



Department of Energy  
Washington, D.C. 20545

FEB 1 1979

Section 7  
Ref #1  
Ref to NUREG-0527

Mr. Richard Cunningham  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Cunningham:

Your request to DOE Field Offices and DOE Headquarters for review of the January 15, 1979, Draft NRC Report "Regulation of Federal Radioactive Waste Activities" has resulted in a significant number of comments.

We are currently in the process of evaluating and collating the comments; however, in view of the tight schedule for NRC preparation of the final report, obtaining Commission review, and possible redrafting to accommodate Commission comments, we have decided to forward the comments now available in the unedited and uncollated form (as received). Because of this they may not reflect DOE policy and may contain ambiguous or inaccurate statements. We plan to fully review the enclosed comments in the next few days, and utilize them in preparing a more complete and accurate commentary on the NRC Draft. The enclosed comments should not be quoted as DOE positions without specific DOE approval and, for the present, should be treated as raw data.

From my staff's review of the Draft Report we see the following points as most important:

1. The discussion of relative hazards of DOE wastes vs. commercial wastes in the Executive Summary, Section 3.0 and Appendix C of the report are non-factual, incomplete and easily misconstrued. We believe these portions of the report should be revised to include only factual matter which relates specifically to the relative hazard or risk. The revised discussion should include statements for both DOE and for commercial waste of relevant factors such as:

- a. Inventories of various levels of specific activities
- b. Isotopic content

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c. Site description, including population density, hydrology and meteorology

d. Discussion of waste forms, i.e., liquid, solid, gaseous, salt cake, low specific activity hardware from D and D operations, etc.

2. A summary of Appendix E "Current, Environment, Safety and Health Practices of DOE" should appear in the Executive Summary, as well as in the body of the report. As the report is now organized, the placement of this very relevant information only in the appendix of the report could result in inaccurate opinions of the DOE safety program in the radioactive waste area.

3. NRC should be more factual in its assessment of potential benefits associated with NRC regulatory authority. For instance, on Summary page 8, NRC claims as a potential benefit "...increased public confidence in Federal waste management activities." It is not clear that this has been the case in the Light Water Reactor industry. In several states where nuclear reactors have been properly licensed, nuclear moratoria have been proposed and in some cases adopted, in spite of the licensing activities of NRC. We believe the public acceptance of DOE facilities located in many states across the nation has been very good by any measure. It should be noted that DOE maintains public document rooms in the vicinity of the major field offices which provide a wide spectrum of information on the DOE operations and their potential impacts.

4. To provide appropriate balance, the report should include some discussion of the potential adverse effects on DOE operations which could result from extension of NRC regulatory authority. The discussions should address the following as a minimum:

a. Delays in obtaining licenses could result in continued use of older but no longer adequate tanks or other equipment.

b. Extension of NRC authority could cause dilution in the present clear understanding that safety is a line management responsibility.

c. An overly strong regulatory role could erode the DOE's ability to manage its own programs with chaotic consequences in all operations including safety programs. Congress is likely to withhold funds from DOE programs that fail to reach stated objectives, even if such failure were entirely due to failure to obtain proper licensing.


d. The high costs of licensing incurred by both NRC and DOE could soak up funds that might otherwise be available for safety hardware.

Richard Cunningham

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Your evaluation and use of the enclosed comments may result in additional questions or required clarifications. Please feel free to call for our assistance as needed. We will forward additional comments as they become available.

Sincerely,



Robert W. Barber, Acting Director  
Safety Engineering Division

EV80/SED24

Enclosures:

1. AL Comments dtd 1/29/79
2. ID Comments dtd 1/26/79
3. NV Comments dtd 1/29/79
4. OR Comments dtd 1/31/79
5. RL Comments dtd 1/29/79
6. SR Comments dtd 1/26/79
7. CI Comments dtd 1/31/79



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29 JAN 1979

Robert W. Barber, Acting Director, Nuclear Safety Coordinatio  
Headquarters

NRC STUDY - REGULATION OF FEDERAL RADIOACTIVE WASTE ACTIVITIE

- References:
1. Memorandum, Cunningham, NRC, to DOE F.O. Managers, dated January 15, 1979, Transmittal of NRC draft report "Regulation of Federal Radioactive Waste Activities".
  2. Classified Memorandum, T. R. Clark, AL to A. Bryan Siebert, DP, dated January 18, 1979, Study Required by Section 12 of NRC's FY1979 Appropriations Legislation.
  3. Memorandum, T. R. Clark, AL, to A. Bryan Siebert, DP, dated December 20, 1978, Impact of NRC Licensing on National Security.

As requested in reference 1, submitted herein are AL comments on the NRC draft report "Regulation of Federal Radioactive Waste Activities". AL comments regarding the impact of NRC licensing on national security have been submitted to DP, references 2 and 3, and support the AL position that NRC regulatory control is unnecessary and would not provide benefits such as increased safety, uniformity, and public reassurance. Examples are given regarding curtailment of nuclear weapons production as a result of regulatory control and AL radioactive waste storage, disposal, and processing facilities are described.

AL comments were prepared in recognition of the fact that the executive summary does not include, 1) conclusions and recommendations, or 2) national security implications of regulatory control over defense activities. These sections are left blank as explained in the executive summary on pages 3 and 8.



Executive Summary

Page 1, 2nd paragraph, line 2 and 3 - NRC should make a clear statement that the draft report does not represent a listing and inventory of all radioactive waste activities presently conducted by Federal agencies. The listing and inventory is of storage, disposal, and processing activities as defined by the NRC for the purpose of the study.

Page 1, 3rd paragraph - The relative hazards portion of the NRC study is based on an assessment of consequences rather than risk or probability that hazards will occur. On this basis, the regulator must assume that the probability of any identifiable hazard is unity and must be prevented. This approach is undesirable since a risk versus benefit analysis is precluded and the safety level of an activity can be driven well beyond its economical viability rather than to the acceptable level of protection. The impact becomes significant in terms of cost and diversion of resources.

Page 2, last paragraph - It is important to note that the draft report did not include resource costs for DOE as a result of regulatory control. This point is easily overlooked when examining the cost tables provided on pages 7-7 and 7-9 of the draft report.

Page 4, question 2, site listing - In reference 3, AL did not include Rocky Flats Plant as a disposal facility which the NRC has done (see Table 2.1 of draft report). The RFP areas listed by the NRC are not considered by AL as permanent disposal with no intent to exhume.

Page 5, question 6 - The NRC provides no basis for the conclusion that an intervening processing step between storage and disposal should be regulated. Regulatory control of waste processing should be unnecessary before, or after storage. Even Section 12 of the NRC Authorization Bill directs the NRC study to include storage and disposal activities. No mention is made of processing.

Page 6, question 7, regulatory options - Nuclear weapons design, production, assembly, and testing activities involve a complicated network of lead times, schedules, and interdependence among numerous defense facilities in the U.S. The regulatory process, as described in

Option A covering defense waste activities could potentially severely impact nuclear weapons activities.

Page 6, question 7 - Regulatory Option C would appear to have a greater impact on DOE activities than Option B, however, the NRC cost is greater for Option C than Option B. This distinction and apparent reasoning for the order which options are presented should be made. Because of the order, Congress may assume Option B provides more control and costs more than Option C.

Page 8, question 11 - Since the NRC could not perform a detailed and time-consuming study of DOE storage and disposal activities, the NRC identifies two theoretical potential benefits of regulatory control, i.e., increased health, safety, and environmental protection, and increased public confidence. The AL position regarding these potential benefits is described in reference 3.

Page 9, question 12, 1st paragraph - The NRC position that a particular regulatory option could have potential benefits despite the adequacy of DOE's existing program is disturbing. (See following comments regarding Question 12.)

Page 9, question 12, Independence of Review -

- 1) Conflict of interest - the formal program and arrangement by which the DOE oversees the activities of contractors activities may be no less a conflict of interest than when one government agency oversees another. The conflict of interest logic would not stand up under close scrutiny of DOE practices.
- 2) The "two heads are better than one" principle may not be desirable to apply particularly if one head is adequate and two heads will result in a significant cost increase.

Page 9, question 12 - There is no evidence that increased depth of review, public participation, and increased inspection authority will provide the benefits described.

Regulation of Federal Radioactive Waste Activities, Draft.  
Dated January 15, 1979

Page 1-2, 1st paragraph - The listing and inventory only covers storage, disposal, and processing facilities as

defined by the NRC and does not comprise a complete listing and inventory of all radioactive waste in Federal custody.

Page 1-5, section 1.3, Waste Management Activities Defined - The Waste Storage definition is such that waste packages being held for any length of time (e.g., accumulations of drums in a warehouse for a few days or weeks awaiting treatment, disposal, or transfer to a retrievable storage facility) constitutes waste storage. As such, essentially all AL facilities, e.g., Mound Facility, Pinellas, ITRI, etc. would perform waste storage activities.

The reference 2 and 3 submissions are based on the assumption that storage is not accumulation of TRU waste packages in a warehouse or other staging area less than one year prior to shipment to a retrievable storage facility for holding until a disposal mechanism is available.

Since there is no exclusion of wastes being held for shipment or processing in the Waste Storage definition, the definition of Waste Processing could be interpreted to include those activities involving processing of newly generated solid or liquid radioactive wastes. Accordingly, the listing and inventory of DOE waste facilities would significantly increase over that presented in the NRC draft report.

Contaminated soil should be recognized as a special case of waste activity. Generally, such activities are reported in the radioactive waste management site plans. In some instances, where past actions involving placement of contaminated debris in pits or trenches, e.g., at Rocky Flats, the contaminated area is not truly waste disposal in the sense of permanent shallow land burial since the contaminated debris and soil waste would presumably be exhumed during D&D of the facility. On the other hand, the activity may or may not fit the description of waste storage depending on the intent of the NRC. If such activities do constitute disposal or storage, the Mound Facility should be included as well as other locations with contaminated property, e.g., Air Force contaminated property areas located on Kirtland Air Force Base.

