Margaret F.
Marla L.O.
Shev B.
[redacted]

1/19
For info purposes.
Jack S.

January 19, 1989

NOTE TO: Robert Bernero
Robert Browning
✓Jack Scarborough

FROM: Philip Justus

SUBJECT: DOE'S FIRST ANNUAL INTERNATIONAL CONFERENCE ON HLW MANAGEMENT

This note is to inform you in advance of official correspondence that NRC has a seat on the Program Committee of the newly created organization that will oversee the first and subsequent annual meetings on HLW, all to be held in Las Vegas. DOE is the principal sponsor, ANS and ASCE are currently the principal technical support groups. Other societies are expected to cooperate. The first conference is scheduled for April 8-12, 1990.

The next meeting of the Program Committee will be held in Washington, D.C. on February 15, 1989. It is essential that NRC be represented and participate fully at this meeting if it is to have any influence or effect on the program, i.e., on selection of session co-chairman, on selection of plenary and keynote speakers and on the standards and tenor of the papers to be solicited and ultimately selected for presentation.

The NRC rep at the Feb 15 meeting should be someone with the knowledge of HLW issues and key individuals (persons fairly prominent in the programs of their respective countries) and with standing in the Agency sufficient to speak out authoritatively and to vote on behalf of the Agency.

Nominations of a keynote speaker on the morning of the first day, to set the tone of the meeting will be made and a vote taken at the Feb 15th meeting. The keynote address topic is, to the effect: "Status of Compliance Assessment." Personally, I consider that this address would best be given by NRC, by the Director of either NMSS or HLWM. A nomination to this effect by the NRC rep would be in order, in my view.

The Program Plan draft, to be finalized at the Feb 15th meeting has evolved to the following:

Mon morn: Plenary sessions on Status of Compliance Demonstration
Mon afternoon:
- Nat. Syst. - Geology;
- Engr. Syst. - WP;
- Syst.Engr.Integr. - Syst. Engr./Perf. Assess.;
- Inst. Syst. - Regulations

Tues morn/afternoon:
- Nat. Syst. - Hydro & Climate/Geochem & [illegible]
- Engr. Syst. - Repository/ESF

Syst.Engr.Integr.- Storage/Transp.
Inst. Syst.- Socioecon & Env/Policy & Ext. Affairs
Wed morn: Session Summary Plenaries and Panels
Wed afternoon: Issue-discussion forums: topics tbd Feb. 15.

A decision will soon be needed as to who should represent NPC on the Program Committee on February 15th.

cc: Ronald Ballard

PRESENTATION TO THE NUCLEAR REGULATORY COMMISSION

Samuel Rousso, Acting Director
Office of Civilian Radioactive Waste Management
December 20, 1988

Introduction

It is a particular pleasure to appear before you today to report on our agency's activities, because this month will mark one of the most significant milestones our program has met: issuance of the Site Characterization Plan (SCP) for the Yucca Mountain site.

As you well know, a great deal is riding on our site characterization program: years of effort, several billions of dollars, and an important national interest. Because so much is at stake, the bedrock of our program must be technical excellence. That calls for both meticulous planning and rigorous quality assurance (QA). Our planning for site characterization has benefited from the numerous interactions between DOE and NRC staffs, and we have strengthened our QA program significantly in response to NRC concerns. The approximately 7,000-page document we will issue at the end of this month describes a comprehensive and integrated program that we feel confident will yield the information we need in order to determine the suitability of the Yucca Mountain site and--if the site proves suitable--to demonstrate its suitability to you in the licensing process. If at any point in the course of our site characterization activities we determine that the site is not suitable, we will promptly notify the NRC.

While Ed Kay has left our program and I am serving as an Acting Director, I assure you that our core team remains intact, that continuity is being maintained, and that we are moving the program forward aggressively. In fact, we are substantially augmenting our capabilities through a major management and operations contract which I will tell you more about in a few minutes.

This afternoon, I want to highlight our activities over the past 6 months. I will then discuss areas of joint and special interest to our agencies.

PROGRAM HIGHLIGHTS

Site Characterization

Let me begin by turning in more detail to the subject of site characterization at the Yucca Mountain site. Site characterization involves the collection, compilation, and synthesis of data that will be used to:

- Determine whether or not the Yucca Mountain site is suitable as a geologic repository for high-level radioactive waste,

- Design the repository,

- Design the waste package,

- Develop and validate models for performance assessment, and

- Support development of the Environmental Impact Statement and the Safety Analysis Report needed to submit a license application to the NRC.

Last January, DOE issued a Consultation Draft of the Site Characterization Plan (SCP/CD) for the Yucca Mountain site. Since our last formal briefing to you, in June, we have continued to hold technical meetings with the NRC staff to discuss their major concerns on the consultation draft. These meetings have been attended by the State of Nevada and local affected parties. We have also reviewed and acted upon draft and final point papers from the NRC that presented objections, comments, and questions about the SCP/CD. We have reviewed comments from the U.S. Geological Survey and others, as well.

In developing the final text of the plan, we addressed all of the NRC's major concerns, including:

- The treatment of alternative conceptual models;

- The design and location of the exploratory shaft facility (ESF) and the potential effects of ESF construction and

testing on site characterization and waste isolation; and

- Performance confirmation following site characterization, testing of seals system components, and the interpretation of "substantially complete containment."

DOE Headquarters has completed its concurrence review of the final text of the SCP and, as I mentioned earlier, we will issue the plan at the end of this month. At about that same time, we will issue the supporting references and a number of environmental and other documents. During February and March 1989, we will hold public briefings and hearings on the SCP in Nevada.

