



# Federal Emergency Management Agency

Washington, D.C. 20472

May 8, 1992

Mr. Robert E. Shewmaker  
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Dear Mr. <sup>Bob</sup>Shewmaker:

Enclosed are the final minutes from the January 14, 1992 ICODS Quarterly Meeting and the draft minutes from the April 14, 1992 ICODS Quarterly Meeting. Please review the draft minutes and the roster and refer any comments to Bud Andress at (202) 646-2801.

The next ICODS meeting is scheduled for June 14, 1992 at FEMA's offices, 1411 K Street, N.W., Washington, D.C. Please let us know your agenda items.

Sincerely,

*Bill*

William S. Bivins  
Chairman, Interagency Committee  
on Dam Safety

Enclosures

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**Interagency Committee on Dam Safety (ICODS)  
Quarterly Meeting**

**Federal Emergency Management Agency**

Hall of States Building  
Washington, D.C. 20472

**January 14, 1992**

<b>Participants</b>	<b>Organization</b>	<b>Phone</b>
William S. Bivins, Chairman	FEMA	(202) 646-2817
Bud Andress	FEMA	(202) 646-2801
Chip Hines	FEMA	(202) 646-3115
Arthur Walz	DOD/U.S. Army COE	(202) 647-8652
John McPherson	DOD/U.S. Army COE	(202) 272-0215
Neil Parrett	DOI/USBR	FTS 776-4220
Jack Brynda	DOI/USBR	(202) 208-5275
Charles Karpowicz	DOI/NPS	(202) 343-7027
Joseph S. Haugh	USDA/SCS	(202) 447-4909
Gerald Seinwill	USDA/SCS	(202) 720-2520
John Steward	USDA/USFA	(202) 205-1448
Gus Tjoumas	FERC	(202) 219-2735
Marshall Fox	FWS	FTS 776-2074
Jack Mulhern	MSHA	(703) 235-1590
Daniel Rom	NRC	(301) 504-2573
Robert Shewmaker	NRC	(301) 504-2596
James H. Coulson	TVA	(615) 751-5405
Sam Shipman	TVA	(615) 632-8153
Richard Serbu	DOE	(301) 903-2856
Thomas McSpadden	DOE	FTS 233-5656
Paul Storing	IBWC	(202) 647-8529
Anderson Bryan	Venture Computing	(518) 237-8284
Michael Petruska	Venture Computing	(518) 237-8284

## **I. WELCOME AND OPENING REMARKS**

- Chairman Bivins welcomed the participants to the quarterly meeting and asked for introductions.

## **II. REVIEW OF MINUTES FROM THE OCTOBER 8, 1991 ICODS MEETING**

- Chairman Bivins asked the participants for any oral comments on the last ICODS meeting minutes. No members had comments. He requested that written comments be given to Bud Andress or sent to FEMA within 1 week.

## **III. STATUS OF MEMORANDA OF UNDERSTANDING (MOU'S) AND MEMORANDA OF AGREEMENT (MOA'S)**

- Mr. Andress defined the MOU's and MOA's. The MOU's are the agency agreements to participate in the update of the national inventory of dams. Specifically, the MOU is an agreement to let Venture Computing Group assist the agency in organizing its files for transfer of data to the national inventory. To date, FEMA has seven signed MOU's; two are still unsigned. The MOA's are the instruments to fund National Dam Safety Program activities recommended by the operations subcommittee and approved by ICODS.
- Chairman Bivins stated that Ed Pritchett of the U.S. Army Corps of Engineers (Corps) raised a question at the last ICODS meeting on the legality of the MOA's between agencies. The Department of the Army General Counsel questioned whether it was legal for an ICODS member agency to fund FEMA activities. Chairman Bivins stated that there are precedents for this type of arrangement; for instance, the development of the Training Aids for Dam Safety (TADS) program. Nonetheless, the position of the Army was correct. The MOA's must be revised, including those that have already been executed.
- FEMA presented the issue to its General Counsel, who agreed that it is appropriate under the Economy Act (31 U.S.C. Sec. 35) for one agency to fund another agency for goods and services, such as FEMA has done in the past. The transfer of funds for dam safety for purposes other than support of ICODS is analogous to FEMA's receipt of funds from the

Department of the Army for the support of the chemical stockpile emergency preparedness and other activities. The Army recommended that to facilitate the transfer of funds for dam safety activities, the funds must be directed to FEMA rather than to ICODS. Based on the Army's recommendation, FEMA has revised every MOA to clarify that funds come from each agency to FEMA to carry out National Dam Safety Program activities recommended by ICODS. Chairman Bivins distributed the revised MOA to the ICODS representatives. He requested that each member send the revised MOA through administrative channels and return two signed copies to him so that the funding for ICODS projects can be continued. A cover letter explaining the background to the MOA revision was included with each copy.

#### **IV. INVENTORY OF DAMS**

- Chip Hines is in charge of maintaining the inventory of dams at FEMA headquarters. The inventory is contained on a Digital Equipment Corporation VAX computer and is contained in the Oracle data base management system. The system has remote access capabilities and menu systems. Mr. Hines introduced Mr. Mike Petruska from Venture Computing, the company that created the dam safety inventory software. When Venture completes the software program, the Federal agency data will be put on the FEMA VAX. Currently, FEMA has the existing Corps' inventory on the VAX and has placed all of this data into the new structure. In addition, FEMA has approximately 43 state data bases which will be ready for input once the data update cycle is complete.

- Mr. Petruska updated the members on the status of the inventory. Currently, Alabama and Florida are not participating in the inventory. Alabama has no regulations or laws governing dam safety. Although the state would like to be involved and is conducting some dam safety activities independently, it will not be participating in the project. The position of Florida is that the state has no structures tall enough to warrant being called a dam. It is expected that all of the other states, with the exception of Maine, will have their data in on time. (The position in Maine, which is funded out of general funds, is vacant. Venture anticipates that Maine will miss the first phase deadline.) All the other states are progressing quite well on their inventory activities and expect the data to be in on time. Approximately

10 states have completed phase one and are starting phase two. On the Federal side, 2 agencies out of 16 have finished phase one and two. Compliments were given to the Tennessee Valley Authority (TVA), the first agency to complete phase one and phase two. Of the remaining 14 agencies, it is expected that 12 will be in on the February 1st deadline and that 2 agencies will be just slightly behind the deadline. Because there has been some difficulty in obtaining the national identification (i.d.) numbers, Venture has developed a program to assist the agencies in finding the numbers during phase two.

- Mr. Hines stated that he has provided two agencies with assistance in matching national i.d.'s to their data base. Mr. Hines has constructed queries and received data with i.d. numbers that can be compared against the existing data base system. At present, he has no feedback on the success of the queries; however, FEMA or Venture can assist the agencies in obtaining the i.d.'s. The Venture programs use the Paradox data base management system, which is PC compatible. Mr. Hines is updating the documentation of the system. Mr. Hines then explained the dam inventory data base in more detail and Anderson Bryan of Venture Computing provided a demonstration on the use of the system.