Page 1-5, waste processing - Processing should not be subject to the NRC study as previously stated in comments on the executive summary.

Page 2-1, low-level waste, 1st paragraph - There are certain low-level waste types that do require shielding, e.g., high beta-gamma wastes from a nuclear power reactor (other than spent fuel).

Page 2-4, special activities - It would appear that contaminated properties other than those associated with disposal or storage were also excluded. (Exception being Rocky Flats Plant).

Page 2-4, last paragraph - Activities at Mound Facility are clearly described in the NRC reference 22 and there is no reason to suspect past waste activities at Mound. Mound could have been included in the NRC inventory for similar reasons that the Rocky Flats Plant was included. However, AL believes the intent of Congress is such that the areas listed at the Rocky Flats Plant would not be considered for regulation.

Page 2-6, table 2-1 -

- 1) The burial of TRU waste prior to 1970 is not reflected in this table, e.g., TRU waste is buried at LASL.
- 2) A footnote should be added to the table to indicate that the definition of "existing activities" is those for which construction or procurement occurred prior to 1982 (see pg. D-1).

Page 2-7, table 2-2 -

- 1) A footnote should be added to the table to indicate that the definition of "future activities" is those for which construction or procurement occurs subsequent to 1982.
- 2) Based on the above definitions of "existing" and "future" the table is misleading in that most readers will probably assume LASL or Idaho, for example, will not store wastes in the future.
- 3) The A.2.8 entry for LASL should be omitted and re-entered for INEL.

Page 2-10, (D&D discussion) - Recommend the recent lead assignment made to RL for D&D of ET facilities be acknowledged.

Page 2-12, DP sites - Sandia Laboratory should be Sandia Laboratories.

Page 2-13, table 2.6 -

- 1) The Mound Facility, Bldgs. PP and R were a 1978 start, not a 1980 scheduled start.
- 2) The Hanford Z Plant is a RL responsibility, not AL.

Page 3-1, 2nd paragraph, line 5 - "assuming a probability of unity" is undesirable for reasons stated in the AL comments on the executive summary.

Page 3-2, section 3.2.3, 1st paragraph - The "no 150-year delay" assumption for the accident scenarios is unrealistic regarding the intrusion by man accident. Administrative controls should be highly effective in precluding accidental intrusion by man.

Page 3-3, figure 3-1 - The DOE TRU entry is for TRU waste stored at ID only. This is not evident by the figure.

Page 5-3 section 5.3.5 - The manner in which the NRC describes maintenance of status quo is misleading. The point should be made that NEPA requirements will be met regardless of whether NRC regulatory jurisdiction is extended or not.

Page 6-4, 1st complete paragraph - The NRC incorrectly assumes that the only waste activities of possible concern to defense program schedules are those connected with future storage of HLW. This is not the case as evidenced by information provided in references 2 and 3. Storage of DOE TRU wastes and burial of DOE low-level wastes are in several cases closely coupled with weapons production operations.

Page 7-1, Introduction - The statement should be made that DOE costs are excluded from the analysis.

Page 7-2 - See earlier comments regarding conflict of interest, and "two heads are better than one" principle.



Page 7-6, last paragraph - HLW Disposal appears to be omitted from the list.

Page A-1, organization list -

- 1) The definitions of "existing" and "future" should be stated.
- 2) The organizational listing does not account for burial of TRU wastes which occurred prior to the TRU waste retrievable storage requirements.

Page A-4, LASL - The activity is not unknown (less than 400,000 curies).

Page A-4, LASL - The total volume buried includes TRU and non-TRU waste which is mixed.

Page A-4, LASL - Two locations, Area G and Area T, are presently used for LLW disposal.

Page 7-7, section 7.5.1.3, Schedule Impacts of Licensing WIPP

1st paragraph - WIPP becoming operational in 1986 is doubtful. The WIPP schedule allows about 2 years for licensing activities and the NRC is now discussing the possibility of an 8 to 12 year schedule.

2nd paragraph - Figure 5.7 is referenced, but not in the draft report. If the same as figure D-4, it is evident that the provisional construction authorization (PCA) for early shaft construction will add a substantial delay in obtaining an operational license for receipt of waste.

3rd paragraph - See paragraph's 1 and 2 comments and, in addition, note that a large portion of delay will be due to the public hearing process over which neither NRC nor DOE has total control independently or jointly.

4th paragraph - A delay of 2 or 5 years is short based on our understanding of current NRC thinking.

Page A-5, Pantex - Also, low-level wastes have been stored in silos as described in the NRC reference 22, for Appendix A.



Page A-6, Pantex - The activity of the waste buried and stored is less than 1500 curies.

Page A-6, RFP - The activity is very low which can be readily concluded from the NRC reference 22, for Appendix A.

Page A-6, RFP - The reported volume includes, 1)  $13.6 \times 10^4$  m<sup>3</sup> of waste, the majority of which is non-radioactive, contained in two sanitary landfills, and 2)  $6 \times 10^4$  m<sup>3</sup> of sludge located at the bottom of holding ponds which would be removed when use of the ponds is discontinued. A more realistic estimate of contaminated debris and soil in trenches and pits would be  $4 \times 10^3$  m<sup>3</sup>.

Page A-10, Pantex - Total activity of the waste buried and stored is less than 1500 curies.

Page A-11, Pantex - Total volume of TRU waste ( $>10\text{nCi/gm}$ ) stored is estimated to be 33 m<sup>3</sup> and the activity is low.

Page A-15, A.2.2 - Section 5.3.5 is referenced for additional information and references regarding the WIPP, however, section 5.3.5 deals with maintenance of status.

Page A-16, section A.2.6, LASL - The R&D transuranic waste treatment facility is not a plutonium facility and is limited to an inventory of 100 grams of plutonium. The facility will not incinerate stored wastes and will only burn low activity TRU wastes for the purpose of achieving R&D objectives. This facility should not be listed as a processing facility. LASL does have a Waste Volume Reduction Facility on the drawing boards which would be completed in the mid 1980's and would probably include an incineration capability for burning as generated and stored TRU wastes.

Page B-17, last paragraph - There are two active locations (Areas G and T) for LLW disposal at LASL.

Page B-17 and B-18, LASL - Excluding the metal shed which is used for temporary above ground staging of TRU waste there are four storage facilities which are: storage pit (Area G), storage trenches (Area G), corrugated metal pipe (CMP) storage (Area G), and corrugated metal pipe (CMP) storage pit (Area T).

Page B-19, 1st paragraph, last line - Should read: "Wastes placed into storage are limited to 1g Pu-238 per 210 l drum, 100 g of other TRU per 115 l drum, 200 g of other TRU per 210 l drum, or 175 g per m<sup>3</sup> up to a maximum of 350 g per crate.

Page B-19, 2nd paragraph - Should read: "Wastes contaminated with Pu-238 in excess of 1 g/drum or uranium with high radiation (U-233) are stored in concrete casks and placed into shallow trenches."

Page B-19, 3rd paragraph - Should read: "The CMP storage trench at Area T is used for storage of cemented waste containing plutonium and americium. The CMP storage facility at Area G is used for retrievable storage of high beta-gamma waste."

Page B-42, past waste disposal methods and locations for Rocky Flats - Should be changed as follows:

1,2 - Oil Burning Pits (Pit 1, 1957) and Pit 2 (1956 and 1961-1965). Oil containing depleted uranium was burned and the residue covered with fill. Pit 2 was excavated in 1978 and contaminated residues removed.

3,4 - (Third and fourth sentences should be changed). Trenches T-2 and T-8 contain sanitary sewage sludge and flattened empty drums. The larger pits contain a larger fraction of plutonium than the smaller pits.

5. - Asphalt and Soil Disposal Areas (1969 and 1972). This is a fill area covered by two to three feet of soil and contains low concentrations of plutonium.

6. - (Change second sentence). These pits were dug to house ash residues from incineration of general combustible waste which included about 100 grams of depleted uranium.

7,8 - (Add two sentences). Contaminated sewage sludge containing a total of 1 to 1.5 millicuries of alpha activity is buried at the current landfill. Twenty kilograms of depleted uranium is buried at the original landfill.

9. - (No change)

10. - Area 903 (1958-1967). This area was used to store drums of plutonium contaminated oil and became contaminated when the drums leaked.

Page B-44, 1st paragraph - Last sentence should be changed: "Radioactive wastes are prepared for storage at the Idaho National Engineering Laboratory (TRU Wastes) or for disposal at the Nevada Test Site (non-TRU Wastes).

Page B-45, 1st paragraph - Kirkland Air Force Base should be Kirtland Air Force Base.

Page B-45, beginning of 2nd paragraph - Sandia Labs is under the direction of Albuquerque Operations Office not San Francisco Operations Office.

Page B-45, 6th paragraph - Should read: "Burial pits are used to dispose of waste with security classifications, or waste in excess of 2.5 mrem/hr., and uranium machining waste, as well as other uranium waste that is a fire hazard."

Page B-45, 7th paragraph - Should be changed: "Prior to 1960, small quantities of suspected alpha contaminated wastes were placed in the Area II burial ground (less than 1 gram of Pu-239). There is no TRU waste buried or stored at Area III. SLA will begin generating TRU Waste in 1979 which will be shipped to LASL for storage.

Page B-46, 1st line - Kirkland AFB should be Kirtland AFB.

Page C-2, 4th paragraph, second to last sentence - Should read: "The controlling isotopes are all long lived and one or more are found in significant quantities in most types of radioactive wastes considered in this study." The wording as is could be misread to mean all the controlling isotopes are found in significant quantities in most waste types.

Page C-3, figure C-1 - "DOE TRU" entry should be changed to "DOE TRU stored at ID".

Page C-6, figure C-2 - "DOE TRU" entry should be changed to "DOE TRU stored at ID".

Page C-7, figure C-3 - (DOE "Stored" TRU) entry should be changed to "DOE TRU stored at ID".