With issuance of the SCP, the Department of Energy will be able to proceed with the all-important testing that is necessary to determine site suitability. However, no new site-characterization activities will begin until a fully-qualified QA program covering those activities is in place.

Exploratory Shaft Facility

We have carefully reviewed the site characterization schedule, particularly with regard to the ESF. To ensure that all necessary quality assurance plans and procedures and other necessary documentation and analyses are in place, we have

delayed starting the ESF final design (Title II) and, therefore, the start of ESF construction. As announced in October, we plan to begin site preparation work in May 1989 and to begin exploratory shaft construction in November 1989.

In its comments on our draft Mission Plan Amendment, the NRC expressed concern that schedule compression could adversely affect the completeness and quality of the license application. However, we imposed the delay to ensure that site characterization activities are conducted in accordance with the QA requirements of 10 CFR 60, Subpart G, and we believe that meeting QA requirements is the best guarantee of the completeness and quality of data for our license application. Further, we are actively seeking ways to manage our program so that we can adhere to our schedule and meet the statutory timetable for review. We will consult further with the NRC on this issue as our planning matures.

OCRWM has imposed a comprehensive set of management and technical prerequisites that will be met prior to the start of the ESF Title II design in January. They include a thorough review of, and necessary revisions to, QA program requirements and design control procedures. Significant elements of these prerequisites are:

- A review of the flowdown of 10 CFR Part 60 requirements to

the ESF design.

- Development and implementation of procedures to assign appropriate QA controls to ESF design and construction.

- Development of the Nevada Nuclear Waste Storage Investigation Quality Assurance Plan 88-9, Revision 2, currently under review by NRC staff.

The ESF has been the subject of intense scrutiny. NRC staff has indicated their concern about the potential for flooding at the ESF location as well as the possibility of the ESF adversely impacting the waste-isolation capabilities of the repository. Based on additional analyses of the probable maximum flood (PMF), in June 1987, we reoriented the shafts within the preferred location area to sites that are topographically higher than a conservative PMF elevation and horizontally distant from the flood limits, even though the original sites were above the probable maximum flood elevations. The new sites have the additional advantage of allowing the shaft collars to be set in bedrock.

Figure 1 shows both previous and current shaft sites compared to the probable maximum flood water level. Figure 2 shows topographic cross-sections of the new shaft sites. Exploratory Shafts 1 and 2 are located 16 and 36 feet, respectively, above

the PMF elevations. Exploratory Shaft 1 is located 290 feet horizontally away from the flood limit, while Exploratory Shaft 2 is 250 feet away. An aerial view of the sites is provided in Figure 3. These new shaft sites were discussed with NRC staff and the State of Nevada in April 1987. The participants at the meeting concluded that the proposed shaft sites are acceptable pending the demonstration that flooding and erosion will not adversely affect the long-term performance of the site. That analysis is provided in the SCP and its references.

With regard to preserving the waste-isolation capabilities of the site, analyses reported in the SCP indicate that the ESF can be constructed without adversely affecting the site and without interfering with other testing activities or test results.

At the request of the NRC staff, we are preparing a Design Acceptability Analysis of the ESF Title I design. This analysis is intended to provide the NRC staff with the added confidence in the acceptability of the design that they need in order to review the SCP. The Design Acceptability Analysis includes the following:

- A review of 10 CFR 60 requirements applicable to the ESF and their incorporation into the design requirements and criteria documents;

- An evaluation of the Title I design to determine if the exploratory shaft facility would (1) compromise long-term waste isolation, or (2) compromise our ability to characterize the site, and (3) provide representative data;

- A determination of the appropriateness of parameters and data used in SCP analyses;

- Comparative assessments of alternative ESF locations; and

- An assessment of any impacts on the design and recommendations for corrective measures to be implemented during Title II design.

This effort is being undertaken by an independent group of DOE contractors and consultant personnel. Their recommendations will be thoroughly reviewed by management, and any necessary corrective actions will be taken during the ESF Title II design. If significant changes are necessary to the ESF design, we will notify the NRC staff promptly.

A schedule showing these activities and their relationship to ongoing SCP and ESF-related areas is shown in Figure 4. Overall, we are proceeding with the utmost care to ensure that our investigations will not impair the waste-isolation capabilities of the site itself, that the data we obtain will be

adequate to assess site suitability, and that data collection and analysis will be subject to a rigorous program of quality assurance in accordance with the requirements in 10 CFR 60. Our aim is to submit a high-quality license application that will enable the NRC to complete its review of the application within the statutory 3-year period.

Changes in OCRWM Technology Development Activities

Section 161(c) of the Nuclear Waste Policy Amendments Act of 1987 (Amendments Act) calls for an orderly phase-out of funding for all research designed to evaluate the suitability of crystalline rock as a potential host rock medium for a geologic repository. The amendments narrow the program's research objectives by directing OCRWM to characterize only one site, the Yucca Mountain site. We have therefore terminated six domestic research activities designed to evaluate the suitability of crystalline rock as a host medium, and we have redirected the remaining domestic research activities to support the characterization of the Yucca Mountain site.

OCRWM Budget for Fiscal Year 1989

On July 19, 1988, Congress enacted an appropriation of $369.8 million for the Nuclear Waste Program for Fiscal Year 1989. The allocation of this appropriation among the various components of

the OCRWM program, including a comparison of Fiscal Year 1988 and Fiscal Year 1989, is shown in an attachment to your copy of these remarks.