- After the presentation, Mr. Petruska discussed Venture's methodology to assist the agencies in finding national i.d. numbers. Venture felt that the best approach was to first break down the responsibilities in the agency. For example, the Forest Service (USFS) has nine regions. Venture's approach was to have the person most familiar with the dams in the region compare the dams listed on the inventory with either the 1981 information or the current information provided to Venture. The demonstration showed that the person could compare by region, township, dam name, or location. The software, which was developed with the USFS, now can be offered to all the agencies.

- Joseph Haugh of the United States Department of Agriculture (USDA) asked about the classification of the USFS dams. He was informed that all the dams are on USFS lands. Approximately one-third of the dams are Federally-owned; the other two-thirds are permitted throughout the USFS. There are approximately 3,400 dams.

- John Steward of the USFS stated that Venture's work has been extremely valuable. The USFS is a very decentralized organization with employees who have their own way of doing things. They have employees who are still manually going through the printouts; one employee has never operated a PC and will not learn. Other employees have said they're using the PC because they do not want to sort through a thousand dams. The USFS is in the process of redoing their entire electronic inventory. They've added the rest of the FEMA data fields and are developing a new inventory on Oracle. In addition, they will use programmers who know the Venture systems to make sure they do not reinvent the wheel.

#### **V. SUBCOMMITTEE FOR FEDERAL AND NON-FEDERAL DAM SAFETY COORDINATION**

- Mr. Haugh reported that the subcommittee has not met since the last ICODS meeting. At that meeting, Mr. Haugh presented a paper that had been distributed for approval at the April ICODS meeting on the permitting process for dam safety modifications. He stated that he has not received any comments on the paper. The paper described success stories of states that have been able to coordinate the permitting process and complete the necessary dam safety modifications.

- Chairman Bivins requested that any member comments on the paper be submitted to Mr. Haugh.

#### **VI. SUBCOMMITTEE ON OPERATIONS**

- Chairman Bivins referred to page 6 of the minutes from the last meeting and recalled the suggestion that the group might want to revisit the subcommittee structure and convene a subcommittee of ICODS and ASDSO. Mr. Haugh stated that the group would meet in the afternoon and discuss the issue.

- The report of the subcommittee on operations discussed the \$65,000 allocated for updating the inventory. Mr. Andress stated that FEMA has MOA's and funds from six agencies

totaling \$80,000 that has been held in abeyance pending the decision from the General Counsel. Now that they have the decision, they can use the money.

## **VII. REPORT OF AGENCY ACTIVITIES**

### **A. Department of Agriculture (USDA)**

- Gerald Seinwill stated that a new chief was assigned to the Soil Conservation Service (SCS) last year. The USFS operation is doing very well and the National Engineering Office is up to speed. They are bringing in a national geologist and a national hydrogeologist. A major information systems division has been established in Fort Collins to centralize all of the data for the agency. Chairman Bivins will attend the USDA's national engineering conference in March.
  
- Mr. Steward of the USFS stated that the agency is completing its inventory.

### **B. Department of Defense (DOD)/U.S. Army Corps of Engineers (Corps)**

- John McPherson stated that Ed Pritchitt, a former ICODS representative, passed away suddenly on November 21st. This is a very sad loss to the Corps and the engineering profession in general; Ed was a top notch engineer known internationally for his work. There is now a key vacancy in the geotechnical and materials branch.
  
- Lew Gustafson, the chief geologist in the Corps, has announced his retirement, which has resulted in another key vacancy. The Corps will have to find an engineering geologist to replace him.
  
- Around 1983, the Corps combined its engineering and construction operations into an engineering and construction directorate--all the military and civil operations were grouped together. About 4 years ago, the Corps re-established an engineering division within the civil works directorate that covers all the dams in the directorate. Mr. McPherson's office is in the civil works directorate. Officially, the Corps created an engineering division in June or July 1989. Mr. McPherson has been acting chief of the division since then.

- Mr. McPherson stated that the Corps tried to meet the deadline for their Biennial Report submission to FEMA this year. Unfortunately, the submission was misplaced in their Assistant Secretary's office by one of the Secretary's staff members. The report should be submitted to FEMA soon.

- The dam building business has slowed down for the Army, as it has in most of the country. The Corps' report will indicate two more dams in operation from 2 years ago. Instead of having eight dams under design, there are now seven. There are 11 dams under construction in comparison to 7 dams 2 years ago; many are being finished up. Approximately \$94 million has been spent on dam safety in the past 2 years. There were three projects to correct seepage problems and other types of problems. Some dam safety assurance to upgrade those projects which do not meet current criteria has been performed, *i.e.*, hydrologic deficiencies in the spillway capacity and geotechnical and seismic operations. In addition, approximately \$20 million was spent to repair minor problems relating to dam safety.

- The cost sharing resulting from the 1986 Act is causing some problems on projects that had no actual sponsor contributing to the construction of the project. The Corps is now trying to come up with cost sharing for a few projects in the \$30 to \$40 million range. In most cases, cost sharing will be with the states. The agency, which provided land easements and rights-of-way and relocations, went out of business right after World War II. As a result, it is difficult to come up with requirements under the 1986 Act for cost sharing. In some cases, however, such as those involving contracts for hydro power or water supply, the arrangements are clear cut.

- In March, the Corps will participate in the drawdown of some lower Snake River projects. For approximately 1 month, the Corps will draw down Little Goose about 20 feet and Lower Granite about 39 feet. The purpose of the drawdown is to return to a river type condition so that the little fish can get back downstream faster. At this point, the result is unclear because these projects have not been drawn down since they were built. The project will be quick,

coming down and up in only 1 month. The Corps has sent several people in the past month to look at the entire reservoir areas, the development, some of the structures on the manmade spills, and some of the natural spills, which are really the problem. There are a lot of grain elevators, railroads, and highways. The results will be interesting and the Corps is watching the project closely.

- The Corps is actively involved with the Army installations and other DOD agencies to get their inventory squared away. The Corps is holding workshops with the agencies to set up a dam safety periodic inspection program patterned after the one used on its civil works projects. The Corps civil works division is far ahead of the military side and is working to get the military caught up.

#### C. Department of Energy (DOE)

- Richard Serbu reported that the DOE has moved its dam safety program to the risk analysis and technology division where it will receive a lot more attention. Mr. Serbu stated that the division is a safety oversight organization that also does risk-based analysis. The division will look at the line organizations with the actual responsibility for the safety of dams, making sure that they are doing the right job, and correcting them if they are not.

