exemption decisions can be made with

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assurance that human health and the environment are protected. In this regard, we believe our actions are consistent with those of other Federal agencies; e.g., the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA), who have formulated or are attempting to formulate similar policies for the hazardous materials they regulate. I also believe our policy will contribute to the focusing of our radiation protection resources on those risks with greatest potential impact on public health and safety.

We do not consider the BRC policy to be in opposition to either the Clean Air or Safe Drinking Water Acts. While the criteria in NRC's BRC policy and EPA's radionuclide air emission standards are numerically similar, their purposes are different. The BRC policy's individual dose criterion, combined with the collective dose criterion and other policy conditions and constraints, provide the bases for exempting a practice from the full scope of regulatory controls. As a result, the analyses to support exemption decisions under the BRC policy must take into account all significant pathways through which exempt material can interact with man. In contrast, EPA's Clean Air Act standard sets a maximum level for radionuclides in airborne emissions from specific classes of emission sources. Other pathways of exposure, such as direct radiation or radionuclides in water, are not considered. The Safe Drinking Water Act (SDWA), on the other hand, has resulted in the definition of specified maximum contaminant levels and a dose level above which water supply operators are required to treat drinking water supplies. These levels also do not take into account pathways such as direct radiation or airborne radionuclides. When considered in its entirety, any practice exempted through the provisions of the BRC policy is not likely to cause exposures which would approach these SDWA dose or contamination levels.

Finally, I would emphasize that BRC decisions will not cause "... all kinds of radioactive diseases and destruction ... ." In fact, any potential exposure associated with an exemption decision would be only a small fraction of the exposure we all receive from natural background radiation. These exposures occur from radiation that is natural in origin as well as from sources which involve man-made uses of radioactive material. In total, as estimated by the National Council on Radiation Protection and Measurements (NCRP No. 93), the effective dose equivalent received by an average individual in the United States population is about 360 millirem per year. Of this total, over 83 percent (about 300 millirem per year) is a result of natural sources, including radon and its decay products, while medical exposures such as x-rays, when averaged over the U.S. population, contribute an estimated 15 percent (53 millirem per year). Other man-made sources, including nuclear fallout, contribute the remaining 1 to 2 percent of the total exposure. The remaining 1 to 2 percent also includes the contribution from nuclear power plant effluents. I am presenting this total exposure "picture" to provide a perspective on the hypothetical risks which may be associated with potential BRC waste disposal practices. This perspective is one of several that the Commission believes are relevant to its decisions involving regulatory resource allocations to control the potential radiological risks associated with the use of radioactive materials.

In closing, I want to assure you that we take our mandate to protect the health and safety of the public very seriously. I hope my responses to your constituents' concerns have enhanced the dialogue on this technically complex and controversial issue.

Sincerely,

Original Signed By:
James M. Taylor

James M. Taylor
Executive Director
for Operations

Enclosures:
1. BRC Policy Statement
2. BRC Explanatory Booklet
3. 1986 Statement of Policy

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICE OF THE
SECRETARY

August 13, 1990

ACTION - Beckjord, RES/
Bernero, NMSS

Cys: Taylor
Sniezek
Thompson
Blaha
Jordan, AEOD
Scroggins, OC
SBaggett, NMSS
SMoore, NMSS

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

FROM: Samuel J. Chilk, Secretary

SUBJECT: SECY-90-175 - STAFF REQUIREMENTS - OCTOBER 4, 1989, FOLLOWING A BRIEFING ON STUDY OF ADEQUACY OF REGULATORY OVERSIGHT OF MATERIALS UNDER A GENERAL LICENSE

This is to advise you that the Commission (with all Commissioners agreeing) has concurred in the staff's recommendations. The staff should proceed with the rulemaking to modify the general license in 10 CFR 31.5 and to establish a registration and response system for general licensees through the proposed rulemaking. The periodic verification letters provided for in the rule should be accompanied by a copy of the regulations from time to time. These actions should promote better tracking, improved communications, and enhanced licensee understanding of the requirements and compliance with them. Staff should prepare and submit a proposed rule for Commission review.

~~(EDO)~~ (RES) (SECY Suspense: 9/1/90) 9000191

The staff should also proceed with a rulemaking to modify 10 CFR 32.51 to restrict the maximum air gap between the device and the product for generally licensed devices. A proposed rule should be prepared and submitted for Commission review.

~~(EDO)~~ (RES) (SECY Suspense: 3/29/91) 9000192

As a separate but related matter, staff should proceed with intentions to establish through rulemaking separate exemptions for certain devices. Staff should ensure that proposed exemptions of certain devices that are currently used under general and specific licenses are analyzed and exempted in accordance with the Below Regulatory Concern policy. The staff should integrate its proposal to consider exempting these devices into the BRC implementation program.

~~(EDO)~~ (RES) (SECY Suspense: 9/14/90) 8900198

SECY NOTE: THIS SRM, THE SUBJECT SECY PAPER, AND THE VOTE SHEETS OF COMMISSIONERS ROGERS, CURTISS, AND REMICK WILL BE MADE PUBLICLY AVAILABLE IN 10 WORKING DAYS FROM THE DATE OF THIS SRM.

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ENCLOSURE 2

The staff should conduct reviews and analyses, as described below, and report findings to the Commission.

