

ACRS-2077
PDR 060983

CERTIFIED COPY

DATE ISSUED: 05/10/83

CERTIFIED

MINUTES OF THE JOINT CLASS-9 ACCIDENTS
AND REACTOR RADIOLOGICAL EFFECTS SUBCOMMITTEE MEETING

FEBRUARY 22, 1983 - WASHINGTON, D.C.

The ACRS Class-9 Accidents and Reactor Radiological Effects Subcommittee held a joint meeting on February 22, 1983 in Room 1046, 1717 H Street, N.W., Washington, D.C. The purpose of the meeting was to review the NRC's Severe Accident Source Term Program. The entire meeting was open to the public. Notice of this meeting was published in the Federal Register on Monday, January 31, 1983. A copy of this notice is included as Attachment A. Attachment B is a listing of meeting attendees; the meeting schedule is included as Attachment C; and Attachment D is a listing of meeting handouts and viewgraphs. A complete set of meeting handouts are on file at ACRS headquarters. Ms. R. C. Tang was the Designated Federal Employee. There was one statement from the public.

Subcommittee Chairman's Opening Statement

Dr. Kerr called the meeting to order. He commented that this meeting was being chaired by himself and Dr. Moeller. He stated that the combined Subcommittees would review the NRC's severe accident source term research and utilization program. Dr. Kerr asked that the NRC Staff discuss the following items in the upcoming presentations:

1. How will the Source Term research be included with the Safety Goals and severe accident policy statement?
2. What is needed currently that is not available in the WASH-1400 report?
3. How is the staff judging improvements?
4. What is the goal of the Source Term program and when will it be completed?

8306200163 830510
PDR ACRS
2077 PDR

DESIGNATED ORIGINAL
Certified By BJR

Dr. Moeller referred to the DOE sponsored report on "Source Terms: An investigation of Uncertainties, Magnitudes, and Recommendations for Research", which had been published as NUS-3808 in March 1982. He specifically asked how this report and its recommendations were related to, and were possibly being taken into account, in the NRC effort.

NRC Presentation

R. Bernero described the Accident Source Term Program Office (ASTPO) which had recently been established as a temporary office by the EDO. Bernero is the Director of this new Office. The Accident Source Term Program Office will provide two functions - to make sure that the technical work is done in a coherent and correct manner and to start the source term regulatory proceedings.

R. Bernero commented that the new source term estimates are expected to be lower than the WASH-1400 estimates because of the conservative assumptions used in WASH-1400. The new source term estimates will be used in emergency planning and the consideration of new design features for nuclear power plants.

Dr. Moeller asked if the source term research program is concerned with the manner in which the containment fails. Bernero replied that there is a specific item in the Source Term Office charter dealing with the resolution of the containment failure issue.

M. Silberberg followed with an overview of the source term program. This program was initiated at the request of the Commission for the purpose of reassessing the source term. The contractors for this program are Idaho National Engineering Labs (INEL), Oak Ridge National Labs (ORNL), Sandia and Battelle Columbus Labs (BCL). Additional sources of data will be provided by the Federal Republic of Germany, EPRI, DOE, GE, and from the TMI-2 Core examination.

BCL prepared in January 1983 a draft of Volume I of the Source Term reassessment for large dry PWR containments (Surry). This draft, referred to as NUREG-0956, has not been accepted by the NRC as of this meeting. There are two additional volumes in preparation for source terms associated with ice condenser and BWR Mark I/III containments. The source term research is examining fission product/aerosol release from the fuel, transport in the reactor coolant system, and transport in the containment. Preliminary findings in the BCL report indicate that the total release fractions of fission products vary in general from slightly less than WASH-1400 estimates to several orders of magnitude lower, depending on the accident sequence. The NRC is also subjecting the BCL report to peer review before accepting it as a final document.

The initial peer review meeting was held in Washington, D.C. on January 25-26, 1983. Some comments follow:

- ° general approach is a step in the right direction,
- ° development of analytical models are far ahead of their validation,
- ° additional consideration should be given to details of plant systems/
structures in transport pathway analysis,
- ° improve modeling of upper plenum,
- ° improve thermal hydraulic analysis,
- ° improve containment analyses - loading and failure times,
- ° uncertainty analysis - how much uncertainty is associated with
codes, assumptions, etc.

Contractor Presentations

R. Wichner of ORNL followed with a presentation of source term research at ORNL. He discussed fission product release from LWR fuel, the status of core melt tests, and the current status of the review of tellurium (Te) and control rod alloy release.