- Thomas McSpadden reported that he and Mr. Serbu were both very new to the dam safety process; he has been involved only 4 weeks. Mr. McSpadden stated that in the past few years, DOE has had the Federal Energy Regulatory Commission (FERC) inspect almost all of DOE's dams. The process should continue. DOE currently is looking at three dams in-depth that have had problems; two are at the Savannah River.

#### D. Department of Interior (DOI)

- Neil Parrett reported that the Bureau of Reclamation is spending approximately \$30 to \$50 million on dam safety. The United States Geological Survey (USGS) now has a dam on its Reston property. Mr. Parrett reported that they are getting good support for the safety of dams in the department. DOI finally has the Bureau of Indian Affairs (BIA) program up and

running. The administration reconvened a DOI working group on dam safety which has become fairly active. They have scheduled meetings for April and October. In April, the group will set priorities for the year and in October it will evaluate progress to determine areas that need improvement. Emergency action planning may need the most improvement.

#### Fish and Wildlife Service (FWS)

- Marshall Fox reported that the FWS completed emergency action plan (EAP) tests on all of its high and significant hazard dams. This year, FWS conducted what it perceived as a more meaningful test. Most station managers are biologists who are unfamiliar with dam safety and give some resistance to EAP testing. After the tests were completed, the agency got very good feedback from the station managers. As a result, they should be much more well-prepared. In addition, FWS has been conducting training workshops on rehabilitation and maintenance and recognition of problems so that they can be addressed before they become major. During the last year, FWS completed a 2-year process and held over 50 training sessions. In the last few months, FWS has completed designs on a number of projects on high and significant hazard dams. Last week, FWS had a bid opening for construction of a new large roller type dam, the Elmer Thomas dam in Oklahoma. The bids came in quite a bit lower than expected. In addition, FWS recently completed a design for a dam in Illinois; another design for a dam in Texas will be completed in the spring. On all three projects, the Corps has assisted in construction management. They will be working with FWS during the next year or so to complete the projects. FWS also will complete designs on a structure in Massachusetts in the next 2 or 3 months.

#### National Park Service (NPS)

- Charles Karpowicz reported that one of his NPS responsibilities is to keep track of all of the dams that affect the National Park system. Currently, there are 13 dam projects proposed by other entities on structures that would be located within or adjacent to park boundaries. Some of these projects have been on the books for a long time and may be de-authorized by Congress in a few years. There are a few projects under construction, such as the large Las Vegas dam located upstream of the boundary of Lake Meade National

Recreation area. In the proposed acquisition category, there are approximately 10 dams that the NPS will acquire through its land acquisition program. This program is similar to a perpetual program in that if the agency removes a dam or repairs it, it keeps acquiring additional dams through the land acquisition program. The NPS has 542 operational dams which affect them: 361 are NPS dams, 10 are high hazard, 32 are significant hazard, and 319 are low hazard. It is interesting that superintendents often have more interest in funding low hazard dams because of recreation programs or because of natural habitats around them. Fortunately, through the Bureau of Reclamation, the NPS has been able to obtain approximately \$2.7 million for dam safety modifications in FY 93. Mr. Karpowicz told his supervisor that the NPS still needs approximately \$4.7 million for operations and maintenance (O&M). Basically, no NPS dams receive any O&M funding. A \$2 million dam safety modification job was completed in Oklahoma and the park still did not come up with a few thousand dollars to clear the trees off the back side of the dam. There are approximately 171 non-NPS dams that affect the NPS. To date, the NPS has deactivated approximately 88 dams. This has been a great benefit. Rather than spend a lot of money repairing these small dams, they have been deactivated. In FY 91, the NPS completed eight dam safety modification jobs. Now, NPS has 121 seriously deficient dams. All high hazard dams have some type of work initiated, mitigation established, or funding programmed. However, NPS has 7 significant hazard dams and 54 low hazard dams for which it has not started repairs. In addition, there are 42 dams that require EAPs. Twenty dams have plans that are incomplete or missing either because they were just entered into the program through land acquisition or because they have a classification change from low to significant or high hazard. Classification changes can occur quickly with a new campground or visitor use area. The program is making a lot of progress. However, through land acquisition, the NPS acquires more problems and more work.

#### E. Department of Labor/Mine Safety and Health Administration (MSHA)

- Jack Mulhern reported that the MSHA has reviewed mine operator plans for the construction of 4 new dams and completed the review of 61 major modifications to existing dams in the past year. Mr. Mulhern sent the Biennial Report to the Secretary's office the

first week in December. One result of the report was a decision by MSHA to postpone further rulemaking on regulations for metal/non-metal tailing dams.

- In May, MSHA will hold a national meeting with coal operators and consultants to discuss the new procedure letters at the National Mine Safety and Health Academy, Beckley, West Virginia. These procedure letters provide guidelines to MSHA engineers on acceptable engineering practice. The letters have been shared with the coal mining industry and their consultants. This meeting will be a forum for discussion on this new MSHA procedure.

#### F. Federal Energy Regulatory Commission (FERC)

- Gus Tjoumas stated that the FERC's submission for the Biennial Report discussed EAP training for more in-depth testing of EAPs. A training course will be held January 28 and 29. An invitation is extended to anyone interested in attending. Participants are coming from TVA and the Corps. Representatives from almost every ICODS agency have attended FERC EAP training courses. The current course is greatly improved from the initial courses. FERC has learned quite a bit in these first 2 years. For the first time, in Portland, FERC taught the course entirely with our own staff; the course received positive feedback from attendees. FERC will continue to make improvements to the upcoming course in Baltimore. The next two courses will be held in July-August, possibly in San Francisco and Chicago.

- With respect to engineering guidelines, FERC is continuing to develop chapters on additional topics, including chapters on construction quality control. FERC will send the information to the agencies for comments before completing the final drafts.

- With respect to probable maximum precipitation (PMP), FERC is involved in a contract to develop an approach to their site-specific evaluation. Although the project was scheduled for completion this spring, extra work is needed on moisture maximization. The National Weather Service is involved in an advisory capacity on the contract and will do the additional work on moisture maximization. A final draft report is to be completed by the end of June.

For probable maximum flood (PMF), the FERC is starting a contract to develop a standard for development of PMFs. The contract should be finished by mid-summer.

- Regarding dam safety modification, remedial measures for approximately 110 dams are in construction or approaching final design.

- In response to a question by Mr. Parrett, Mr. Tjoumas answered that the PMP contract is being done by North American Weather Consultants. The study was initiated as a result of interest in PMP for the Michigan/Wisconsin area. The purpose of the study is to refine on a regional basis the PMP values for this region. Even historical information to develop the procedures, such as the paleohydrology, will be studied. Although the study was to be finished in April, one of the advisors, Mr. Myers, suggested that moisture maximization be addressed. The National Weather Service is involved in an advisory capacity on this project and the work now depends on their study dealing with moisture maximization. Mr. Tjoumas stated that there are no plans to expand the contract further. The FERC is in the process of developing a MOA for the contract with the National Weather Service.