1. Given the staff's belief that losses of generally licensed devices are underreported, it is likely that some kinds of accidents and misuses might also be underreported. The staff's recommendation for periodic verification letters itself indicates a concern that some general licensees might not know what problems they are required to report, or even that they are required to report. The staff should present the information obtained through these periodic surveys to the Commission, with an evaluation of the need for further regulatory action. This evaluation should consider the need to require a specific license for additional types of devices or applications, to provide additional guidance to general licensees, for changes in the verification letters, and for other changes to Part 31, such as a requirement for additional training.

2. The April 1987 report by Oak Ridge Associated Universities entitled "Improper Transfer/Disposal Scenarios for Generally Licensed Devices" suggests a potential for significant doses from several types of devices. Although the staff has informally determined that this document is based on unrealistic assumptions that produce dose estimates that are too conservative, the staff currently has no documented analysis supporting its conclusions.

   The staff should explain why the doses estimated in the Oak Ridge report are unlikely to be experienced in practice or otherwise insufficient as a basis for rulemaking. To support its conclusions, the staff should obtain a peer review of the Oak Ridge report and analyze the potential doses associated with radioactive materials under a general license.

   Staff should use its analysis as a major part of the basis for making future improvements in regulatory oversight of general licenses and for making decisions on whether to recommend specific licensing for other generally-licensed devices. The staff's analysis could also provide a basis for gathering additional information on categories of general licensees where survey responses are sparse. This analysis should be independent of the proposed rule on the registration and response system, however, so that the rulemaking will not be delayed.

3. The staff should assess the design dose criteria established for generally licensed devices in 10 CFR Part 32 to ensure that members of the public are adequately protected. In the recent Commission deliberations on final revisions to 10 CFR Part 20, Commissioner Curtiss raised a concern about adoption of 10% of the occupational limit (i.e. 500 mrem/yr) as the design criterion for generally licensed devices in 10 CFR 32.51(a)(2)(ii) and 32.51(c). Rather than delay promulgation of the final revisions to 10 CFR Part 20 and the conforming changes, this issue should be resolved as part of an integrated program to improve regulatory oversight of generally licensed material and devices. Staff should carefully consider what the design criteria should be, given that the people receiving the exposures are members of the general public rather than radiation workers, and should provide recommendations for the Commission's consideration on whether revision of the design criteria should be initiated.

The staff should submit a plan with milestones for the accomplishment of these reviews and analyses.

~~(EDO)~~ (NMSS) (ECY Suspense: 2/1/91) ~~9000194~~
8900184

cc: Chairman Carr
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
OGC
GPA

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICE OF THE
SECRETARY

June 13, 1990

(REISSUED JULY 28, 1990)*

MEMORANDUM FOR: James M. Taylor, Executive Director
for Operations

FROM: Samuel J. Chilk, Secretary

SUBJECT: SECY-89-360 - COMMISSION POLICY STATEMENT ON EXEMPTIONS FROM REGULATORY CONTROL

This is to advise you that the Commission (with Chairman Carr and Commissioners Roberts, Rogers and Remick agreeing and with Commissioner Curtiss agreeing in part and disagreeing in part) has approved the attached Statement of Policy on Below Regulatory Concern.

The Commission has also agreed that the staff should proceed expeditiously with its program for disseminating information on the BRC policy to Congress, media representatives, other Federal agencies, state and local authorities, Indian Tribal organizations, and the public. Such a program is necessary to effectively communicate the basis and need for the policy with these groups. Accordingly, the Commission agreed that a working group of NRC managers should be established to develop and implement a comprehensive strategy for releasing the BRC policy. The working group should arrange briefings for Congressional staff and other Federal and state agencies (including EPA, DOE, FDA, CPSC, Agreement States, and affiliated organizations). The working group should also arrange internal workshops to prepare NRC Headquarters and Regional staffs for responding to inquiries about BRC. Commissioners offices should be advised of the time and location of all working group meetings. The working group should also coordinate the development and release of information about BRC, such as the BRC pamphlet being developed by Public Affairs. (DEDS)

The Commission looks forward to staff's progress in implementing the BRC policy, including establishment of interim residual radioactivity criteria for decommissioning and assessing existing exemptions for consistency with the BRC policy. These efforts will not only enhance the coherence of NRC's regulatory

NOTE: THIS SRM AND THE SUBJECT SECY PAPER WILL BE MADE PUBLICLY AVAILABLE UPON PUBLICATION OF THE FEDERAL REGISTER NOTICE

*Reissued to include Chairman Carr's June 21, 1990 response to Commissioner Curtiss' additional views. The Chairman's response along with the Policy Statement and Commissioner Curtiss' views were forwarded to the Federal Register for publication on June 27, 1990

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ENCLOSURE 2

framework, but may also encourage the use of a consistent risk basis in other areas of the Federal government's regulatory framework for protecting the public and the environment from a variety of risks. (RES) 8300615

Staff should develop a program for systematically assessing existing NRC exemptions (as directed in the October 13, 1989 SRM) to evaluate their consistency with the criteria and provisions of the BRC policy and for developing a framework of new regulations and guidance to implement the BRC policy (e.g., residual radioactivity limits for decommissioning, waste exemptions, regulations to establish a framework for exempting consumer products).
~~(EDO)~~ (RES) (SECY SUSPENSE: 8/17/90) 8900198

Staff should revise the analysis of public comments which was included with SECY-89-184, as appropriate, to reflect the Commission decision in the BRC policy and make this analysis publicly available.
~~(EDO)~~ (RES) (SECY SUSPENSE: 6/25/90) 8700019

Commissioner Remick would have preferred that the waste-related position of the policy be deferred until it could be presented together with more detailed guidance on the implementation of waste-related exemptions. He would also have preferred that the risk coefficient used to set the dose criteria in this policy be 4×10^{-4} chances of a fatal cancer per rad of exposure. This number is closer than 5×10^{-4} to the risk coefficients calculated in the Appendix discussions of the UNSCEAR and BEIR-V studies, which provide no apparent calculational basis for 5×10^{-4}.

