

ACNW-0059

PDR 8/6/93

MINUTES OF THE 46TH ACNW MEETING
SEPTEMBER 22 AND 25, 1992

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CERTIFIED

Issued: November 6, 1992

MINUTES OF THE 46TH MEETING OF THE
ADVISORY COMMITTEE ON NUCLEAR WASTE
SEPTEMBER 22 AND 25, 1992
BETHESDA, MARYLAND

The 46th meeting of the Advisory Committee on Nuclear Waste was held Tuesday and Friday, September 22 and 25, 1992, in rooms P-422 and P-110, 7920 Norfolk Avenue, Bethesda, Maryland. The purpose of this meeting was to discuss and take appropriate actions on the items listed in the attached agenda.

A transcript of selected portions of the meeting was kept and is available in the NRC Public Document Room at the Gelman Building, 2120 L Street, N.W., Washington, D. C. [Copies of the transcript taken at this meeting may be purchased from Ann Riley & Associates, Ltd., 1612 K Street, N.W., Washington, D. C. 20006.]

Dr. Dade W. Moeller, Committee Chairman, convened the open portion of the meeting at 1:00 p.m. and briefly reviewed the schedule for the meeting. He stated that the meeting was being conducted in conformance with the Federal Advisory Committee Act. He stated that the Committee had received neither written comments nor requests from members of the public for time to make oral statements. However, he invited members of the public, who were present and had something to contribute, to let the ACNW staff know so that time could be allocated for them to make oral statements.

ACNW members, Drs. William J. Hinze, Paul W. Pomeroy, and Martin J. Steindler, were present. [For a list of attendees, see Appendix III.]

I. CHAIRMAN'S REPORT (Open)

[Note: Mr. Richard K. Major was the Designated Federal Official for this part of the meeting.]

Dr. Moeller announced that, after today's session, the 46th ACNW meeting will be recessed for two days, Wednesday and Thursday, so that the members and staff will be able to attend a meeting of the Board on Radioactive Waste Management, National Academy of Sciences, National Research Council. The 46th ACNW meeting will resume on Friday, September 25, 1992, at 8:30 a.m.

Dr. Moeller presented Ms. Betty Sanders, ACNW Staff Secretary, with a letter of appreciation and a certificate for 18 years of faithful service to the Federal government on the occasion of her retirement.

Dr. Moeller welcomed Ms. Joan Kirkland, ACNW Staff Secretary, to her newly assigned position in support of the Committee and Staff.

Dr. Moeller presented Mr. Howard Larson, ACNW Staff Senior Engineer, with a certificate that recognizes his high quality service and significant contributions to the work of the Committee and NRC.

Dr. Moeller identified a number of items that he believed to be of interest to the Committee, including:

- U.S. Ecology sued the State of California for requiring that pre-licensing adjudicatory hearings be conducted on its Ward Valley siting work. The lawsuit filed before the California Supreme Court charges that the decision to hold additional hearings by the California Health and Welfare Agency and Department of Health Services was illegally coerced by the state's Senate Rules Committee.
- On August 6, 1992, the NRC staff issued Yankee Atomic Electric Company (YAEC) a "possession-only" license for its permanently closed Yankee nuclear power plant. YAEC will submit a decommissioning plan to NRC by February 1994.

II. DRAFT REGULATORY GUIDE 8013, "ALARA RADIATION PROTECTION PROGRAM FOR EFFLUENTS FROM MATERIALS FACILITIES" (Open)

[Mr. Giorgio N. Gnugnoli was the Designated Federal Official for this part of the meeting.]

Dr. Donald Cool, Office of Nuclear Regulatory Research (RES), provided a brief introduction to the draft Regulatory Guide 8013, Guidance on 10 CFR Part 20, ALARA Radiation Protection Program for Effluents from Materials Facilities. He acknowledged that the guide was not among the especially important guides for the implementation of the revised 10 CFR Part 20. One of the purposes for this guide is to resolve implementation concerns for NRC material licensees subject to Subpart I of the Environmental Protection Agency's (EPA) Clean Air Act regulations in 40 CFR Part 61. This portion of the regulations deals with radionuclide (other than radon) emissions. In order to avoid a dual regulatory burden on NRC licensees, one of the goals of this regulatory guide is to provide guidance on recording, reporting and emissions control sufficient to justify exclusion from National Emission Standards for Hazardous Air Pollutants (NESHAPs) requirements under Subpart I. NRC-licensed nuclear power plants have already been excluded from Subpart I. EPA has published a Federal Register notice proposing rescission of Subpart I requirements for materials facilities. EPA conducted a large survey of NRC licensees to determine the levels of controlled emissions released at these facilities. As a result of this survey and the content of the

ALARA guide, the EPA acknowledged the viability of the ongoing, long-term program of emissions' control. A Memorandum of Understanding between NRC and EPA commits to publication of the ALARA control program for comment by the end of October 1992. Final promulgation is expected by early next year.

The specific departure from typical ALARA program guidance is that the ALARA concept promoted in this guide specifically deals with impacts to the general public, as opposed to occupational ALARA practices. The mechanisms for this control is through control of emissions from the facilities, which through airborne transport of radionuclides, can lead to exposure in unrestricted areas offsite. The activities and measures used to achieve this control are basically the same as for the conventional occupational ALARA practices; e.g., equipment and audits.

With the above introduction, the Committee moved on to specific questions without any formal presentation. Ms. Charleen Raddatz, RES, addressed the specific Committee questions. She pointed out that the term "materials facility" encompasses all licensed facilities, except nuclear power reactors. The guide will be modified to indicate more explicitly the focus of the guidance. Some clarification was needed in terms of the two means of compliance with Part 20 Subpart D:

- Limiting to 1.0 mSv/year the total effective dose equivalent (TEDE) to the individual likely to receive the highest dose; or
- Demonstrating that the releases comply with Table 2 values of 10 CFR Part 20, Appendix B; and the dose from external sources does not exceed 0.5 mSv/year.