The objectives of the ORNL fission product release studies are (1) to determine release rates from commercial, irradiated LWR fuel under accident conditions; (2) to compare results with SASCHA data and with integral melt tests at ORNL; (3) to correlate release data with the physical and chemical changes in the fuel; and (4) to determine the form of the release material. ORNL is planning to complete seven tests during this fiscal year. The tests are conducted in a hot cell which houses a steel container, the fuel specimen, thermocouples,

optical pyrometers, and other instruments. The analytical system consists of a thermal gradient tube (which analyzes the species as they are deposited in the tube), a filter bank, and charcoal for noble gases. Three tests, HI-1 through-3, have been completed using fuel from the H.B. Robinson plant. The maximum test temperatures were 1400°C, 1700°C, and 2000°C respectively. Four additional tests are planned for this year, starting in February and ending in October. The future tests will use fuel samples from Peach Bottom, Quad Cities Unit 1, and Oconee. The fuel element sample weighs one kilogram (about the same as eight fuel pins with steel plates at either end and a control rod in the center). ORNL is in the process of developing 10-kilogram samples for the purpose of being more representative of a commercial reactor core. Preliminary results indicate that the fraction of fission products available for release may be less than predicted by the WASH-1400 study.

D. Powers of Sandia discussed high temperature fission product chemistry and transport. Objectives of the high temperature fission product chemistry program are (1) to determine the chemical interactions among fission products and reactor materials that might affect transport of fission products after release from the fuel; and (2) to provide quantitative descriptions of the chemistry for inclusion in the TRAP-MELT Model. Experimental work is performed in a microbalance apparatus, a transpiration apparatus, and most importantly the fission product reaction facility. The fission product reaction facility can create a fairly prototypic steam and hydrogen environment at temperatures typical of reactor accidents in the upper plenum structure or along the transport pathways before entering the containment.

Sandia is focusing on the reactions of tellurium, cesium, iodine, and boron carbide with structural and core materials. Some preliminary results are as follows:

- ° CsOH can physically deposit on structural materials below 700°C;
- ° A small fraction of CsOH will chemically react with and bind to oxides on steel structures;
- ° Tellurium vapors chemically react with structural steel or their oxides to form stable, condensed compounds; and
- ° Silver does not chemically react with CsI but will react with I, I₂, or HI to form silver iodide.

The next phase of experiments will model BWR accident sequences.

J. Gieseke of BCL followed with an overview of the TRAP-MELT code. This code divides the primary system into control volumes which are connected by fluid flow. The TRAP-MELT code assumes that (1) the radionuclides in each volume are well mixed; (2) the total surface area, average surface and gas temperature characterize radionuclide behavior for each volume; (3) all deposition mechanisms are proportional to the radionuclide or particle concentration. Transport of radionuclides occurs between radionuclide "states" defined as the product of location and radionuclide phase.

T. Kress of ORNL followed with a discussion of containment code validation of aerosol behavior at the Oak Ridge Nuclear Safety Power Plant (NSPP). The dominant containment aerosol phenomena needing validation are agglomeration, gravitational settling, steam condensation onto aerosols, and diffusiophoresis. The NSPP tests are designed to use appropriate aerosols; produce aerosol concentrations which allow agglomeration to produce aerosols equivalent to those in a full-sized containment; coherent tests with the controlling of dominant phenomena; and measurement of the important parameters. The NSPP program plans to complete all single-component aerosol tests in steam environments by FY '83. Mixed aerosol tests and effects on engineered safety features (ESFs) are scheduled to be completed by FY '84. The summary of current milestones associated with this validation program are as follows:

- ° the important phenomena are known;
- ° dry aerosol data provide confidence in models for agglomeration and gravitational settlings; and
- ° integral validation is still needed for establishing the partitioning of condensed steam between containment and aerosol surfaces; aerosol removal by diffusiophoresis, and wet mixture aerosol shape factors.

K. Winegardner of Pacific Northwest Laboratories (PNL) discussed aerosol behavior in ESF systems. This program is aimed at predicting the effectiveness of ESFs on aerosol depletion and initial emphasis on postulated severe accident sequences. This program will examine filtration, spray, pressure suppression, and air cooling systems.

Current tasks are development of mathematical models for predicting ESF system effectiveness in terms of aerosol depletion, and suppression pool and ice bed models for use in development of NUREG-0956.

