



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
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QA: N/A

JUL 11 2001

OVERNIGHT MAIL

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KEY TECHNICAL ISSUE (KTI) AGREEMENT ITEM STATUS

The purpose of this letter is to inform you of schedule changes for completion of KTI agreement items resulting from extensive replanning of the Yucca Mountain Site Characterization Project activities.

The recent replanning of the Fiscal Year (FY) 2001 project schedule resulted in revised dates for submittal of some KTI agreement items to the U.S. Nuclear Regulatory Commission (NRC) and deferral of other agreement items to subsequent fiscal years. FY 2002 and out-year planning is in progress and new KTI dates that result from this planning will be proposed to you at the earliest opportunity.

The enclosed tables identify KTI agreement items to be completed in FY 2001 and those to be deferred. Those agreement items being deferred from FY 2001 are primarily a result of cancellation of Revision 1 to the Total System Performance Assessment for Site Recommendation, and postponement of revisions of related Process Model Reports.

The schedule changes identified in this letter have been discussed with N. King Stablein and James W. Anderson of your staff, and at the NRC/U.S. Department of Energy Quarterly Quality Assurance/KTI and Management Meetings. Please direct any questions concerning this letter to Timothy C. Gunter at (702) 794-1343.

Stephan Brocoun
Assistant Manager, Office of
Licensing and Regulatory Compliance

OL&RC:TCG-1346

Enclosure:
Status of remaining FY 2001 KTI Agreement
Items

WM-11
NM5507

JUL 11 2001

cc w/encl:

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Status of Remaining FY2001 KTI Agreement Items

ENCLOSURE

TABLE 1

KTI Agreement Items Scheduled and Expected to be Completed in FY 2001

No.	KTI Agreement Description	Original Due Date	Revised Due Date	Remarks
1	CLST 3.1 The revision to the "Summary of In-Package Chemistry for Waste Forms" AMR, the NRC needs to know whether and how initial failures are included in the in-package chemistry modeling, taking into account the multiple barrier analysis. DOE stated that the "Summary of In-Package Chemistry for Waste Forms" AMR, ANL-EBS-MD-000050, deals with time since waste package breach, instead of time of waste package failures. The model is appropriate for the current implementation in the TSPA scenarios because breaches do not occur until after aqueous films may be sustained. Multiple barrier analyses are discussed in the TSPA IRSR, and therefore will be discussed in the TSPA KTI Technical Exchange.	Not Specified	August 2001	The TSPA technical exchange is scheduled for August 6-10, 2001.
2	CLST 4.2 The revision to the "Summary of In-Package Chemistry for Waste Forms" AMR, the NRC needs to know whether and how initial failures are included in the in-package chemistry modeling, taking into account the multiple barrier analysis. DOE stated that the "Summary of In-Package Chemistry for Waste Forms" AMR, ANL-EBS-MD-000050, deals with time since waste package breach, instead of time of waste package failures. The model is appropriate for the current implementation in the TSPA scenarios because breaches do not occur until after aqueous films may be sustained. Multiple barrier analyses are discussed in the TSPA IRSR, and therefore will be discussed in the TSPA KTI Technical Exchange.	Not Specified	August 2001	The TSPA technical exchange is scheduled for August 6-10, 2001.
3	CLST 5.4 Provide the list of validation reports and their schedules. DOE stated that the geochemical model validation reports for "Geochemistry Model Validation Report: Degradation and Release" and "Geochemistry Model Validation Report: Material Accumulation" are expected to be available during 2001. The remainder of the reports are expected to be available during FY 2002 subject to the results of detailed planning and scheduling. DOE understands that these reports are required to be provided prior to LA. A list of model validation reports was provided during the technical exchange and is included as an attachment to the meeting summary.	FY 2001 FY 2002	FY 2001 FY 2002	The FY 2001 portion is expected to be complete at the end of the FY. Other portions of this agreement remain in FY 2002 and will be reviewed during the FY 2002 planning cycle.
4	CLST 5.5 Provide information on how the increase in the radiation fields due to the criticality event affects the consequence evaluation because of increased radiolysis inside the waste package and at the surfaces of nearby waste packages or demonstrate that the current corrosion and dissolution models encompass the range of chemical conditions and corrosion potentials that would result from this increase in radiolysis. DOE stated that the preliminary assessment (calculation) of radiolysis effects from a criticality event will be available to NRC during February 2001. The final assessment of these conditions will be available to NRC prior to LA.	February 2001	September 2001	This item has been delayed and is now expected at the end of the FY.
5	RT 4.3 Provide the applicable list of validation reports and their schedules for external criticality. DOE stated that the geochemical model validation reports for "Geochemistry Model Validation Report: Degradation and Release" and "Geochemistry Model Validation Report: Material Accumulation" are expected to be available during 2001. The remainder of the reports are expected to be available during FY2002 subject to the results of detailed planning and scheduling. DOE understands that these reports are required to be provided prior to LA. A list of model validation reports was provided during the technical exchange and is included as an attachment to the meeting summary.	FY 2001 FY 2002	FY 2001 FY 2002	The FY 2001 portion is expected to be complete at the end of the FY. Other portions of this agreement remain in FY 2002 and will be reviewed during the FY 2002 planning cycle.

