KENNY C. GUINN
Governor

STATE OF NEVADA

ROBERT R. LOUX
Executive Director

OFFICE OF THE GOVERNOR
AGENCY FOR NUCLEAR PROJECTS
1802 N. Carson Street, Suite 252
Carson City, Nevada 89701
Telephone: (775) 687-3744 • Fax: (775) 687-5277
E-mail: nwpo@nuc.state.nv.us

3/29/02
67FR15257
(51)

September 23, 2002

Dr. Richard Meserve, Chairman
US Nuclear Regulatory Commission
Washington DC 20555

Dear Chairman Meserve:

Although the comment period for the NRC Yucca Mountain Review Plan, draft Revision 2 (YMRP) ended on August 12, 2002, the State of Nevada, after reviewing the Department of Energy's (DOE) comments on the YMRP, felt compelled to inform you of our views regarding DOE's comments because we believe that our comments will help you and your staff in your consideration of a final Yucca Mountain Review Plan.

We are presenting this review to you because DOE's comments raised some fundamental issues of interpretation of 10 CFR Part 63 that we believe speak directly to the Commission's statutory mandate to protect the public health and safety.

If you have any questions, please feel free to contact me at your convenience. My number is 775-687-3744. Thank you for your consideration of these comments.

Sincerely,

Robert R. Loux
Executive Director

Enclosure

Template = ADM-013

E-RIDS = ADM-03
Cold = J. Cisco (JAC3)
M. Beranek (MFB)

cc: Advisory Committee on Nuclear Waste, NRC
US Nuclear Waste Technical Review Board

Enclosure

Nevada's Supplemental Comments on NUREG 1804

in Reply to DOE's Comments filed August 12, 2002

General Comments:

In its correspondence of August 12, 2002, transmitting its general and specific comments to the Nuclear Regulatory Commission ("NRC") regarding NUREG 1804, Yucca Mountain Review Plan, draft revision 2 (also referred to as the YMRP), the U.S. Department of Energy ("DOE") pays lip service to the fact that the YMRP is merely guidance for the NRC staff in planning its review of DOE's license application, in that DOE may deviate from the guidance as it deems appropriate. DOE then launches into an attack on almost every aspect of the NRC plan, in the form of literally hundreds of general and specific comments finding fault with NRC's guidance. Significantly, the point of most of DOE's comments is that the particular NRC guidance is either too detailed and specific; or it is too general; or finally, that particular assessments ought to be deleted entirely from any licensing review plan, no matter how pertinent they may be to the safe and efficient operation of a proposed repository, if they depart even one iota from the verbatim wording of NRC's licensing regulation, 10 C.F.R. 63.

1. DOE's commentary on NUREG 1804 is reminiscent of a student who wants to know the questions before taking his final exam, and then rails at the teacher for identifying questions not specifically covered in class. DOE would like to dictate to NRC exactly what **DOE** thinks it needs to prove to receive a license to construct the Yucca Mountain repository, and it proposes to tell NRC the questions it may ask and what methods of analysis it may use to probe DOE's preparedness. All of this fencing over what NRC may expect, or how NRC should conduct its assessments, ignores the basic mandate given by Congress to NRC at its inception, and specifically reaffirmed in the Nuclear Waste Policy Act of 1982 ("NWPA"), i.e., the protection of public health and safety.

In Section 114(f)(5) of the NWPA, Congress provided: "Nothing in this Act shall be construed to amend or otherwise detract from the licensing requirements of the Nuclear Regulatory Commission established in Title II of the Energy Reorganization Act of 1974." The duties of the NRC, as provided in Section 203(b) of the Energy Reorganization Act of 1974 include:

(1) Principal licensing and regulation involving all facilities, and materials licensed under the Atomic Energy Act of 1954 . . . ,

(2) Review the safety and safeguards of all such facilities, materials, and activities, and such review functions shall include, but not be limited to —

(A) monitoring, testing and recommending upgrading of systems designed to prevent substantial health or safety hazards; and

(B) evaluating methods of transporting special nuclear and other nuclear materials and of transporting and storing high-level radioactive wastes to prevent radiation hazards to employees and the general public.