Commissioner Curtiss' additional views are attached.

Chairman Carr's response to Commissioner Curtiss' views is also attached.

Attachments:
As Stated

cc: Chairman Carr
Commissioner Roberts
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
OGC
GPA

ENCLOSURE 2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICE OF THE
SECRETARY

ACTION - Beckjord, RES

Cys: Taylor
Thompson
Blaha
Bernero, NMSS
Murley, NRR
Scroggins, OC
Wlahs, RES

October 13, 1989

MEMORANDUM FOR: James M. Taylor
Acting Executive Director for Operations

William C. Parler, General Counsel

Harold R. Denton, Director, GPA

FROM: Samuel J. Chilk, Secretary

SUBJECT: STAFF REQUIREMENTS - SECY-89-184 - PROPOSED COMMISSION POLICY STATEMENT ON EXEMPTIONS FROM REGULATORY CONTROL

This is to advise you the the Commission, with all Commissioners agreeing, has disapproved your recommendation on a proposed Commission Policy Statement on Exemption from Regulatory Control.

The Commission requested the staff to submit for Commission approval a final policy statement which incorporates the following elements:

A. BELOW REGULATORY CONTROL

The NRC will exempt from further regulatory control a practice that satisfies the criteria listed below.

B. INDIVIDUAL DOSE CRITERION

The average individual dose to typical individuals in the critical group should be less than 10 mrem/year for individual practices. An interim individual dose limit of 1 mrem/yr for exposures resulting from materials and products used by the general public should be established until the Commission gains more experience with the potential for individual exposures resulting from multiple practices. The staff should be clear and precise in defining an approach to distinguish which practices are subject to each of these dose limits. Dose will be considered in terms of effective dose equivalent.

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Date 10-16-89
Time 7:30 A

C. ALARA

Collective doses resulting from exposure to a practice should be as low as reasonably achievable (ALARA). Annual collective doses less than or equal to 1000 person-rem will be deemed to satisfy the ALARA criterion. The calculation of collective dose does not need to consider individual doses less than or equal to 0.1 mrem/yr.

D. OTHER BRC EXEMPTIONS

The NRC may exempt practices that do not meet the individual dose criterion on a case-specific basis if the Commission determines that doses to the public are ALARA and regulatory control is not justified by further reductions in individual and collective doses.

The final policy statement should be written in terms understood by the average lay person and the discussions of the above criteria should be explained in the context of the risks that the ordinary individual faces in his or her everyday life. The policy statement should also be consistent with the following format:

1. INTRODUCTION

Describe the purpose of the BRC Policy; cite existing exemptions already codified in NRC's regulations and those of other Federal agencies; overview the content of the Policy Statement.

2. TERMS AND CONCEPTS

Define key terms and concepts used in the Policy Statement (e.g., practice, dose, risk, linear hypothesis, ALARA).

3. POLICY

Describe and justify the BRC criteria listed above (BRC, individual dose criterion, ALARA with the collective dose criterion and truncation level, and exemptions at higher doses). The rationale should clearly describe the unifying risk basis used in establishing the criteria.

4. IMPLEMENTATION

Describe how the BRC Policy will be implemented through rulemakings and licensing actions; describe opportunities for public comment through subsequent actions; identify the potential need, if any, for assessment of environmental impacts; provide guidance on how the NRC will consider applications for exemptions (e.g., would NRC develop a general rule for exempting consumer products or for specific products such as frying pans, jewelry, gas mantles, etc.); and describe how the NRC will review already exempted practices to ensure that the assumptions made were appropriate.

5. STANDARD FORMAT AND CONTENT

Describe, in general terms, the format and content of exemption applications that the NRC staff would find acceptable.

Additional comments are provided in the Commissioners' vote sheets.

The BRC Policy Statement should supersede the Commission's policy statement on consumer products dated March 8, 1965, because the BRC policy provides a consistent risk basis for exempting practices using radioactive materials from regulatory control.

~~(EDO)~~ (RES) (SECY Suspense: 11/30/89)

The General Counsel should examine the treatment of the issue of Agreement State compatibility under the Policy Statement, focusing on the question of whether we have the authority to require Agreement States to adopt criteria that are identical to those set forth in the Policy Statement (i.e., Agreement State BRC criteria can be neither less stringent nor more stringent than the criteria established by the Commission).

(OGC) (SECY Suspense: 11/30/89)

The Commission requested the staff to submit a plan, schedule, and resource requirements for the following activities:

a. Initiation of a systematic assessment of existing exemptions for radioactive materials in NRC's regulations. As the first step in the assessment, staff should identify existing exemptions and prepare a plan for evaluating them for conformance with the BRC policy.

b. Rulemaking activities, as appropriate, to ensure that codified exemptions are consistent with the BRC policy.

c. Development of a regulatory guidance to ensure that the BRC Policy is implemented consistently in licensing actions and future exemptions.

d. Proactive program for disseminating information on the LRC Policy to other Federal agencies, State and local authorities, Indian Tribal organizations, media, and the public. This program should include publication of an informative pamphlet on the BRC policy for widespread distribution to the general public in terms understood by the lay person.

e. Program for assuring that staff remains cognizant of ongoing health effects research about the nature and significance of risks at low doses and dose rates, as well as working with other responsible agencies to ensure that necessary research is being conducted and will provide useful results. Consideration should be given for the need to conduct appropriate health effects research, on a periodic basis, on the effectiveness of the implementation of the Commission's exemption policy.