Dr. Moeller suggested that the concept of the dose to the average member of the critical group, as recommended by the International Commission on Radiological Protection, be used instead of the "individual likely to receive the highest dose." Although he acknowledged the goal of consistency with terminology in the language of 10 CFR Part 20, Dr. Moeller was concerned about implementation problems with identifying such an individual. Some steps in revising the language to modify worst case assumptions for the highest dose individual in favor of more realistic approaches are being considered by RES. Beyond that, RES seemed reluctant to depart from the 10 CFR Part 20 terminology. Dr. Steindler questioned whether a guide on ALARA necessarily had to rely strictly on language in 10 CFR Part 20. Dr. Moeller emphasized that development of regulatory guides offers an opportunity to clarify and expand on the wording in the regulations.

Another significant concern was that explicit, numerical values for effluent releases (10-20% of values in Appendix B, Table 2) are specified as ALARA, as opposed to reducing emissions to ALARA levels. Ms. Raddatz discussed the purposes of the guide; one of these being to demonstrate that the ALARA releases from NRC-licensed facilities comply with the EPA Clean Air Act requirement that members of the public are not exposed to more than 0.1 mSv/year. In order to clarify this interpretation, the following wording has been added to the guide:

If the licensee cannot achieve effluent concentrations less than 20% of the Appendix B value or demonstrate by calculation that the TEDE to the individual likely to receive the highest dose is less than ten millirems [0.1 mSv], then the licensee should demonstrate compliance with the ALARA requirements of this section by evaluating procedures, engineering controls and process controls.

A description for how that evaluation is to be done is given later in the guide. The idea is to aim at the 10-20% figure; if this is not possible, other efforts can be made to reduce emissions and impacts.

Dr. Steindler took issue with the approach in the guide. He questioned whether a guide should be written to satisfy the EPA, as opposed to establishing implementation guidelines for NRC regulations. He also noted that if ALARA is 10-20% of the Appendix B values, would not that raise concerns that the Appendix B values are 5 to 10 times too high? In effect, 10 CFR Part 20 is not ALARA. He further cautioned on the possible negative impacts of this action in setting precedents in other agency efforts, such as below regulatory concern (BRC) and decommissioning and decontamination (D&D). He suggested wording such as setting ALARA goals "...at some modest fraction of the values in Appendix B, Table 2."

The RES staff pointed out that the 10-20% goal is a bench mark for licensees to meet. Should they not comply with that goal, it does not imply that ALARA is precluded. Other avenues of demonstration, such as the \$1000 per man-rem [\$100,000 per man-Sv], require further evaluation, i.e., NRC inspectors would be required to investigate carefully that the evaluation is correct. As long as the licensee could stay below the 10-20% level, the ALARA requirement will be satisfied. Dr. Steindler continued to criticize this approach. He indicated that ALARA was a process, not a goal or number. He cautioned that today's bench mark ALARA goal may well become tomorrow's standard. Dr. Pomeroy questioned whether the guide provided any motivation to achieve lower than 10-20%, even if could be done with little additional cost.

The Committee also raised concerns regarding the specific mention of effluents that cannot be effectively monitored. Dr. Hinze asked whether better guidance could be given. Ms. Raddatz pointed out that the 30% figure for the amount of unmonitored effluents is within the error band of the measurements. Mr. Michael Weber, NMSS, pointed out that there are small research and development facilities that have hundreds of potential release locations. Frequently in these situations, the daily usage, permitted by license, of the entire inventory of a radionuclide would be such that if the entire daily inventory were released, it would fall below the 10-20% ALARA level. In effect, either by license, practice or other means, the "estimated" release from unmonitored points cannot exceed the 30% criterion. In response to these arguments, Dr. Steindler observed that EPA requires monitoring of every stack release when hazardous materials are used.

Dr. Moeller suggested the following rewording of the guide regarding unmonitored releases:

All points of release of radioactive effluents should be identified, and release points (e.g., stacks, discharges and vents) monitored, if practical, to ensure that the magnitude of effluents is known with a sufficient degree of confidence to estimate public exposures.

In response to Dr. Steindler's question on whether the cited American National Standards Institute (ANSI) standards for monitoring specifications would be able to detect the 10-20% bench mark, Ms. Raddatz stated that she was not sure. She will reconsider the ALARA goals with respect to the ANSI references.

Other suggestions made by the Committee addressed the distinction between the ALARA Committee and Radiation Safety Committee, the ALARA Committee's obligation to report to senior management, and the trade-offs in balancing public doses and occupational exposures.

A memorandum summarizing these comments was sent to the Executive Director for Operations.

III. DISCUSSION WITH MEMBERS OF EPA'S SCIENCE ADVISORY BOARD ON RECENT CONSIDERATIONS CONCERNING CARBON-14 RELEASE LIMITS FROM AN HLW REPOSITORY (Open)

[Note: Mr. Howard J. Larson was the Designated Federal Official for this portion of the meeting.]

Dr. James Watson, Chairman of the carbon-14 subcommittee of the U.S. Environmental Protection Agency's (EPA's) Science Advisory

Board (SAB) was the presenter. Accompanying him was Mrs. Kathleen Conway, the Designated Federal Official for the EPA Radiation Advisory Committee (RAC).

Dr. Watson described the organization of the SAB, noting that its main focus is on risk assessment rather than on risk management. He stated that the SAB had been asked to review issues related to C-14 and that assignment had been given to his 14-member subcommittee. On April 20, 1992, his group was requested to conduct the review and has met three times since then. The intention is to submit its report to the RAC at a meeting on October 29-30, 1992, with the report scheduled to be considered by the SAB Executive Committee in January 1993.

The charge to the subcommittee consisted of the following six narrowly defined elements:

1. Does the Agency's document accurately summarize the total inventory of C-14 present?
2. Does the Agency's document accurately characterize the mechanisms and release rates for gaseous C-14 from the wastes and canisters?
3. Does the Agency's document accurately describe the effectiveness of engineering barriers designed to reduce or impede releases?
4. Does the Agency's document accurately describe the physical and chemical retardation and transport of C-14 from the waste repository to the surface?
5. Is the Agency's assessment of the magnitude of the release complete, correct, and clear?
6. Does the Agency's document adequately describe the uncertainties associated with the assessment of the magnitude of the release?