#### G. International Boundary and Water Commission (IBWC)

- Paul Storing reported that the IBWC focused its activities this year, as it did last year, on the environmental situation on the U.S.-Mexican border and cooperation with the Environmental Protection Agency to deal with water pollution problems along the border. Because these problems are related to the North American Free Trade Agreement, the IBWC, which in the past remained competent, technical, and low key, is suddenly under the spotlight in several areas. Fortunately, the IBWC is continuing its competence in the area of dam safety.

- The IBWC will hold its annual meeting for the U.S. and Mexican sections the last week in January this year. There will be a series of special presentations by the Corps on the way the U.S. and Mexican sections interrelate with the Corps, wetlands, safety issues, and other topics.

- The IBWC recently entered into an agreement with the Bureau of Reclamation for a silt survey at Falcon dam, one of the two major IBWC dams. It is expected that the survey will begin this month or in February.
- The IBWC is preparing the first 5-year joint report with Mexico on the safety of dams. Next week, engineers will be checking records at the Rio Grande Valley.
- Mr. Storing will follow up with Mexican officials on the Spanish translation of TADS materials. Mr. Parrett stated that there were many people who could translate the materials in the Denver area.

#### H. Nuclear Regulatory Commission (NRC)

- Robert Shewmaker reported that the NRC has met the deadline for submission of the Biennial Report. The NRC currently has funding for dam safety, a new posture for the agency. They are in the final stages of executing an MOA with FERC, which will be assisting NRC with an overview of dams under NRC jurisdiction. A definitive position has been reached on those dams that are associated with nuclear power plants, are NRC licensees and under NRC jurisdiction, and which the NRC can regulate without the need for additional regulations. In that process, Mr. Shewmaker has worked with FEMA's Chip Hines to determine if other dams not under NRC jurisdiction that are associated with a nuclear power plant site are in fact being monitored by another Federal or state agency. The NRC has provided FEMA with a commitment that it will review on a first cut any dam that should be examined under the Federal guidelines, whether NRC has regulatory authority or not. If the dam is not under its authority, NRC will pass the information on the dam to FEMA for follow-up by another agency. If the NRC were to extend its regulatory authority, a 2- to 5-year effort might be required because of the way regulations are developed.
- NRC efforts have been split into two areas: dams associated with the power reactors producing electric power and all other licensees, the large portion of those being mill tailings dams. In light of the current economy and changes in the nuclear business, total reclamation

is the primary activity at the mill tailings dams. The numbers of those are decreasing along with decrease in demand for refined ore. NRC also has identified some smaller dams associated with other licensed facilities that are going to be included in the program.

#### I. Tennessee Valley Authority (TVA)

- James Coulson stated that the Biennial Report submission, the inventory of dams, and the agency's funding have all been submitted. TVA's program office in Knoxville has done a good job in completing the submissions.
  
- TVA has recently undergone major restructuring. Until January 6, TVA was a construction organization that hired all its own trades and labor personnel. TVA's own construction personnel managed all their own projects. A year ago, the decision was made to contract all construction through partnership contracts. In mid-November, two contracts were awarded to cover fossil and hydro construction for TVA. The fossil sector is the largest part. The two contracts cover the western region, under Flour Daniel, and the eastern region, managed by a consortium of Gilbert, Union Boiler, and Morrison-Knudsen. Because of the way the regional boundaries were drawn, very few of TVA's 53 dams were in the western region. As a result, the decision was made to include all the hydro projects in the eastern region under the direction of Morrison-Knudsen, the prime hydro contractor. A complete transfer of construction responsibility was made on January 6, 1992. There currently are no major dam safety construction projects under way and there will not be until later in the year. In mid-December, the TVA engineering organization was reorganized. Formerly, there were departments for civil, mechanical, and electrical engineering which handled both fossil and hydro projects. As a result of the reorganization, there are now two major departments: fossil engineering and hydro engineering. This restructuring provides greater focus for the hydro program. Mr. Coulson is now manager of Hydro Engineering Services and is responsible for all three disciplines within hydro engineering. In addition to dam safety, TVA is entering into a 10-year hydro modernization program. The program includes about 90 hydro units. Projects will include replacing runners and increasing

generator efficiency and capacity. Approximately 240 to 300 megawatts should be added to the system.

- At present, few jobs are underway. TVA's biggest near-term dam safety construction effort will be at Hiwassee dam. High longitudinal stresses have built up as the result of concrete growth. Plans are to cut slots in the dam to relieve stresses, add post-tensioning, and redesign spillway gates so they can continue to operate. The implementation of this plan will be progressing over the next 3 fiscal years.

- In response to a question on TVA personnel and equipment, Mr. Coulson answered that TVA still owns the equipment and is leasing it to the contractors. The contractors are now employing many former TVA personnel. Although TVA still has a fairly sizeable management organization to oversee the contractors, it no longer employs trades and laborer personnel.

- In response to a question on the slots cut in the Hiwassee dam, Mr. Coulson answered that two of seven spillway gates are not 100% operable; they have been severely impacted by concrete growth. Although the dam is basically straight, it has curved sections at each end. There is a lot of cracking associated with the curves. TVA will relieve the stress in these areas with slots. This approach was used successfully at Fontana dam in the mid-1970's to repair a large crack which resulted from concrete growth.

- Chairman Bivins told Mr. Coulson that a future meeting agenda would be adjusted to give him additional time to discuss the Hiwassee dam concrete growth problem.

#### J. The Federal Emergency Management Agency (FEMA)

- Chairman Bivins stated that six agencies have submitted their data for the Biennial Report. These agencies were commended for having their reports in on time. Chairman Bivins requested that the remaining agencies submit their reports with a WordPerfect 5 or 5.1 diskette. The report will be shorter and more attractive this year, possibly a glossy

publication. Chairman Bivins requested that any agency with color photos of dams should submit the photos for use in the Biennial Report. The photos should not be esoteric because this may raise questions on Capitol Hill. Attractive photos of the dams or photos with construction crews making improvements were requested. Both prints and negatives would be helpful in producing the report.

- Chairman Bivins reported that FEMA is moving its Office of Earthquakes and Natural Hazards to 14th and K Streets, N.W., Washington, D.C. to a building under renovation. FEMA will be in the building by approximately mid-March. The office space contains a large conference room that can be used for ICODS meetings.

- ASDSO will hold a board meeting soon in the Baltimore hotel where they are holding their annual conference. ASDSO also will meet on January 15, 1992. They have asked Chip Hines to provide them with information and data for discussions with Congressmen. ASDSO is becoming more pro-active politically. ICODS has supported the group in its efforts to speak for state dam safety needs without being controlled by a Federal agency.