RES
~~(EDO~~/GPA))

(SECY Suspense: 01/30/90)
(EDO Suspense: 01/16/90)

cc: Chairman Carr
Commissioner Roberts
Commissioner Rogers
Commissioner Curtiss
ACRS
ACNW
IG

NUCLEAR ENERGY ACCOUNTABILITY PROJECT

Post Office Box 129 • Jupiter, Florida 33468-0129 • (407) 743 0770
Environmental Protection • Involvement • Litigation • Information

UNITED STATES OF AMERICA
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

September 20, 1990

In the Matter of Nuclear Energy Accountability Project v. U.S. Nuclear Regulatory Commission	10 C.F.R. 2.206 Below Regulatory Concern (BRC) rule

COMES NOW, the Nuclear Energy Accountability Project, (hereinafter Petitioner), and hereby requests action by the U.S. Nuclear Regulatory Commission pursuant to Title 10 of the Code of Federal Regulations Part 2.206.

Specific Request

1. Petitioners request the immediate resignation of all five NRC Commissioners.

2. Petitioners request that a single administrator be appointed to function in place of the current commissioners.

3. Petitioners request that the BRC rule or policy be immediately discontinued by the NRC.

Basis and Justification

1. The NRC illegally denied the public of its right to participate in the formulation of a BRC policy.

2. A new study released by Public Citizen, Deregulation the Disposal of Radioactive Waste: A Status Report - 2nd edition, assesses the potential health risk posed to each state as a direct result of the NRC's BRC policy.

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3. The NRC recognizes that one additional cancer death per 20,000 persons could result each year if citizens were exposed to the maximum permitted radiation dose of 100 millirems as allowed by the BRC rule.

4. The NRC violated the federal Administrative Procedure Act (APA) by failing to publish the BRC proposal in draft form subject to public comment before issuing a final rule.

5. The NRC's BRC rule violates both the 1954 Atomic Energy Act and the 1985 Low-Level Radioactive Waste Policy Amendments Act by seeking to reduce the economic costs associated with radioactive waste disposal at the expense of public health and safety.

6. The NRC acted in an arbitrary and capricious manner by approving a BRC rule which incorporates a health risk standard which is less restrictive than is generally accepted as a matter of a public health policy.

7. The NRC, through adoption of the BRC policy, has violated its own mission to protect the public health and safety, the environment and the common defense and security within the United States of America.

8. The NRC commissioners erred in their evaluation and justification of the BRC policy by making a comparison of the BRC policy to Denver, Colorado vs. Washington, DC, Brick vs. Wood Home and a Round-trip Cross-Country Flight. In all the aforementioned comparisons, the public has a choice to accept the risk of additional radiation exposure, whereas the NRC's BRC policy affords the public no choice in being exposed to additional radiation and the adverse health affects which may result.

9. Implementation of the BRC policy will not benefit the public and will prevent State and Federal agencies and others from focusing on the activities that pose greater risks to the public. Specifically, the public will be adversely affected through:

* Less timely and less consistent cleanup of contaminated sites,
* Decreased assurance that funds set aside to cleanup and decommission nuclear facilities are adequate,
* Increased costs and overall risks to the public from managing certain types of radioactive wastes in a manner commensurate with their radiological risk,
* Decreased assurance of a consistent level of safety for consumer products containing nuclear materials.

10. The NRC regulatory exemptions using the individual and collective dose criteria will not provide reasonable assurance that individual exposures to the public from all licensed activities and exempted practices will not exceed the generally recognized dose criterion for members of the public of 100 mrem per year, given the Commission's intent to:

* Impose both individual and collective dose criteria,
* Consider the total impact of a proposed activity (not just a portion of a practice),
* Evaluate the potential that people may be exposed to more than one exempted practice,
* Monitor and verify how exemptions are implemented under this NRC policy,
* Verify dose calculations through licensing reviews and rulemakings with full benefit of public review and comment and
* Inspect and enforce licensee adherence to specific conditions and constraints imposed by NRC on exempted practices.

11. The NRC's BRC policy is not consistent with the intent of the National Environmental Policy Act and would not provide an appropriate level of environmental review under the act.

12. The NRC's BRC policy would result in greater risk levels through the introduction of radioactive materials into products which may be used by children. Additionally, Commissioner Carr stated at a recent hearing in July 1990 that a nuclear site could be cleaned-up in accordance with the BRC policy to permit a children's playground to be constructed on the site !

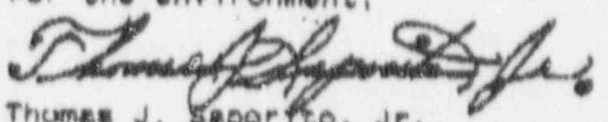
13. Commissioner Curtiss does not support the establishment of a collective dose criterion at a level of 1000 person-rem. Commissioner Curtiss stated that this level is an order of magnitude higher than the level recommended in IAEA Series No.89, as well as the level recommended by most other international groups. Furthermore, it is an order of magnitude higher than the 1988 collective dose to members of the public due to effluents from all operating reactors, the most recent year for which figures are available.