Dr. Watson reiterated that the charge was to focus solely on the releases and transport of the C-14 from the waste containers to the environment, as discussed in the document provided to the subcommittee entitled "Issues Associated With Gaseous Release of Radionuclides for a Repository in the Unsaturated Zone" (referred to as the "issues document"). However, the subcommittee was later informed that it may comment upon the individual and population doses resulting from such releases in the context of the SAB's report "Reducing Risk".

After indicating that EPA believes the standard to be technology-based, a discussion ensued between Dr. Watson, the members and Dr. David Okrent, ACNW consultant.

The conclusions reached by the subcommittee were as follows:

1. The source term estimate of 1 Ci of C-14 per metric tonne heavy metal (MTHM) appears reasonable. (However, since Congress has reduced the total repository inventory to 70,000 MTHM, the estimate should be changed (reduced) accordingly.)
2. The issues document does not accurately characterize the potential for gaseous C-14 release from the repository, and it may not be possible to accurately characterize the release based on currently available information. (The subcommittee found no scientific or technical basis for the assumption of 10% failure of the canisters at 300 years and 90% failure at 1,000 years, particularly since the containers have not been designed nor the construction materials selected. Also, the container environment has not been defined for an unsaturated site, and corrosion and other degradation modes have not been established.)
3. The issues document assumed that engineered barriers contributed little to the containment of C-14. The subcommittee noted that delaying release to the environment allows radioactive decay and therefore, it encouraged investigation of multiple barriers to retard the migration of C-14 to the accessible environment. (Dr. Okrent noted that the recommendation to use multiple barriers, in the absence of the broader perspective-cost-benefits, et al., may not necessarily be correct. Dr. Watson noted that members of his subcommittee argued both sides of that issue strongly, but that the majority believed the investigation was worth pursuing.)

Dr. Hinze also questioned whether guidance was provided for "multiple barriers" insofar as a tradeoff between geological versus engineered barriers.

4. The hypothesis stated in the issues document that the principal transport mechanism for gaseous C-14 in flat terrain would be diffusion is incorrect. This hypothesis could lead to the erroneous assumption that location of a repository in flat terrain would greatly reduce C-14 transport. This was

because the issues document ignored the temperature effects of spent fuel which would cause advection to be dominant under any reasonable scenario.

Dr. Steindler interjected, indicating that he found it difficult for an issues document to be so "far off base". Dr. Watson noted that the subcommittee spent considerable time at their June meeting discussing this point, after which the authors of the issues document corrected their presentation.

5. The uncertainty analysis can be improved substantially. The broader uncertainty bands recommended for various parameters will lead to greater overall uncertainty regarding the potential magnitude of C-14 releases. As a result, the subcommittee concluded that it is not possible on the basis of currently available information to predict with reasonable confidence whether releases from an unsaturated repository would be less than or greater than the Table 1 (40 CFR Part 191) release limits.

The SAB noted that while an appreciable global population dose over 10,000 years may be produced by C-14 release from a repository, the average individual dose would be very low. For a release of half the C-14 inventory, the global population dose would be 14 million person-rem, and the corresponding average individual lifetime dose would be about 0.01 mrem. These doses correspond to a calculated 4,000 cancer fatalities over 10,000 years and lifetime individual risks of 3×10^{-9} .

After some discussions with Dr. Moeller regarding dose truncation (which the subcommittee did not address), Dr. Watson noted that his group did not resolve whether these doses were a public health issue, other than to state that the EPA must address this matter when considering the C-14 releases. His group also recommended that the predicted individual and population doses should be considered in comparison with doses from other sources, with dose limits in other standards, and with other environmental and radiation risks.

The final comment of the SAB subcommittee was that optimizing site selection on a single criterion may or may not cause loss of optimal conditions for other criteria. It was noted that the release of C-14 to the environment would probably be less from a saturated site than from an unsaturated site, but risks from other radionuclides may be greater or smaller depending upon a number of factors.

In response to Dr. Hinze's query whether the subcommittee had looked at the source term, it was noted that the Committee had looked at various ways in which the C-14 source term could be reduced, but did not perform any form of cost-benefit related analyses. In response to further questions from Dr. Hinze, it was explained that the subcommittee had looked at inventory and release mechanisms in some detail. Dr. Watson expressed the belief that additional research on the release from the waste and the subsequent transport of C-14 could perhaps reduce associated uncertainties.

Dr. Steindler asked whether the ACNW could receive copies of the reference cited in the issues documents. Mrs. Conway said that she would obtain same and send them.

Dr. Okrent discussed the difference in perspective between spending money for prevention of a premature death in the next 50-100 years and the expenditure of funds to avert health effects many years into the future.

In response to Dr. Steindler's question, it was noted that the only other release that appeared to have any significance, at least to the subcommittee, was the release of iodine. However, if all the iodine inventory were released, it would still be only approximately 0.3 of the limit. Tritium was considered a non-issue.

After concluding observations by Dr. Moeller and an expression of thanks to Dr. Watson, this session was concluded.

IV. DISCUSSION WITH AND PROGRESS REPORT BY THE NRC'S DIVISION OF LOW-LEVEL WASTE MANAGEMENT ON THE SITE DECOMMISSIONING MANAGEMENT PLAN (SDMP) (Open)

[Note: Mr. Howard J. Larson was the Designated Federal Official for this portion of the meeting.]

Dr. John Austin and Messrs. Timothy Johnson and David Fauver, NMSS, participated in the presentation to brief the Committee on both the overall program as well as specifics on several sites in the SDMP program, viz.: Chemetron, DOW Chemical and Chevron sites.

Mr. Fauver noted that the purpose of the SDMP is to "identify unique and problematic decommissioning sites and resolve issues associated with their timely cleanup." There are currently 46 sites listed in the SDMP. He discussed the following criteria for placing a site on the list:

- Problems with the continued viability of the responsible organization (such as bankruptcy),

- Large amounts of contaminated soil, unused settling ponds, or onsite burials (this is the primary reason for most sites being placed on the SDMP),
- Long-term presence of contaminated, unused buildings (in many instances, decommissioning was being delayed for no apparent reason),
- License previously terminated and contamination present in excess of unrestricted limits (there are four sites that fall under this criterion),
- Contamination or potential contamination of groundwater.