NRC's own 10 C.F.R. 63.32 spells out this mandate: "In a construction authorization for a geologic repository operations area at the Yucca Mountain site, the Commission shall include any conditions it considers necessary to protect the health and safety of the public, the common defense and security or environmental values." NRC further provides, in 10 C.F.R. 63.74: "DOE shall perform, or permit the Commission to perform, those tests the Commission considers appropriate or necessary for the administration of the regulations in this Part. This may include tests of—

(1) radioactive waste;

(2) the geologic repository, including portions of the geologic setting and the structures, systems, and components constructed or placed therein . . ."

Just as the hypothetical student would seek to play semantic games to control the scope of the final xam, so DOE seeks to play semantic games with the NRC and its assessment guidelines to dictate the "playing field" for NRC's licensing review, while ignoring the most basic precept of NRC's mandate: to assure that the transport and disposal of high-level nuclear waste is accomplished with the goals of public health and safety foremost in mind.

2. A number of DOE's "general" comments on NUREG 1804 are either incorrect or assume too narrow a view of NRC's aforementioned mandate and its unassailable authority to carry it out. For example, DOE's August 12 transmittal letter complains that NRC should allow the applicant (DOE) to dictate what is important to safety and what is important to waste isolation. This suggestion ignores NRC's overarching authority to ascertain what is in the best interest of public health and safety and should not be undermined by an applicant seeking to focus NRC's attention on the applicant's strengths and ignore its weaknesses.

3. DOE's August 12 transmittal invokes the new mantra of a "step-wise licensing process" with respect to a Yucca Mountain repository. It has been clear ever since the NWPA was adopted in 1982 that there were three phases in the anticipated process (construction authorization, license to receive and possess nuclear materials, and amendment for closure). While it axiomatic that more information will be available in the second step than in the first, and in the third than in the first two, DOE attempts to convolute that simple and expected

phenomenon into the argument **that it does not really need to be prepared for the first step** (construction authorization). Although DOE made explicit statements to Congress during the hearings on the resolution to approve Yucca Mountain that Yucca Mountain is the most well investigated piece of terrain in the universe, that all aspects of its natural features have been thoroughly examined through 20 years of expert study and the expenditure of billions of taxpayer dollars, that the "sound science" of going forward with Yucca Mountain has been **proven**, and that the site characterization was **completed** by or before February 14, 2002, it then states in its comments on the YMRP that "the YMRP should explicitly recognize that at the time of application for CA, the repository design and associated safety analyses will be at the **preliminary phase of development.**" Thankfully, the requirements set out by NRC in its licensing regulations are to the contrary. In 10 C.F.R. 63.3(b), NRC provides: "DOE may not begin construction of a geologic repository operations area at the Yucca Mountain site unless it has filed an application with the Commission and has obtained construction authorization as provided in this part. Failure to comply with this requirement is grounds for denial of a license." Furthermore, NRC amplifies the character and quality of information that must be provided by DOE and does not permit that it be "preliminary"; as provided in 10 C.F.R. 63.10: "Information provided to the Commission by an applicant for a license or by a licensee, or information required by statute, or required by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee **must be complete and accurate in all material respects.**" (emphasis added)

Accordingly, DOE is incorrect in suggesting that Part 63 recognizes that different levels of detail will support each licensing step through construction and operation. DOE wrongly assumes (to support its argument) that this central feature of 10 C.F.R. Part 50 (NRC's reactor licensing rule) is embedded in Part 63. This unsupported assumption has become the foundation of DOE's insistence that its application for a construction authorization does not need to face the same scrutiny regarding safety as do subsequent steps in the licensing process. The fact is, according to Part 63, at the time of construction authorization, the Commission must find reasonable assurance of preclosure safety and have a reasonable expectation of post-closure waste isolation. These two findings must then be sustained throughout the subsequent phases of the licensing process.