R. Wichner of ORNL next discussed post-accident iodine and tellurium chemistry research at ORNL. Objectives of this program are to measure iodine volatilities under realistic conditions; gain an understanding of aqueous iodine chemistry; determine the effect of chemistry uncertainty on iodine and tellurium transport; organic iodine production rates; and tellurium chemistry. The research on the last two objectives has not yet been started. Conclusions and results include:

- ° HOI has not been observed spectrophotometrically;
- ° the observed increase of the second stage rate constant with ionic strength indicates that "HOI" is ionic (H_2OI^+);
- ° the kinetics of the I_2 hydrolysis reaction have been determined;
- ° redox kinetics;
- ° the time varying iodine volatility predicted theoretically has been seen;
- ° early volatility results indicate somewhat higher volatility than predicted; and
- ° ORNL researchers believe prudence dictates that the radiation effects on volatility and reaction rates be determined.

RES Presentation on KI Paper

R. Bernero discussed the status of the potassium iodide paper. The KI paper is the first example of new source term information in the regulatory process. Using WASH-1400 source terms, a cost benefit or value impact ratio of \$30,000 cost per thyroid nodule averted was derived in assessing the effectiveness of KI as a blocking agent. This original work was performed in 1980 and there was some thought that, based on these cost benefit numbers, a recommendation could be made regarding KI. However, recent re-evaluation of this issue indicates a factor of 40 is too optimistic regarding KI effectiveness. Therefore, Bernero would not recommend to the Commission preplanned stockpiling or predistribution of KI for the general public for potential reactor accidents. Bernero also commented that telling the state agencies not to use KI is difficult. D. Moeller made the following two comments:

- (1) Have an organization such as NCRP review and comment on the Staff's proposed recommendation to the Commission, and
- (2) Based on the risk due to radiation thyroid cancer (which is 10^{-4} per rad), giving KI is justified (1 adverse reaction to KI per million consumed). Mr. Bernero replied that no adverse impacts of KI were considered nor did RES attempt to take account the negative effects of taking other preventive measures.

Contractor Presentations

P. MacDonald of INEL next described the results of the Severe Fuel Damage Scoping Test (SFD-ST) at the Power Burst Facility (PBF). The SFD-ST was the first in a series of severe fuel damage tests to be performed at PBF. He noted that this test was atypical because of the slow heat up rates and use of fresh fuel. The test was conducted with 32 fuel rods that are typical of 17x17 PWR rods but are only three feet in length. The test sequence consisted of three days of power calibration and fuel conditioning; a ten-day cooling period to produce the proper cesium to iodine ratio; a few hours of irradiation to buildup the short-lived fission products; and finally a high temperature transient. Observations of fission product chemical form from the SFD-ST were:

- ° insignificant gaseous iodine, most iodine is soluble, and little particulate iodine;
- ° Te and Sb are predominant in particulates; and
- ° Te and Cs are predominant in plateout.

New information from the SFD-ST includes:

- ° rapid oxidation of lower bundle was unexpected and cannot be calculated with existing models;
- ° rate of increase of fission product release rate due to liquefaction and temperature was about 50 times higher than release due to temperature alone;

- ° fission product release resulting from quenching was more than 10 times larger than release due to temperature and liquefaction;
- ° iodine and tellurium followed liquid pathway;
- ° low volatility fission products were not released to any extent; and
- ° plateout was significant and could not be removed by flushing.

The next PBF test is scheduled for April 15, 1983. The last is currently scheduled for April 23, 1984. Heat up rates will be characteristic of TMI-2. The fourth and fifth tests will use previously irradiated fuel with slow cooldown. The fifth or last test will have control rod material present.

A. Appelhaus of INEL continued the PBF discussion with a presentation of the SFD Series 2 tests. The objectives of the Series 2 tests are to (1) determine the fraction of fission product vapors/aerosols released to the upper plenum region; (2) determine the relative timing of volatile fission product and aerosol release, (3) determine the chemical composition and physical characteristics of aerosols and fission products; and (4) relate all of the previous objectives to the fuel/core behavior. Mr. Appelhaus noted that providing an environment characteristic of the PWR upper plenum region will be important to the series 2 tests. INEL performed a detailed evaluation of the B&W plenum and of the Zion

plenum regions and discovered that they could model these regions very well. A PBF will provide the following:

- ° high burnup PWR fuel taken to fuel melting conditions for risk dominant accident scenarios;
- ° the only source term data generated in a truly realistic environment;
- ° concentrate on fission product and aerosol release to the plenum region and retention and transport mechanisms;
- ° comprehensive measurement system to characterize fission product and aerosol behavior; and
- ° relate fission product and aerosol behavior to fuel behavior.