The ranking factors used were discussed. Dr. Austin noted that it is a different system than EPA's Hazardous Ranking System (HRS) which it was believed would not apply to the SDMP sites. For example, while off-site migration is a significant factor in the HRS calculation, it could be zero for an SDMP site which would then yield meaningless results.

In response to Dr. Steindler's question whether each site had been inventoried, Mr. Fauver noted that, while there are some sites that have not yet been characterized, the focus has been on sites where the contamination is believed to be significant. Deadlines have yet to be set for this program, except in one case where the licensee has been ordered to perform the site characterization.

There have been two major SDMP policy issues identified: the timeliness of the site cleanup and the allowable residual contamination criteria. These issues have been covered by the April 6, 1992 Action Plan, which addresses the currently acceptable cleanup criteria, the finality of cleanup, timing, site characterization and the ability to compel timely cleanup.

Addressing the issue of finality, the Action Plan now states clearly that the NRC, once it clears a site, will not require further cleanup of that site in the future. While this position is of some comfort to licensees (and is about all the NRC can do on its own), it does not address what the EPA or the relevant state and local authorities might do in the future. For this reason, the NRC staff is giving attention to potential future disruptions.

Dr. Steindler queried whether any public water supplies had been contaminated. He was told that, while there were none, the staff evaluates the groundwater pathway for any case where it is believed it could become a potential concern. Dr. Austin further elaborated on the modeling process and the use of trend analyses, noting that

plume movement at the Wood River Junction facility in Rhode Island was followed for a decade.

Several general observations were made concerning the current estimate of approximately 16 million cu. ft. of waste believed to be associated with the SDMP: the direct exposure pathway presents the most hazard; most of the waste is Class A waste; thorium presents a greater hazard than uranium; and approximately 10 million cu. ft. have yet to have their eventual disposition decided. This is a large and expensive problem regardless of whether the waste is shipped off-site or disposed on-site.

The current residual contamination limits were noted and the references discussed. It was noted that the "participatory rulemaking" process was about to start and that it is intended to result in realistic and publicly understood and accepted limits. [The Committee is tentatively scheduled to hear a presentation on the "enhanced participatory rulemaking process" at its 48th meeting scheduled for November 1992.]

Three SDMP sites were discussed. The first, DOW Chemical, was principally discussed because DOW might apply for an exception to the decommissioning rule to allow institutional control of disposal. Most contamination is from a magnesium/thorium alloy in the form of slag. DOW contemplates disposing of the slag in a separate RCRA disposal cell located in a hazardous waste landfill. Dr. Hinze questioned whether procedures were in place to act upon, or grant, an exception. Dr. Austin stated that, while there is a statement in the rules that permits exceptions, he was not certain at what staff level such exemptions could be issued.

The Chemetron facility was discussed next. An update of the presentation provided last year to the Committee was provided, it being noted that the State of Ohio now has jurisdiction over the solid waste and is therefore in the site remediation plan review process. (The site comes under RCRA because of the disposal of plating sludge in the ravine at the Chemetron Bert Avenue site - one of the two related sites.) Site characterization has been completed and it has been proposed as a remediation alternative that approximately 1,500,000 cu. ft. of contaminated soil (> 15 pCi/gram) be disposed onsite. Considerable discussion ensued in response to Dr. Steindler's question as to an acceptable quality assurance level for groundwater assessments for site characterization purposes.

The last site discussed was the Chevron Nuclear Lake site, near Pawling, New York. The uniqueness of this site is that the license was terminated in 1975, the site was sold in 1979 by its owners, United Nuclear, to the Department of Interior-National Park Service (DOI-NPS), and then in 1988 plutonium contamination exceeding NRC

limits was identified. The question of ownership and the finality of the action taken previously are two of the more interesting issues associated with this site. After a series of discussions and letters, Chevron (who purchased Gulf Oil -- the original owner -- in the 1980's) has agreed to "participate" in the cleanup with DOI-NPS.

Dr. Steindler questioned, in light of the long duration before resolution questions for most of these SDMP projects, whether: 1) similar problems had been experienced with the cleanup of various DOE facilities, 2) the NRC was resource constrained, and 3) the NRC Office of Nuclear Regulatory Research (RES) was aware of the problems and was participating in the solutions. In each case the response was affirmative: the staff is working with DOE on both cleanup and mixed waste problems; sufficient resources are being applied on this problem area by the NRC; and RES is involved in the rulemakings and is in the feedback loop.

Dr. Moeller asked about the need for dealing with each site on a case-by-case basis. He was told that, due to differing levels of state involvement, differing sites, differing types of ownership with various degrees of culpability, and the wide spectrum of types and extent of contamination, it is currently almost mandatory that most sites be handled on an individual basis. Perhaps once the coupling in the future of the SDMP Action Plan and the residual contamination level limits question is resolved as a result of the "enhanced participatory rulemaking" process, the relative questions can be handled generically.

Dr. Austin also noted that the staff is developing a generic groundwater model, attempting to define "reasonably conservative," developing procedures for handling human intrusion and dose assessment, and continuing to pursue the completion of NUREG-5512, the draft document on residual contamination levels. It was noted that for most cleanups, the guidance provided in NUREG-5512 would be acceptable, but for the remaining 2-3% of the more complicated SDMP sites, it probably would have only limited use.

In response to a question, the staff representatives indicated that a letter from the Committee on the SDMP was not needed. Dr. Austin agreed to send the Branch Technical Position on Site Characterization to the Committee for review as soon as it is completed.

After thanking the staff, Dr. Moeller adjourned the session.

V. EXECUTIVE SESSION (Open/Closed)

[Note: Mr. Richard K. Major was the Designated Federal Official for this part of the meeting.]