Unlike Part 50, Part 63 requires a Safety Analysis Report (SAR) as part of the application for construction authorization. Part 50 requires a "Preliminary Safety Analysis Report" (PSAR) for NRC's review for a construction permit, and a "Final Safety Analysis Report" (FSAR) for review to support a license to receive and possess. (Part 50.34). The contents of each is specified, and level of detail of information is an obvious differentiation. Part 63 does not authorize DOE (nor should it) to first obtain congressional approval based on its assurances of a high state of readiness, and then turn around and argue for a "watered-down" version of what it must demonstrate to receive a license to construct. The requirement, in Part 63.21, that "The

application must be as complete as possible in light of information that is reasonably available at the time" is not an endorsement of an incomplete application for a construction authorization. That language was the Commission's response to DOE's comment on the proposed Part 63 that there should be a definition of different levels of detail during the three licensing phases. The Commission's chosen language is an acknowledgment that at later steps, inevitably due to operating experience, there will be more information, which, hopefully, will sustain the Commission's original decisions about safety and waste isolation.

The requirement for an SAR, rather than the Part 50 PSAR/FSAR approach, is consistent in Part 60 and Part 63. The Commission could have used the Part 50 approach in Part 60 — but it did not. It could have introduced it into Part 63 — but it did not. Presumably, this is because licensing and developing a geologic repository is a first-of-a-kind endeavor that requires a detailed understanding of an unprecedented interdependency among the site, the design, and the operation. It also does not offer the same opportunities as a reactor to mitigate safety concerns or problems by retrofitting, rebuilding, or simply turning it off. Therefore, at the time of a construction authorization, there is a need for confidence, supported by a demonstration of a thorough understanding of the systems involved and their interrelationships, that the repository will function safely. This does not **preclude** the ability to make changes based on new information, once that information is normally analyzed within the licensing context. But it does, intentionally, prohibit the **dependence** on new or future information to support an incomplete safety case.

NRC's modification of its YMRP to accommodate DOE's comment on information required for each licensing step would require significant and inappropriate revision of the Commission's regulatory approach for repository licensing and a formal revision of Part 63.

4. An area where DOE's comments on NRC's YMRP flies in the face of historical fact is quality assurance. DOE has never adequately implemented a QA program during the entire duration of the repository program, and NRC is keenly aware of this. DOE complains that the YMRP "unnecessarily goes beyond the statement of performance objectives for the quality assurance program." First of all, it is in the area of quality assurance where NRC's mandate to protect public health and safety is particularly critical. NRC's definition of quality assurance in its applicable regulation (10 C.F.R. 63.141) appropriately articulates the breadth of its focus in this area: "As used in this part, quality assurance comprises all those planned and systematic actions necessary to provide adequate confidence that the geologic repository and its structures, systems, or components will perform satisfactorily in service." NRC's attempt to identify the specific elements of a sound quality assurance program which it will evaluate, and define the acceptance criteria which it will employ in making its assessment, should be embraced by DOE, whose quality assurance program relating to the proposed Yucca

Mountain repository has borne the brunt of relentless criticism. DOE's suggestion that NRC revert to "basic" criteria from 10 C.F.R. 50, Appendix B, or NQA-1, is insupportable. NRC's enhancement of the criteria is consistent with DOE's routine failure to adequately implement a sound QA program. The application of a primarily reactor-based standard to scientific investigations for site characterization at Yucca Mountain has not proven effective for DOE and its contractors. Specific areas of the YMRP where DOE focuses the majority of its comments (i.e., software, scientific notebooks, and model validation) are exactly the areas in which DOE's performance is most suspect. DOE has experienced multiple major systemic breakdowns in its QA program. Despite the language in the NWPA that DOE's QA program applies to site characterization activities, and repeated NRC demands that DOE's QA program be adequately implemented prior to site recommendation, the information upon which DOE relied for its site recommendation was, by DOE's own admission, not fully qualified. DOE's QA program is currently not adequate for license application, and NRC should remain diligent in its commitment to scrutinize DOE's QA program using the appropriate and specific requirements currently set out in the YMRP.