Without going into the details of the budget, I would like to call your attention to a few items: (1) $15 million is provided for recovery by NRC of Fiscal Year 1988 costs it incurred in performing pre-license application activities related to the OCRWM program (additional funding is being requested in our Fiscal Year 1990 budget); (2) the second repository program has been terminated; and (3) in Fiscal Year 1989, $7.8 million is budgeted for the Licensing Support System. Depending on the procurement schedule, some of this could be carried over for commitment in Fiscal Year 1990.

As you know, the NRC and the DOE signed a Memorandum of Understanding in July 1988 to establish general policy and procedures regarding the recovery by the NRC of costs it incurs in performing pre-license application activities related to nuclear waste disposal in a geologic repository. This memorandum codifies our on-going practices, and we are pleased that smooth working relationships are the norm under this agreement.

Issuance of the Draft Mission Plan Amendment for Comment

We issued a draft 1988 Mission Plan Amendment for comment last June. The Mission Plan Amendment, scheduled for issuance in early 1989, will provide information to Congress about OCRWM's plans for carrying out the program as revised by the Nuclear Waste Policy Amendments Act of 1987. It presents the general strategy for the waste-management program as well as plans for both technical and institutional activities. It will be followed by a revised Project Decision Schedule.

Monitored Retrievable Storage (MRS)

The Amendments Act authorizes DOE to site, construct, and operate an MRS facility subject to certain conditions, which include linkages to the development of the geologic repository. These linkages between an MRS and repository construction reduce the early benefits expected to result from operation of an MRS facility. We are currently updating our analysis of MRS functions in an integrated waste-management system as well as conducting studies for alternative MRS designs. As a result, the functional and operational requirements originally envisioned for the MRS may change as we continue our systems studies.

Meanwhile, we are working to support the efforts of the independent MRS Review Commission. Our staff has made several

presentations to the Commission. We plan to brief the Commission on the results of our systems studies early in 1989, and we will continue to provide them with information they need to prepare their report to Congress.

Selection of Management and Operating Contractor

Bechtel Systems Management Inc. has been selected to become DOE's management and operating (M&O) contractor for overall design and analysis of the waste-management system. The M&O contract, with an initial term of 10 years, is estimated to involve expenditures of about $100 million annually.

Bechtel will be joined in this effort by several other companies who will be responsible for specific aspects of the program. Under the terms of the contract, the contractor will ensure that work on the waste-management system proceeds in a well-structured, systematic manner that meets technical, schedule, cost, safety, environmental, and quality-assurance requirements; that the work meets the regulatory requirements of the NRC and the Environmental Protection Agency; and that it is consistent with applicable DOE orders. This substantial augmentation in DOE support is certain to help us to meet statutory goals, including the goal of timely program implementation.

AREAS OF JOINT AND SPECIAL NRC INTEREST

Quality Assurance

In our report to you last June, we discussed how our program had been redirected by the Amendments Act and we explained that we had undertaken a major reorganization of OCRWM in order to better carry out the amended program. This reorganization included the establishment of an Office of Quality Assurance that reports directly to the OCRWM Director.

Since then, we have made significant progress in strengthening our QA program. One important task has been the reevaluation of our QA documents. As a result of this reevaluation, these documents were or will be superseded and replaced by the "Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program" and the "Quality Assurance Program Description for the Civilian Radioactive Waste Management Program." These documents and supplementary sub-tier documents embody OCRWM quality-assurance policy; together, they constitute OCRWM's QA Plan.

We transmitted both of these documents to your staff, prior to issuance, for review and acceptance. We have met numerous times with NRC staff in open meetings, and with the State of Nevada and others, to address questions relating to these documents and

related subjects. Further, we have committed to the NRC to implement NUREG-1318, "Technical Position on Items and Activities in the High-Level Waste Geologic Repository Program Subject to Quality Assurance Requirements," April 1988.

QA training is another area of special emphasis. OCRWM and Project Office staff and contractor employees are receiving training on specific QA procedures. Mandatory indoctrination workshops are being held to acquaint each employee with QA requirements and benefits as well as the NQA-1 basic criteria under which QA programs have been established and used successfully throughout the U.S. nuclear power industry. Specific training on the Quality Assurance Requirements and the Quality Assurance Program Documents is being provided to familiarize employees with the OCRWM QA program requirements and program description. Further, we have underway QA verification efforts that include all of our program participants. NRC staff participate as observers and provide comments on the conduct and results of these verification activities.

The General Accounting Office has reported on the OCRWM QA program, and the DOE Office of the Inspector General has undertaken a study of how we have handled comments on the SCP/CD. This is not the forum for addressing the GAO report, and the Inspector General's investigation is still underway. I mention them, however, to emphasize that our program does not lack for

surveillance to assure its proper conduct and the quality of its work.

DOE-NRC Interactions

At the beginning of my remarks, I mentioned the productive meetings we have held with the NRC. Consultation between our staffs is of increasing importance in the waste-management program. Over the past year, DOE/NRC interactions have included a series of meetings on the Licensing Support System, QA, the NRC Point Papers, and the ESF, as well as briefings to the NRC Commissioners and the Advisory Committee on Nuclear Waste.

A key meeting that dealt with alternative conceptual models was, indeed, a technical seminar on modeling of the Yucca Mountain site hydrology. We appreciate the constructive contributions of the NRC staff in this area. You will find the results in the SCP itself.

In addition to resolving issues relating to the SCP, DOE has been developing the study plans that implement the site characterization plan. The study plans provide additional detail about the studies, tests, and analyses described in the SCP. We expect to transmit 17 study plans to the NRC within the next 12 to 18 months. A total of over 100 study plans will be prepared for the total site characterization program. Five of

them pertaining to the ESF have been prepared and will be submitted to NRC coincident with the SCP.