A. Memoranda and Letters

Draft Regulatory Guide 8013, "ALARA Radiation Protection Program for Effluents from Materials Facilities"
(Memorandum to Mr. James M. Taylor, Executive Director for Operations, dated September 30, 1992)

Program Plan for the Advisory Committee on Nuclear Waste
(Memorandum to Chairman Selin, dated September 30, 1992)

Workshop on EPA's "Draft 40 CFR 191" Held by the Board on Radioactive Waste Management (Letter to Dr. Chris Whipple, Clement International, dated September 29, 1992)

Invitation to Meet with ACNW Members (Letter to Dr. John Gittus, British Nuclear Forum, dated September 30, 1992)

B. Site Characterization Activities (Open)

Dr. Hinze indicated he had some questions regarding Mr. Robert M. Bernero's response, dated August 28, 1992, to the Committee's letter, dated August 4, 1992, on this subject. Ms. Charlotte E. Abrams, NMSS, who was in the audience, agreed to clarify the NMSS response. She indicated that, while the staff believes that the geophysical investigations at the Yucca Mountain site are useful and should be conducted, the staff wants to be very careful that it does not interject itself into the management of DOE's program.

Dr. Hinze stressed his understanding that the staff comment in paragraph 3, page 2, of the Bernero letter did not mean that geophysics is not an issue that will result in impacts to the site's ability to isolate waste, but rather that the "issue" is really the sequencing or scheduling of such investigations.

Dr. Hinze also asked if the staff has evaluated the impact of the Exploratory Studies Facility and the planned entry into the repository horizon upon surface geophysical investigations. Ms. Abrams indicated that, to date, the staff had not seen the DOE design for more than the portal. She thanked Dr. Hinze for his perspective that drifting may have some impact upon surface investigations and that both surface and underground geophysics must be coordinated.

Dr. Steindler asked if a legal document exists that requires DOE to write study plans. Ms. Abrams replied that study plans were mutually agreed upon but as to which agency had proposed this approach, she could not remember. The role of quality assurance in the process was also discussed.

Dr. Pomeroy wanted to know if DOE had firmed up its schedule for next year insofar as which study plans it planned to send to the NRC. Ms. Abrams indicated that she would provide to the Committee a copy of a letter from Mr. John P. Roberts, DOE, to Mr. Joseph J. Holonich, NMSS, dated August 17, 1992, that identifies the tentative dates for delivery of DOE documents to NRC, including study plans, topical reports, performance assessment iterations, and revisions to the Annotated Outline for License Application.

C. Systems Analysis Approach to Reviewing the Overall High-Level Waste Program (Open)

Dr. Steindler reviewed the concepts behind his last draft paper entitled "High-Level Waste Repository Issues in Need of Timely Consideration" (Official Use Only), revised September 24, 1992.

He described how he had incorporated the comments transmitted to him on an earlier draft, dated August 30, 1992. He requested that, prior to the next meeting, the members:

- Mark up and rewrite, as they believe necessary, the latest draft in order that a final draft can be considered during the 47th ACNW meeting, and
- Topics/issues identified in the draft report be prioritized. (Such a ranking would permit the final report to be prepared in a format that, in addition to reflecting in some relevance the Committee's concerns, would also be of assistance in the preparation of the covering report summary.)

D. ACNW Four-Month Plan (Open)

The Committee prepared and approved its next four-month plan. The plan includes a tabulation of proposed Committee activities for the period September - December 1992. A memorandum to Chairman Selin was issued.

E. Activities of the National Academy of Sciences - National Academy of Engineers - National Research Council (Open)

Dr. Moeller observed that there are a number of committees and boards in the National Research Council that are concerned with technical fields related to this Committee's areas of interest. Dr. Moeller requested that the staff prepare a paper that identifies those committees/boards along with their most recent publications and schedules for future activities.

F. Center for Nuclear Waste Regulatory Analyses (Open)

The Committee discussed an NRC staff proposal to expand the role of the Center for Nuclear Waste Regulatory Analyses (CNWRA) to include low-level waste issues.

As a result of this discussion, the Committee raised questions whether the CNWRA had achieved sufficient staffing and technical capability in the high-level waste field to be considering an expansion into low-level waste issues. In order to gain a better understanding on this matter, Dr. Steindler requested that members be provided with a list of all reports issued by CNWRA, including papers that have been published in the open literature. He suggested that this list, once prepared, be updated on a regular basis.

G. Electric Power Research Institute Meeting (Open)

Mr. Howard Larson, ACNW staff, informed the members that he has been invited to present a paper on ACNW activities during an EPRI-sponsored International Low Level Radioactive Waste Conference to be held in Baltimore, Maryland on November 9-12, 1992. The Committee endorsed the presentation.

H. Stock Ownership by ACNW Members (Closed)

The members discussed the provisions of 10 CFR Section 0.735-28a regarding prohibitions on "stock" ownership by NRC regular employees and Special Government Employees (ACNW members). The results of this discussion will be sent to the Office of the General Counsel.

I. ACNW Future Activities (Open)

The Committee agreed to the following tentative schedule for its initial meetings in 1993:

50th ACNW Meeting	January 27-28, 1993
51st ACNW Meeting	February 24-25, 1993

The members were requested to provide Mr. Richard Major with a list of dates that would not conflict with their other commitments for next year. The results of this poll will be used during the 47th ACNW meeting to assist the members in scheduling future meetings.

The Committee agreed to change the dates for the 48th ACNW meeting from November 16-17, 1992, to November 19-20, 1992.

J. Future Meeting Agenda

Appendix III summarizes the proposed items endorsed by the Committee for the 47th ACNW Meeting, October 21, 1992, and future Working Group meetings. This list includes items proposed by the Commissioners and NRC staff as well as ACNW members.

The meeting was adjourned at 3:25 p.m., Friday, September 25, 1992.

Advisory Committee on Nuclear Waste; Meeting

The Advisory Committee on Nuclear Waste (ACNW) will hold its 46th meeting on Tuesday, September 22, 1992, 1 p.m. until 6 p.m., in room P-422 and Friday, September 25, 1992, 8:30 a.m. until 5 p.m., in room P-110, 7920 Norfolk Avenue, Bethesda, MD.

The entire meeting will be open to public attendance, with the exception of a portion of item F that may be closed to discuss information the release of which would represent a clearly unwarranted invasion of personal privacy per 5 U.S.C. 552b(c)(6). The agenda for the subject meeting shall be as follows:

A. Prepare the next four-month plan of ACNW activities.

B. Discuss with EPA representatives results of the EPA's Science Advisory Board's recent consideration of C-14 release limits from a high-level waste repository.

C. Continue to prepare a response to a supplemental request from Chairman Selin made on April 24, 1992, on a systems analysis approach to reviewing the overall high-level waste program.