TABLE 1

KTI Agreement Items Scheduled and Expected to be Completed in FY 2001

No.	KTI Agreement Description	Original Due Date	Revised Due Date	Remarks
6	ENFE 5.3 Provide the applicable list of validation reports and their schedules for external criticality. DOE stated that the geochemical model validation reports for "Geochemistry Model Validation Report: Degradation and Release" and "Geochemistry Model Validation Report: Material Accumulation" are expected to be available during 2001. The remainder of the reports are expected to be available during FY2002 subject to the results of detailed planning and scheduling. DOE understands that these reports are required to be provided prior to LA. A list of model validation reports was provided during the technical exchange and is included as an attachment to the meeting summary.	FY 2001 FY 2002	FY 2001 FY 2002	The FY 2001 portion is expected to be complete at the end of the FY. Other portions of this agreement remain in FY 2002 and will be reviewed during the FY 2002 planning cycle.
7	ENFE 2.12 Provide the documentation and analysis of the column crush tuff experiments. The DOE will provide documentation of the results obtained from the crushed tuff hydrothermal column experiment, and of post-test analysis, in new reports specific to the column test, expected to be available by September 2001.	September 2001	September 2001	No changes in schedule
8	ENFE 4.1 Provide the executable version of the most recently qualified version of TOUGHREACT. The DOE will provide the executable TOUGHREACT Rev 2.2 to the NRC by February 2001, subject to the NRC obtaining any applicable agreement for usage of the software.	February 2001	TBD	DOE is working on licensing issues.
9	RDME 3.1 Provide the technical basis for the range of relative humidities, as well as the potential occurrence of localized liquid phase water, and resulting effects on ground support systems. The DOE will provide the technical basis for the range of relative humidity and temperature, and the potential effects of localized liquid phase water on ground support systems, during the forced ventilation preclosure period, in the Longevity of Emplacement Drift Ground Support Materials, ANL-EBS-GE-000003 Rev 01, and revision 1 of the Ventilation Model, ANL-EBS-MD-000030, analysis and model reports. These are expected to be available to NRC in September and March 2001, respectively.	March 2001 September 2001	September 2001	The completion of these documents have been delayed, but is expected to be complete at the end of the FY.
10	SDS 1.2 Consistent with proposed 10 CFR Part 63, the NRC believes the use of the mean is appropriate, however, DOE may use any statistic as long as it is consistent with site data and technically defensible. DOE will either provide technical justification for use of median values or another statistical measure, such as the mean, or will evaluate and implement an alternative approach. The DOE-proposed approach and its basis will be provided to NRC prior to September 2001. The approach will be implemented prior to any potential LA.	August 2001 LA	September 2001 LA	The FY 2001 portion is currently experiencing delays, but is expected to be complete at the end of the FY.
11	SDS 2.3 Consistent with proposed 10 CFR Part 63, the NRC believes the use of the mean is appropriate, however, DOE may use any statistic as long as it is consistent with site data and technically defensible. DOE will either provide technical justification for use of median values or another statistical measure, such as the mean, or will evaluate and implement an alternative approach. The DOE-proposed approach and its basis will be provided to NRC prior to September 2001. The approach will be implemented prior to any potential LA.	August 2001 LA	September 2001 LA	The FY 2001 portion is currently experiencing delays, but is expected to be complete at the end of the FY.