Transportation Initiatives

DOE's transportation program is based on the assumption that full-scale movement of high-level radioactive waste is not likely to start for about 15 years, and that this schedule allows ample time to develop the necessary infrastructure for an efficient transportation system. Planning and implementation of the transportation program are well underway. I believe that we have made real progress technically in developing the elements of the system and institutionally in addressing concerns about the transport of high-level waste.

Institutional Interactions

Institutional interactions are a key component of our efforts to develop the transportation system, and we continue to encourage the active participation in program planning of a broad range of interested parties. To support such participation, the Transportation Coordination Group, consisting of the State of Nevada, representatives from other States, Indian Tribes, utility representatives, and others, meets periodically. NRC staff have attended such meetings on a regular basis. Detailed information about the transportation program is also provided through

documents that are issued for comment.

To foster the study of a wide variety of institutional issues, OCRWM has also put into place a number of cooperative agreements with national and regional groups having particular interests in transportation. Agreements are now in effect with such organizations as the National Conference of State Legislatures, the Western Interstate Energy Board, the Southern States Energy Board, the Commercial Vehicle Safety Alliance, and the American Association of State Highway and Transportation Officials.

Cask Development

Because DOE will need a fleet of transportation casks over the operating life of the program, a major cask-development effort is underway. Efforts are focused on the design of a new generation of shipping casks with larger carrying capacities for shipping spent fuel from reactor sites to a repository or to an MRS facility. Negotiations have been completed for the design of "from reactor" casks with General Atomics, Westinghouse Electric, Nuclear Assurance Corporation, Nuclear Packaging, and Babcock and Wilcox. Contract values for these "from reactor" casks range from $7.0 million to $14.9 million. DOE expects to define cask fleet requirements and to initiate procurement in time to ensure limited shipping capability by 1998. These cask designs will

form the core of a cask fleet.

In addition to the design and development of these "from reactor" casks, DOE will be reviewing over the next several years the need for three additional cask design initiatives. These include casks for (1) shipping waste from an MRS facility to a repository, (2) shipping non-standard fuel and component parts, and (3) shipping defense high-level waste.

DOE has also been working with utilities to evaluate and assess the compatibility of transport cask designs with utility on-site storage programs. Although the storage technologies at several of the utilities differ significantly, there are possibilities in the system for standardization and integration that could optimize operations for safety and economy. While there are clearly benefits to be gained by using more than one technology for supplementary at-reactor storage, we want to avoid a proliferation of specifications. Interest is growing in avoiding such proliferation, but DOE and the utilities have not yet reached a consensus on how to achieve compatible designs. However, as part of our effort to deal with this problem, we have been meeting with waste producers to discuss the concept termed by the NRC "As Compatible as Reasonably Achievable," and we will continue working closely with them on this issue.

Nuclear Fuel Services Fuel Shipment and Storage Project

The West Valley Demonstration Project is under the jurisdiction of the DOE's Assistant Secretary for Nuclear Energy. OCRWM's responsibility relative to the West Valley Demonstration Project is limited to ensuring that the glassified waste now stored as liquids at West Valley are compatible with the natural and engineered repository system prior to DOE's acceptance, transport, and eventual emplacement of these wastes.

In light of Federal spent-fuel research and development needs and a Federal commitment to clean up the former Nuclear Fuel Services (NFS) facility at West Valley, OCRWM entered into a cost-sharing program with NFS to demonstrate the performance of transport/storage casks using the NFS-owned fuel. OCRWM has imposed Waste Acceptance Preliminary Specifications and QA Requirements on this program to assure that the glassified waste will meet program standards. We are also working closely with the NRC to finalize certification of the casks used for spent-fuel transport.

Dry Cask Storage Study

In accordance with the Amendments Act, DOE is preparing a report on the use of dry cask storage at reactor sites. The study assesses the utility industry's spent nuclear fuel storage needs

through the start of operation of the geologic repository, and reviews not just dry cask storage but most of the techniques that could be used to increase on-site spent-fuel storage capacity. We released an initial version of this report for review and comment by the NRC, States, local governments, and the public in September. Overall, we are very pleased with the reception given the initial version and are well into the comment resolution process at this point. When the final report is completed, we will ask the NRC to comment on the final version. We will then submit both the final report and any NRC comments to Congress. Submittal is scheduled for late January 1989.

Licensing Support System (LSS) Development

The licensing support system that will support the requirements of all parties in the repository licensing process will be based on a detailed set of system specifications. These specifications are being derived from statutory, programmatic, and user requirements. During the past year, some of these requirements have been defined through the efforts of the High Level Waste Licensing Support System Advisory Committee, efforts which serve as the basis of the proposed rule recently published by the NRC.

In parallel with these efforts, DOE produced a series of four reports to serve as a sound foundation for the system design. These reports, "A Preliminary Needs Analysis," "Data Scope

Analysis," "Conceptual Design," and "Benefit-Cost Analysis," have been submitted to the Office of Management and Budget (OMB) and distributed to the parties to the LSS negotiation and to other interested parties. At this time, the Office of Information and Regulatory Affairs at OMB has approved the technical aspects of the design, and we are beginning to develop functional specifications that will lead to a competitive procurement of the hardware and software.

In addition to these reports, we have embarked on designing and building a prototype system in Washington, D.C., and the University of Nevada at Las Vegas that will contain about 200,000 pages of text. This information will be in full text with images of the actual pages of the documents. The prototype will be used primarily to assess user reaction to such a system and to fine-tune hardware and software requirements. It is scheduled to be available by Spring 1989.