D. Discussion with and progress report by the NRC's Division of Low-Level Waste Management on the Site Decommissioning Management Plan (SDMP) list. Generic objectives and examples will be considered.

E. Review a proposed regulatory guide on 10 CFR part 20, ALARA criteria for material licensees.

F. Discuss proposed NRC regulations and their impact on the outside financial interests of members and their immediate families.

G. Discuss anticipated and proposed Committee activities, future meeting agenda, administrative, and organizational matters, as appropriate. Also, discuss matters and specific issues that were not completed during previous meetings as time and availability of information permit.

Procedures for the conduct of and participation in ACNW meetings were published in the Federal Register on June 6, 1988 (53 FR 20699). In accordance with these procedures, oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Committee, its consultants, and staff. Use of still, motion picture, and television cameras during this meeting may be limited to select portions of the meeting as determined by the ACNW Chairman. The office of the ACRS is providing staff support for the ACNW. Persons desiring

to make oral statements should notify the Executive Director of the office of the ACRS as far in advance as practical so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Information regarding the time to be set aside for this purpose may be obtained by a prepaid telephone call to the Executive Director of the office of the ACRS, Mr. Raymond F. Fraley (telephone 301/492-4516), prior to the meeting. In view of the possibility that the schedule for ACNW meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the ACRS Executive Director or call the recording (301/492-4600) for the current schedule if such rescheduling would result in major inconvenience.

I have determined in accordance with subsection 10(d) Public Law 92-463 that it is necessary to close portions of this meeting noted above to discuss information the release of which would represent a clearly unwarranted invasion of personal privacy per 5 U.S.C. 552b(c)(6).

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the chairman's ruling on requests for the opportunity to present oral statements and the time allotted can be obtained by a prepaid telephone call to the ACNW Executive Director, Mr. Raymond F. Fraley (telephone 301-492-8049), between 8 a.m. and 4:30 p.m. EST.

Dated: September 11, 1992

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 92-22540 Filed 9-16-92; 8:45 am]

BILLING CODE 7590-01-M

Regulatory Guide; Issuance, Availability

The Nuclear Regulatory Commission has issued a revision to a guide in its Regulatory Guide Series. This series has been developed to describe and make available to the public such information as methods acceptable to the NRC staff for implementing specific parts of the Commission's regulations, techniques used by the staff in evaluating specific problems or postulated accidents, and data needed by the staff in its review of applications for permits and licenses.

Revision 3 to Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," provides guidance on methods acceptable to the NRC staff for complying with the Commission's regulations for emergency

response plans and preparedness at nuclear power reactors.

Comments and suggestions in connection with (1) items for inclusion in guides currently being developed or (2) improvements in all published guides are encouraged at any time. Written comments may be submitted to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Regulatory guides are available for inspection at the Commission's Public Document Room, 2120 L Street NW., Washington, DC. Copies of issued guides may be purchased from the Government Printing Office at the current GPO price. Information on current GPO prices may be obtained by contacting the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082, telephone (202) 512-2249 or (202) 512-2171. Issued guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161.

(5 U.S.C. 552(a))

Dated at Rockville, Maryland this 25th day of August 1992.

For the Nuclear Regulatory Commission.

C.J. Heltemes, Jr.,

Deputy Director for Generic Issues and Rulemaking, Office of Nuclear Regulatory Research.

[FR Doc. 92-22547 Filed 9-16-92; 8:45 am]

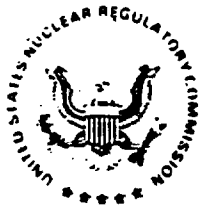
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[Docket No. 50-333]

Power Authority of The State of New York, (James A. FitzPatrick Nuclear Power Plant); Exemption**I.**

The Power Authority of the State of New York (PASNY/licensee) is the holder of Facility Operating License No. DPR-59, which authorizes operation of the James A. FitzPatrick Nuclear Power Plant (the facility). The license provides, among other things, that the facility is subject to all rules, regulations, and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is a boiling water reactor located at the licensee's site in Oswego County, New York.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
 ADVISORY COMMITTEE ON NUCLEAR WASTE
 WASHINGTON, D.C. 20555

September 8, 1992

SCHEDULE AND OUTLINE FOR DISCUSSION
46TH ACNW MEETING
SEPTEMBER 22 AND 25, 1992

Tuesday, September 22, 1992, 7920 Norfolk Avenue, Room 422,
Phillips Bldg., Bethesda, Maryland

- | | | |
|----|------------------------------|--|
| 1) | 1:00 - 1:15 p.m. | Opening Remarks by ACNW Chairman (Open)
1.1) Opening Remarks (DWM/RKM)
1.2) Items of Current Interest (DWM/RKM) |
| 2) | 1:15 - 2:30 p.m. | <u>Review Draft Regulatory Guide 8013,</u>
<u>Guidance on 10 CFR Part 20, ALARA</u>
<u>Criteria for Material Licensees (Open)</u>
(DWM/GNG)
2.1) Staff Presentation
2.2) Discussion
2.3) Tenor of ACNW Report |
| | 2:30 - 2:45 p.m. | ***** BREAK ***** |
| 3) | 2:45 - 3:30 p.m. | <u>Prepare the Next Four-Month Plan of ACNW</u>
<u>Activities for the Commission (Open)</u>
(DWM/RKM) |
| 4) | 3:30 - 5:00 p.m. | <u>Committee Activities/Future Agenda</u>
(Open/Closed) (DWM/RKM)
Discuss anticipated and proposed Committee
activities, future meeting agenda,
administrative and organizational matters,
as appropriate
3.1) Set October Agenda
3.2) Set Working Group Meetings
3.3) Decide Other Future Topics
3.4) Center Activities (LLW)
3.5) Air Cleaning Conference
3.6) ACNW Staff Assignments
3.7) Stock Ownership by Members (Closed) |
| | 6:15
5:45 p.m. | RECESS |

NOTE: On September 23 and 24, 1992, the ACNW will observe the
proceedings of the National Research Council's Board on
Radioactive Waste Management (BRWM). The Board is conducting
a technical review of the documents provided by DOE to EPA to
support their position on draft #4 (Feb. 1992) of the revised
Standard 40 CFR Part 191, for high-level radioactive waste.