- Chairman Bivens reported that the effort to develop national seismic standards for lifelines is continuing. At the discussions involving dams, Chairman Bivins suggested that ICODS could do a good job of developing standards. So far there has been only one response on the issue from ICODS members. Mr. Parrett stated that the Interagency Committee on Seismic Safety and Construction had chosen some time ago to view dams as not being lifelines. Mr. Parrett suggested that ICODS try that approach to resolve the problem. His fallback position was that if there was going to be an effort to prepare the standards, they ought to be prepared within ICODS by the people who know about dams and seismic standards. One final conclusion was that dams were not included in the lifelines arena because many dam owners were knowledgeable and had used the proper standards. However, Chairman Bivins stated that although this might be true for government dams and for those in which the government has an interest, it is not true for the vast majority of dams. For instance, if the dam fails that controls the water supply for Podunk, it has a lifelines impact on Podunk and

perhaps other communities. Chairman Bivins did not raise this issue as a formal agenda item because he wanted more time to talk individually with ICODS members. However, he believes we are now on the brink of having to go forward if ICODS wishes to address the issue of seismic standards for dams. The community involved and groups that represent other lifelines such as water and sewer systems feel that dams ought to be addressed. Chairman Bivins did not want to take unilateral action without consulting with the group. He then thanked Mr. Parrett for his response and recommendations.

- Chairman Bivins stated that he talked with Chip Hines' staff about looking at the new data to see how many really are lifelines. Another consideration is that if a dam threatens a lifeline, such as a downstream water intake, the inventory will not disclose the threat.

- Chairman Bivins was pleased with the presentations, especially those dealing with EAPs. FEMA has lagged behind in this area, especially because it is an organization that is supposed to be involved in emergency management planning and exercising EAPs. It has taken FEMA a lot of time to promote interest in this area. Chairman Bivins stated that he was approached recently by people at the training facility in Emmitsburg, Maryland who wanted to know what they could start doing in this arena. Chairman Bivins hesitated bringing this to their attention because of the different audiences for ICODS members. It is his understanding that members deal with dam owners and operators and the training members now provide is primarily for this group.

- Mr. Tjoumas stated that the FERC training is designed for owners and operators as well as other groups. The FERC audience is the dam owner. The FERC is training the dam owner that has the responsibility to develop the EAP for his use. It must be understood that evacuation is the responsibility of the local and state agencies. The state and local agencies are the critical players with respect to evacuation. To date, FERC has not had any local or state representatives attend the training classes. One of FERC's main requirements for its licensees is coordination with state and local agencies; tests indicate that it is an advantage to have a representative of the licensee as a liaison with state and local agencies. FERC is in

the third year of the 5-year test cycle and will have each licensee that has high hazard dams conduct at least one in-depth test every 5 years. Many local people are asking the owner to make someone available to them so that in an emergency they can provide assistance in areas such as interpreting inundation maps. With regard to the inundation maps, FERC requires dam break analysis that can be up to the FDF to develop the maps. FERC has found that this type of testing gives the local people an opportunity to tell the licensee what they would like to see on inundation maps. Typically, the local agencies request both the sunny day and IDF boundaries. The maps would be updated according to the comments made by the agencies and FERC. In the past 6 years, FERC changed its regulations on EAP requirements and required all licensees to follow a certain format for the report. A few years ago, FERC determined that the licensees with prior EAPs should do the same thing. Now everyone must use the same format. Through that process, FERC found that major improvements were made on the EAPs. Although some licensees were against it in the beginning, they now see the change as beneficial.

- Mr. Parrett stated that he met with staff from the Montana dam safety and emergency response programs, the first time representatives from those two agencies had met. The same thing happened in Wyoming. The DOI handles emergency action planning through its O&M organization. When DOI started handling risk analysis and incremental consequences, they began siting warning systems for evacuation, a far more effective method than structural fixing. Subsequently, this working group for dam safety got the agency involved. DOI has contacted a lot of states and local county and city emergency response teams which are short of funding and manpower. These groups have to tie emergency action planning to multi-hazards to receive FEMA funding for civil defense. DOI tried to do some work in South Dakota and Nebraska. Although there was not a public policy official available to talk to DOI in either state because of a biker rally, the states are starting to make progress on the issue. This issue also should hit the Corps, which was looking at emergency warnings for dam safety only. Most DOI structures inundate large numbers of the population. There is a standard operating procedure document on protecting the structure, not the people downstream. Although DOI has been successful in bringing about a change in philosophy,

the downstream people must be contacted; there must be warnings to let people know when the channel capacity and the spillway discharge go into operation. Once that warning system is going, it is not that difficult to deal with the dam. If there are 130,000 people near the maximum spillway discharge and another 30,000 near the dam area, there are a lot of warnings to be made.

- Daniel Rom brought up the Salmon test. A group of approximately 20 people from an agency of about 20, including the district and the division and the headquarters, discussed experiences they have had with exercises on the Columbia River system, and how that compares to their plans for public involvement and emergency operations. Their experience with the exercises has been that people did not want to listen or become involved. Basically, the Corps and one or two state people would participate. But now, even though there will be a control draw down at 2 feet per day, people up in the reservoir with port facilities, railroads, and marinas will be high and dry--there is tremendous public involvement. At Lewiston-Clarkston and down to the confluence with the Snake and the Columbia, people are really interested because they realize that those outside the levies would probably have wells dry up. There are a lot of grain elevators that have been constructed to fill in the reservoir which was designed for fluctuations of 6 feet a year, not 39 feet. As a result, there will be considerable consolidation. In addition, three of the marinas may go bankrupt because they will go down from a lake to the Snake and Clearwater Rivers. Surprisingly, just inside of Idaho, there are some ancient slides that stopped moving when NRC impounded the reservoirs; they are definitely going to start again. Now, the state and the railroads are very concerned that they have not gotten on the bandwagon. They are trying to get some construction materials stockpiled.

- Chairman Bivins stated that everyone should become involved in dam safety exercises. FEMA pays state and local emergency managers for some of their time; however, FEMA specifies the structure of the exercise. Just because a utility wants to test its program to satisfy FERC does not mean that the state or the local emergency manager has FEMA money

for the test. A way should be found to coordinate the exercises. SCS also has been very active in the area.

- Mr. Parrett stated that DOE is having trouble obtaining permits for radio frequencies. The process is a very bureaucratic one.

- Mr. Tjoumas stated again that the prime audience for dam safety measures is the dam owner. FERC structures its class to describe responsibilities of the various entities involved, from the dam owner to the local emergency preparedness agencies. During the course, FERC includes a mock exercise involving roles from the dam owner to the fire department. The mock exercise meets the needs of the class attendees, *i.e.*, the licensees learn how to go about coordinating and developing a scenario, participate in the exercise, and then develop the critique of the final to make improvements.

- Chairman Bivins stated that he was not trying to suggest that one training session was the answer. However, there must be a better way of meshing the various audiences.