We believe the LSS negotiated rulemaking was extremely productive and that the LSS offers real promise for expediting the licensing process. Because the development of the LSS will be phased, we will have opportunities to evaluate the system's effectiveness as it is being developed. The Energy and Water Appropriations Bill, P.L. 100-371, names the University of Nevada, Las Vegas, as the site of the LSS. We view this as an opportunity to work cooperatively with the University not only to provide a home for

the LSS, but to develop and apply emerging technology that can optimize this system for all participants.

State and Local Government Interactions

The State of Nevada continues to actively participate in and oversee program development. State representatives attended our technical meetings with NRC staff on the SCP/CD and the exploratory shaft facility, and the State submitted extensive comments on the SCP/CD. Unfortunately, those comments reached us well past the deadline--too late for incorporation in the SCP under the published schedule. However, we will carefully consider comments the State offered in their review of the Consultation Draft along with comments they offer during the upcoming public comment period on the SCP.

The DOE continues to hold open its offer to the State of Nevada to begin consultation and cooperation negotiations under Section 117 of the NWPA. On April 6, 1988, Secretary Herrington wrote to Governor Bryan of Nevada offering to enter into consultation and cooperation negotiations and negotiations for the Benefits Agreement provided for under the Amendments Act. Among other benefits, such an agreement would provide for State and local representation on a Review Panel with broad review and advisory responsibilities. It would also include a schedule of annual payments to Nevada. In exchange, the State would forego its

right to file a notice of disapproval if the Yucca Mountain site were recommended for a repository. The Secretary's letter also offered the State the opportunity to name an on-site representative. On May 20, 1988, The Governor of Nevada declined the offer to negotiate, stating that the State prefers to use informal mechanisms for interacting with the program.

Prior to the Amendments Act, impact assistance was to be made available to the State only during repository development and operation. The amendments made it available during site characterization as well--if a benefits agreement is not negotiated. DOE will soon submit to Congress a report--mandated by Section 175 of the Amendments Act--on the possible socioeconomic impacts of the repository program and the various authorities, responsibilities, and funding sources that could be used to mitigate those impacts that might occur.

The amendments authorize direct participation grants to "affected" units of local government and expand the definition of "affected." Nye County, the county in which the site is located, is "affected" under the terms of statute, and the Secretary has approved the requests of two other counties--Lincoln and Clark--for "affected" status. On October 14, 1988, DOE awarded initial participation grants for FY '89 of $203,340 to Nye County, $313,568 to Clark County, and $156,490 to Lincoln County. The final grant awards for FY '89 will be made shortly.

CONCLUSION

Having presented the highlights of our activities over the past 6 months, I would like to offer some thoughts on how we might make our working relationship even more productive over the coming months. At the outset of my remarks, I stated that we will soon meet a major program milestone--issuance of the SCP. I think it's human nature to want to pause and draw a deep breath on such an occasion. But this program presses on. That milestone will not only mark the close of the first phase of site characterization--development of the SCP; it will inaugurate a new phase--implementation of the plans for site characterization --that will require sustained and arduous efforts on both our parts.

The NRC is going to be called upon to review numerous, highly technical documents--not only the 7,000 page-long SCP, but documents related to the design of our exploratory shaft facility, 100 or more study plans, and our semi-annual progress reports. We are confident that, like our work to produce these documents, your review will also be both thorough and timely. We, in turn, must carefully consider your comments on these documents; review our plans for site characterization in light of them and revise our plans as appropriate; initiate new surface-based, site-characterization activities; and begin to prepare the site itself for construction of the exploratory shaft facility.

Ensuring the technical excellence of our work while adhering to an aggressive schedule is going to call for very skillful management. In particular, to ensure that NRC concerns are understood and addressed, we must continue to work to maintain clear communication between our agencies via frequent staff-to-staff interactions. This means that for each comment we receive from you, we must understand not only the substance of the comment, but what weight the NRC places on it. That is, we must know whether the comment expresses a regulatory concern, or whether it is a staff-level suggestion for a technical change that can be treated as advisory.

With a technical program of this scope and complexity, maintaining clarity in communications is no small task. That it has been performed so well to date is a tribute, I think, to the determination and skill of both of our staffs. I am confident that as the work of site characterization progresses, we will gain still more skill in managing our interactions.

Thank you very much for your attention. I hope that I have been clear. I would welcome your questions.

ATTACHMENT

APPROPRIATION FOR NUCLEAR WASTE PROGRAM

FOR FISCAL YEAR 1989

On July 19, 1988, Public Law 100-371 was enacted that included, among other appropriations for Fiscal Year 1989, $369,832,000 for nuclear waste disposal activities to be derived from the Nuclear Waste Fund. This appropriation is allocated to the following programmatic activities:

Nuclear Waste Fund	FY 1988 (in millions)	FY 1989 (in millions)
First Repository		
Operating expenses	$240,900	$212,161
Capital purchase	15,100	11,539
Construction	0	0
Subtotal	$256,000	$223,700
Second Repository		
Operating expenses	$ 3,500	$ 0
Capital purchase	0	0
Construction	0	
Subtotal	$ 3,500	$ 0
Monitored Retrievable Storage		
Operating expenses	$ 4,000	$ 15,000
Capital purchase	0	0
Construction	0	0
Subtotal	$ 4,000	$ 15,000
Transportation and Systems Integration		
Operating expenses	$ 37,000	$ 40,600
Capital purchase	0	400
Construction	0	0
Subtotal	$ 37,000	$ 41,000
Program Management and Technical Support		
Operating expenses	$ 56,800	$ 71,732
Capital purchase	2,700	3,400
Construction	0	0
Subtotal	$ 59,500	$ 75,132