Page C-7, figure C-3 - Is the omission of DOE HLW from the figure intentional?

Page C-10, section C.3.2.1, line 4 - Considering administrative controls including health physics measures, 1920 hours per year seem unrealistic for a worker to inhale resuspended soil in the presence of earth moving equipment.

Page C-14, section C.4.3.4, DOE, LLW, LASL - AL is unable to verify the accuracy of the values stated in curies/cubic meter for the isotopes listed. We are unaware of the "Defense Waste Documents" referenced, the cut-off date for calculation, respective volumes, or assumptions regarding decay.

Page D-11, section D.2.5, Full Licensing of TRU Disposal (WIPP)

2nd paragraph, last sentence - The implication here is that the DOE will be controlling schedules on licensing activities. There is also the likelihood that significant delays will occur due to NRC inability to meet their own internal review schedule.

5th paragraph - HLW repository licensing standards and guides may not be directly applicable to TRU repositories.

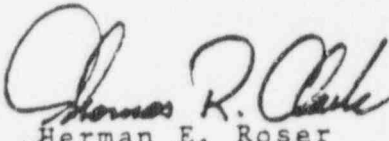
Page D-13, figure D.4 - In general, the schedule appears too optimistic and is not consistent with the NRC internal scheduling which indicates 8 years, assuming no PCA and 12 years a PCA.

Page E-3, figure E.2 - Under Assistant Secretary of Defense Programs, Mound Laboratory should be Mound Facility and should be listed under Weapons Facilities instead of Laboratories.

Page E-8, following line 20 add - The DOE and field offices have implemented a formal system for reporting and investigating accidents, incidents, occurrences, and near-occurrences involving ES&H matters.

Page E-10, line 7 - Rewrite the sentence beginning in this line as follows: The field office (and DOE Headquarters as necessary) reviews and approves or augments these criteria.

Page E-13, section E.7.8, public participation - Mention should be made that close liaison is encouraged and maintained between contractors/area offices, and state/local governments. Also, DOE facilities are subject to regulation under the Clean Air Act and Federal Water Pollution Control Amendments of 1972 and 1978. Previously, the USEPA administered these programs with public involvement where appropriate. Under recent Executive Order, the states may elect to administer pollution abatement programs at Federal facilities.

  
Herman E. Roser  
Manager

WMB:RYL (U-643)

cc: A. Bryan Siebert, OASDP, Headquarters  
A. L. Dressen, ETW/P, Headquarters



Department of Energy  
Idaho Operations Office  
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Idaho Falls, Idaho 83401

JAN 26 1973

POOR ORIGINAL

TO: R. M. Barber, Director  
Safety Engineering, EV-89, MSE-201, DOE-HQ

FROM: J. P. Hamric, Director  
Nuclear Fuel Cycle Division

*J. P. Hamric*

SUBJECT: COMMENTS ON DRAFT NRC REPORT "REGULATION OF FEDERAL RADIOACTIVE WASTE ACTIVITIES"

ID has reviewed the subject report and has the following comments:

- (1) Section 7 - The extended discussion of supposed benefits in this section is not appropriate. The NRC report itself describes the benefits as theoretical, potential, nebulous, and unquantifiable, and states "without a detailed and time-consuming study of DOE's present and proposed waste disposal activities, it is not possible to ascribe concrete benefits and costs to extensions of NRC regulatory authority." The analysis given in this section lends an air of truth to something which has little basis in fact.
- (2) Page 7-7 - It is not clear whether the costs given in the table on this page are annual costs or total program costs and whether they are NRC costs only or NRC/DOE costs. If they are total program costs, they appear much too low. Also, the relationship between manyears and dollars is not clear.
- (3) Page A-3 - The activity of LLW disposed in the RMMC should be  $7.8 \times 10^6$  Ci rather than  $3.4 \times 10^6$  Ci.
- (4) Page A-3 - The discussions on page 2-4 exclude radioactive effluents from this study. Consequently the ICPP area, the FOF area, and ponds should be excluded from this listing.
- (5) Page A-13 - The volume of high-level waste located in the liquid tanks is  $10,260 \text{ m}^3$  rather than  $872 \text{ m}^3$ .
- (6) Page A-13 - The volume of waste located in the bins is  $1500 \text{ m}^3$  rather than  $99 \text{ m}^3$ .
- (7) Page A-16 - Section A.2.6 should also include the Slagging Pyrolysis Incinerator planned for installation at INEL.



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- (8) Page B-13 - The second sentence of the fourth paragraph implies the RWMC has seepage ponds, which is not true. There is only one pond and it isn't actually radioactive.
- (9) Page B-13 - No tornadoes have been documented on the INEL although two have been sited in areas adjacent to the INEL.
- (10) Page B-13 - The last sentence in the fifth paragraph should read, "Groundwater depths vary from 225 feet to 600 feet."
- (11) Page B-13 - fifth paragraph - Revise the next to last sentence to read: "The potential for a damaging earthquake is low although the INEL is located within a designated Zone III seismic area."

cc: B. Siebert, DOE-HQ, OAS/DP  
G. Oertel, DOE-HQ, ETA/P

POOR ORIGINAL



Department of Energy  
Nevada Operations Office  
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JAN 29, 1979

Robert W. Barber, Acting Director  
Nuclear Safety Coordination (EV-80), HQ

REGULATION OF FEDERAL RADIOACTIVE WASTE ACTIVITIES

The attached list is the Nevada Operations Office comments on the draft "Report to the Congress on Extending the Nuclear Regulatory Authority to Federal Radioactive Waste Storage and Disposal Activities."

R. W. Newman  
Assistant Manager  
for Operations

cc: A. B. Siebert, Jr., Dir.  
Inst. Liaison & Comm.  
Defense Programs (DP-80),  
HQ

POOR ORIGINAL

COMMENTS ON "REGULATION OF FEDERAL RADIOACTIVE WASTE ACTIVITIES"

Following are the DOE/NV comments on "Regulation of Federal Radioactive Waste Activities."

1. Page 1-2, last paragraph, 1st sentence - Begin sentence with "Underground and surface radioactive debris resulting from..."
2. Page 2-4, paragraph 2.3.1.3 - Suggest that the reason to be listed under "Radioactive residues resulting from nuclear...", state "The problems associated with this debris are unique, and their evaluation could pose a problem to National security."
3. Page 2-6, include under NTS-Storage-LLW - "A.1.4."
4. Page 2-7 - Insert A.2.1 in Table 2.2 for NTS Disposal LLW. Also A.2.6 for NTS Processing TRU.
5. Page 2-9, paragraph 2.3.3.2, next to last sentence stating; EPA has trivial quantities...; change this sentence to read, "EPA (a DOE/NV contractor) has trivial quantities of unlicensed waste at its Las Vegas laboratories to be disposed of at the Nevada Test Site."
6. Page A-4, under Nevada Test Site (NTS)" - Delete last two sentences and replace with: "The volume and activity of contaminated surface waste would be difficult and costly to assess; however, DOE has a disposal plan for these defense wastes. At the two NTS waste management sites, the buried waste volume/curies is  $2.4 \times 10^4 \text{ m}^3$  and 3.8 million curies."

7. Page A-14 - Add under paragraph A.2.1:

"Nevada Test Site

"LLW generated by defense programs and their contractors will continue to be disposed of at the NTS."

8. Page A-16 - Add under paragraph A.2.6:

"Nevada Test Site

"A LLW and TRU waste processing building is to be constructed in FY-79 at Area 5, Radioactive Waste Management Site on the Nevada Test Site."

9. Page A-18, references 33 and 34 - Should be changed to read:

33. "Operational Radioactive Waste Management Plan for the Nevada Test Site" 1978, NVO-185, USDOE/Nevada Operations Office."

34. "An assessment of the Nevada Test for Low-Level Waste Management," 1978, NVO-193, USDOE, Nevada Operations Office and REECO.

10. Page B-26, 4th paragraph, 3rd sentence - Modify this sentence to read as follows: "...consists of low-level contaminated materials, i.e., heavy military equipment, metal testing towers, and other steel and iron debris from atmospheric testing during the 1950's.

11. Page B-26, last paragraph, 6th sentence - correct the values shown to "660 and 1640 feet," and add to this sentence "...below the surface."



Department of Energy  
Oak Ridge Operations  
P.O. Box E  
Oak Ridge, Tennessee 37830

POOR ORIGINAL

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January 31, 1979

Robert W. Barber, Acting Director, Nuclear Safety Coordination,  
Mail Station E-201, Germantown

COMMENTS ON NRC DRAFT "REGULATIONS OF FEDERAL RADIOACTIVE WASTE  
ACTIVITIES"

In response to the January 15, 1979, letter from R. E. Cunningham of NRC to R. J. Hart of Oak Ridge requesting our review and comments on the first draft of subject report, we offer the following opinions, observations, and suggestions.

We believe that extending licensing regulations to DOE handling, storage, and disposal facilities for defense radioactive wastes would result in unnecessary and severe restrictions and would impose tremendous difficulties upon waste operations. Our belief concerning this matter is that safety and control can be assured through existing and improved technologies and procedures and that the implied regulatory actions would extend undesirable responsibilities to the already overburdened NRC and would not have assets which would overbalance the extensive slowdowns and possible shutdowns.

The draft report could be improved by responding to the enclosed comments.

Since there is geographical interrelationship between the three plants in Oak Ridge (ORGP, ORNL, and Y-12), we suggest a total Oak Ridge area map showing the three plant locations. The burial grounds should also be included. We believe an OR area map should be available to you similar to the SR map (Fig. D.16.1), and we suggest that it be incorporated in the final report.

Enc 4

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3.

Robert W. Barber

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January 31, 1979

We hope our statements are of some assistance and would welcome the opportunity to review and comment on the reports' "Conclusions" and "Recommendations".