TABLE 1

KTI Agreement Items Scheduled and Expected to be Completed in FY 2001

No.	KTI Agreement Description	Original Due Date	Revised Due Date	Remarks
12	SDS 3.1 The ECRB long-term test and the Alcove 8 Niche 3 test need to be "fractured-informed" (i.e., observation of seepage needs to be related to observed fracture patterns). Provide documentation which discusses this aspect. DOE responded that for the passive test, any observed seepage will be related to full periphery maps and other fracture data in testing documentation. The documentation will be available by any potential LA. For Niche 3, fracture characterization is complete and a 3-D representation will be included in testing documentation. The documentation will be available August 2001.	August 2001 LA	September 2001 LA	The FY 2001 portion has been delayed and is expected to be complete at the end of the FY.
13	SDS 3.4 The NRC needs DOE to document the discussion of excavation-induced fractures. DOE responded that observations of excavation-induced fractures will be documented in a report or AMR revision by June 2001.	June 2001	September 2001	The agreement is expected to be complete at the end of the FY.
14	SZ 5.9 Provide additional information in an updated AMR or other document for both the regional and site scale model (for example, grid construction, horizontal and vertical view of the model grid, boundary conditions, input data sets, model output, and the process of model calibration). The updated USGS Regional Groundwater Flow Model is a USGS Product, not a Yucca Mountain Site Characterization Project product. It is anticipated that this document will be available in September 2001. DOE believes that the requested information is now available in the current version of the Calibration of the Site-Scale Saturated Zone Flow Model AMR and will be carried forward in future AMR revisions.	September 2001	September 2001	No changes in schedule at this time, however, this is a USGS document and will be provided when it becomes available.
15	TEF 2.6 Provide the detailed test plan for Phase III of the ventilation test, and consider NRC comments, if any. The DOE will provide a detailed test plan for the Phase III ventilation test in March 2001. The NRC comments will be provided no later than two weeks after receipt of the test plan, and will be considered by the DOE prior to test initiation.	March 2001	June 2001	Completion of the test plan was delayed to incorporate additional changes.
16	TEF 2.7 Provide the Ventilation Model AMR, Rev. 01 and the Pre-Test Predictions for Ventilation Test Calculation, Rev. 00. The DOE will provide the Ventilation Model AMR (ANL-EBS-MD-000030) Rev 01 to the NRC in March 2001. Note that ventilation test data will not be incorporated in the AMR until FY02. Test results will be provided in an update to the Ventilation Model AMR (ANL-EBS-MD-000030) in FY 02. The DOE will provide the Pre-test Predictions for Ventilation Tests (CAL-EBS-MD-000013) Rev 00 to the NRC in February 2001.	February 2001 March 2001 FY 2002	September 2001 FY 2002	The pretest predictions have been provided to NRC for review. The remaining FY 2001 portion is expected to be complete at the end of the FY. Additional agreement portions remain scheduled in FY 2002.
17	TEF 2.9 Provide the Multi-Scale Thermohydrologic Model AMR, ICN 03. The DOE will provide the Multi-Scale Thermohydrologic Model AMR (ANL-EBS-MD-00049) Rev 00 ICN 03 to the NRC. Expected availability July 2001.	July 2001	September 2001	Completion of the agreement has been delayed and is expected to be complete at the end of FY 2001.
18	TEF 2.10 Represent the full variability/uncertainty in the results of the TEF simulations in the abstraction of thermodynamic variables to other models, or provide technical basis that a reduced representation is appropriate (considering risk significance). The DOE will discuss this issue during the TSPA TE tentatively scheduled for April 2001.	April 2001	June 2001	The TSPA technical exchange is scheduled August 6-10, 2001

TABLE 2

KTI Agreement Items Scheduled to be Partially Complete in FY 2001 to be Rescheduled Beyond FY 2001