Commissioner Curtiss further stated that he considered this level of 1000 person-rem to be unacceptably high, when in the context of other risks that we regulate and in view of the fact that the purpose of this Policy Statement is to establish a framework for identifying those practices that the Commission considers to be below regulatory concern.

14. The NRC's BRC policy does not comply with Federal Law wherein the BRC policy exceeds the regulatory discretion provided by the 1985 Low-Level Radioactive Waste Policy Amendments, which specifically permits only that "regulation of a waste stream [that] is not necessary to protect the public health and safety ..." may be terminated. The deregulation criterion addressed in the 1986 BRC policy is that it may not create "an undue risk to public health and safety." The 1990 BRC policy addresses "acceptable risk" as a justification and basis for regulatory considerations. The Low-Level Radioactive Waste Policy Amendments of 1985 stated unequivocally and unconditionally that only regulation not necessary "to protect the public health and safety" may be terminated.

For all the foregoing reasons, and in the interest of public health and safety and for the protection of the environment as a whole, Petitioners request that this petition be granted.

For the environment,



Thomas J. Saporito, Jr.
Executive Director, NEAP

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cls/ts

Campaign for a Prosperous Georgia Testimony before
the Nuclear Regulatory Commission
Thursday September 18, 1990

presented by Deborah Sheppard, Executive Director

On behalf of the Campaign for a Prosperous Georgia, I thank you for the opportunity to appear before you today to discuss the policy issues surrounding the deregulation of low level nuclear waste.

Campaign for a Prosperous Georgia is a non-profit consumer and environmental group working to promote a clean environment and a healthy economy in Georgia. Our areas of concern include energy, solid waste and water. We have been extensively involved in issues surrounding nuclear safety and economics as well the development of a state level solid waste management plan.

The NRC's Below Regulatory Concern policy statement and its implication for the monitoring and management of low-level nuclear waste raises several interesting questions.

In developing this policy the NRC recognizes the financial responsibilities inherent in addressing the overall nuclear waste dilemma. It has expressed a desire to focus its financial resources on the more significant nuclear threats. The proposal may be well intended in its attempt to protect the public from the most hazardous materials, but it fails to adequately account for costs that may arise as a result of removing monitoring and control of low-level nuclear materials.

There are distinct financial advantages to separating and monitoring all radioactive waste at the source of its production. Deregulation of these materials means we loose control over how

much radioactive material ends up in any one landfill. Without monitoring and control there exists a likelihood that any given site will receive enough low-level radioactive materials to exceed "specified standards". Georgia's emphasis on regional approaches to solid waste management further increases the possibility that we in Georgia could be faced with radioactive contamination at landfill sites as a result of multiple producers using the same disposal facility for the BRC waste. It will only take one case of landfill closure due to contamination from radioactivity to set off a panic and potential public health crisis. Monitoring for radioactivity would be called for at all sites, even the smallest municipal locations.

What began as a cost saving measure could explode into a radioactivity monitoring nightmare as state and local solid waste regulators attempt to determine where the BRC waste has gone and which sites can handle more without a harmful cumulative effect.

Without the presence of radiation monitors at every disposal facility, it will be functionally impossible to know how much they are receiving or have already received.

The difficulty in tracking and monitoring regular garbage has prevented the state from moving more quickly in the implementation of solid waste reduction goals. Local governments have called upon the state to assist in the purchase of scales to measure incoming waste.

Would the NRC propose to provide radiation monitoring equipment to each of Georgia's solid waste disposal sites to assure the public the risk of contamination remained below

.regulatory concern? If not, how does the NRC propose to prevent this nightmare from occurring throughout the state ?

We maintain that segregating hazardous materials from the waste stream at their source of production makes economic sense. Similar cradle to grave monitoring has shown to be an effective way to control other toxic substances that are expensive and difficult to monitor. Local, state and federal governments and the citizens they endeavor to serve have a common interest in developing programs to manage potentially dangerous materials in ways that are effective and safe.

In closing CPG requests a response to the following questions.

* How will this accumulation of low-level radioactive materials at any given site be prevented if local monitoring does not occur ?
* We understand that the EPA is strongly opposed to this policy. Are you aware of this opposition and their reasons for it?
* Are we opening the door for deregulation of other hazardous materials including dioxins, PCB's and others?
* How does the NRC propose to protect the public from multiple sites in the same geographic region all receiving rad waste?

We are concerned that you have not fully considered the economic considerations involved in dere, .ating low-level nuclear waste. We look forward to more fully understanding the basis of this proposed change and ask that you respond to these concerns.

waste that is sure to creep in?

The Chief Deputy Attorney General of the State of Maine, James T. Kilbreth, testifying before the House Interior Subcommittee on Energy and the Environment on July 26, 1990, said it is easier to get rid of quantities of low-level waste "by regulatory fiat rather than by solving the waste disposal crisis created by the failed federal policies of the last 45 years." Some call this linguistic detoxification for the benefit of the power plants where waste is piling up, and to provide aplace for dismantled power plants at the end of their life span, which in some cases is very soon.

Providing many dumping grounds would certainly reduce the cost of clean up of contaminated sites. The cost to the public would then be, according to the NRC, one extra fatal cancer in every 100,000 Americans, which our government considers acceptable. However, because of wind and water patterns and new evidence indicating that low-level radiation (in the range 0-5 rems) is five to ten times more dangerous than was previously believed, the number of fatal cancers could easily be ten to twenty per 100,000. What are the ethics of exposing an unsuspecting public to such dangers? How many citizens must be sacrificed to the nuclear industry?