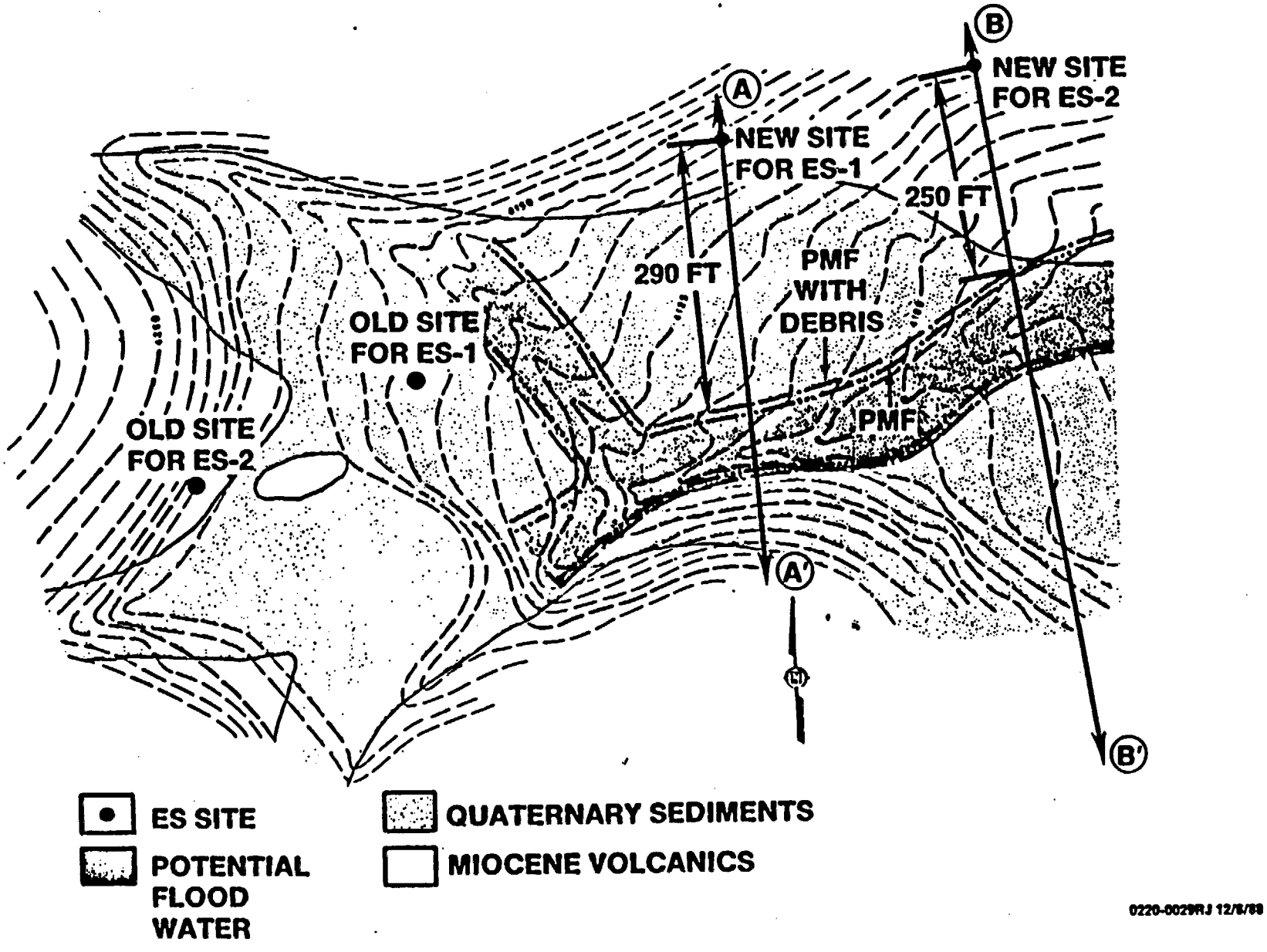
Total Program.....	$360,000	$354,832
Nuclear Regulatory Commission Fees	0	15,000
Total Nuclear Waste Fund.....	$360,000	$369,832

Several limitations on expenditures were included in the legislation:

- Of the amount appropriated, no more than $11.0 million, at an annualized rate, may be provided to the State of Nevada for the period July 1, 1988, through June 30, 1989, for the conduct of its oversight responsibilities pursuant to the Nuclear Waste Policy Act of 1982 as amended, of which not more than $1.5 million may be expended for socioeconomic studies and not more than $1.5 million may be expended on transportation studies.