No.	KTI Agreement Description	Original Due Date	Proposed Due Date	Remarks
1	SDS 2.2 Provide the updated FEPs: Disruptive Events AMR, the Seismic Design Input Report, and the update to the Seismic Topical Report. DOE will provide the updated FEPs AMR to NRC. Expected availability is January 2001. DOE will provide STR 3 to the NRC for their review. Expected availability is January 2002. The Seismic Design Inputs Report is expected to be available to the NRC by September 2001.	January 2001 September 2001 January 2002	FY 2002 or later FY 2002 or later	The DE AMR has been delivered to NRC. The Seismic Design Inputs Report is no longer in the FY 2001 plan, and it and STR 3 will be rescheduled during the FY 2002 planning cycle.
2	ENFE 2.18 Provide the following documents: EBS: Physical and Chemical Environment Model, Rev. 01; Multiscale Thermohydrologic Model, Rev. 00, ICN 01; Abstraction of Drift-Scale Coupled Processes, Rev 01; Environments on the Surfaces of the Drip Shield and the Waste Package Outer Barrier, Rev. 00, ICN 01; Waste Package Degradation PMR, Rev. 00, ICN 01; EBS Degradation, Flow, and Transport PMR, Rev. 01; Near Field Environment PMR, Rev. 00, ICN 02 and Rev. 01; Hydrogen Induced Cracking of Drip Shield, Rev. 00, ICN 01; Drift Degradation Analysis, Rev. 01; Design Analysis for the Ex-Container Components, Rev. 00; Longevity of Emplacement Drift Ground Support Materials, Rev. 01; Stress Corrosion Cracking AMR, Rev. 00, ICN 01; In-Drift Microbial Communities, Rev. 00, ICN 01; Physical and Chemical Environment Abstraction Model, Rev. 00, ICN 01; UZ Flow and Transport Model PMR, Rev. 01; General Corrosion and Localized Corrosion of the Drip Shield, Rev. 00; Water Distribution and Removal Model, Rev. 01. The DOE will provide the documents requested by the dates indicated: <i>Engineered Barrier System: Physical and Chemical Environment Model</i> (ANL-EBS-MD-000033) Rev. 01: FY 02; <i>Multiscale Thermohydrologic Model</i> (ANL-EBS-MD-000049) Rev. 00, ICN 01: January 2001; <i>Abstraction of Drift-Scale Coupled Processes</i> (ANL-NBS-HS-000029) Rev 01: September 2001; <i>Environment on the Surfaces of the Drip Shield and the Waste Package Outer Barrier</i> (ANL-EBS-MD-000001) Rev. 00, ICN 01: January 2001; <i>Waste Package Degradation PMR</i> (TDR-WIS-MD-000002) Rev. 00, ICN 01: January 2001; <i>Engineered Barrier System Degradation, Flow, and Transport PMR</i> (TDR-EBS-MD-000006) Rev. 01: September 2001; <i>Near Field Environment PMR</i> (TDR-NBS-MD-000001) Rev. 00, ICN 02: January 2001 and Rev. 01: September 2001; <i>Hydrogen Induced Cracking of Drip Shield</i> (ANL-EBS-MD-000006) Rev. 00, ICN 01: January 2001; <i>Drift Degradation Analysis</i> (ANL-EBS-MD-000027) Rev. 01: January 2001; <i>Design Analysis for the Ex-Container Components</i> , ANL-XCS-ME-000001 Rev. 00: January 2001; <i>Longevity of Emplacement Drift Ground Support Materials</i> (ANL-EBS-GE-000003) Rev. 01: January 2001; <i>Stress Corrosion Cracking of the Drip Shield, the Waste Package Outer Barrier, and the Stainless Steel Structural Material AMR</i> (ANL-EBS-MD-000005) Rev. 00, ICN 01: January 2001; <i>In-Drift Microbial Communities</i> (ANL-EBS-MD-000038) Rev. 00, ICN 01: January 2001; <i>Physical and Chemical Environmental Abstraction Model</i> (ANL-EBS-MD-000046) Rev. 00, ICN 01: January 2001; <i>Unsaturated Zone Flow and Transport Model PMR</i> (TDR-NBS-HS-000002) Rev. 01: September 2001; <i>General Corrosion and Localized Corrosion of the Drip Shield</i> (ANL-EBS-MD-000004) Rev. 00: January 2001; <i>Water Distribution and Removal Model</i> (ANL-EBS-MD-000032) Rev. 01: January 2001.	January 2001 September 2001 FY 2002	FY 2002 or later FY 2002 or later	The documents scheduled for January 2001 have been delivered to NRC. The EBS PMR, NFE PMR, UZ PMR, and Drift-Scale Coupled Processes AMR revisions, originally scheduled for September 2001, are no longer in the FY 2001 plan and will be rescheduled during the FY 2002 planning cycle.