The crowning touch is having to depend on the concept of ALARA, which means that radiation exposure will be "as low as reasonably achievable." I quote from page 4 of the policy statement of the Nuclear Regulatory Commission: "NRC has endorsed the ALARA provision in regulatory practice for a number of years (10 CFR Part 20). However, NRC has not yet provided criteria that would establish the basis for defining the level of residual risk at which further regulatory control is no longer warranted."

What kind of regulation is it that has no criteria? What is meant by "reasonably achievable?" This is a very slippery

standard, if one could even call it a standard. There is no basis for defining the level of residual risk. When decisions are left to someone's subjective judgment of what is "reasonably" achievable, in essence there is no regulation and no protection for the public. One can only conclude that BRC is a sham.

Thank you for the opportunity to appear before you.

Adele Kushner
Rt 2 Box 182A, Alto, Ga 30510

References:

John Gofman, Radiation-Induced Cancer from Low-Dose Exposure: An Independent Analysis (San Francisco, CA: Committee for Nuclear Responsibility, P.O. Box 11207, San Francisco, CA 94101) 1990.

Jay M. Gould and Benjamin A. Goldman, Deadly Deceit: Low-Level Radiation, High Level Coverup (New York: Four Walls Eight Windows Press, P.O. Box 548, Village Station, NewYork, NY 10014) 1990.

George Mitchell, S. 2979, Radiation Protection Act, Congressional Record-Senate, August 3, 1990, pages S 12170-12173.

Scott Saleska, "Low-Level Radioactive Waste: Gamma Rays in the Garbage," Bulletin of the Atomic Scientists (April 1990) pages 19-25.

Rachel's Hazardous Waste News # 183, 184, 185 (Princeton NJ: Environmental Research Foundation, P.O. Box 3541, Princeton NJ 08543) June 6, 1990, June 13, 1990.

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Remarks By
Debra L. Newman
at the
Below Regulatory Concern Policy;
Public Meeting
Atlanta, GA.
September 20, 1990

I would like to thank the Nuclear Regulatory Commission for giving me the opportunity to speak today. However, I am not only speaking for myself. I am speaking for my many friends and neighbors who could not make it today due to the time of day you have so conveniently scheduled this hearing. I am also here on behalf of my 9 month old son and his future children, because they are the ones most effected by BRC.

I will be giving my remarks today on some of the remarks given by Chairman Carr of the U.S. Nuclear Regulatory Commission at the Joint Meeting of the Local Chapters of the Health Physics Society on February 20th of this year.

I will begin with a quote from Mr. Carr. In referring to the people in society which he believes wants all risk eliminated from everything he states,

> "Transportation, cigarettes, and alcohol are somehow "voluntary" risks over which they have absolute control. They choose" to travel, smoke or drink, and therefore this makes the associated risk "acceptable"--no matter how large it may be in relation to other commonplace activities in society. When it is pointed out to them that they also "choose" to turn on their light switch, and therefore must also be willing to accept the risks associated with the centralized generation of electricity, the inconsistency escapes them."

Because we choose to turn on our light, does this mean we should be willing to accept irrisponsible policies that pose a health risk? Does this mean that it should be none of our concern? Should we sit back and watch the NRC kill our children and poison our environment without thought of service? Should we accept whatever the NRC puts before us because we "choose" to turn on a light?

Mr. Carr also stated that implementation of the BRC policy "benefits society as a whole". Let's take a moment and talk about some of these so called "benefits" to society.

First, let's consider the most vulnerable in our society, our children. Children would be among the first to be effected by an increase in radiation levels. In addition, risk to the unborn fetus is multiplied by ten. Is this how the NRC plans to "benefit" the children and unborn in our society?

Next, we need to consider the increase of deaths in our society. Not to mention nonfatal cancers, birth defects and other noncancerous health effects that the NRC fails to acknowledge. We also need to mention that the risk factor increases from generation to generation. Is this how the NRC plans to "benefit" the general public?

Third, sanitaition workers would be handling BRC waste without their knowledge since BRC waste is not required to be labeled. Is this how the NRC plans to "benefit" our sanitation workers?

Fourth, we need to consider that incinerators would emit additional radioactive bottom ash and fly ash. Radioactive ash would end up on our food crops, water supplies, and in the air we breathe. The metels, furons and dioxins incinerators emit aren't enough? Is this how the NRC plans to "benefit" the general public and the future of our planet?

Next, let's consider the use of radioactive waste being recycled into consumer products. You may argue that we already have radioactive materials in consumer products. However I think we should be taking it out, not putting more into consumer goods.

The fact is, although you choose to negate it, is that 1 in 10,000 Americans will die as a result of the BRC policy. That does not even take into account birth defects, nonfatal cancer and adverse health effects. It also doesn't take in to account the increased risk to children and the unborn.

The only real "benefit" I see in this policy is the benefit to the nuclear industry. Mr. Carr points to the high cost of radioactive waste disposal as one reason for the need for the policy. Is this to say that as the cost goes up we should deregulate even more radioactive waste?

I come before you today as an angry mother, outraged by the irresponsiblity of this policy. I refuse to just stand by and let the NRC destroy my son's future and his chance for a clean environment.

PUBLIC STATEMENT ON

BELOW REGULATORY CONCERN POLICY

by: Changfuh Lan
September 20, 1990

Good afternoon Mr. Chairman and members of the panel. My name is Changfuh Lan and I am with Duke Power Company. Today I am representing a group of radiation protection professionals from Duke Power Company. I will present brief comments on certain aspects of the NRC's Below Regulatory Concern Policy Statement.