Specific Comments:

(**Note:** To avoid any confusion, the numbering below is a reference to the specific number DOE assigned to the Comments it filed with NRC.)

DOE Cmt #	DOE Position	Reply
1	DOE says "The YMRP should recognize that at the time of application for a CA(Construction Authorization), the repository design and associated safety analyses will be **at the preliminary state of development.**" This comment is directed at **all sections** of the YMRP. DOE goes on to state that "data and analyses obtained through the performance confirmation and research and development programs will provide additional information appropriate for later stages of licensing."	Having a safety analysis at a "preliminary stage" is not an acceptable basis for the award of a license. It also directly contradicts statements of Spencer Abraham and others over the last six months (in their effort to persuade Congress to continue the Yucca Mountain project) to the effect that this is the most studied piece of real estate in the world, and that 20 years and billions of dollars in effort have clearly confirmed its sound science.

3	DOE takes issue with NRC's form "evaluation findings" statements at the end of each section of the YMRP, which typically state: "The staff has reviewed the [specific information in the LA] and other docketed material. . . ." DOE comments, "This statement could imply that any material not on the docket cannot satisfy any review needs." DOE then goes on to argue that the basis of NRC's decision should not be limited to materials in the docket, and accordingly, NRC should just include the catch-all "and other materials" rather than "and other docketed materials."	The language should remain exactly as it is. Leaving the door open for NRC to make its decision based on vague "other material" not even in the docket allows excessive discretion on the part of NRC and confusion and lack of transparency with respect to the public and other parties to the proceeding. Should there be further litigation concerning the outcome of the license application proceeding, it would result in chaos for the challenged decision to have been predicated on the basis of vague "other material" not in the docket.
4	DOE states that any discussion by NRC of DOE's Environmental Impact Statement is "beyond the scope of the YMRP."	DOE's Environmental Impact Statement is required to be either adopted, not adopted, or adopted "to the extent practicable" by the NRC "in connection with the issuance of a construction authorization and license for geologic

		repository." § 114(f)(4). Accordingly, there is nothing inappropriate about NRC's reference to DOE's EIS in the YMRP.
6	DOE proposes distorting the standard NRC "request for additional information," common in every licensing proceeding, by arguing that any NRC request for additional information "should explain that requested information needs to be reasonably available."	Common sense dictates that if additional information requested by NRC is not reasonably available, then NRC will be persuaded to modify its request. That is not the real danger here. The real danger is that DOE has seized upon a vague, subjective, poor choice of words from NRC's 10 C.F.R. 63, and (here and repeatedly throughout its comments) seeks to push for application of that subjective language at every possible juncture. Obviously, the issue of **uncertainties** and the lack of definitive information will be a pivotal issue throughout many aspects of the licensing proceeding. By pressing for the adoption of subjective language modifying every possible requirement (such as "reasonably available"), DOE seeks to reduce the number of **absolute** requirements that it must meet and increase the number of requirements which are subjective or as to which its agency judgment of reasonableness might be deferred.
7	DOE wants NRC to do away with the Key	This is semantic trickery on the part of DOE to disguise the fact that they will

Technical Issue (KTI) nomenclature and status during the license application process and consider it "not applicable."