Sincerely,

*for Charles A. Kiser*  
R. J. Hart  
Manager

ER-12:DEL

Enclosure:  
Comments on  
Draft Report

cc w/encl:  
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COMMENTS ON NRC DRAFT "REGULATIONS OF FEDERAL  
RADIOACTIVE WASTE ACTIVITIES"

Volumes of radioactive waste which were brought to the attention of the NRC reviewer by ORO site representatives are not in all cases reflected in the report.

<u>SITE</u>	<u>VOLUME OF LLW AT END OF FY 1978</u>
ORNL: Liquid Sludge (contained)	466,000 gal.
Burials	184,000 M <sup>3</sup>
Y-12:	85,470 M <sup>3</sup>
ORGP: Metal (stored)	10,000 T
Burials	138,490 M <sup>3</sup>
Paducah:	6,549 M <sup>3</sup>
Portsmouth:	968 M <sup>3</sup>
Fernald:	*337,008 M <sup>3</sup>
LOOW:	783,000 M <sup>3</sup>
W.S.: Quarry	1,520,000 M <sup>3</sup>
Pits	5,940,000 M <sup>3</sup>

\*Includes 5,522 M<sup>3</sup> owned by African Metals, Inc.

Tables 2.1, 2.2, 2.3

Niagara Falls -- The correct name is Lake Ontario Ordnance Works (LOOW) as indicated in Table 2.5.

Table 2.5

Weldon Spring (not Springs). Also, a recheck on assigned programmatic responsibilities might be in order.

Figures 3.1, 3.2, 3.3

The 600,000 MWe-yr. should be 300,000 with relative hazard adjustments as necessary. DOE's forecast is 300,000 MWe-yr. by the year 2000.

Figure 3.3

ORNL ILW is not 10<sup>4</sup> greater relative hazard than LASL buried wastes or Idaho LLL, since ILW is disposed of by shale fracturing as a solid in shale at depths of 300-900 feet.

Pages 6-7

The section beginning with "The detailed description..." has been repeated in the report.

Page 7-1, Section 7.2

Line 1 - fifth word is misspelled.

This presentation seems to try to justify regulation for the sake of regulation and assumes (in Para. 2) that DOE's care, concern and containment of rad waste is less than that applied in the commercial sector. Actually, the opposite appears to be the case. We believe the opposite is true. The multiple levels of existing DOE review is documented in Appendix E. These exceed by far the level of review applied to the commercial waste disposal.

Page 7-2, Section 7.3.1.1

The first paragraph indicates that there is really no need for extension of NRC regulations to DOE's activities and that, at the most, benefits from imposition of a particular regulatory option would be very marginal.

Independence of Review

This section seems to indicate that DOE would subordinate public health and safety to operational concerns. We don't agree with this.

There are already multiple levels of review; i.e., contractor technical and engineering staffs, contractor management staff, DOE Field Office technical and engineering staffs, DOE Field Office management staff, DOE HQ reviews, in addition to the utilization of consultants.

Page 7-3, Section 7.3.1.2

The public already has the opportunity to participate.

Section 7.4

Line 4 - opportunities is misspelled.

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Pages 7-3, 7-4, Section 7.4.1.1

Independence of Review - This section is very confusing. We have no knowledge of an existing regulatory program. Reference is made to Option C which says: "This double-check would not encompass a detailed environmental, safety, and health review;" yet Page 4-4 Option C requires the full EIS treatment.

Page 7-7

Figure 5.7 is missing.

Page 7-8

Line 1 - Last word should be "injection" not "inspection."

The OR-ILW Hydrofracture Facility examples show the lack of real need for NRC licensing. Costs but no benefits are shown. An additional cost is having to use the existing less-safe facility 4-5 years longer. DOE (ERDA) prepared an EIS (ERDA-1553) in 1977 which included NRC comments. There was no request for a public hearing from anyone, although the opportunity existed. NRC's comments on the draft EIS included: "The overall staff conclusion is that the disposal of intermediate level wastes by the hydrofracture technique will result in only minor impacts on either operating personnel or the public."

Page A-2 - FMPC

Line 7 -  $33.9 \times 10^4$  should be  $32.7 \times 10^4$

Line 8 - 1510 Ci should be 1034

both were provided per NRC reference (5)

Page A-4 - ORGDP

This section is incomplete based on the data provided NRC per reference (5).

Paragraph 2, line 5 - 13.7 should be 13.8

The references are redundant; i.e., (5) (31) (38) (42) (46) (53) (70) and (74) are identical.

Page A-5 - ORNL

Third paragraph, line 5 - "less than" should be inserted before "15".

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Page A-4 - PGDP

The Paducah plant was built to enrich uranium in the isotope U-235, not provide feed to ORGDP and Portsmouth as is written. The plant is operated as the bottom of the enrichment complex because of increased overall efficiency. However, the use of the term "feed" is misleading since it is commonly used in the industry to mean production of  $UF_4$  from ore or recycle scrap.

Page A-6 - PGDP

References are missing. Should be (51-53).

Page A-7 - Weldon Spring

This site did not produce uranium hexafluoride but rather uranium tetrafluoride. Also, the raw material used by the plant should be domestic ore concentrates.

Second paragraph, line 5 should read: "The total U and Th activity in the pits is about 50 curies, while that in the quarry is about 2.25 curies."

Add: "These curie values do not include any activity associated with radium-226, which is also in the waste."

Page A-7 - Oak Ridge Y-12 Plant

Omit "For a number of years,"

Line 5 -  $34.0 \times 10^3$  should be  $25.5 \times 10^3$

Line 6 -  $6 \times 10^3$  should be  $6.8 \times 10^3$

Page A-8 - ORNL

Second paragraph, line 1 - "about" should be inserted before "18.0" and the ".0" should be changed to ".4".

Fourth paragraph is incorrect and should be deleted.

Page A-9 - FMPC

Line 4 - 200 curies should be 6 curies.

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Page A-9 - Lake Ontario Ordnance Works

Change Niagara Falls to LOOW. In the last line of this section, omit "...suspected of...being..." It is not technically considered waste since there have been commercial expressions of interest in acquiring ownership as described per reference (31).

African Metals Corporation is no longer a Belgian Company.

Page A-14

The RPP is being disposed of in the existing classified burial ground at Portsmouth.

Page B-4 - FMPC

Second paragraph, line 4 - insert "of Ohio" between "... Company..." and "...under..."

Sixth paragraph, line 2 - change "... two metal oxide tanks." to "...a metal oxide tank."

Seventh paragraph, line 1 - change "...two metal oxide tanks." to "...one metal oxide tank."

line 3 - change "These..." to "the K-65 tanks..."  
Eighth paragraph, last sentence should be: "The tanks are owned by DOE and are leased to African Metals Corporation under a contract that expires in 1983."

Page B-9 - FMPC

Change the first sentence to: "The metal oxide tank is owned by DOE as is the adjacent empty tank."

Page B-23 - LOOW

Change facility name throughout this section to "Lake Ontario Ordnance Works". The first sentence should be: "The Lake Ontario Ordnance Works site is located in Niagara County, New York, in the Lewiston Township, about 8 miles north of the City of Niagara Falls."

The second sentence should be: "The LOOW site consists of approximately 190 acres." The 33.7 acre figure came from Page 24 of reference (30) cited on Page A-18. The figure refers to the area possibly required after the African Metals residues are removed and should not be construed to mean contaminated acreage.

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The last paragraph should read: "The immediate area is primarily rural. The residents are generally employed in Niagara Falls and Buffalo where there are several large chemical and heavy industrial operations." Although tourism is a factor, it is not the main source of income despite what is contained in Page 9 of reference (30). The last sentence in the draft of this section should be omitted since it is not based on fact and does not relate to the site description.

African Metals is not a Belgian owned company. Also, contrary to one of our previous reports, the F32 residues are not in Building 410 and do not belong to the U.S. They are in the recarbonation basin and belong to African Metals.

Page B-28 - ORGDP

First paragraph, line 4 - "15" should be "25",  
line 6 - "Clinton (20 miles northeast)" instead of "(10 miles northeast)".

Second paragraph - gas centrifuge should be gaseous diffusion. Also, in the previous sentence, "for commercial power reactors" should be inserted.

Second paragraph, line 6 - "...uranium for commercial power reactors." The penultimate sentence should be omitted.

The penultimate sentence in the last paragraph should be "Tornadoes are uncommon in this region."

Page B-29 - ORNL

Third paragraph, line 1 - "...nuclear reactors..." instead of "...reactor..."

Sixth paragraph, line 1 - "...including two tokamaks, (ORMAK - Oak Ridge Tokamak) and (ISX - Impurities Studies Experiment)..." instead of as written.

Page B-31

First paragraph should read "Environmental Sciences Laboratory, completed in 1978, is the first..."

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Fourth paragraph, line 2 - change "...storm drains,..." to "...ground water intrusions,..."

Fifth paragraph, second sentence should be: "...waste is transferred to the process waste treatment plant." The last two sentences pertain to the ORGDP. They should read: "The site is approximately bounded by Bethel Valley Road, Tennessee Highway 95, the Clinch River, and Walker Branch. White Oak and Melton Valley Creeks flow south through the site."

Page B-34 - ORNL

The penultimate sentence of the last paragraph should read "Tornadoes are uncommon in this region."

Page B-35 - PGDP

The last sentence of the first paragraph should read: "The site consists of 730 acres within the fenced area, of which 80 acres are under roof." The first sentence of the fourth paragraph should be omitted. In the fifth paragraph, line 5 change "hot" to "contaminated". "Hot", as used, is local vernacular for contaminated; however, within the nuclear industry, scrap contaminated with depleted, normal or low enriched uranium can hardly be considered "hot". The penultimate sentence in the last paragraph should read: "The site is in Earthquake Zone 3."

Again, we question the use of the wording "to feed ORGDP and Portsmouth" in describing the function of the Paducah plant.

Page B-39 - PORT

The last sentence on the page should read: "Land devoted to privately owned..."