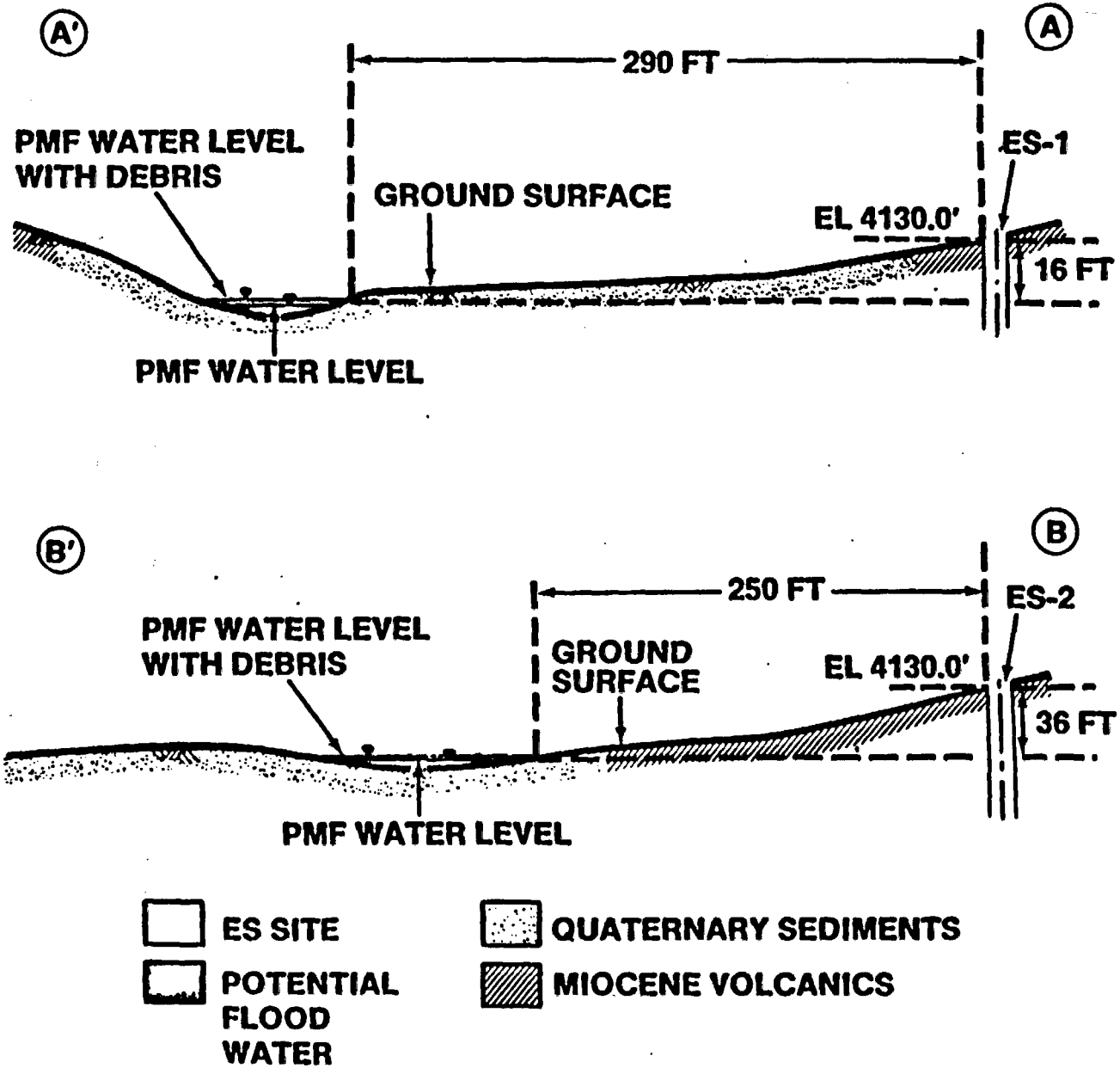
- No more than $5.0 million at an annualized rate may be provided to local governments to conduct appropriate activities.