not have completed their agreements with respect to the 293 outstanding KTIS by the time of the licensing application. The YMRP (p. 1-8) speaks of NRC staff characterizing issues as either "open items" or "confirmatory items." Apparently, DOE would savor the notion of having the 293 KTI issues moved under the "licensing proceeding" nomenclature and will probably next urge that any KTI which has in pre-licensing been deemed no longer "open," but is either "closed" or "closed pending," must be put in the "confirmatory issue" basket and therefore not need to be completed in time for licensing. The problem with that is **all** of the 293 KTIS have been removed from the "open" category. However, the "closed pending" denomination which still applies to the vast majority of them actually means "closed provided that DOE lives up to the agreements it has made with NRC, and provides satisfactory information such as will permit the item to be characterized as closed." NRC never should have allowed items which are really "open" to be categorized as "closed pending" based on DOE's promise to complete various activities before licensing (some of which it has not even undertaken yet) in order to move the items to "closed." NRC did so, and now DOE hopes to argue that since none of the 293 KTIS are characterized as "open," that they must accordingly be characterized — in the

		licensing proceeding jargon — as "confirmatory items," thus eliminating the current requirement that DOE close those issues before licensing.
10	DOE requests a change (YMRP, p. 1-18) replacing the phrase "thousands of years" with "ten thousand years," supposedly to be consistent with the regulatory compliance period.	There is no reason to make this change. In fact, it changes the meaning of the sentence written by NRC which is, "The need for a performance confirmation program is unique to the high-level radioactive waste program. This uniqueness reflects the uncertainties in estimating geologic repository performance over thousands of years." NRC said exactly what it meant to say. Ideally, the "uncertainties" would be few in number during the first 10,000 years, and they would be greater after that. That is why NRC elsewhere makes the distinction between "reasonable assurance" before the 10,000 years and "reasonable expectation" thereafter. There is no reason for NRC playing into DOE's hands by acknowledging and emphasizing a high level of "uncertainties" during the **first 10,000 years**.
12	DOE again urges the addition of the language "in light of reasonably available information."	Again, DOE is attempting to insert a very subjective standard. DOE obviously intends to explain any failure to provide information, uncertainty in information, or lack of backup information for a particular assumption or

conclusion on the basis that the information was "not reasonably available." One must assume, with respect to every NRC requirement for DOE providing information, that if the information is neither "gotten" nor "gettable" by DOE, NRC will necessarily assess its importance and make a decision with respect to its impact on the licensing decision. DOE is obviously seeking a "free pass" opportunity to characterize any and all missing information as "not reasonably available."

13 DOE suggests that there should be a general acknowledgment in Section 2.2 of the YMRP (Acceptance Review Checklist) that "some of the requested information may not be available at submittal of the license application." For justification, DOE points to similar statements made in Section 4.5 of the YMRP containing similar language.

The supposed analogies referenced by DOE pertain to matters in the post-closure period as to which there is not necessarily a need to address them at the time of a construction authorization hearing or proceeding. However, the section to which DOE suggests this liberal language be globally applied (Section 2.2) contains such requirements as "a general description of the proposed geologic repository," "a description of work conducted to characterize the Yucca Mountain site," "a description and discussion of the design of the various components of the geologic repository operations area and the engineered barrier system." If DOE wants a dispensation from providing information which "may not be available at submittal of the license

		application," then DOE must specifically identify each NRC requirement as to which this dispensation would apply. Otherwise, it is a recipe for DOE to come in unprepared, promise to deal with missing information in its performance "confirmation" or "research and development" programs, and hope to get a license in spite of the absence of information which ought to have been in hand before DOE recommended the Yucca Mountain site to the President and to Congress.
14	DOE makes the identical recommendation it made in its Comment 10, this time rebelling at the notion that NRC should assess the ability of the repository to limit exposures (even accidentally) one minute beyond 10,000 years.	Mindful of the fact that maximum dosages will occur soon after 10,000 years, DOE seeks to avoid even incidental contact with that period of time.
18	DOE criticizes a YMRP requirement that the NRC staff should confirm that DOE has	This is nothing less than the law requires. Yet DOE requests NRC to insert at the end of the sentence the words "should retrieval be necessary." On one level, the comments seems like an innocent addition, since retrieval may not be