Page B-40

The identification of the classified and unclassified burial grounds is reversed.

Page B-49 - Weldon Spring

First paragraph, line 3 should be: "The DOE portions of the site consist of approximately 59 acres."

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Page B-52 - Y-12 Plant

First sentence, "...about 550 acres..." Omit "..., 80% within Roane County and 20%..." The second sentence should read: "The northern boundary approximates Pine Ridge, Bethel Valley Road on the south, Scarboro Road on the east, and the Roane-Anderson County line on the west." The existing paragraph is describing the total Oak Ridge reservation.

In the second paragraph, "(3)" should be "(3) support of other UCC-ND facilities in Oak Ridge, and..."

The third sentence in paragraph three should read: "...the depleted uranium and uranium alloy processes."

Omit paragraphs six, seven, and eight since they do not relate to the site descriptions; they are historical.

The last sentence should read: "Tornadoes are uncommon in the area, while..."

Page C-1 Appendix C - Assessments of Relative Potential Hazards of Radioactive Wastes

One can intuitively agree that DOE waste is certainly comparable in hazard to commercial waste. The lack of a quantitative assessment of relative risk is understandable due to the large uncertainties involved. The qualitative assessment of relative risk appears to hinge on a comparison of past practice; i.e., DOE; and probable better future practices; i.e., commercial. This comparison is meaningful only if it is the intent of extended authority to regulate past practices; e.g., to require remedial measures for practices that may have occurred many years before. These remedial measures could be extremely expensive, and could conceivably detract from the needed attention to present and future waste management problems.

Page D-4

Section D.2.2 discusses a review of earth sciences information and other site relevant data and the preparation of an EIS but does not recognize the several rad waste management and site EIS's DOE has already published. The relationship of the latter to the NRC EIS's is unclear.

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Sections D.2.3 and D.2.3.3 mention site expansion plans for Paducah (misspelled) and Portsmouth GDP's. There are no significant rad waste storage/disposal plans for expanding at Paducah. The only additional rad waste storage/disposal facility at Portsmouth is related to the centrifuge plant. While the volume is expected to be significant, the associated radioactivity will be trivial.

Page D-6

Table D.2 listed LLW instead of LLL and omits Weldon Spring and Lake Ontario Ordnance Works.

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FM USDOE ALEX G FREMLING MGR RICHLAND WA

TO RHEGGTN/USDOE ROBERT W BARBER GERMANTOWN MD

INFO RHEGGTN/USDOE A BRYAN SIEBERT JR GERMANTOWN MD

AE

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UNCLASSIFIED/N O N W D/NARR. (SECTION ONE OF TWO) NRC DRAFT REPORT -  
REGULATION OF FEDERAL RADIOACTIVE WASTE ACTIVITIES.

IN RESPONSE TO THE RICHARD E. CUNNINGHAM LETTER TO ALEX G. FREMLING,  
ET AL, DATED JANUARY 15, 1979 TRANSMITTING THE SUBJECT REPORT, WE  
HAVE REVIEWED THE REPORT.

NRC HAS CONCLUDED THAT THE APPLICATION OF ONE OF THE REGULATORY  
OPTIONS COULD HAVE POTENTIAL BENEFITS DESPITE THE ADEQUACY OF DOE'S  
EXISTING PROGRAM. NRC CHARACTERIZES THESE POTENTIAL BENEFITS IN  
TERMS OF INDEPENDENCE OF REVIEW, INCREASED DEPTH OF REVIEW, PUBLIC  
PARTICIPATION, AND INCREASED INSPECTION AUTHORITY. THERE IS ABSOLUTELY  
NO DATA AT ALL TO SUPPORT THIS CONCLUSION. THIS APPEARS TO BE A  
GENERAL PERCEPTION OR ASSUMPTION ON THE PART OF THOSE WHO ARE  
WRITING THE REPORT. WE HAVE THE FOLLOWING SPECIFIC CONCERNS:

(1) THE PURPOSE OF THE NRC STUDY WOULD BE BETTER SERVED IF THE  
REPORT WERE REORGANIZED TO INCLUDE INFORMATION ON THE CURRENT DOE

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ES&H PROGRAM IN A BACKGROUND SECTION FOLLOWING THE INTRODUCTION. THIS INFORMATION IS CURRENTLY RELEGATED TO APPENDIX E. AS NOW ORGANIZED, A READER MAKING AN NORMAL PROGRESSION THROUGH THE STUDY SEES ONLY NRC METHODS OF DOING BUSINESS AND THE PROPOSED POTENTIAL BENEFITS OF EXTENDING NRC METHODS OF DOING BUSINESS AND THE PROPOSED POTENTIAL BENEFITS OF EXTENDING NRC AUTHORITY WITHOUT HAVING THE BENEFIT OF KNOWING CURRENT DOE PRACTICES. THE OMISSION OF THIS INFORMATION EARLY IN THE REPORT DEPRIVES THE READER OF A FRAME OF REFERENCE FROM WHICH TO MAKE AN EVALUATION REGARDING ADDITIONAL NRC INVOLVEMENT. IN ADDITION, THE CURRENT FORMAT MAKES IT HIGHLY LIKELY THAT A BIASED OPINION ON THE NEED FOR NRC INVOLVEMENT HAS ALREADY BEEN FORMED BY THE TIME APPENDIX E IS REACHED. APPENDIX E, SECTIONS E.7.2. AND E.7.6. ARE JUDGED TO BE A SUBSTANTIAL MISSTATEMENT OF THE REAL SITUATION. WE BELIEVE THAT THE NUMBER OF PEOPLE INVOLVED IN ES&H ACTIVITIES OF DOE IS MUCH GREATER THAN THE NUMBER OF NRC PERSONNEL PERFORMING ONSITE INSPECTIONS. NOT ONLY ARE THERE CONSIDERABLY MORE ONSITE DOE INSPECTORS, THERE IS A COMPLETE MANAGEMENT STRUCTURE AT EACH DOE SITE TOTALLY FAMILIAR WITH THE PARTICULAR PROBLEMS THAT DRIVES SUCH AN INSPECTION PROGRAM. SECTION E.7.6. IMPLIES THAT SINCE DOE DOES NOT PREPARE A FORMAL

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EVALUATION REPORT ON A PROJECT THAT AN INADEQUATE SAFETY ASSESSMENT IS MADE. OUR MANAGEMENT SYSTEM AND OUR CONTRACTUAL RELATIONSHIP TO THE WORK RESULTS IN DOE CONDUCTING SAFETY EVALUATIONS AND ASSESSMENTS IN A DIFFERENT MANNER THAN IS NRC PRACTICE. SINCE OUR FACILITIES ARE GOVERNMENT FUNDED AND OWNED, DOE INTERFACES FREQUENTLY WITH THE CONTRACTOR DURING THE EARLY STAGES OF PROJECT PLANNING, DESIGN AND SAFETY REPORT PREPARATION. DOE SAFETY REQUIREMENTS ARE FACTORED INTO THE FACILITY SAFETY REQUIREMENTS AT SEVERAL STAGES DURING EACH SAFETY ANALYSIS, THUS, THE FINAL SAFETY ANALYSIS REPORT ISSUED BY THE DOE CONTRACTOR REFLECTS DOE FINAL SAFETY REQUIREMENTS. DOE SUPPORTING DOCUMENTATION CONSISTS OF DETAILED QUESTIONS, COMMENTS, AND EVALUATIONS WHICH HAVE BEEN TRANSMITTED TO THE CONTRACTOR THROUGH OUR CONTRACTUAL CHANNEL FOR CONSIDERATION AND/OR INCLUSION IN THE REPORT AS APPROPRIATE. GIVEN OUR MODE OF OPERATION, WE BELIEVE IT WOULD BE REDUNDANT AND OF LIMITED BENEFIT FOR DOE TO ALSO PREPARE A SEPARATE SAFETY EVALUATION REPORT COMPARABLE TO THAT CURRENTLY PREPARED BY NRC. WE BELIEVE THAT THE REPORT MISLEADS THE READER REGARDING PUBLIC PARTICIPATION IN DOE OPERATIONS. EVEN THOUGH DOE DOES HAVE THE EXTENSIVE PUBLIC INVOLVEMENT CHARACTERISTIC OF THE

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PAGE 4 RHEGRLO0191 UNCLASSIFIED/NOFORN D/KARR

NRC REGULATORY PROCESS, DOE POLICY DOES SPECIFICALLY REQUIRE PUBLIC PARTICIPATION. DOE FULLY COMPLIES WITH ALL NEPA REQUIREMENTS. EISS AND EAS ARE PREPARED CONSISTENT WITH THAT ACT, AND INVOLVE PUBLIC HEARINGS AS REQUIRED. THE EIS IS GIVEN DOE-HQ EVALUATION AND APPROVAL ACTION PRIOR TO PROCEEDING WITH THE SPECIFIC ACTIVITY IN QUESTION. FURTHERMORE, FOR SIGNIFICANT FEDERAL ACTION, CONGRESSIONAL APPROVAL IS REQUIRED IN THE AUTHORIZATION AND FUNDING PROCESS. DOE ALSO MAINTAINS PUBLIC DOCUMENT ROOMS IN WHICH A WIDE SPECTRUM OF REPORTS ON ITS OPERATION AND THEIR IMPACTS, ETC., ARE MAINTAINED.