- We support the principle articulated in the Nuclear Regulatory Commission Policy Statement that there is a level of radioactivity so low as to be below regulatory concern -- or BRC. Scientific research conducted on behalf of nuclear utilities confirms that BRC is technically sound, and classification of qualifying radioactive materials as BRC would pose no health risk to the public.

- We support the NRC and the nuclear industry views that BRC is an important technical concept. The BRC concept is important because it will lead to consistent "ground rules" for practices involving virtually undetectable amounts of radiation that are so low as to have no health effects.

- We also support the process that the NRC has established to develop a standardized approach to practices involving all types of materials with extremely low levels of radiation.

Since the NRC Policy Statement itself makes no changes to existing NRC regulations, before any such changes could be made, the NRC would go through a rulemaking process, during which there would be extensive review and opportunity for public comment.

We recognize the importance of the BRC Policy Statement; it seeks for the first time to establish a coherent and consistent, risk-based approach for regulation of radiation across the board, including medical applications, consumer products and nuclear power plants. It establishes guidelines, for instance, that the staff could use when considering standards for site release after decommissioning of a nuclear power plant.

In conclusion, we strongly support the NRC's initiative to address the BRC issues. Further, we believe that development of BRC is important to the conduct of good radiation protection programs. Establishing regulatory cut-off values would assure that limited resources are being used most effectively in protecting the health of our workers and the public.

Thank you.

September 20, 1990
Public Hearing - BRC Policy
Statement submitted by Kathryn Kyker, 60 Jefferson Circle Athens, GA 30601

My name is Kathryn Kyker and I live in Athens, Georgia. I'm here today out of concern. Concern for communities across America, concern for the land that supports us all,and concern for my children. I work as a social worker. I was trained to analyse the human effect of policies. Not in technical,detached scientific jargoon but in terms of living, dying, and the length of time and quality of time in between the two.

I've read the NRC's Policy Statement on this matter. I was not reassurred. This policy seems to err in several ways. First, in its liberal practice allowance: "exemptions may be granted the release for unrestricted public use of lands and structures containing residual radioactivity." Unrestricted public use? Does this mean houses, malls,daycares could be built onthis land? Secondly, the policy and the attached comments of the commissioner and chairman openly debate whether or not its prudent to specify if radioactive materials can be recycled into children's products (they mentioned pacifiers and baby food). They openly acknowledge that children are at higher risk when exposed to radiation, and that this risk and the risk to fetuses is not assessed in their discussion on "safe exposure." They negate the clear horrendous implications of this possiblity by their discussion of whether or not they are responsible for a Justification Of Practice. And I quote: "The Commission believes that justification decisions involving social and cultural values judgments should be made by affected elements of society and not the regulatory agency. Consequently, the Commission will not consider whether a practice is justified in terms of net societal benefit." Well, what this says to me is that we, citizens of the United States, are not being given the power to make a decision about this policy- oh sure, we've got this public meeting, but it's primairly to be informed by the NRC about this policy, as the policy already published in the Federal Register on July 3, without public input, that I am aware of. it certainly didn't appear on my voting ballot- so this was decided for us and now we're allowed to comment on it. But take comfort in the fact that if we become an "affected element of society" then they recognize our right to... what? What could we do? Undump it? Drain our streams and creeks and rivers that become radiated from landfill seepage? Our rights don't seem to mean much once the damage is done. And another thing about that statement: since when is the desire for a long and healthy life devoid of unnecessary exposure to man-made radiation,"a social and cultural value" which, apparently from their point of view, not everyone would have? Personally, that's my social and cultural value, so does that mean I get my home town exempted from this policy? I doubt it. And this brings up the point of choices. In their discussion of individual dose criterion, they attempt to equate voluntary and nonvoluntary exposures to

radiation, stating that "Variations in natural background radiation apparently play no role in individuals' decisions on common matters such as where they live, whether or not they fly in airplanes, etc. Well I believe that people are not very aware of these natural radiation sources or they would demonstrate some preferences. But, even if they chose to live in an area that was higher in natural radiation, it does not then follow that these people would also shrug off nonvoluntary radiation exposure. The policy statement reads that these natural doses are commonly accepted by the public, and the implication is the public would commonly accept to use radioactive land, radioactive recycled materials, and have radioactive waste dumped like household garbage. This illustrates a low concept of the public. I guess their argument goes: if people are dumb enough to voluntarily accept radiation in their surroundings, then they deserve to be exposed to radiation nonvoluntarily also. How can the NRC use stupidity as a justification for this policy which will undoubtedly increase the risks of cancer, birth defects, and other health problems?

I have two more points to make. The first is the entire dialogue on dose criterion. I take issue with the whole premise that you can evaluate whether or not this exposure is o.k., just by assessing what will possibly result from this one policy. This does not take into account other likely, possibly daily, exposures to other non-monitored or badly-monitored emissions. For instance, if you live in Athens, you receive exposure through the air from radioactive waste generated by University of Georgia labs. Possibly, you're getting this in your water too. You may also have the bad fortune to have lived near the site of a watch plant that made lumionous dials. This site was carelessly abadoned, and at one time was declared the most radioactive site in Georgia. Now I don't think that Athens is atypical. We're lucky to not live downstream from the Tuscaloosa Acquifer, which carries radioactive emissions from the Savannah River Plant. Of course, if you live in Savannah, then you're not lucky in that regard. And who knows what else we're being exposed to? It's out there all over the place and the last thing we need is more. Even the NRC admits in their statement that there are uncertainties involved in their risk assessment and they will not fully know the effect of widespread distribution of radioactive materials in recycled consumer products until they gain more experience. How are they going to gain experience? Statistics. Statistics of deaths, defects, and disabilities that can be traced to recycled consumer products. Statistics that are going to be provided by people; people just like us in this room.