- As a result of the offsets of the OMB, FEMA's earthquake program has received a lot of support and has been encouraged to enlarge the program. Three people would be transferred to the program from dam safety. Thus, FEMA's dam safety program for 1993 was canceled. This issue is still to be resolved. The committee report encouraged FEMA to maintain ICODS.

- Chairman Bivins then requested items for general discussion.

## **VIII. OPEN DISCUSSION**

- Mr. Shewmaker inquired about the status of the Corps' effort at Title 12 renewal.

- Mr. McPherson stated that only the inventory update was funded in Title 12. As this is the last year for the update, the Corps was trying to decide whether they needed legislation

to continue it. The Corps met with the Assistant Secretary and all Corps' attorneys to review the background. Although it was determined that there was need for legislation, they were going to submit legislation not tied to a specific amount. They decided to leave the amount open and go for generic authorization to continue the inventory in perpetuity. That legislation will be part of the legislative package for the Water Resources Development Act of 1992. This issue is sensitive. The Corps stated in its Biennial Report submission that they have submitted legislation to continue funding. However, because the Assistant Secretary had not signed off, they wanted to delete the statement from the report. Basically, they want to adopt the position that it was not \$500,000 or nothing. The Corps will meet with them on dam safety and a number of other issues in February. There is a definition problem with Assistant Secretary of the Army that pertains solely to the Corps.

- In response to a question by Mr. Shewmaker on the ASDSO resolution, Chairman Bivins answered that their board of directors was now discussing the topic.

#### **IX. ANNOUNCEMENTS/NEXT MEETING**

The next ICODS meeting will be held April 14, 1992, and will be a joint meeting hosted by ASDSO. As usual, there will be a morning meeting for ICODS and an afternoon meeting for ASDSO. There will be a social event in the evening. The meeting will be in the Washington D.C. area. Chairman Bivins will provide information on the location as soon as it becomes available.

**Interagency Committee on Dam Safety (ICODS)  
Quarterly Meeting**

**Federal Emergency Management Agency**

Phoenix Park Hotel  
Washington, D.C. 20472

**April 14, 1992**

<b>Participants</b>	<b>Organization</b>	<b>Phone</b>
William S. Bivins, Chairman	FEMA	(202) 646-2817
Bud Andress	FEMA	(202) 646-2801
Arthur Walz	DOD/U.S. Army COE	(202) 272-0419
Paul Barber	DOD/U.S. Army COE	(202) 504-4536
Neil Parrett	DOI/USBR	FTS 776-4200
Jack Brynda	DOI/USBR	(202) 208-5275
Charles Karpowicz	DOI/NPS	(202) 343-7027
Joseph S. Haugh	USDA/SCS	(202) 720-4909
Gerald Seinwill	USDA/SCS	(202) 720-2520
Gus Tjoumas	FERC	(202) 219-2735
Ron Corso	FERC	(202) 219-2735
Marshall Fox	FWS	(303) 236-2074
Jack Mulhern	MSHA	(703) 235-1590
Robert Shewmaker	NRC	(301) 504-2596
John Steward	USFS	(202) 205-1448
James H. Coulson	TVA	(615) 751-5405
Morris Herndon	TVA	(615) 632-8153
Sam Shipman	TVA	(615) 632-8153
Thomas McSpadden	DOE	(301) 903-5656
Paul Storing	IBWC	(202) 647-8529
Martin McCann	Stanford University	(415) 969-8212

## **I. WELCOME AND OPENING REMARKS**

- Chairman Bivins welcomed the participants to the quarterly meeting and asked for introductions.

## **II. REVIEW OF MINUTES FROM THE JANUARY 14, 1992 ICODS MEETING**

- Bud Andress asked the participants for oral comments on the draft to the January 14 meeting minutes. No member had comments. Mr. Andress told the group that the minutes would be left open another 10 days for final comments.

## **III. STATUS OF MEMORANDA OF UNDERSTANDING (MOU'S) AND MEMORANDA OF AGREEMENT (MOA'S)**

- Mr. Andress reviewed the status of the MOU's and MOA's. The MOU's are the agreement between the Federal Emergency Management Agency (FEMA) and the Federal agencies to participate in the update of the national inventory of dams. The MOA's are the instruments used to fund National Dam Safety Program activities recommended by the subcommittee on operations and approved by ICODS.
- FEMA has received seven signed MOU's and all of the agencies are cooperating fully. At the January 14 ICODS meeting, Mr. Andress passed out revised MOA's for resigning. To date, six out of nine member agencies have signed. FEMA is pleased with the quick and positive response of the agencies.
- Of the \$80 thousand committed, \$30 thousand has been received and \$50 thousand is expected in the near future. Approximately \$65 thousand was spent on the Federal portion of the inventory update (approved by agreement with ICODS members in October 1991). There is \$15 thousand left in MOA funds, or \$65 thousand spent out of a potential \$120 thousand.

- Paul Barber of the U.S. Army Corps of Engineers (Corps) stated that the Corps still has a problem with the MOA. The attorneys for the Corps and Corps technical personnel will attempt to resolve the problem.

#### **IV. INVENTORY OF DAMS**

- Mr. Address stated that Terry Petruska of Venture Computing Group, Inc. would provide an inventory total in the joint session with the Association of State Dam Safety Officials (ASDSO). According to Mr. Address, NATDAM submissions have been received from 15 out of 16 agencies. A meeting will be held with the hold out agency the week of April 12.

- Mr. Address provided a status on the inventory for the states. Currently, there are 48 participating states. Of the 48 states (Alabama and Florida are not participating), 47 states have made initial submissions of work plans and 41 states have completed Phase I. Thirty-six states have had their work plans approved by the Board of Directors of ASDSO and 12 states have had their work plans evaluated for the research process. Of these 12 states, 6 states have received final ASDSO approval of their work plans. Fifteen states have submitted Fiscal Year (FY) 1992 data. The updated inventory should be completed by September 1992.

- Chairman Bivins commented on the exemplary cooperation of the states and Federal agencies and the excellent work of Venture Computing. According to Chairman Bivins, the result has been a tremendous product at a reasonable cost. In addition, the project is building excellent internal capabilities to continue the process in the future.

- In response to a question on funding, Mr. Barber of the Corps responded that legislation is pending to continue funding at the same rate, without the 5-year limitation.

## **V. SUBCOMMITTEE FOR FEDERAL AND NON-FEDERAL DAM SAFETY COORDINATION**

- Joseph Haugh reported on the subcommittee meeting held on April 13 at FEMA's new offices.
  
- With regard to the membership of the subcommittee, Jeris Danielson will continue to represent ASDSO. It also was brought up that representation from the Association of State Flood Plain Managers on the subcommittee would benefit Federal and state cooperation. (Mark Rebeau was mentioned as a possible representative on the subcommittee from the Association.) Chairman Bivins will attend the annual meeting of the Association of Federal Flood Plain Managers in Michigan in May. This should further the cooperation between FEMA and the Association.
  