(3) THE REPORT DOES NOT DISCUSS THE POTENTIAL DETRIMENTAL IMPACTS OF NRC REGULATION OF DOE PROGRAMS. SPECIFICALLY, REGARDLESS OF WHICH AGENCY REGULATES, THE RESPONSIBILITY FOR THE MANAGEMENT OF DOE FACILITIES RESTS WITH DOE, NOT NRC. A STRONG REGULATORY ROLE BY NRC COULD SUBSTANTIALLY ERODE DOE'S RESPONSIBILITY TO EFFECTIVELY MANAGE ITS PROGRAMS. THIS PROBLEM BECOMES EMINENTLY CLEAR IN SECTION 4.5, "REMEDIES", WHERE THE REPORT STATES THAT IN ENFORCING ITS REGULATORY ROLE (SHOULD CONGRESS PROVIDE THEM THAT AUTHORITY) THE ONLY PRACTICAL OPTIONS ARE FOR NRC TO COMPEL DOE TO TRY AGAIN TO COME UP WITH A SATISFACTORY PROGRAM, OR FOR NRC TO REPORT TO

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CONGRESS SO THAT AN APPROPRIATE SOLUTION MAY BE DIRECTED THROUGH THE LEGISLATIVE PROCESS. IT BECOMES OBVIOUS THAT THE PROPOSED INTERACTION BETWEEN THE TWO FEDERAL AGENCIES AND THE PROBLEMS THAT WILL OCCUR WILL HAVE TO BE MONITORED, REFEREED, AND SOLVED BY CONGRESS. SUCH AN ORGANIZATIONAL RELATIONSHIP INVOLVING A CRITICAL NATIONAL PROBLEM WITH NATIONAL SECURITY IMPLICATIONS IS, IN OUR OPINION, UNWORKABLE. IT SHOULD BE NOTED THAT THE EXECUTIVE SUMMARY FAILS TO MENTION THIS PROBLEM OF REMEDIES OR ENFORCEMENT.

(4) THE DISCUSSION OF HAZARDS (SECTION 3) IS NOT DEVELOPED SUFFICIENTLY TO ALLOW MEANINGFUL CONCLUSIONS TO BE DRAWN REGARDING THE REAL HAZARD FROM RADIOACTIVE WASTE. WE RECOGNIZE THAT SENATOR'S DOMENICI AND HART SPECIFICALLY REQUESTED THAT A GENERAL COMPARISON OF RISKS BE INCLUDED, AND THAT THE NRC REPORT ATTEMPTS TO QUALIFY SECTION 3 AS BEING A RELATIVE HAZARD COMPARISON, HOWEVER, THE HAZARDS ANALYSIS IS SO SUPERFICIAL THAT IT HAS THE EFFECT OF BEING GROSSLY MISLEADING WHEN IN REALITY IT MAY BE VERY MUCH IN ERROR. FURTHER, WE FIND ABSOLUTELY NO BASIS FOR THE SPECIFIC IDENTIFICATION OF THE HANFORD (WASTE STORAGE) TANKS IN FIGURES 3.1, 3.2, AND 3.3 AND AS SUCH SHOULD BE DELETED. THE PRIMARY OBJECTIVE OF THE NRC REPORT (AS WE SEE IT) IS TO RELATE NRC AND DOE REGULATORY SYSTEMS.

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THE HAZARDS SECTION DOES NOTHING TO ENHANCE THAT OBJECTIVE.

HOWEVER, SINCE THE SECTION IS PROBABLY NECESSARY IN RESPONSE TO THE SPECIFIC REQUEST BY DOMENICI/HART, WE SUGGEST IT BE MODIFIED AND INCLUDED AS AN APPENDIX TO THE REPORT.

(5) IN SECTION 4 OF THE REPORT, SPECIFICALLY ON PAGE 4-2, A STATEMENT IS MADE THAT DOE FACILITIES FOR SHORT-TERM STORAGE OF HIGH-LEVEL WASTE FROM DOE ACTIVITIES (E.G., EXISTING DOE HIGH-LEVEL WASTE TANKS) ARE NOT PRESENTLY LICENSABLE BY NRC. AS THE FEDERAL COURT FOR THE DISTRICT OF COLUMBIA (NRDC, ET AL, V. ASMINISTRATOR, ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, ET AL, 451 F. SUPP. 1245 (D.C. 1978) NOTED, THE KEY TO LICENSING OF DOE HIGH-LEVEL WASTE FACILITIES IS WHETHER THOSE FACILITIES ARE AUTHORIZED BY CONGRESS FOR THE EXPRESS PURPOSE OF LONG-TERM STORAGE THE COURT SPECIFICALLY CONCLUDED THAT THE PRECISE DURATION OF STORAGE WAS NOT INTENDED TO BE DETERMINATIVE OF NRC'S LICENSING AUTHORITY. ALTHOUGH THIS ISSUE AND OTHERS ARE CURRENTLY ON APPEAL TO THE COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA, THE STATEMENT IN THE REPORT IS MISLEADING.

WE ALSO HAVE THE FOLLOWING COMMENTS OF AN EDITORIAL NATURE:

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FM USDOE ALEX G FREMLING MGR RICHLAND WA

TO RHEGGTN/USDOE ROBERT W BARBER GERMANTOWN MD

INFO RHEGGTN/USDOE A BRYAN SIEBERT JR GERMANTOWN MD

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UNCLASSIFIED/N O N W D/NARR. FINAL SECTION OF TWO

~~APPENDIX A, PAGE A-6: STET~~

ALL OF THE ACTIVE LOCATIONS RECEIVING WASTES ARE IN THE 200 AREAS.

*A.1.3 Page A 9*

~~APPENDIX A, PARA A-1.3, PAGE A-6:~~

THE FOLLOWING CORRECTIONS SHOULD BE MADE --

"UP THROUGH <sup>1978</sup>~~1976~~, THERE HAVE BEEN <sup>20</sup>~~60~~ UNINTENTIONAL RELEASES . . .

APPROXIMATELY <sup>436,000</sup>~~436,000~~ GALLONS . . .

THE REMAINING <sup>11</sup>~~44~~ RELEASES . . .

HANFORD PRESENTLY HAS 156 TANKS FOR HIGH LEVEL WASTE STORAGE

~~SEVEN OF WHICH ARE DOUBLE-SHELLED. THIRTEEN ADDITIONAL DOUBLE-SHELL TANKS ARE UNDER CONSTRUCTION.~~

*A.1.7 Page A 12*

~~APPENDIX A, PARA A-1.7, PAGE A-6:~~

CORRECTIONS SHOULD BE MADE AS FOLLOWS UNDER ~~TANK FARMS:~~

"THERE ARE <sup>15</sup>~~45~~ TANK FARMS (<sup>A AX AY AZ B BX BY Q S</sup>~~AX AY AZ B BX BY C S~~)

~~SX SY T TX TY U~~  
~~EX, EX, TX, TX, U~~ . . .

38 ARE IN ACTIVE LIQUID SERVICE (SEVEN DOUBLE SHELL AND 31  
SINGLE SHELL) AND <sup>118</sup> ~~448~~ . . .

<sup>A</sup> ~~APPENDIX A, PARA. A.2.5, PAGE A.15;~~ <sup>A.2.5</sup> <sup>A.15</sup>

1 MAKE CORRECTION AS FOLLOWS, "THERE ARE PRESENTLY 13 ~~DOUBLE-~~  
~~SHELL, MILLION GALLON CAPACITY,~~ UNDERGROUND TANKS . . . ."

<sup>B</sup> ~~APPENDIX B, PAGE B.10;~~ <sup>B.10</sup>

SECOND PARAGRAPH - "THE HANFORD COMPLEX CONSISTS OF 60 MAJOR  
BUILDINGS WHICH ARE GENERALLY SUPPORTED BY OPERATIONS  
INVOLVING SEVERAL OTHER STRUCTURES.

1 SIXTH PARAGRAPH - "GROUNDWATER LEVELS AVERAGE ABOUT <sup>200</sup> ~~200~~  
FEET IN DEPTH <sup>200 Areas</sup> ~~AT THE 200 AREAS.~~" SAF:GRG

REF 0185

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*If by facilities*  
*20 to 30*

*4 hr*

*100 Area N reactor & Shut Down K*

*200 Area Waste Man Chem Processing*

*300 Processing Bldg*

NNNN

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PRIORITY

U.S. DEPT. OF ENERGY

1979 JAN 26 PM 4 26

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FM R L MORGAN DOE N AUGUSTA SC

TO BRYAN SIEBERT DOE GERMANTOWN MD

INFO GTN/GEOTZ OERTEL DOE GERMANTOWN MD

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UNCLAS/N O N W D/NARR////////URGENT////////

SR'S COMMENTS ON NRC'S DRAFT STUDY TO CONGRESS CONCERNING EXTENDING

NRC LICENSING AS REGULATORY AUTHORITY TO DOE WASTE OPERATION.

AS REQUESTED IN YOUR JANUARY 9, 1979 LETTER TO RICHARD CUNNINGHAM

OF THE NRC WITH A COPY TO STETSON WE HAVE REVIEWED THE SUBJECT STUDY

AND HAVE THE FOLLOWING COMMENTS:

A. COMPLETENESS

WE CONCLUDE THAT THE STUDY ONLY PARTLY MEETS THE REQUIREMENTS AS

SPECIFIED BY CONGRESS IN THE NRC AUTHORIZATION BILL. WE FEEL THAT

THAT IT DOES NOT MEET S-2584 REQUIREMENTS TO PROVIDE A REALISTIC

COMPARISON BETWEEN THE HAZARDS ASSOCIATED WITH DEFENSE AND

COMMERCIAL WASTES. IN PARTICULAR, THE STUDY DID NOT TAKE INTO

CONSIDERATION THE VAST AMOUNT OF UPGRADING IN DEFENSE WASTE

HANDLING FACILITIES AND PRACTICES THAT HAVE OCCURRED IN THE SEVENTIES,

NOR OF THE CURRENT AND PLANNED UPGRADING. THESE UPGRADING EFFORTS



PAGE 2 RHEGSROC244 UNCLAS/N O N W D/NARR////URGENT////

HAVE SUBSTANTIALLY LESSENERED THE HAZARDS ASSOCIATED WITH DEFENSE WASTE AND HAVE SUBSTANTILLY REDUCED THE PROBABILITY OF A RELEASE (Q.V. PARAGRAPH 2 PAGE 6 OF THE STUDY).