FIGURE 1
ESTIMATED HIGH-WATER LEVELS ASSOCIATED WITH A PMF IN THE EXPLORATORY SHAFT AREA



0220-0029RJ 12/8/88

FIGURE 2
TOPOGRAPHIC CROSS SECTIONS IN THE VICINITY OF THE NEW ES-1 AND ES-2 SITES

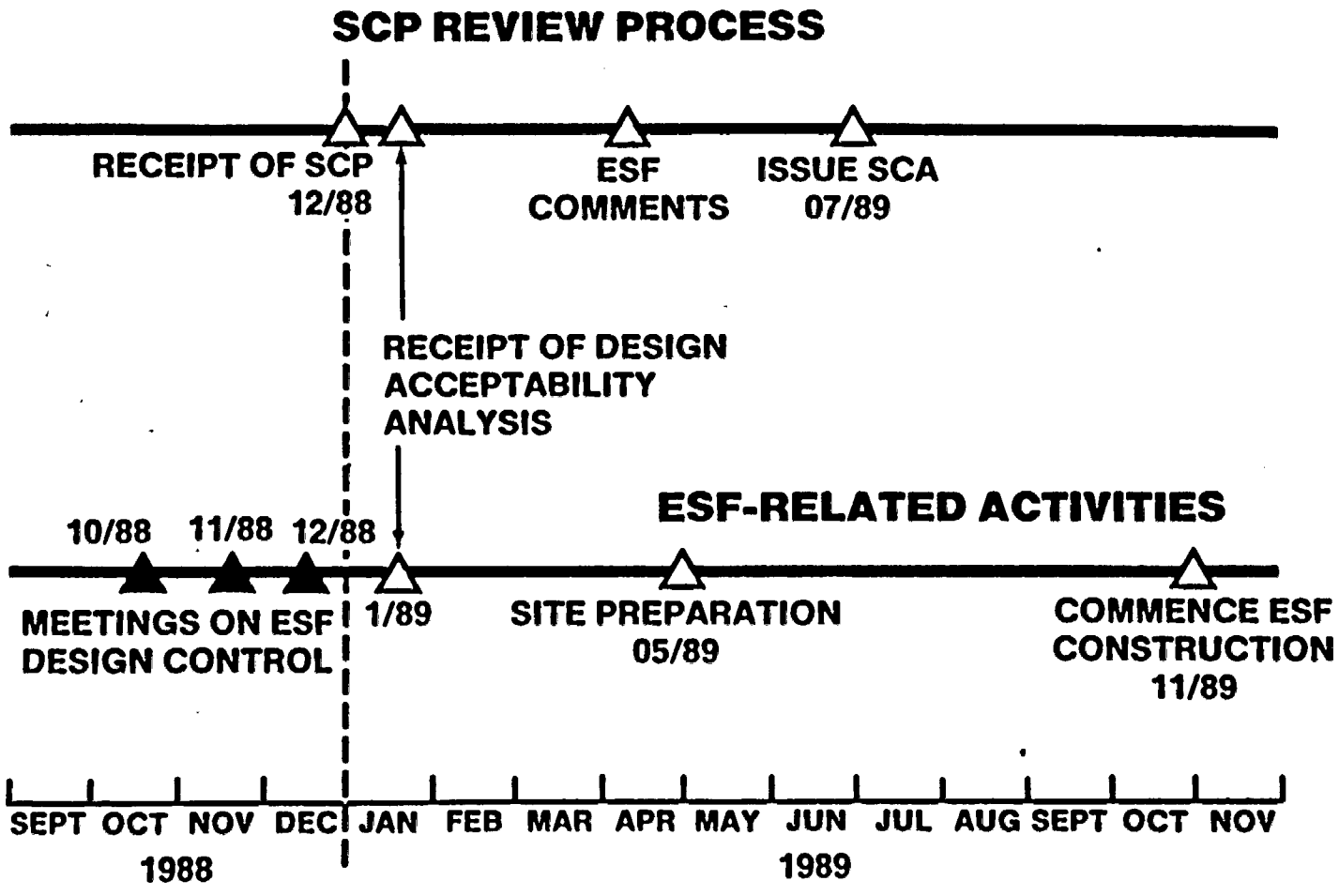


0220-0029RJ 12/8/89

FIGURE 3

EXPLORATORY SHAFT COLLARS (ES-1 and ES-2) AT YUCCA MOUNTAIN
Approximate Elevation Above Natural Wash

FIGURE 4
ESF RESOLUTION APPROACH



3 wks - design acceptability analysis

want NRC comments w/in 3 months

Question 1

It is the understanding of the Commission that DOE has recently awarded a management and operating (M&O) contract to provide overall systems engineering, development, and management services to the Department. Who are the subcontractors involved in this contract? (See attached DOE press release)

Question 2

How do the M&O contractors fit into the current DOE and DOE contractor organization, and what is the schedule for phasing them into the program? What are the roles of the M&O contractors and how do these roles compare with the present prime contractors, such as Weston, Sandia, Livermore, SAIC and the USGS, used in the repository program?

Question 3

Once the M&O contractors begin their work, how will their QA programs fit with and compare to the quality assurance program plans that are presently being used by the prime contractors?

Question 4

In the area of quality assurance, the staff has participated as observers in all of the QA audits of the prime contractors conducted by DOE this year. The staff has found that over the course of the year the conduct of the audits has improved. However, the DOE audit teams continue to find major problems with the implementation of the prime contractor QA plans. Several examples include: (1) many of the prime contractors do not have all the necessary procedures in place; (2) for those procedures that are in place, the contractors are not following many of them; (3) all of the DOE audit teams have found that the prime contractors do not have effective training programs in place; and (4) many of the contractors do not have an effective records management system. What actions are being taken by DOE to not only correct the significant deficiencies identified by the audits but also to ensure complete and proper implementation of the prime contractors' QA programs?

Question 5

How is DOE planning to address the Commission's comments on the June 1988 Draft Mission Plan Amendment?

Question 6

With respect to the Commission's comments on the Draft Mission Plan Amendment, of particular concern was the fact that the Amendment identified a compression of the schedule for near-term activities that could leave DOE insufficient time to develop a complete and high-quality license application. In addition, DOE's October 19, 1988 announcement on delaying sinking of the exploratory shaft facility will further decrease the time available to conduct testing and develop a license application. What impact will the schedule compression have on conducting an adequate testing program and on preparing a complete and high-quality license application?

Question 7

What, if any, major project decisions is DOE making without NRC involvement?

Question 8

In the Commission Information Paper numbered SECY-88-285, the staff presented its regulatory framework for the high-level waste program. Does DOE have any concerns with the regulatory strategy described in SECY-88-285?

Question 9

At a September 29, 1988 meeting between members of the NRC staff and representatives from Savannah River, DOE presented a schedule for NRC review of waste acceptance process (WAP) documents and indicated that any delay by NRC would result in delays in starting the glass factory. The schedules presented by Savannah River were not coordinated with the DOE Office of Civilian Radioactive Waste Management (OCRWM), nor integrated into OCRWM schedules, and were inconsistent with NRC-OCRWM agreements on the timing of the NRC review of the WAP quality assurance program. What is OCRWM doing to integrate the waste acceptance process and repository program activities?

Question 10

How does DOE consider comments and issues raised by the State of Nevada and affected units of local government?

Question 11

DOE did not agree to schedule workshops on several topics proposed by NRC and related to CDSCP concerns, prior to the SCP. What are the reasons for DOE reluctance to support technical consultations, which results in DOE making decisions and issuing key documents, such as the SCP, without fully understanding and addressing NRC concerns? What does DOE suggest to improve the consultation process?

EXPLORATORY SHAFT COLLARS (ES-1 and ES-2) AT YUCCA MOUNTAIN

Approximate Elevation Above Natural Wash