J. Gieseke of BCL next gave a brief introduction of the BCL source term research. The procedure for starting this research begins with selection of the types of plants based on available information, design characteristics, etc. Next, specific accident sequences are selected. MARCH and MERGE codes are then used to estimate thermal-hydraulic parameters. These combined with the CORSOR code provide the source available to be released from the fuel. TRAP-MELT is used to calculate the transport and deposition of fission products in the primary system as well as what is released to containment. A second source calculation is provided by Sandia based on a core-concrete reaction. CORRAL-2 and NAUA are used to compute the radionuclide transport and deposition in the containment; following this a time dependent release from containment is obtained.

The uncertainty in the prediction of the type and conditions of containment failure was noted and Dr. Siess pointed out that, up to the point of containment failure, the public health was not being affected. Mr. Bernero agreed that the containment and its mode of failure would have a very significant effect on the radionuclide release.

Mr. Kelber clarified that this meeting was to discuss work being done to describe the source term within containment as a function of time, what is its form and where it is. Mr. Gieseke went on to list the assumptions and uncertainties in the calculations. He also pointed out the weaknesses identified by the peer review panel and the NRC and noted that the contractor report is an evolutionary document that will be revised and updated over the next several months.

Mr. Denning went on to describe the accidents, the plants, and the studies. The CORSOR code models the reactor core in 120 sections and follows the temperature in each of these sections. Fission product species are released at different temperatures, and at any one time different species may be released from different parts of the core depending on the temperature distribution. Thus UO_2 aerosols may be forming from very hot regions while Cs and I are being released from the less hot regions. This is important relative to particle formation and deposition.

Mr. Kuhlman pointed out that the current method of predicting core material deposition through the primary system has been improved over the NUREG-0772 method by the inclusion of additional material species, additional transport mechanisms, time dependent release of core materials, and coupling with containment. Although the present approach is an improvement, there are some remaining problems including

lack of quantification of system sensitivity, imprecision in deposition velocities/release rates, poor description of the upper plenum geometry and circulation pattern, surface heatup due to decay heat from deposited fission products not being considered, and the aerosol release from the core after core slumping not being considered.

Mr. Kuhlman noted that the cesium and iodine emission rates and the presence of steam and hydrogen almost preclude the release of molecular iodine--it will all be CsI or a very small portion of KI. He also pointed out that various components (steam generators) of the primary system are good sinks for radionuclides released from the core.

In response to a question by Dr. Axtmann, Mr. Marino confirmed that the PBF experiments described earlier could have a significant impact on these models of fission product release and migration.

Mr. Gieseke next addressed the transport, deposition and leakage of fission products in containment as described by the CORRAL and NAUA computer codes. The output of these codes gives airborne activity, the settled-out mass, the plated mass, and the mass that leaked out, as well as size distribution of the material. He described the type of calculations that were made and the results obtained. For a typical sequence, core uncover occurs at 30 seconds, melt starts at 27 minutes, the core slumps at 57 minutes, the bottom head fails at 81 minutes and the core-concrete interaction also begins at 81 minutes. The codes provide an accumulated leaked mass as a function of time for each species of fission product of interest, as well as for the sum of the fission products. They also predict the airborne mass of each. The codes show that the release

from containment is orders of magnitude less if containment spray is used. The amounts released are very much sequence dependent.

Mr. Warman (Stone & Webster) advocated adopting an interim source term pending completion of the research on a new source term. He thought that planners should have the benefit of the most current, scientifically supportable, suitably bounded, source term information rather than be constrained by past conservative assumptions. He offered about six reasons in support of this statement.

Mr. Warman then commented on the draft of NUREG-0956, Volume 1, which had been reviewed earlier. He pointed out that in one specific example, the Surry containment, the containment failure is assumed even though the peak pressure calculated is below the design margin, let alone the ultimate margin for that containment. He also contended that using a single node to model containment was unrealistic in that it could not represent the tortuous release path the fission products would have to follow to escape containment.