B. NRC OPTIONS

WE ARE PARTICULARLY CONCERNED THAT THE OPTIONS IDENTIFIED BY NRC ARE STATED IN SUCH A WAY THAT ALL EXCEPT "MAINTAIN STATUS QUO" (7E ON PAGE 7) ARE WRITTEN IN SUCH A WAY THAT NRC'S ACTIVITIES WITHIN DOE REMAIN MUCH THE SAME. THEY ALL WOULD REQUIRE BASICALLY THE SAME INFORMATION FLOW FROM DOE TO NRC, THE SAME NRC REVIEW, AND HAVE THE SAME IMPACT ON DOE. I DO NOT BELIEVE THAT ANY PARTIAL APPROACH TO LICENSING WILL HAVE AN IMPACT LESS THAN FULL NRC LICENSING - OPTION A.

C. INTERFERENCE WITH DEFENSE OR DEFENSE RELATED ACTIVITIES

A SERIOUS CONFLICT WOULD ARISE IF NRC REGULATORY ACTIVITIES ARE ALLOWED TO INTERFERE WITH DEFENSE RELATED ACTIVITIES. DOE AND ITS PREDECESSOR ORGANIZATIONS HAVE, THROUGH THEIR SUBCONTRACTORS, SUCCESSFULLY AND SAFELY OPERATED WEAPONS MATERIALS PRODUCTION FACILITIES SINCE THE EARLY 1940S. IF THESE OPERATIONS ARE DELAYED OR INTERRUPTED BY REGULATORY ACTIONS, THE RESULTS WOULD IMPACT DIRECTLY ON THE NATIONS'S NUCLEAR WEAPONS PROGRAMS, PARTICULARLY SINCE THE WEAPONS MATERIALS PRODUCTION PROGRAMS INVOLVE NOT ONLY PRODUCTION

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OF NEW WEAPONS BUT ESSENTIAL MAINTENANCE (E.G., REPLACEMENT OF TRITIUM DECAY) FOR THE EXISTING WEAPONS.

SAVANNAH RIVER, AT THE DOE PRODUCTION SITE AT  
ANY EXTENSION OF NRC AUTHORITY TO THE  
REACTOR, CHEMICAL SEPARATION OR INTERIM WASTE STORAGE (TANK FARM)  
OPERATIONS FOR SRP WEAPONS MATERIAL PRODUCTION OR TO CLASSIFIED

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WASTE MANAGEMENT AND STORAGE FACILITIES NOT DIRECTLY ASSOCIATED WITH PRODUCTION FACILITIES WOULD DIRECTLY IMPACT THE NUCLEAR WEAPONS PROGRAMS.

D. COMPROMISE OF SECURITY INFORMATION

DETAILED KNOWLEDGE OF WASTE GENERATION RATES FROM DEFENSE PRODUCTION OPERATIONS WOULD PROVIDE SUFFICIENT INFORMATION FOR ACCURATE DEDUCTION OF CURRENT NUCLEAR PRODUCTION STRATEGY AND OUTPUT. VERIFIED KNOWLEDGE OF TOTAL DOE WASTE INVENTORIES WOULD ALSO PROVIDE SUFFICIENT INFORMATION FOR AN ACCURATE ASSESSMENT OF PAST CONTRIBUTIONS TO DEFENSE PRODUCTION. THESE SECURITY QUESTIONS FURTHER EMPHASIZE THE DESIRABILITY OF EXCLUDING DEFENSE PRODUCTION AND INTERIM WASTE STORAGE FACILITIES FROM REGULATION, I.E., LIMITING REGULATORY AUTHORITY AND PUBLIC INVOLVEMENT ONLY TO THE HIGH-LEVEL DEFENSE WASTE PROCESSING FACILITIES WHOSE OPERATING DATA ARE NOT RELATED TO DEFENSE INFORMATION.

E. DELAY COSTS ASSOCIATED WITH NRC LICENSING OF DOE WASTE FACILITIES

SECTION 7.5.1.3 AND 7.5.2.3 OF THE STUDY DOES NOT GIVE LICENSING DELAY COSTS BUT SUGGESTS MAXIMUM DELAYS OF FOUR TO FOUR AND ONE-HALF YEARS FOR REGULATORY OPTIONS A AND B "DEPENDING ON WHERE NRC PREPARATION WERE TO BEGIN AND ON WHETHER FACILITY CONSTRUCTION WAS

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PROHIBITED PENDING REVIEW". SUCH DELAYS IN CONSTRUCTION WOULD COST FROM 1 TO 2 BILLION DOLLARS IN INTEREST AND NON-PRODUCTIVE OPERATING FUNDS FOR THE INITIAL HIGH LEVEL WASTE PROCESSING FACILITY PROPOSED FOR SAVANNAH RIVER AND SEVERAL TIMES THAT FOR THE TOTAL PROGRAM. THE EXACT AMOUNTS WOULD DEPEND ON HOW MUCH DELAY WAS INCOUNTED, HOW WELL IT COULD BE ANTICIPATED, AND WHERE IT OCCURRED IN THE CONSTRUCTION CYCLE.

PAST REGULATORY EXPERIENCE WOULD INDICATE THAT THE NRC SUGGESTED DELAYS ARE ACTUALLY THEORETICAL MINIMUMS RATHER THAN RELISTIC MAXIMUMS. THIS WOULD PARTICULARLY APPEAR TO BE THE CASE FOR THE LICENSING AT THE UNIQUE WASTE PROCESSING FACILITIES REQUIRED FOR EACH DEFENSE WASTE STORAGE SITE AS COMPARED TO NRC'S EXPERIENCE WITH THE LICENSING OF RELATIVELY STANDARD REACTOR DESIGNS.

#### #. DATA ASSESSMENT AND INTERPRETATION

##### APPENDIX A

PAGE A-7, LINE 4

THE  $79.4 \times 10$  TO THE 5TH CI IS "AS BURIED". IT HAS DECAYED AND IS CURRENTLY  $38.8 \times 10$  TO THE 5TH CI.

PAGE 1.16 - A.2.8 DEFENSE WASTE PROCESSING FACILITY CONSTRUCTION

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TO BEGIN FY 1982 NOT 1980.

PAGE A-8, 9.

THE EMPHASIS ON "INTENTIONAL RELEASES" SEEMS OVERPLAYED. SINCE THERE WERE NONE AT SRP OR INEL, RE-EDITING OF THIS SECTION SEEMS CALLED FOR.

PAGE A-10 - PARA. 2 - DEPLETED URANIUM IS NOT STORED IN VAULTS, BUT IN SECURED AREAS.

PAGE A-11

UNDER SAVANNAH RIVER PLANT, LINE 7

2.4 X 10 TO THE 5TH M TO THE 3RD SHOULD BE 2.7 X 10 TO THE FOURTH M TO THE 3RD

... 10 TO THE 5TH SHOULD BE 3 X 10 TO THE 5TH CI (DECAY CORRECTED) LINE 6. AFTER "STORAGE PADS". SHOULD BE ADDED "AND IN TRENCHES".

APPENDIX B.

PAGE 47, PAR. 3

THERE ARE THREE TEST REACTORS AT SR.

APPENDIX C.

C.3 - PATHWAYS MODEL (BEGINNING PAGE C-8)

LAMBA SUB 2 SHOULD BE LAMBA SUB 1 (PAGE C-8)

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USE OF THE AVERAGING TERM DELTA (PAGE C-9) LEADS TO CONFUSING INTERPRETATIONS WHEN RESULTS ARE COMPARED WITH RESULTS USING EQUATION AT BOTTOM OF PAGE C-8. CALCULATED RELATIVE HAZARDS CAN DIFFER SIGNIFICANTLY. IF THESE CALCULATED RESULTS ARE CONSIDERED SIGNIFICANT IN THE DEVELOPMENT OF LEGISLATION THEY SHOULD BE VERIFIED BY MORE DETAILED MODELING AND CALCULATIONS.

BT

#0244

NNNN





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JAN 31 1979

Robert W. Barber, Acting Director  
Safety Engineering Division, HQ

**NRC STUDY OF REGULATION OF FEDERAL RADIOACTIVE WASTE ACTIVITIES**

References: 1. Memo, R. W. Barber to R. H. Bauer, dated 1/16/79  
2. Letter, R. H. Bauer to A. Abriss, dated 1/9/79

Review of the subject document, transmitted with Reference 1, has resulted in several comments, provided below. In summary, some comments resulted from review of those aspects of the report that addressed specific CH contractor sites. Information regarding those sites was provided to the NRC in Reference 2 and by telecons with the addresser of that letter and Dr. S. Mann of my staff. The comments below were required because the NRC did not incorporate the provided information into the report. Remaining comments address the NRC logic and conclusions presented in support of the subject study.

1. Page 1-2, paragraph 2 - NRC staff did not visit CH to obtain information on sites under CH direction.
2. Page 1-3, paragraph 1 - It is imperative that "risks" be identified to adequately assess hazards associated with operations and to put them into proper, relative perspectives.
3. Page 1-5, paragraph 2 - The definition for "Waste Storage" is inadequate since it does not provide a clear description of facilities and/or operations which should be included in this category, i.e., what is the break point for inclusion, either in terms of minimum storage time, quantities, etc.
4. Page 2-3, paragraph 4 - The term "planned" movement should be more clearly defined since interpretation can result in at least two conclusions: (1) definitive plans to move the waste, including schedules, dates, costs, and any necessary arrangements finalized, or (2) intentions to remove the materials at some later date that, at this time, has not been finalized, or that no means presently exist for such final disposition but will be developed for the purpose of removing such materials.