	plans for the retrieval and alternate storage of waste packages.	necessary. However, the comment could be interpreted to suggest that DOE believes it does not need to have "plans for the retrieval and alternate storage" **unless and until** it is determined that retrieval is necessary. The **plans** must be made by DOE (and evaluated by NRC) even though the ultimate necessity for retrieval may or may not occur. Therefore, plans are a **must**; they are not only necessary if and when retrieval becomes a reality; and their assessment by NRC is an appropriate aspect of the licensing proceeding.
22	DOE cites a section (3.1.2) of the YMRP requiring that DOE cite the legal bases for the licensing authority. NRC requires a listing of applicable regulations and an affirmation that none have been left off the list. DOE asks that NRC withdraw the requirement of confirmation that "no regulatory citations have been omitted."	This suggestion of DOE is almost incredible. NRC announces acceptance criteria that require the list of authorities and an affirmation that none have been left off the list — and DOE objects to being required to affirm that none have been left off the list. What is the point of making a list if it is not complete? What is the use of NRC staff reviewing DOE's work if it is not permitted to check on its accuracy and completeness?
23	Referring to YMRP p. 3-7, wherein the NRC	This suggestion insults NRC's intelligence. A child could "verify" that plans

provides that its review of the project planning schedules should include "verifying that the schedules, time-scaled charts, or work progress flow charts are **complete, consistent,** and reflect the **logical** sequence of work," DOE comments that "verifying the adequacy of the applicant's planning tools and confirming that they are complete, consistent, reflect a logical sequence, or allow sufficient time for completion is inappropriate for NRC's review." DOE suggests changing the requirement to merely say that NRC will "verify" that those schedules and charts are "provided."

and schedules and charts have been "delivered." To have NRC's staff assess them for completeness, consistence, and logical sequence is simply the exercise of NRC's licensing assessment responsibility. If the plans, schedules, and charts of DOE do not need to be complete or consistent or logical, then why have them? And why bother to submit them to NRC if NRC is not to evaluate them?

38 DOE complains about NRC review methods providing that its staff should "confirm that subsurface ventilation equipment important

DOE is again losing sight of NRC's broad authority to ensure public health and safety. **Any** system "important to safety" which operates on electricity ought to have backup power. NRC is not usurping the proper role of DOE by including

to safety has backup or standby equivalents" and "ensure that the design has sufficient emergency backup power. . . ." DOE also complains that NRC makes reference to systems it considers important to safety (such as fire protection and ventilation), asserting that DOE, not NRC, should decide if systems are important to safety.

in its guidance document a requirement that staff should check for that type of safety backup equipment.

44 DOE complains about, and wants deleted, a review method (p. 4.1-15) that would have NRC staff verify that the license application has adequately described (among other features) "cask type." DOE says the meaning of cask type is unclear and should be deleted.

This seemingly innocuous comment by DOE may be the product of its not knowing what cask it will employ to transport and deliver to the proposed Yucca Mountain site the high-level nuclear waste from around the country. Assessment of this obviously important aspect of DOE's proposed disposal ought to remain as stated in the YMRP.

45 Similar to number 44, DOE objects to a requirement that it provide the results of

This is another example of DOE's utter unpreparedness for license application. How can DOE rely 99.7 percent on the waste package for isolation and yet

non-destructive examination and inspection of waste packages, saying they will be unavailable when the license application for construction authorization is submitted.

request a license prior to the time it is able to conduct non-destructive testing of that package?

52 DOE objects to the most obvious and appropriate of evaluations to be made by NRC staff. It objects to the following requirements of the YMRP: (1) "If the design methodologies depend on site specific test data, confirm that such data are available." (2) "Ensure that any analytical or numerical models used to support the design methodologies have been verified, calibrated, and validated." (3) "Verify that any assumptions . . . and their implications . . . have been documented."