Mr. Warman made the point that there will be a large quantity of liquid water in containment due to condensation on passive heat sinks. This water is available to dissolve the CsI and CsOH thereby limiting their release to the atmosphere. He showed a multinode model of containment that Stone and Webster is using to analyze releases from reactor accidents. These include both large (36") and small (4") openings in the containment. Assuming a hot leg break and a 7 ft² opening through containment, Stone and Webster conservatively calculated a

Joint Class 9-Accident and
Reactor Radiological Effects
Subcommittee Meeting

- 16 -

2/22/83

factor of more than 10 reduction in aerosol released between what was released into containment and what got out of containment.

Mr. Warman summarized by saying he did not believe containment (large dry) failure by overpressurization was a credible event, and even if there was a large hole in containment there would be a large reduction in the radionuclides as they pass from the breach in the primary system through the compartments of and opening in the containment before they are released to the atmosphere. He urged others to make similar studies that could then be used to support an interim source term while research continued on the development of a new source term.

The Subcommittee Chairmen thanked the meeting participants and adjourned the meeting at about 6:20 p.m. Although further meetings on this topic are anticipated none was scheduled at this time.

Bucci

B&O to continue service between Decatur and Springfield.

As a condition to use of the exemption, any B&O or N&W employees affected by the transaction will be protected by the conditions set forth in *Norfolk and Western Ry. Co. Truckage Rights*, BN, 354 I.C.C. 605 (1978) as modified in *Mendocino Coast Ry., Inc.-Lease and Operate*, 360 I.C.C. 853 (1980), *aff'd sub nom. Railway Labor Executives' Ass'n v. United States*, 675 F. 2d 1248 (D.C. Cir. 1982). This satisfies the statutory requirements for protection of employees under 49 U.S.C. 10505(g)(2), which may not be avoided through the exemption process.

By the Commission, Heber P. Hardy,
Director, Office of Proceedings.
Agatha L. Megeovich,
Secretary.

[FR Doc. 83-2551 Filed 1-28-83, 8:45 am]
BILLING CODE 7035-01-M

DEPARTMENT OF JUSTICE

Proposed Consent Decree in Action To Enforce the Clean Water Act

In accordance with Departmental policy 28 CFR 50.7, 38 FR 19029, notice is hereby given that on January 11, 1983, a proposed consent decree in *United States v. Diamond Shamrock Corporation*, No. CA3-830046R was lodged with the United States District Court for the Northern District of Texas, Dallas Division.

The proposed consent decree provides for compliance with both an NPDES permit and the Clean Water Act Section 311 prohibition against discharges in "harmful quantities." The proposed consent decree requires that the company pay a penalty of \$10,000.00 for prior discharges.

The Department of Justice will receive for a period of thirty (30) days from the date of this notice written comments relating to the proposed consent decree. Comments should be addressed to the Assistant Attorney General of the Land and Natural Resources Division, Department of Justice, Washington, D.C. 20530, and should refer to *United States v. Diamond Shamrock*, D.J. Ref. No. 90-5-1-1-1602.

A proposed consent decree may be examined at the Office of the United States Attorney, Northern District of Texas, U.S. Federal Building and Courthouse, Room 10G28, 1100 Commerce Street, Dallas, Texas 75242; and the Environmental Protection Agency, First International Building, 1201 Elm Street, Dallas, Texas 75270; and the Environmental Enforcement Section, Land and Natural Resources

Division, United States Department of Justice, Room 1515, Ninth Street and Pennsylvania Avenue, NW., Washington, D.C. 20530. A copy of the proposed consent decree may be obtained in person or by mail from the Environmental Enforcement Section, Land and Natural Resources Division of the Department of Justice.

Carol E. Dinkins,
Assistant Attorney General, Land and Natural Resources Division.

[FR Doc. 83-2564 Filed 1-28-83, 8:45 am]
BILLING CODE 4410-01-M

NATIONAL SCIENCE FOUNDATION

Physiology, Cellular and Molecular Biology Advisory Panel; Subpanel on Genetic Biology; Meeting

In accordance with the Federal Advisory Committee Act, as amended, Pub. L. 92-463, the National Science Foundation announces the following meeting:

Name: Subpanel on Genetic Biology of the Advisory Panel for Physiology, Cellular and Molecular Biology.
Date and time: February 17-19, 1983 and 9:00 a.m.—5:30 p.m.
Place: Room 643, National Science Foundation, 1800 G Street, NW., Washington, D.C. 20550
Type of meeting: Closed
Contact person: Dr. Philip D. Harriman, Program Director, Genetic Biology Program, Room 329, National Science Foundation, Washington, D.C. 20550, telephone (202) 357-9687.