TABLE 3

KTI Agreement Items Scheduled to be Complete in FY 2001 to be Rescheduled Beyond FY 2001

No.	KTI Agreement Description	Original Due Date	Proposed Due Date	Remarks
1	CLST 1.17 Provide additional detail on quality assurance acceptance testing. DOE stated that it would provide guidance and criteria in the next revision of the Technical Guidance Document (TGD) for LA. The development of the LA sections and associated programs and process controls for the procurement and fabrication of waste package materials and components will be included. This will include consideration of the controls for compositional variations in Alloy 22. The TGD revision will be issued by June 2001, contingent upon NRC publication of the final 10 CFR 63 and the Yucca Mountain Review Plan.	June 2001	Nominal 180 days after issuance of 10 CFR 63 and associated Yucca Mountain Review Plan	This agreement depends on NRC issuance of YMRP and Part 63 and the original date anticipated this to be issued by NRC early in CY 2001.
2	CLST 3.5 Provide the plan for experiments demonstrating in-package chemistry, and take into account subsequent NRC comments, if any. DOE stated that the current planning provides for the analysis of additional in-package chemistry model support. This analysis will determine which parts of the model are amenable to additional support by testing, and which parts are more amenable to sensitivity analysis, or use of analogues. Based on these results, longer range testing will be considered. If testing is determined to be appropriate, test plans will be written in FY01 and made available to the NRC.	FY 2001	FY 2002	Appropriateness of testing will not be determined until late FY 2001 and therefore any test plans would not be prepared until FY 2002
3	CLST 4.6 Provide the plan for experiments demonstrating in-package chemistry, and take into account subsequent NRC comments, if any. DOE stated that the current planning provides for the analysis of additional in-package chemistry model support. This analysis will determine which parts of the model are amenable to additional support by testing, and which parts are more amenable to sensitivity analysis, or use of analogues. Based on these results, longer range testing will be considered. If testing is determined to be appropriate, test plans will be written in FY01 and made available to the NRC.	FY 2001	FY 2002	Appropriateness of testing will not be determined until late FY 2001 and therefore any test plans would not be prepared until FY 2002
4	ENFE 2.7 Identify specific coupling relationships that are included and excluded from TSPA, including Onsager couples, and give technical bases for their inclusion or exclusion. The DOE will identify specific coupling relationships that are included and excluded from TSPA, including Onsager couples, and give the technical basis for inclusion and exclusion. This information will be documented in a revision to the Engineered Barrier System Degradation, Flow, and Transport PMR (TDR-EBS-MD-000006), expected to be available by September 2001.	September 2001	FY 2002 or later	EBS PMR revision is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle.
5	ENFE 2.18 Provide the following documents: EBS: Physical and Chemical Environment Model, Rev. 01; Multiscale Thermohydrologic Model, Rev. 00, ICN 01; Abstraction of Drift-Scale Coupled Processes, Rev 01; Environments on the Surfaces of the Drip Shield and the Waste Package Outer Barrier, Rev. 00, ICN 01; Waste Package Degradation PMR, Rev. 00, ICN 01; EBS Degradation, Flow, and Transport PMR, Rev. 01; Near Field Environment PMR, Rev. 00, ICN 02 and Rev. 01; Hydrogen Induced Cracking of Drip Shield, Rev. 00, ICN 01; Drift Degradation Analysis, Rev. 01; Design Analysis for the Ex-Container Components, Rev. 00; Longevity of Emplacement Drift Ground Support Materials, Rev. 01; Stress Corrosion Cracking AMR, Rev. 00, ICN 01; In-Drift Microbial Communities, Rev. 00, ICN 01; Physical and Chemical Environment Abstraction Model, Rev. 00, ICN 01; UZ Flow and Transport Model PMR, Rev. 01; General Corrosion and Localized Corrosion of the Drip Shield, Rev. 00; Water Distribution and Removal Model, Rev. 01. The DOE will provide the documents requested by the dates indicated:	January 2001 September 2001	FY 2002 or later	The documents scheduled for January 2001 have already been delivered to NRC. The EBS PMR, NFE PMR, UZ PMR, and Drift-Scale Coupled Processes AMR revisions originally scheduled in September 2001 are no longer planned for FY 2001. These will be rescheduled

TABLE 3

KTI Agreement Items Scheduled to be Complete in FY 2001 to be Rescheduled Beyond FY 2001