- The subcommittee also discussed the need for increased publicity in the area of dam safety. Although there is a representative from the ASCE on the subcommittee (Edwin Jones), more activity is needed. In response to a question on the USCOLD newsletter, Mr. Haugh stated that although the subcommittee has not specifically discussed the newsletter as a source of publicity, it could provide a very appropriate audience for dam safety information. Chairman Bivins asked if it would be desirable for the subcommittee to serve as a focal point. The response to the suggestion was positive.
  
- Mr. Haugh also mentioned that the Federal Energy Regulatory Commission (FERC) has been good in submitting information to the subcommittee on its training programs and courses. FERC has done a lot of work in Emergency Action Plan (EAP) training from which Federal and non-Federal agencies benefit.

## **VI. SUBCOMMITTEE ON OPERATIONS**

- Mr. Haugh stated that the subcommittee on operations is now looking for proposals for joint funding.
  
- One proposal for funding involves the recognition of individuals who have contributed over the past 5 or 6 years to the Training Aids for Dam Safety (TADS) program. The preliminary idea is to obtain ICODS funding for certificates of appreciation and plaques. Chairman Bivins stated that a budget for the production of the certificates and plaques will be submitted to the ICODS members for approval.
  
- Chairman Bivins suggested that the Tennessee Valley Authority (TVA) begin serving on the subcommittee. The subcommittee members will be TVA, the Corps, and the Department of Labor (DOL).
  
- Chairman Bivins then raised the issue of the letter sent by ASDSO on state problems with Federal agencies involved in dam safety. The letter included five items: EAP terminology; wetlands; FERC's role in the state of Washington's regulations; guidelines on moving vegetation; and spillway-related regulations.
  
- With regard to EAP terminology, it was suggested that the area be broadened and perhaps made the subject of a subcommittee. Ron Corso of the FERC stated that it is extraordinary that the state of Alabama raised the EAP terminology issue, particularly since the state has virtually no dam safety program. According to Mr. Corso, the Federal Guidelines provide clear definitions of warnings and alerts. Chairman Bivins responded that the source of the question in Alabama is not the dam safety group but the Office of Emergency Services. Alabama is attempting to move its dam safety responsibilities to another area and the official is expressing concern over possible confusion with regard to warnings, *i.e.*, definitions used by different agencies are not consistent. Mr. Corso stated in response that FERC has tried to be consistent with respect to the terminology for EAP's and EAP testing.

- Arthur Walz from the Corps stated that there has obviously been a dialogue between the Mobile District and Alabama Power. The Corps Dam Safety Committee is visiting Mobile soon and will look into the matter. The Corps also has published a document that supplements the Guidelines and may clarify any confusion. Neil Parrett of the Department of Interior (DOI) stated that a consistent ICODS terminology for EAP's may benefit states and counties; however, a consistent approach may not be possible. Mr. Walz stated that the Corps has found that regions vary and that modifications often are made to suit local conditions. In addition, two EAP tests were run in Alabama, which may have caused the issue to come up. The EAP tests are run primarily because of regional differences.
  
- Mr. Corso stated that FERC is confident that companies know what to do; it is with the agencies responsible for evacuation that the process breaks down. For example, an earthquake exercise was conducted approximately 1 year ago that involved Pickwick Dam. One operations duty specialist had to call another duty specialist at the Alabama Emergency Management Agency, thereby causing confusion.
  
- Marshall Fox from the Fish and Wildlife Service (FWS) mentioned that the same issue of consistency came up in Colorado, and that EAP tests were the cause of the problem.
  
- Chairman Bivins suggested that it would be appropriate for the subcommittee on operations to take up the issue, and that ASDSO should select a representative to be present at the discussion.
  
- Mr. Haugh stated that it may be necessary to revisit and revise the Federal Guidelines on Emergency Action Planning. The proper setting for this discussion would be the subcommittee. It may only be necessary to reaffirm the Guidelines.
  
- On the wetlands issue, Mr. Corso said that the states perceive a real problem with section 404 permitting for repairs. There is a perception that the wetlands are unique and that environmental concerns should take precedence over dam safety repairs. Mr. Corso stated

that sensitivity to the environment is at a much heightened level over the past 10 years. The Environmental Protection Agency (EPA) does not say that environmental analysis must be prepared on everything. The notion that anyone would ignore environmental concerns when repairing a dam is nonsense. Mr. Corso stated that inconsistencies within the Corps are appalling in some cases; some offices will put dam safety at the bottom of the pile.

- Chairman Bivins stated that the EPA is becoming involved in the wetlands and environmental protection issue, although no one from EPA has contacted him yet.
  
- Mr. Corso said that there should be some recognition of priorities. The FERC Commissioners require speed in completing repairs. Although there is the time to conduct the needed Corps procedures, the problem is setting priorities. Mr. Barber stated that he would meet with Mr. Corso after the meeting to obtain specifics on the problem areas.
  
- Chairman Bivins suggested that a workshop might be the appropriate educational tool for dam experts to discuss the wetlands issue and regulations with groups not involved in dams and dam safety issues.
  
- Mr. Corso discussed item 3 in the ASDSO letter, the statement that FERC went to state legislators to obtain an exemption from state requirements. According to Mr. Corso, this was an instance of the message becoming garbled. The state had put together new regulations on dam safety and the dam owners were unhappy with the new requirements. The owners perceived the regulations as a revenue-gathering process and felt strongly that if a state wants to pass taxes, they should not hide the tax in increased utility rates. As a result, the owners, not FERC, went to the state legislature to exempt FERC-licensed projects from the regulations. The owners were not successful, primarily because the session had another focus. The state, in turn, asked FERC to sign a MOU to discourage the owner-sponsored legislation. If the MOU does not reflect the owners' wishes, they will probably be successful in having their legislation passed. Mr. Corso stressed that the FERC has never played the pre-emption card, although the owners have. FERC believes that there is much to

be gained by working with the states in this area.

- With regard to item 4 in the ASDSO letter, the state of Arkansas inquired whether there are any guidelines or studies on moving vegetation on dams. The Soil Conservation Service (SCS) has guidelines (1981 Technical Note), which it will pass on to ASDSO. The Corps also reported that they are studying the effects of roots on dams in its REMER II program.

- Item 5 in the ASDSO letter addressed Missouri's concern over spillway-related regulations. Mr. Corso stated that there may be no need for concern over the Probable Maximum Flood (PMF) level because PMF is not appropriate for the majority of dams. Chairman Bivins stated that PMF is the ultimate design level from which you step down (ASCE approach). Mr. Parrett stated that ASDSO, not ICODS, is the appropriate forum to deal with the issue. Chairman Bivins stated that he would address this position with ASDSO.