The license application proceeding is intended to be a very public and "transparent" proceeding, in which not only NRC, but also all other parties, including intervenors in the proceeding, and the American public in general, are able to hold up to the light and assess DOE's conclusions, and just as important as its conclusions, the test data, models, validation documentation, and design analyses upon which DOE's conclusions are based. NRC should not lessen its requirements to any degree whatsoever in these areas — areas in which DOE's performance has been pronounced suspect by ACNW and NWTRB, among others.

58	Dealing with NRC's section on waste package and engineered barrier system structures, DOE urges the deletion of acceptance criteria pertaining to cladding, drip shields, the diversion of flow of water away from the drip shield and waste package.	DOE gives no justification for the deletion of these considerations from NRC's acceptance criteria. Obviously, these are all critical considerations and should be retained.
59	DOE argues that it should not have to give consideration to "repetitive seismic loading" in respect to preclosure seismic design. It makes this assertion on the basis of a five-year-old DOE report.	NRC has the authority to decide what ought to be considered in the pursuit of public health and safety. In the face of a June 2002 earthquake centered within a few miles of the proposed repository site, as well as the serious and damaging 1992 earthquake nearby, certainly it is within NRC's discretion to consider repetitive seismic loading as a factor to be examined.
63	DOE here objects to and seeks removal of a list of review methods and acceptance criteria which would establish DOE management's commitment to maintain radiation exposures as low as is reasonably achievable.	Each and every one of the review methods acceptance criteria articulated by NRC are sensible and appropriate and should remain.

67	The YMRP recognizes that NRC's staff will expend lesser resources evaluating low-risk significant issues in comparison to high-risk significant issues. Yet DOE complains that there is no clear guidance to NRC's reviewers on **how** to reduce the scope of their review.	DOE returns to the mode of the student wanting to know every question before the test is given. Like the student who only wants to study course material that will appear on the final exam, so, too, DOE insists upon being advised as to what will **not** be looked at, as well as what will. NRC should exercise its discretion, based upon the risk significance as shown during the licensing proceeding of the project's various components, and not lock itself in to one set of criteria or review methods for high-risk versus low-risk issues.
70	DOE proposes that this section (4.2) relating to features, events, and processes "should recognize that events need not be considered if they have limited effect on the radiological exposures to the reasonably maximally exposed individual or radionuclide releases to the environment."	DOE begs the question here: Events need to be considered until and unless DOE **demonstrates** they will have a "limited effect" on exposures and releases. These provisions should remain unmodified.
75	DOE wishes to change the review method set out by NRC with respect to consideration of	Requiring "discussion" and "consideration" are vague and meaningless

	past igneous events at the Yucca Mountain area. DOE suggests including vague language to the effect that there is a "discussion" of past igneous activity and that DOE "considered" information relevant to past igneous activity.	standards. The review methods set out by NRC at p. 4.2-11 of the YMRP are clear and appropriate and should remain. [This observation recurs in a large number of instances in its massive comments, in which DOE seeks to change NRC's wording assessing the completeness or accuracy of DOE information, and instead, DOE proposes the substitution of words reflecting only that DOE "provided" the information or that the information was "considered" by DOE or that it was "discussed" by DOE. Such requirements would be meaningless, *vis a vis* NRC's implementation of its mission to ensure public health and safety.]
79	DOE objects to language (YMRP p. 4.2-12) under which NRC would assess the **consistency** of its igneous activity probability models with other underlying geologic information. DOE argues that its probability models for igneous and seismic activity are based on expert elicitation and that it was left	Once again, DOE attempts to introduce terminology "to the extent appropriate" that is vague and ambiguous and subjective, and would only lead to disputes about what was appropriate. To the extent that DOE chooses to rely on expert elicitation instead of hard data, it does so at its peril with respect to inconsistencies between expert elicitation, and inconsistencies between expert elicitation and hard data which are made part of the record.

to the experts in each case to determine to what extent different tectonic models were important in the determination of their probability models. DOE would like to insert the phrase "to the extent appropriate" with respect to its use of underlying geologic bases.