No.	KTI Agreement Description	Original Due Date	Proposed Due Date	Remarks
	<p>ENFE 2.18 (continued)</p> <p>Engineered Barrier System: Physical and Chemical Environment Model (ANL-EBS-MD-000033) Rev. 01: FY 02; Multiscale Thermohydrologic Model (ANL-EBS-MD-000049) Rev. 00, ICN 01: January 2001; Abstraction of Drift-Scale Coupled Processes (ANL-NBS-HS-000029) Rev 01: September 2001; Environment on the Surfaces of the Drip Shield and the Waste Package Outer Barrier (ANL-EBS-MD-000001) Rev. 00, ICN 01: January 2001; Waste Package Degradation PMR (TDR-WIS-MD-000002) Rev. 00, ICN 01: January 2001; Engineered Barrier System Degradation, Flow, and Transport PMR (TDR-EBS-MD-000006) Rev. 01: September 2001; Near Field Environment PMR (TDR-NBS-MD-000001) Rev. 00, ICN 02: January 2001 and Rev. 01: September 2001; Hydrogen Induced Cracking of Drip Shield (ANL-EBS-MD-000006) Rev. 00, ICN 01: January 2001; Drift Degradation Analysis (ANL-EBS-MD-000027) Rev. 01: January 2001; Design Analysis for the Ex-Container Components, ANL-XCS-ME-000001 Rev. 00: January 2001; Longevity of Emplacement Drift Ground Support Materials (ANL-EBS-GE-000003) Rev. 01: January 2001; Stress Corrosion Cracking of the Drip Shield, the Waste Package Outer Barrier, and the Stainless Steel Structural Material AMR (ANL-EBS-MD-000005) Rev. 00, ICN 01: January 2001; In-Drift Microbial Communities (ANL-EBS-MD-000038) Rev. 00, ICN 01: January 2001; Physical and Chemical Environmental Abstraction Model (ANL-EBS-MD-000046) Rev. 00, ICN 01: January 2001; Unsaturated Zone Flow and Transport Model PMR (TDR-NBS-HS-000002) Rev. 01: September 2001; General Corrosion and Localized Corrosion of the Drip Shield (ANL-EBS-MD-000004) Rev. 00: January 2001; Water Distribution and Removal Model (ANL-EBS-MD-000032) Rev. 01: January 2001.</p>			during the FY 2002 planning cycle.
6	<p>IA 2.2 Document results of sensitivity studies for particle size, consistent with the above item. (Eruptive AC-1) DOE agreed and will document the waste particle size sensitivity study in TSPA-SR, Rev 1. This will be available to the NRC in June 2001.</p>	June 2001	FY 2002 or later	TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle
7	<p>IA 2.3 Document how the tephra volumes from analog volcanoes represent the likely range of tephra volumes from Yucca Mountain Region (YMR) volcanoes. (Eruptive AC-1) DOE agreed and will document the basis for determining the range of tephra volumes that is likely from possible future volcanoes in the YMR in TSPA-SR, Rev. 1 or demonstrate that TSPA-SR results are insensitive to uncertainties in the reasonably expected volumes of tephra in the YMR. This will be available to the NRC in June 2001.</p>	June 2001	FY 2002 or later	TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle
8	<p>IA 2.4 Document that the ASHPUME model, as used in the DOE performance assessment, has been compared with an analog igneous system. (Eruptive AC-2) DOE agreed and will complete calculation CAL-WIS-MD-000011 that will document a comparison of the ASHPUME code results to observed data from the 1995 Cerro Negro eruption. This will be available to the NRC in January 2001. DOE will consider Cerro Negro as an analog and document that in TSPA-SR Rev 1. This will be available to the NRC in June 2001 (Eruptive AC-2)</p>	January 2001 June 2001	FY 2002 or later	The document required in January 2001 has been delivered to NRC for review. TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle

TABLE 3

KTI Agreement Items Scheduled to be Complete in FY 2001 to be Rescheduled Beyond FY 2001