## **VII. REPORT OF AGENCY ACTIVITIES**

### **A. Department of Agriculture (USDA)**

- Gerald Seinwill stated that Jim Mosely, the Assistant Secretary for Natural Resources and the Environment and the chairman of USDA's Dam Safety Committee, is leaving the agency. It appears that Mosely's Deputy will become Acting Assistant Secretary.

- The SCS had a problem in West Virginia for which the SCS managed to obtain an exemption from state control of dams. The SCS will be speaking with West Virginia officials about the problem. In addition, the SCS small watershed program is interested in using the FEMA dam inventory for its own management purposes.

- John Steward of the Forest Service (FS) reported that FS is completing modifications to its manual and handbook, including strengthening the requirements for testing of EAP's. The FS also is trying to improve its record in the areas of EAP testing and monitoring, which

was brought to its attention by the last biennial report. The FS made its first dam inventory submission on time.

- Mr. Seinwill also reported that Chairman Bivins visited the National Engineering Conference in Florida, where they showed the dam safety video and held excellent discussions on dam safety issues.

**B. Department of Defense (DOD)/ U.S. Army Corps of Engineers**

- Mr. Barber reported that the Corps has provided substantial financial support (\$300 thousand) to the Army's Training and Doctrine Command (TRADOC) for work on 18 dams and 9 installations.

- Mr. Barber also stated that John McPherson has done an excellent job and will continue to be involved in dam safety. The Corps will not be able to immediately replace Ed Pritchett because of a hiring freeze. Wayne Schwartz is the new Corps chief geologist. He will replace Lew Gustafson, who has retired.

- The Corps participated in the drawdown of the Snake River projects in March. The drawdown is now being evaluated.

- The Corps will sponsor a Corps-wide geotechnical lab conference in late April. There will be 150 technical presentations at the conference, 26 of which will deal with dam safety.

- Mr. Barber also reported that the Corps was called to advise on a 4x8 sinkhole problem at the Sanchez Dam in Southwest Colorado. The Corps advised that the sinkhole not be filled until a full geotechnical evaluation could be completed.

**C. Department of Energy (DOE)**

- Thomas McSpadden reported that this meeting was only his second as representative from the Department of Energy (DOE). Since that meeting, his concentration has been in dam safety.

- Mr. McSpadden stated that from the inventory, DOE has 23 dams and approximately 100 minor structures. Of the 23 dams, 3 are being actively checked for problems. At present, DOE's contractor is inputting data for the national inventory.

**D. Department of Interior (DOI)**

- Mr. Parrett stated that he would present a detailed report on DOI dam safety activities in the joint session with ASDSO.

**E. Department of Labor/Mine Safety and Health Administration (MSHA)**

- Jack Mulhern reported that MSHA is developing an independent reviewer system for dams designed by operators or consultants. MSHA personnel will meet at the National Mine Safety and Health Academy in West Virginia in May to discuss procedure letters. The procedure letters provide MSHA engineers with guidelines on acceptable engineering practices.

**F. Federal Energy Regulatory Commission (FERC)**

- Mr. Corso stated that FERC will conduct two EAP training courses, July 20 in San Francisco and September 21 in Chicago. An invitation was extended to anyone interested in attending. Mr. Corso also stated that FERC may run a separate EAP training session for consultants and a separate course for ASDSO.

**G. International Boundary and Water Commission (IBWC)**

- Paul Storing reported that the IBWC has received a disk from Venture Computing for the national inventory of dams.

- Mr. Storing stated that it might be advisable for ICODS to arrange for the translation of the TADS documents into Spanish. To date, nothing has been done by Mexican officials to translate the materials. Mr. Parrett stated that he would review the scope of work and obtain an estimate on the translation from some firms in the Denver, Colorado area. Chairman Bivins stated that it was his impression that countries other than Mexico wanted copies of the TADS materials in Spanish. Mr. Parrett then asked if ICODS members really cared about the translations, *i.e.*, interested countries could arrange for a translation at their own discretion. Chairman Bivins recommended that Mr. Parrett check with Chris Veesaert to determine if there is a need for the translation. He also pointed out that it might be advisable to maintain control over the translation. Quality could become an issue because TADS will remain a Federal product.

#### H. Nuclear Regulatory Commission (NRC)

- Robert Shewmaker reported that the MOA with FERC for their support of NRC's dam safety program is in the office of the Executive Director for Operations for signature. The MOA should be ready for return to FERC by the third week in April.

- Mr. Shewmaker stated that NRC's goal was to tackle five facilities, including dams and mill tailings. Approximately one-half of the data has been submitted by NRC to Venture Computing. NRC's June deadline should be met.

#### I. Tennessee Valley Authority (TVA)

- James Coulson of the TVA discussed Doakes' Creek Dam, which was designed to maintain a small reservoir for fish rearing. During the last year, there has been a considerable increase in underseepage. TVA believes that the dam is in jeopardy and is limiting differential head to 3 feet only next cycle.

- Mr. Coulson also stated that TVA has completed a generic EAP.

#### **J. The Federal Emergency Management Agency (FEMA)**

- Chairman Bivins stated that FEMA has been designated by Congress to take the lead in preparing a plan (due in June) for developing seismic standards for lifelines. FEMA will work on the plan with the National Institute for Standards and Technology (NIST). The report to Congress will recommend deferring aspects of the development of seismic standards for dams to ICODS. Chairman Bivins stated that he wanted to alert ICODS members that a subcommittee will be created to deal with the issue and that he will contact ICODS members to check on their interest in joining the subcommittee. The subcommittee will be an inter- and intragovernmental group and will include non-Federal representatives.
  
- With regard to the Biennial report, Chairman Bivins thanked the group for their timely submissions. He stated that the report reads well and looks good. He also informed the group that the draft of the report would be sent out to them for final comments before publication and release.
  
- Chairman Bivins reported that the President's budget for FEMA deleted the national dam safety program and transferred three full time equivalent positions to the earthquake program. Chairman Bivins stated that FEMA management is strongly in favor of reinstating the dam safety program, and that significant support has been received from ASDSO, the National Emergency Management Agency, and the Association of State Flood Plain Managers. Chairman Bivins stated that he is very optimistic that the funding will be restored by May. Regardless of the funding issue, the program will be incorporated into the lifelines program. Officially, the dam safety program will fall under the auspices of the Earthquake Hazards.
  
- Chairman Bivins stated that ASDSO has drafted legislation that would establish a national dam safety program. The legislation will be a topic of discussion at the joint session with ASDSO.

## **VIII. ANNOUNCEMENTS/NEXT MEETING**

Chairman Bivins announced that the next ICODS meeting will be held June 14, 1992, at FEMA's new offices, 1411 K Street, N.W. The ICODS meeting was then adjourned.