Purpose of subpanel: To provide advice and recommendations concerning support for research in genetic biology.

Agenda: To review and evaluate research proposals as part of the selection process for awards.

Reason for closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries, and personal information concerning individuals associated with the proposals. These matters are within exemptions (4) and (6) of 5 U.S.C. 552b(c), Government in the Sunshine Act.

Authority to close meeting: This determination was made by the Committee Management Officer pursuant to provisions of Section 10(d) of Pub. L. 92-463. The Committee Management Officer was delegated the authority to make such determinations by the Director, NSF on July 6, 1979.

Dated: January 26, 1983.
M. Rebecca Winkler,
Committee Management Coordinator.

[FR Doc. 83-2505 Filed 1-28-83, 8:45 am]
BILLING CODE 7555-01-M

Advisory Panel for Physiology, Cellular, and Molecular Biology; Subpanel on Cell Biology; Meeting

In accordance with the Federal Advisory Committee Act, as amended, Pub. L. 92-463, the National Science Foundation announces the following meeting:

Name: Subpanel on Cell Biology, of the Advisory Panel for Physiology, Cellular, and Molecular Biology.
Date and time: February 16, 17, and 18, 1983; 9:00 a.m. to 5:00 p.m. each day.
Place: Room 338, National Science Foundation, 1800 G Street, NW., Washington, D.C. 20550.

Type of meeting: Closed.
Contact person: Dr. John S. Cook, Program Director, Cell Biology Program, Room 332, National Science Foundation, Washington, DC 20550. Telephone: 202/357-747.

Purpose of subpanel: To provide advice and recommendations concerning support for research in Cell Biology.

Agenda: To review and evaluate research proposals as part of the selection process of awards.

Reason for closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are within exemption (4) and (6) of 5 U.S.C. 552b(c) Government in the Sunshine Act.

Authority to close: This determination was made by the Committee Management Officer pursuant to provisions of Section 10(d) of Pub. L. 92-463. The Committee Management Officer was delegated the authority to make such determinations by the Director, NSF, on July 6, 1979.

Dated: January 26, 1983.

M. R. Winkler,
Committee Management Coordinator.

[FR Doc. 83-2505 Filed 1-28-83, 8:45 am]
BILLING CODE 7555-01-M

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards; Subcommittee on Class-9 Accidents and Reactor Radiological Effects; Meeting

The Combined ACRS Subcommittees on Class-9 Accidents and Reactor Radiological Effects will hold a meeting on February 22, 1983, Room 1048 at 1717 H Street, NW, Washington, DC. Notice of this meeting was published January 16, 1983.

In accordance with the procedures outlined in the Federal Register on October 1, 1982 (47 FR 43474), oral or written statements may be presented by members of the public, recordings will

ATTACHMENT A

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 Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Designated Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance.

The agenda for subject meeting shall be as follows:

Tuesday, February 22, 1983—8:30 a.m. Until the Conclusion of Business

The Subcommittees will review the Source Term Program with various members of the NRC/RES Staff.

During the initial portion of the meeting, the Subcommittees, along with any of their consultants who may be present, will exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittees will then hear presentations by and hold discussions with representatives of the NRC Staff, their consultants, and other interested persons regarding this review.

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 therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Gary Quittschreiber or Mr. Don Bucci (Telephone 202/634-3267) or Ms. R. C. Tang (202/634-1414) between 8:15 a.m. and 5:00 p.m., EST.

Dated: January 25, 1983.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 83-2567 Filed 1-26-83 8:45 AM]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards; Meeting

In accordance with the purposes of Sections 29 and 82b. of the Atomic Energy Act (42 U.S.C. 2039, 2232b), the Advisory Committee on Reactor Safeguards will hold a meeting on February 10-12, 1983, in Room 1046, 1717 H Street, NW, Washington, DC. Notice of this meeting was published in the Federal Register on January 18, 1983.

The agenda for the subject meeting will be as follows:

Thursday, February 10, 1983

8:30 A.M.—8:45 A.M.: Opening Remarks (Open)—The ACRS Chairman will report briefly on matters of current interest regarding ACRS activities.

8:45 A.M.—11:30 A.M.: Skagit/Hanford Nuclear Projects Units 1 and 2 (Open)—The members will hear and discuss the report of the ACRS project subcommittee and consultants who may be present regarding the request for a Construction Permit for this facility.