No.	KTI Agreement Description	Original Due Date	Proposed Due Date	Remarks
9	IA 2.5 Document how the current approach to calculating the number of waste packages intersected by conduits addresses potential effects of conduit elongation along a drift. (Eruptive AC-3) DOE agreed and will document the way in which the change in geometry of the repository drifts affects the number of waste packages incorporated into the volcanic conduit. Possible consequences of conduit elongation parallel to drifts will be documented in TSPA-SR Rev 1, available to the NRC in June 2001.	June 2001	FY 2002 or later	TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle
10	IA 2.6 Develop a linkage between soil removal rate used in TSPA and surface remobilization processes characteristics of the Yucca Mountain region (which includes additions and deletions to the system). (Eruptive AC-5) DOE agreed and will document its approach to include uncertainty related to surface-redistribution processes in TSPA-SR, Rev. 0. DOE will revisit the approach in TSPA-SR, Rev 1. This documentation will be available to the NRC in June 2001. (Eruptive AC-5)	June 2001	FY 2002 or later	TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle
11	IA 2.9 Use the appropriate wind speeds for the various heights of eruption columns being modeled. (Eruptive AC-5) DOE agreed and will evaluate the wind speed data appropriate for the height of the eruptive columns being modeled. This will be documented in TSPA-SR, Rev. 1. This will be available to the NRC in June 2001.	June 2001	FY 2002 or later	TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle
12	IA 2.10 Document the ICNs to the Igneous Consequences AMR and the Dike Propagation AMR regarding the calculation of the number of waste packages hit by the intrusion. Include in these or other documents (1) the intermediate results of releases from Zone 1 and 2, separately, and (2) the evaluation of thermal and mechanical effects, as well as shock, in assessing the degree of waste package damage in Zone 1 and 2. (Intrusive AC-1 to 4) DOE agreed and will provide ICN 1 of the following AMRs: Igneous Consequence Modeling for TSPA-SR [ANL-WIS-MD-000017], Dike Propagation Near Drifts [ANL-WIS-MD-000015], Characterize Framework for Igneous Activity at Yucca Mountain, Nevada [ANL-MGR-GS-000001], and the calculation Number of Waste Packages Hit by Igneous Intrusion [CAL-WIS-PA-000001]. This will be available to the NRC in January 2001. DOE will provide the results showing the relative contributions of releases from Zones 1 and 2 in TSPA-SR, Rev 1. This will be available to the NRC in June 2001. (Intrusive AC-1 to 4)	January 2001 June 2001	FY 2002 or later	The documents required in January 2001 have been delivered to NRC for review. TSPA-SR Rev. 1 is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle

TABLE 3**KTI Agreement Items Scheduled to be Complete in FY 2001 to be Rescheduled Beyond FY 2001**

No.	KTI Agreement Description	Original Due Date	Proposed Due Date	Remarks
13	SZ 6.1 The DOE will provide the final sensitivity analysis on matrix diffusion (for UZ) in the TSPA-SR, Rev. 0. Due date: December 2000. The saturated zone information will be available in TSPA-SR, Rev.1, expected to be available in June 2001.	December 2000 June 2001	FY 2002 or later	The TSPA SR Rev. 00 has been provided to NRC as per agreement. TSPA-SR Rev. 1 is no longer planned for FY 2001. This agreement will be rescheduled during FY 2002 planning cycle and the information is expected to be contained in a revision to the Input and Results Base Case SZ Flow and Transport Model AMR.
14	SZ 6.3 The DOE will complete the Alcove 8 testing, taking into consideration the NRC staff comments, if any, and document the results in a DOE-approved AMR, due date: May 2001. Same as old UZ 6.3	May 2001	October 2001 (UZ)	Completion of this agreement has been delayed and is expected to be complete in early FY 02.
15	TEF 2.3 Provide the following references: Multi-Scale Thermohydrologic Model AMR, ICN 01; Abstraction of Near Field Environment Drift Thermodynamic and Percolation Flux AMR, ICN 01; Engineered Barrier System Degradation Flow and Transport PMR, Rev. 01; and Near Field Environment PMR, ICN 03. DOE will provide to the NRC the following documents: Multi-Scale Thermohydrologic Model AMR (ANL-EBS-MD-00049) Rev 00 ICN 01 (January 2001); Abstraction of Near-Field Environment Drift Thermodynamic and Percolation Flux AMR (ANL-EBS-HS-000003) Rev 00 ICN 01 (January 2001); Engineered Barrier System Degradation, Flow and Transport PMR (TDR-EBS-MD-000006) Rev 01 (September 2001); Near-Field Environment PMR (TDR-NBS-MD-000001) Rev 00 ICN 03 (January 2001).	January 2001 September 2001	FY 2002 or later	The documents scheduled for January 2001 have been delivered for NRC review. The EBS PMR revision is no longer planned for FY 2001. This will be rescheduled during FY 2002 planning cycle.