The Meeting will be held at the Foundry, Room 2004, 1055
Thomas Jefferson Street, (Off "M" Street) Washington, D.C.

[= Transcribed portion of meeting.

Friday, September 25, 1992, Room P-110, 7920 Norfolk Avenue, Bethesda, Maryland

- 5) 8:30⁵ - 9:55¹⁵ a.m. Discussion with Members of EPA's Science Advisory Board on Recent Considerations Concerning C-14 Release Limits from a HLW Repository (Open) (MJS/HJL)
- 9:55¹⁵ - 10:45 a.m. ***** BREAK *****
- 6) 10:45¹⁵ - 12:30 P.M. Discussion with and Progress Report by the NRC's Division of Low-Level Waste Management on the Site Decommissioning Management Plan (SDMP) List (Open) (DWM/HJL)
6.1) Generic Objectives
6.2) Specific Examples
- 1:00^{2:00} - 1:30 p.m. ***** LUNCH *****
- 7) 1:30^{2:00} - 2:30 p.m. Preparation of ACNW Reports (Open) (DWM/RKM)
7.1) Four-Month Plan
7.2) R.G. on ALARA for Materials Licensees
7.3) Systems Analysis
- 8) 2:30^{12:35} - 4:00^{1:00} p.m. Systems Analysis Approach to Reviewing the Overall High-Level Waste Program (Open) (MJS/HJL)
8.1) Current Status
8.2) Progress on Draft Report/Road Map
8.3) Future Actions
- ~~4:00 - 4:15 p.m.~~ ***** BREAK *****
- 9) 4:15^{2:30} - 5:00^{3:25} p.m. Complete Preparation of ACNW Reports (Open)
9.1) Four-Month Plan
9.2) R.G. on ALARA for Materials Licensees
9.3) Systems Analysis
- 3:25^{5:00} p.m. ADJOURN

APPENDIX III: MEETING ATTENDEES

46TH ACNW MEETING
SEPTEMBER 22 AND 25, 1992

ACNW MEMBERS

	<u>1st Day</u>	<u>2nd Day</u>	<u> </u>
Dr. William J. Hinze	<u> X </u>	<u> X </u>	<u> </u>
Dr. Dade W. Moeller	<u> X </u>	<u> X </u>	<u> </u>
Dr. Paul W. Pomeroy	<u> X </u>	<u> X </u>	<u> </u>
Dr. Martin J. Steindler	<u> X </u>	<u> X </u>	<u> </u>

ACNW CONSULTANTS

Dr. David Okrent		<u> X </u>	
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NRC STAFF

		<u>1st Day</u>	<u>2nd Day</u>	<u> </u>
Charlotte Abrams	NMSS		X	
John Austin	NMSS	X		
Joe DeCicco	NMSS	X		
Earl P. Easton	EDO		X	
Abraham Eiss	NMSS		X	
David Fauver	NMSS		X	
Meg Harvey	NMSS	X		
Timothy Johnson	NMSS		X	
Cynthia Jones	NMSS	X		
Maria Lopez-Otin	SP		X	
Charleen Raddatz	RES	X		
Cheryl Trottier	RES	X		
Michael Weber	NMSS	X		

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

Mary Birch	Duke (OCRWM M&O)
Christopher Charles	Weston
D. Corson	ICF
S. Chu	NWTRB
Joyce Davis	DNFSB
Dan Dresser	Weston
Lawrence Ford	M&O
Steve Frishman	State of Nevada
D.R. Gibson	M&O
Paul Krishna	TRW (M&O)
Bill McCaughey	Weston
Homi Minwalla	Weston
Malachy Murphy	Nye County, NV
J. Packer	TRW (M&O)
Gene Roseboom	USGS
John Russell	CNWRA
Charles B. Serfas	APA
Victor Sjoble	U.S. GAP
E.V. Tiesenhausen	CCCP
J. Treichel	State of Nevada
Ray Wallace	USGS
Pat Ware	

APPENDIX IV: FUTURE AGENDA

47th ACNW Committee Meeting October 21, 1992 (Tentative Schedule)

Wednesday, October 21, 1992 - 47th ACNW Meeting

Comments on the Proposed HLW Repository - The Committee will receive comments on the proposed high-level radioactive waste repository from State, local and Indian Tribe representatives.

Work in Progress at the HLW Repository - The Committee will hear DOE representatives discuss site characterization work in progress, results to date and strategy for setting priorities at the proposed Yucca Mountain HLW repository site.

Accelerated Seismic Initiative - The Committee will be briefed by representatives of DOE and its contractors on the Accelerated Seismic Initiative. The briefing will include information on the June 29, 1992, earthquake that occurred near the proposed Yucca Mountain HLW site.

Working Group Report on Natural Resources - The Committee will hear a report from the Chairman of the ACNW Natural Resources Working Group on a meeting to be held on October 20, 1992.

Systems Analysis Approach - The Committee will continue its discussions of a supplemental request from Chairman Selin on a systems analysis approach to reviewing the overall high-level waste program.

Committee Activities - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate. Also, the members will discuss matters and specific issues that were not completed during previous meetings.

Thursday, October 22, 1992 (Site Visit)

The Committee will visit and be briefed on the DOE Geographic Information System. The Committee will also visit and be briefed on the remote sensing laboratory in north Las Vegas.

Friday, October 23, 1992 (Site Visit)

Two members and several ACNW staff will tour the proposed Yucca Mountain HLW repository site, Midway Valley Trench, Ghost Dance Fault, LM-300 drill rig, Hydrologic Research Facility, Sample Management Facility and Geoscience Laboratory, and the "X" Tunnel at Little Skull Mountain.

APPENDIX V
LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE

A. Meeting Handouts

AGENDA
ITEM NO.