Members of the NRC Staff and representatives of the Applicant will make presentations and respond to questions regarding this matter.

Portions of this session will be closed as necessary to discuss Proprietary Information related to this project.

11:30 A.M.—12:30 P.M.: NRC Safety Research Program (Open)—The ACRS members will discuss the proposed ACRS annual report to the U.S. Congress regarding the proposed NRC safety research program and budget for FY 1984-85.

1:30 P.M.—2:30 P.M.: ACRS Activities (Open/Closed)—The members will discuss the basis for reappointment of ACRS members to the Committee.

The members will also discuss proposed and anticipated subcommittee and full Committee assignments as well as the scope and nature of ACRS activities.

The members will also discuss their report of January 10, 1983 on SECY-82-1B: Proposed Commission Policy Statement on Severe Accidents and Related Views on Nuclear Reactor Regulation.

A portion of this session will be closed as necessary to discuss matters that relate solely to the internal personnel rules and practices of the agency.

2:30 P.M.—4:00 P.M.: Meeting with NRC Commissioners (Open)—The members will meet with the NRC Commissioners to discuss the recommendations of the Committee in its report of January 10, 1983 on SECY-82-1B: Proposed Commission Policy Statement on Severe Accidents and Related Views on Nuclear Reactor Regulation.

4:00 P.M.—6:00 P.M.: NRC Safety Research (Open)—The Committee members will discuss the proposed ACRS annual report to the U.S. Congress regarding the proposed NRC safety research program and budget for FY 1984-85.

Friday, February 11, 1983

8:30 A.M.—12:30 P.M. and 1:30 P.M.—5:00 P.M.: Clinch River Breeder Reactor (Open)—The members will hear and

discuss the report of the CRBR Subcommittee and designated working groups, and ACRS consultants who may be present regarding the request for a Construction Permit for the CRBR. Representatives of the NRC Staff and the Applicant will report to the Committee regarding the proposed facility design and respond to related questions.

Portions of this session will be closed as necessary to discuss Proprietary Information applicable to this matter.

Saturday, February 12, 1983

8:30 A.M.—10:30 A.M.: ACRS Reports to NRC and the U.S. Congress (Open/Closed)—The Committee will complete its reports to the NRC and the U.S. Congress regarding matters discussed during this meeting.

Portions of this meeting will be closed as necessary to discuss information which will be involved in an adjudicatory proceeding.

10:30 A.M.—12:00 Noon and 1:00 P.M.—3:00 P.M.: Reports of ACRS Subcommittees (Open/Closed)—The Committee will hear and discuss reports of designated subcommittees regarding ongoing safety related activities including proposed reform of the regulatory process, repair of the Three Mile Island Nuclear Station Unit 1 steam generators, proposed NRC action plan regarding steam generator tube integrity, consideration of Class 9 accidents in the regulatory process, and decay heat removal provisions in nuclear power plants.

3:00 P.M.—3:30 P.M.: Miscellaneous (Open)—The members will complete action regarding items considered during this meeting.

Procedures for the conduct of and participation in ACRS meetings were published in the Federal Register on October 1, 1982 (47 FR 43474). 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. Persons desiring to make oral statements should notify the ACRS Executive Director as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Use of still, motion picture and television cameras during this meeting may be limited to selected portions of the meeting as determined by the Chairman. Information regarding the time to be set aside for this purpose

ATTENDEE LIST

JOINT MEETING OF THE ACRS SUBCOMMITTEES ON CLASS-9 ACCIDENTS
AND REACTOR RADIOLOGICAL EFFECTS
WASHINGTON, DC
FEBRUARY 22, 1983

Principal Attendees:

ACRS

W. Kerr, Co-Chairman
D. Moeller, Co-Chairman
R. Axtmann, Member
J. Ebersole, Member
D. Okrent, Member
C. Siess, Member
D. Ward, Member
I. Catton, Consultant
M. First, Consultant
S. Lawroski, Consultant
J. Lee, Consultant
M. Steindler, Consultant
J. McKinley, Staff
G. Quittschreiber, Staff
D. Bucci, Staff
R. Tang, DFE

NRC/RES

R. Bernero
C. Kelber
M. Silberberg
J. Glynn
R. Wright
G. Marino

Others

E. Warman, Stone & Webster
D. Powers, Sandia
M. Kuhlman, BCL
J. Gieseke, BCL
K. Winegardner, PNL
R. Wichner, ORNL
T. Kress, ORNL
P. MacDonald, INEL
A. Appelhans, INEL
R. Denning, BCL

TENTATIVE MEETING SCHEDULE FOR THE
ACRS CLASS-9 ACCIDENTS & REACTOR RADIOLOGICAL EFFECTS SUBCOMMITTEE MEETING

FEBRUARY 22, 1983 - WASHINGTON, D.C.