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3. Page 2-1, paragraph 4 - The above comment provides the basis for this comment: At no place in the report were there any references or discussion of the storage area at the Fermi National Accelerator Laboratory (FNLH/LAD) and only briefly was a similar storage area at Brookhaven National Laboratory (BNL) mentioned. These areas contain large amounts of equipment and other materials which are activated and stored, with no present plans for final disposition because of their bulky size and/or undetermined guidance for disposition of valuable materials, such as copper, stainless steel, etc., and because no criteria presently exist for activated materials. Such items have been generated from reactor and accelerator operations and decommissioning of such facilities and have been stored for several years. Information was provided to MRC, per Reference 2, on these storage areas.
6. Page 2-4, paragraph 1 - The MRC has identified "waste processing" as another category for inclusion in the regulatory process they are proposing, but have, by definition and for purposes of this study, excluded those similar operations that are conducted as an integral part of waste generating activities. Such a category specifically addresses those waste inventories presently existing at DOE facilities waiting final disposition; however, such wastes are finite but waste generation is a continuing process. It would appear possible that the MRC, in the future, would again extend its definitions to include regulation of processing at the time of waste generation.
7. Page 2-5, paragraph 5 - The MRC study here states that Argonne National Laboratory (ANL) is "suspected of having some past waste activities" but that "according to DOE, has no storage, disposal, or processing activities." Information on the storage of wastes at ANL-B was provided in the Site Waste Management Plan for that site. Information regarding past disposal activities associated with early ANL operations (Site A/Plot M) was provided as stated in Reference 2. This information was not utilized by MRC in the subject report.
8. Page 2-9, paragraph 1 - The "Federal Agencies, Other than DOE, Convicted for Waste Management Activities" table (Table 24) does not include the Bureau of Mines. Past involvement with that agency revealed the use of a small plot of land for disposal of drums containing rad-waste. Similar areas may exist under their purview.
9. Page 2-10, paragraph 1 (also Page 2-11, paragraph 6) - The report states that "DSD of DOE facilities does not represent any unique waste disposal considerations...."; however, DSD of an MRRR may be an exception

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to this conclusion on the basis of the large quantities of sodium associated with such an activity and the present restriction on disposal of such material.

10. Page 2-10, paragraph 1 - It is not clear if it is MRC's intention to reference DOE "dedicated areas" at each site and present the accompanying list (Manford, Oak Ridge, Savannah River, and Idaho) as all-inclusive. The completeness, or lack thereof, should be stated.
11. Page 2-12, Table 2.5 - Corrections:
  - Replace "Health and Safety Laboratory" with "Environmental Measurements Laboratory."
  - Replace "Frank McLean Memorial Institute" with "Franklin McLean Memorial Research Institute."
  - New Brunswick Laboratory (at ANL) should be listed under Defense Programs, not Energy Technology.
12. Page 2-13, Table 2.6 - This table is incomplete; more information has been provided to RL and AI in the DOD planning system. Also, the ANL 301 Hot Cell Facility should be deleted from the list.
13. Page 3-6 - The MRC study attempts to equate the risks of DOE and commercial operations on the basis that a higher probability of releases from past DOE practices exists, even though relative hazards are greater for the commercial situation. It appears that this concept is being used as a justification for MRC control over DOE waste activities. We strongly disagree with this approach, since past DOE activities should be considered as a separate entity in evaluating hazards and risks. These situations cannot be changed merely by licensing or some other MRC control. Rather, the evaluation of need for MRC control should be based on present and future DOE operations.
14. Page 4-4, paragraph 3 - It is not clear how Option D is differentiated from the present responsibilities of MRC to develop standards for waste operations, unless it is based on the premise that under this option the MRC "would conduct audits and compliance monitoring inspections."
15. Page 4-5, paragraph 3 - The MRC report states, "...there must be a mechanism for discovering and correcting real safety, health or environmental problems...." It appears that MRC is implying that one does not already exist within the DOE. There is presently a complex system within DOE in the form of safety audits, technical review and approvals, detailed documentation and reporting, etc., at the contractor, field

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office, and Headquarters level, as well as EA, EIS, and other formal documentation preparation. It is unclear what the NRC envisions as possible intensification of these items if DOE waste activities were under their direction.

16. Page 5-1, paragraph 1 - The report states, "The requirements of the National Environmental Policy Act (NEPA) would be called into play if NRC's licensing or regulatory authority were extended...." This implies to the reader that DOE does not already comply with NEPA requirements, which is not true. DOE has prepared EIS's for waste disposal operations sites and continues to comply with NEPA requirements. (Same comment applies to Page 7-5, paragraph 4.)
17. Page 7-1, paragraph 3 - This again implies to the reader that DOE does not comply with standards and/or regulations to the fullest extent by use of the phrase "...DOE wastes of a similar nature may meet lesser standards." As evidenced many times over in the report, the NRC attempts to imply that DOE waste activities require control by them to improve operations without making any evaluation or determination of the competency or quality of present practices.
18. Page 7-2, paragraph 1 - As stated in Comment #17, the NRC has stated they have not determined "the adequacy of present DOE activities." It is difficult to comprehend how they can assume that the quality would increase by NRC controls when the present situation has not been assessed. The logic throughout this section has similar weaknesses, as explained in the following comments.
19. Page 7-2, paragraph 2 - The claim that NRC's independent review would be beneficial to the public health and safety in two ways is based on vague concepts which are not fully described so that the reader may draw some incorrect conclusions.
  - (a) Item #1, "reduction in conflict of interest," is based on the concept that DOE programmatic needs may result in compromising development of good waste management operations. If NRC were to have control over those waste activities, they could not reduce the programmatic needs. Therefore, it would only mean that NRC would be given the authority to determine DOE priorities.
  - (b) Item #2, the "two heads are better than one" concept implies that DOE has inadequate checks and balances in waste activities.
20. Page 7-2, paragraph 3 - Again, the NRC states "...a possible benefit is the depth of review...might increase if NRC extended its regulatory authority," and goes on to state that "increased depth of review might



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be found in increased documentation." More paper doesn't necessarily mean more consideration has been given to the situation. In fact, given a finite time period to solve problem situations, increased documentation requirements could impact on the amount of time available for the actual problem solving activities.

21. Page 7-2, paragraph 4 - The NRC report again implies to the reader that DOE is not handling waste management activities with a full commitment to health and safety protection by stating that "decision makers would be apt to be more careful in making the decision" if subject to public scrutiny. When operations are performed at DOE's best capabilities, public scrutiny should not have any significant impacts. In addition, the public already has access to all EIS's, and to other information through technical report publications, and by FOI requests. We realize the value of public participation; however, the public should not be relied on to "identify errors or weaknesses in analyses." Evaluation of the need for extension of NRC authority should not be based on anticipated increase in public participation since (1) that can be accomplished under DOE as well and (2) waste management activities should be run by personnel with considerable technical expertise in that field.
22. Page 7-3, Paragraph 1 - It is unclear on what basis NRC can assume that extension of their regulatory authority would increase public confidence. First, to the general public, Federal agencies are non-distinguishable in terms of "confidence-generators." Second, if the information in latter sections of the report were revealed, such as the costs associated with such a change, it is doubtful that any individuals in the public would endorse such an action.
23. Page 7-7, paragraph 2 - The costs for application of Option A are presented as 623 man-years of effort and 19.5M dollars. Using a standard conversion of 50K/man-year, that results in a total cost in excess of 50M dollars. A cost-benefit study should be performed on these figures on the basis of concrete, identifiable benefits rather than the vague concepts presented in the study. In addition, comment #22 is again applicable; i.e., it is doubtful that the general public would have increased confidence in the Federal government if they were made aware of such costs expended for more Federal redundancy.
24. Page A-1, paragraph 3 - The "NRC has no knowledge of the volumes or the curie content of this waste" at Brookhaven National Laboratory (BNL). This information was provided to the NRC as stated in Reference 2. We again are providing this information by copy of the enclosures to that letter. Table 3.1.3.3, extracted from the BNL EIS, provides a summary of pCi/year for disposal at BNL.

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25. Page A-1, Appendix A - This section on disposal of low-level waste should include information regarding ANL early operations at Site A/Plot H, which was provided to them per Reference 2, as previously stated in comment #7.
26. Page A-9, paragraph 2 - The report addresses storage of contaminated equipment in trenches and shafts at LNL. Again, information provided in Reference 2 and the Site Waste Management Plan (SWMP) was not used since a better description of the waste handling and storage area is available as indicated in comment #5. Also, as mentioned in comment #5, information was provided on FERMILAB waste storage, which was not included in this section. In addition, the RSWF at ANL-W has low-level waste storage which was not addressed in this section.
27. Page A-10, paragraph 5 - The transuranic waste storage activities at the ANL-W RSWF, as discussed in information provided in Reference 2, was not included in this section.
28. Page A-13, paragraph 3:
  - (a) The waste activities at ANL-W, as provided in Reference 2, are primarily low-level waste operations. The scrap, if declared waste, would then be considered high-level waste, by definition; however, it does not require cooling. The number of cadmium-bonded EBR-II blanket subassemblies is 255, stored in 56 storage liners at the RSWF.
  - (b) It is also interesting to note that the references identified for information sources (13-20) are not representative of their data sources since the visit to the INEL by the NRC staff did not include discussions with ANL-W personnel. Information was provided from CH in Reference 2.
29. Page B-1, Appendix B - The list and subsequent site descriptions, do not include FERMILAB nor ANL (Site A/Plot H); see comment #'s 5, 7, 25, and 26.
30. Page B-2, paragraph 4 - "All other waste is stored for a short period of time and then shipped offsite." This is not true for some materials, as explained in comment #5.
31. Page B-13, paragraph 2 - Argonne Universities Association is under the direction of the Chicago Operations Office, not Idaho Operations Office. The Argonne-West Facility is located on the INEL site; however, it is under CH direction. A separate description of the ANL-W site and RSWF should be included since it is not a part of the EORC operations.



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32. Page E-3, Figure E.2 - This chart is out of date since the New Brunswick Laboratory is under the Assistant Secretary for Defense Programs, not Energy Technology.

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Enclosures:

Letter, Bauer to Abriss, dated 1/9/79, w/encs.

CC: G. Cartel, Acting Director, Division of Waste Products, HQ, w/encs.