My final point is regarding the NRC justification that this will allow other national resources to be freed up for more highly radioactive materials. So that's what it finally comes down to. Not what is optimal for our health, our children's health, or for our environment, but rather, money. How we can spend less money undoing all the damage we've done. How we can justify doing less. Maybe even how we can justify doing nothing. If money is the primary motivation for this policy, and I believe

it is, then the NRC should spend its valuable time fundraising, rather than cutting corners that are going to undercut our country. I understand it's expensive, but how can you put a price on keeping our air, water food, as clean as possible? That's basic. As is the right to not have radioactive recycled consumer goods. As the" affected elements of society," we have the right and the responsibility to refuse this policy that sets a dangerous precedent in its acceptance of unacceptable risks and long-term contamination.

Kathryn Pickett

BETWEEN THE LINES

An issue update from the *Blue Ridge Environmental Defense League*

Vol.2 No.3 September 1990 Recycled Paper

LOW-DOSE EXPOSURE TO RADIATION
INVISIBLE, ODORLESS, TASTELESS, AND DEADLY

Find out just what people will submit to, and you have found out the exact amount of injustice and wrong which will be imposed upon them.
Frederick Douglas, August 4, 1857

"I hope this book will show many people how current practices will work very badly for human health, and I hope this book will empower younger generations to prevent the miseries of unnecessary cancers and unnecessary inheritable injuries."
-John W. Gofman, M.D., Ph.D.

The above quotation states with remarkable simplicity and economy the great value of a new study entitled Radiation Induced Cancer from Low-Dose Exposure: An Independent Analysis. The release of this study by Dr. Gofman in January of this year gives environmental groups opposing radioactive waste dumps a solid foundation upon which to base their fight.

The study began as an update on the risks of cancer caused by ionizing radiation and bases its findings on the data collected by government agencies from atom bomb survivors since World War II.

The conclusions of this study are summarized as follows:

1. There is no safe dose or dose-rate of ionizing radiation with respect to induction of human cancer. *This is proven beyond any reasonable doubt.*

> What is Ionizing Radiation?
> In general, an atom has the same number of electrons as protons, balancing the electrical charge. But, when radiation impinges on any material, electrons are knocked out of orbit, and *ions* are formed in the material.
> -Radioactive Waste Campaign FACT SHEET

2. It would be *impossible* for low total doses of ionizing radiation, received slowly from routine occupational or environmental sources, to be less carcinogenic than the same total dose received rapidly.

3. There is no support for speculations about any net health *benefits* from exposure to low-dose ionizing radiation.

4. There is very strong support in the direct human evidence for recognizing that cancer risk is probably more severe per dose-unit at low doses than at moderate and high doses.

5. The cancer-risk estimates for both rapid and slow rate low-dose exposures, provided in

very encouraging because they say there will be no cancer risk at very low dose, and they also say that at high dose there will be no late effects of marrow damage. All that is rather comforting.

You also have the great deal of work that's been done with regard to prenatal irradiation and childhood cancers, and they've come out almost consistently in favor of there being an association. That is to say that a single X-ray taken shortly before birth is sufficient to increase the risk of an early cancer death. And following on to that, there's even been a study that has incorporated measuring the effect of fetal exposure to natural background radiation, and has said this may be a cause of the so-called naturally occurring cancers.

BREDL: Your work on childhood cancers is, of course, what alerted the world to these risks. But these two studies would seem to point in opposite directions. You said there was a third?

Dr. Stewart: In between these two studies stands the work on the risks to workers in the nuclear industry. That was studied by Dr. Mancuso and his associates, of which I was one, and we found evidence of a cancer risk at very low doses. Thus we were in favor of saying that the pre-natal X-ray story is more to be trusted than the other. There have since been what I call in-house studies by the U.S. Department of Energy revising that study and telling us that there really isn't any risk.

So it comes back to, could anything have gone wrong with the A-bomb survivor study? And recent work suggests, yes, there was a mistake there. The mistake was as follows: When you picked up a population of survivors five years after the event and you concluded it was a normal population because it had a normal non-cancer death rate, you actually were making a very grave mistake. The death *rate* was normal, but the *reason* it was normal was because of two late effects of radiation which have more-or-less cancelled one another out.

BREDL: You're saying that the appearance of normal was a statistical accident? Would you elaborate?

Dr. Stewart: There had been tremendous selection due the appallingly high death rate in the early days following the bombing which had had the usual survival of the fittest effect. Please recall that you have two effects of the epidemic due to acute bone marrow depression. Both of these effects had affected the immune system. One had pushed up the population's level of immunological competence and the other pushed it down and it more-or-less works out as a balance. We were able to prove from recent releases of data that if you look closely at it you can find evidence of these two things. So the true story with regard to A-bomb survivors is not that there is no late effect of the A-bomb except radiation, but that there are still three effects; selection, marrow damage, and cancer. That is the reason you get this false impression of no risk at low doses.

BREDL: What are the implications of all this for the average citizen?

Dr. Stewart: At the end of the line, for every extra cancer death you are really postulating there will be genetic damage and therefore damage for the future generations of mankind. ◇