	<u>Speaker</u>	<u>Presentation Time</u>	<u>Actual Time</u>
I. Chairmen's Opening Statement	W. Kerr & D. Moeller	10 Min.	8:30 - 8:40 a.m.
II. Overview of Source Term Research			
a. Summary of Current RES and other Programs	M. Silberberg/ RES	10 Min.	8:40 - 9:00 a.m.
b. Status of Source Term Reassessment	M. Silberberg/ RES	10 Min.	9:00 - 9:20 a.m.
III. Details of Status/Plans of Research Fission Product and Aerosol Release from Fuel	R. Wichner/ ORNL	30 Min.	9:20 - 10:00 a.m.
*****BREAK *****		10 Min.	10:20 - 10:30 a.m.
IV. Fission Product and Aerosol Transport in RCS			
a. Data Base-High Temperature Gas Phase	D. Powers/ SANDIA	15 Min.	10:30 - 11:00 a.m.
b. Modeling (TRAP-MELT)	J. Gieseke/BCL	15 Min.	10:50 - 11:20 a.m.
V. Aerosol Behavior in Containment			
a. Codes	T. Kress/ORNL	10 Min.	11:20 - 11:40 a.m.
b. Code Validation Experiments (NSPP)	T. Kress/ORNL	15 Min.	11:40 - 12:05 a.m.
VI. Aerosol Behavior in ESFs	K. Winegardner/ PNL	10 Min.	12:00 - 12:20 p.m.
*****LUNCH *****		50 Min.	12:20 - 1:10 p.m.
VII. Post Accident Chemistry	R. Wichner/ ORNL	10 Min.	1:10 - 1:25 p.m.
VIII. PBF In-Pile Source Term Tests	P. MacDonald & A. Appelhans/ INEL	30 Min.	1:25 - 2:10 p.m.

ATTACHED - (

IX. NUREG-0772 Follow-on Analysis
 (Draft Report NUREG-0956
 Vol. 1) - Surry

a. Accident Sequences and Thermal Hydraulics	R. Denning/ BCL	15 Min.	2:10 - 2:40 p.m.
b. Release and Transport in RCS	M. Kuhlman/ BCL	15 Min.	2:40 - 3:15 p.m.
***** BREAK *****		10 Min.	3:15 - 3:25 p.m.
c. Transport in Containment	J. Gieseke/BCL	15 Min.	3:25 - 3:50 p.m.
d. Summary of Results	J. Gieseke/BCL	10 Min.	3:50 - 4:10 p.m.
X. Staff Paper on Use of Potassium Iodide	R. Bernero/RES	10 Min.	4:10 - 4:25 p.m.
XII. Open Statement from Stone & Webster	Stone & Webster	15 Min.	5:00 - 5:15 p.m.
XIII. Final Remarks and Adjournment	ALL	10 Min.	5:15 - 5:25 p.m.

LIST OF
HANDOUTS AND VUGRAPHS
JOINT MEETING OF THE ACRS SUBCOMMITTEES ON
CLASS 9 ACCIDENTS AND REACTOR RADIOLOGICAL EFFECTS
FEBRUARY 22, 1983, WASHINGTON, DC

Overview of Trap-Melt Code, Present Status - J. Gieseke/BCL

Post-Accident Iodine and Tellurium Chemistry (ORNL) - R. P. Wichner

PWR--Large Dry Containment--Radionuclide Release Under Specific - Battelle Columbus
Accident Conditions NUREG/CR-3159 Labs.

Source Term Program - E. A. Warman, Stone & Wester Engineering Corp.

Status of Fission Product and Aerosol Release from Fuel Research at ORNL - R. P. Wichner

Overview of NRC Source Term Research - M. Silberberg, NRC/RES/ASTPO

Aerosol Behavior in ESF Systems - Kevin Winegardner, PNL

Aerosol Behavior in Containment Code Validation in NSPP - T. S. Kress

ATTACHMENT D