97 DOE asserts there is a distinction which should be made between the performance confirmation program (where its activities are confirmatory in nature) and the research and development program which it asserts contains "open questions."

DOE seeks to introduce the possibility of its receiving a license while there are still important "open" issues (whether those enumerated in NRC's 293 key technical issues or otherwise). Presumably, NRC did not intend such a result. As described by NRC in Section 4.3.1 of its YMRP, the research and development program "is required to identify, describe, and discuss those safety features or components for which further technical information is required, to **confirm** the adequacy. . . ." NRC cannot be satisfied with some unspecified combination of actual proofs combined with a list of commitments by DOE to investigate and secure other proofs in the future, when it comes to

issuing a license to construction the repository, based upon a **reasonable assurance** that it will operate safely.

114

DOE proposes changing the requirement with respect to the quality assurance program (YMRP p. 4.5-3) which currently provides that the quality assurance program description should be reviewed in detail to determine if each of the criteria of 10 C.F.R. 63.142 has been acceptably addressed (by the quality assurance program describing how the applicable criteria are satisfied) **and** if there is an adequate commitment to comply with NRC's quality assurance requirements.

DOE requests two changes: DOE wants to change the wording to "has been acceptably addressed (by the quality assurance program

This is another example of DOE's effort to lower the bar for its own performance at every possible opportunity. Instead of two requirements ("and"), DOE would substitute one ("or"). Second, DOE wishes to loosen the requirement that its QA program description should be "reviewed in detail" by suggesting that its description can be presented "in a summary form." QA is one of the most critical areas of the YMRP. QA is an area in which DOE has made itself a notorious reputation for ineptitude. NRC should do nothing to lower the bar to accommodate DOE's unpreparedness.

describing **in a summary form** how the applicable criteria are satisfied) **or** by a commitment to comply with the NRC's quality assurance requirements."

116 DOE proposes changing NRC's requirement that "designated quality assurance individuals **are involved in day-to-day facility activities** important to safety or important to waste isolation" by substituting "provides for **policies that result in** day-to-day involvement of quality assurance staff."

The distinction may seem to be small, but it effectively erases the DOE requirement and substitutes something less. Designated quality assurance individuals **must** be involved in day-to-day facility activities, and accordingly, this requirement should not be changed.

117 DOE urges elimination of quality assurance requirements (YMRP 4.5-13) for management assessment of the need for retraining, annual appraisals and evaluation, and certification of qualified personnel in

These management tools called for in acceptance criteria 2 regarding DOE's quality assurance program are obviously appropriate and necessary and well within the scope of NRC's charge to protect public health and safety.

	accordance with applicable codes and standards.	
126	DOE confronts NRC, stating that the regulatory authority for requiring DOE quality assurance "commitments" outside the scope of 10 C.F.R. Part 63 is not clear. DOE demands that if it expected to make "commitments" to some QA guidance documents, NRC should state its rationale and authority.	While 10 C.F.R. 63 generally provides the guidance for an applicant for licensing in this context, nowhere does it preclude NRC from making those evaluations and investigations which it deems necessary in the interest of public health and safety. For DOE to confront NRC as though NRC must **justify** to DOE requirements that are clearly relevant to public health and safety is the height of arrogance and should be disregarded by NRC.
138 and 148	DOE requests deletion of the reference to its "current waste packages" and asks instead that references be made to "a waste package."	Apparently, DOE wants the freedom to obtain a license and then change the waste package design. However, DOE **ought** to have its waste package design in final form prior to filing its license application, and accordingly, this requirement, applying to its then-current waste package design, is appropriate.