DOCUMENTS

- 1 Chairman's Report (Open)
 1. Items of Interest and/or for Possible Discussion, dated September 18, 1992, by Dade W. Moeller
 2. Highlights of the Yucca Mountain Site Characterization Project Bibliography, 1990 - 1991 (DOE/OSTI-3406 Suppl. 3), dated September 18, 1992, by Dade Moeller
 3. Memorandum for Richard Major from Dade Moeller, dated September 18, 1992, regarding National Policy on Risk Assessment, with enclosure
 4. Additional Commentary on Performance Indicators for Low-Level Waste Disposal Systems, dated September 19, 1992, by Dade Moeller [Official Use Only].
 5. Comments on Proposed ACNW Letter on Systems Analysis, dated September 19, 1992, by Dade Moeller.
- 2 Review Draft Regulatory Guide 8013, Guidance on 10 CFR Part 20, ALARA Criteria for Material Licensees (Open)
 6. Memorandum of Understanding Between the Environmental Protection Agency and Nuclear Regulatory Commission Concerning Clean Air Act Standards for Radionuclide Releases from Facilities other than Nuclear Power Reactors Licensed by NRC or its Agreement States, Subpart I, 40 CFR Part 61, undated
- 3 Four-Month Plan of ACNW Activities (Open)
 7. Article from The Washington Post, dated September 21, 1992, regarding Seismology: "Intraplate" Strain Augurs Quakes
- 4 Committee Activities/Future Agenda (Open)
 8. Commentary on Revised EPA Standards, dated September 22, 1992, by Dade Moeller
- 5 Discussion with Members of EPA's Science Advisory Board on Recent Considerations Concerning Carbon-14 Release Limits from a HLW Repository (Open)
 9. U.S. Environmental Protection Agency's Science Advisory Board Discussion on High-Level Waste Carbon-14 Release, dated September 25, 1992 [Viewgraphs]
- 6 Site Decommissioning Plan (SDMP) List (Open)
 10. Site Decommissioning Management Plan, undated [Viewgraphs]

7. Preparation of ACNW Reports (Open)
 11. Letter for Joseph Holonich, NMSS, from John Roberts, DOE, dated August 17, 1992, regarding Submittal of DOE Documents to NRC, with enclosure.
- B. Meeting Notebook
 1. Chairman's Report (Open)
 1. Introductory Statement by ACNW Chairman, dated September 22, 1992. Items of Current Interest
 2. Review Draft Regulatory Guide 8013, Guidance on 10 CFR Part 20, ALARA Criteria for Material Licensees (Open)
 2. Status Report
 3. Memorandum for Dade Moeller from Giorgio Gnugnoli, dated August 24, 1992, re, Regulatory Guide on ALARA Radiation Protection Programs for Effluents from Material Facilities
 4. Memorandum for Raymond Fraley from C. J. Heltemes, dated August 20, 1992, re, Regulatory Guide for Implementation of 10 CFR Part 20 [with enclosures]
 5. Memorandum for Dade Moeller from Giorgio Gnugnoli, dated August 3, 1992, re, Office of Nuclear Regulatory Research Guidance on "As Low As Reasonably Achievable" Relating to the Clean Air Act [with enclosures]
 6. Memorandum for Dade Moeller from Giorgio Gnugnoli, dated August 28, 1992, re, Background References for the 46th Meeting of the ACNW ALARA Regulatory Guide/Part 20 [with enclosures]
 7. Regulatory Guide 8.10, dated September 1975
 8. Regulatory Guide 8.18, dated October 1982
 9. Regulatory Guide 8.31, dated May 1983
 10. Regulatory Guide 10.8, dated August 1987
 4. Committee Activities/Future Agenda (Open)
 11. 47th ACNW Meeting and Associated Tours and Working Group Meeting, Las Vegas, NV, October 20-23, 1992
 12. 48th ACNW Meeting November 16-17, 1992
 13. 49th ACNW Meeting December 17-18, 1992
 14. 50th ACNW Meeting January, 1993
 15. Other Topics to be Scheduled
 16. Working Group Meetings
 17. Blaha List of Proposed Agenda Items
 18. 1993 Meeting Calendar
 19. Background Information on Low-Level Waste Performance Indicators [with enclosures, Official Use Only]
 20. Memorandum for ACNW Members/Staff from Richard Major, dated September 2, 1992, re, ACNW Working Groups and Staff Assignments, Revision 1

21. Proposed Alternate Committee Positions Regarding Restrictions on Stock Ownership [with enclosures]
- 5 Discussion with Members of EPA's Science Advisory Board on Recent Considerations Concerning Carbon-14 Release Limits from a HLW Repository (Open)
 22. Status Report
 23. "New EPA Emissions Rules May Torpedo Yucca Mountain Plans", The Energy Daily, September 4, 1990
 24. "Review of Carbon-14 Release from A High-Level Nuclear Waste Repository" presented at C-14 WG Meeting by R. A. Konynenburg, Lawrence Livermore National Laboratory
 25. Memorandum for ACNW Members from Howard Larson, dated September 11, 1992, re, EPA-SAB Carbon-14 Subcommittee Meeting [with enclosures]
- 6 Site Decommissioning Plan (SDMP) List (Open)
 26. Status Report
 27. Memorandum for ACNW Members from Howard Larson, dated June 16, 1992, re, SECY-92-200, "Updated Report on Site Decommissioning Management Plan", dated May 29, 1992 [with enclosures]
- 8 Systems Analysis Approach to Reviewing the Overall HLW Program (Open)
 28. Status Report
 29. Letter for Chairman Selin from Dade Moeller, dated May 1, 1992, re, Comprehensive Systems Analysis of the High-Level Radioactive Waste Management & Disposal Program
 30. Memorandum for Dade Moeller from Samuel Chilk, dated May 5, 1992, re, Staff Requirements, Refer To: M920424B
 31. Draft Letter from M. Steindler to Distribution, dated September 2, 1992, re, Draft Letter to Selin regarding Issues in HLW Disposal [with enclosures, Internal Committee Use Only]
 32. Draft Letter to Chairman Selin from M. Steindler dated August 30, 1992, re, HLW Repository Issues in Need of Timely Consideration [Internal ACNW Committee Use Only; Pre-decisional Draft]
 33. Memorandum for ACNW Members from Howard Larson, dated July 1, 1992, re, "Thoughts on Systems Analysis" [with enclosures]
 34. Letter to ACNW Members from M. Steindler, dated July 5, 1992, re, Topics and Potential Issues for the Selin Question #2 [Internal Committee Use Only]