Sandia National Laboratories

P.O. Box 5800 Albuquerque, New Mexico 87185-1330

Yucca Mountain Project-Las Vegas Operations 1261 Town Center Drive MS509 Building 4, Room 421A Las Vegas, NV 89134

April 16, 1996

Dr. Colin A. Heath CRWMS M&O Assistant General Manager for Program Integration TRW Environmental Safety Systems, Inc. 2650 Park Tower Drive Suite 800 Vienna, Virginia 22180

Subject: Sandia National Laboratories' Monthly Management Analysis Report

Dear Dr. Heath:

Attached is Sandia's Monthly Management Analysis Report for March 1996. The report includes a summary of technical progress, personnel staffing activities, financial performance problems, programmatic issues, a summary of work planned for the next reporting period, and status of deliverables.

The information and data in this report are preliminary and have not received formal technical or policy review by Sandia National Laboratories or YMP. If you have any comments or questions, please call me at (702) 295-5173.

Sincerely yours,

Michael C. Prod

102.8 /1 Wm-11 /1 NUM-13

Michaele C. Brady, Manager^O YMP Management Department

Ijuvf:ocrwm Copy (with att.) to: D. B. Abel, M&O/TRW, Las Vegas, NV R. W. Andrews, M&O/INTERA, Las Vegas, NV G. S. Bodvarsson, LBNL, Berkeley, CA, MS 50E J. A. Canepa, LANL, Los Alamos, NM W. L. Clarke, LLNL, Livermore, CA L. D. Foust, M&O/TRW, Las Vegas, NV, MS 423 L. R. Hayes, M&O/USGS, Las Vegas, NV D. T. Hoxie, USGS, Las Vegas, NV D. S. Kessel, M&O/SNL, Las Vegas, NV, MS 465 T. Parker, M&O/TRW, Las Vegas, NV MS423

7606030008 760416 PDR WASTE WM-11 PDR WBS:1.2.9.2.2. QA:N/A Dr. Colin A. Heath

C. J. Glenn, NRC/HQ, MS NRC-LV
T. C. Geer, M&O/Duke, Las Vegas, NV MS 423
R. P. Ruth, M&O/Duke, Las Vegas, NV MS 423
A. M. Segrest, M&O/Duke, Las Vegas, NV MS 423
R. D. Snell, M&O/Fluor Daniel, Las Vegas, NV MS 423
R. C. Quittmeyer, M&O/WCFS, Las Vegas, NV MS 423
R. C. Quittmeyer, M&O/WCFS, Las Vegas, NV
W. D. Schutt, M&O/TRW, Las Vegas, NV, MS 423
C. T. Statton, M&O/Las Vegas, NV, MS 423
P. Shutlock, TRW, Vienna, VA
M. D. Voegele, SAIC, Las Vegas, NV, MS 423
J. Younker, M&O, Las Vegas, NV

Copy (without att.) to F. W. Bingham, SNL, 1337 L. S. Costin, SNL, MS 1325 H. A. Dockery, SNL, MS 1326 R. Dunn, SNL, MS 0168 R. R. Richards, SNL, MS 1333 S. E. Sharpton, SNL, MS 1330 R. Thompson, SNL, MS 1343 L. J. Washburn, SNL, MS1330 FIN:1.2.9.2.2 YMP CRF 2

SANDIA NATIONAL LABORATORIES MONTHLY MANAGEMENT ANALYSIS REPORT MARCH

A. Technical Accomplishments

WBS 1.2.1.5 Special Studies

Development of thermal capacitance and thermal conductivity parameters for backfill concept #1 were completed and transmitted to the System Engineering study manager for the backfill study. A draft letter report on "Thermal-Mechanical Evaluation of the 200°C Wall Temperature Thermal Goal" was completed and is in internal review. Submission of this report will complete Level 4 milestone OS15B03D1.

WBS 1.2.3.2.2.2.2 Three-Dimensional Rock Characteristics Models

Three-dimensional rock properties models for porosity in the welded portion of the Topopah Spring tuff (site scale and west-block models), bulk density in the welded portion of the Topopah Spring tuff (site scale and west-block models), and thermal conductivity in the welded portion of the Topopah Spring tuff (site scale and west-block models) were completed and transmitted to the Manager of Scientific Programs. Digital files were made available to PA and other users via the SNL anonymous FTP server. Completion of these models represents substantial progress in completing level 4 milestones OS322221D1 and OS32222D1.

WBS 1.2.3.2.7.1.1 Laboratory Thermal Properties

Collection, assembly, and analysis of existing thermal property measurements was completed and incorporated into the revised synthesis report on thermal properties. This report is in internal SNL review. Extraction of information from this report into the Site Geotechnical Report (SGR) will occur in the next few weeks. Completion of the thermal section of the SGR will complete level 4 milestone OS327111D1.

WBS 1.2.3.2.7.1.4 Laboratory Determination of Mechanical Properties

The test apparatus for testing fractures at elevated temperatures was completed and a successful prototype test was conducted. The first two tests of an eight test series of fractured samples at elevated temperature were also completed. The tests were run at 175°C.

Data from previous fracture tests and from intact mechanical properties tests have been assembled into draft sections of the Site Geotechnical Report. A synthesis report on mechanical properties of intact tuff and fracture properties is also being drafted and will be completed in early summer.

WBS 1.2.3.2.7.3.1 Excavation Investigations

Planning and design of the Sequential Drift Mining test to be incorporated with the construction of the Drift-Scale thermal test was initiated. The design of the test was

coordinated with the design of the Drift-Scale Thermal test in a series of two workshops on test design. Input was provided to ESF Test Coordinator to provide details of the facility requirements for the ESF design group and to begin the test planning package process. A design report describing the Sequential Drift Mining test is being prepared.

WBS 1.2.3.2.7.3.3 In Situ Mechanical Properties

Study Plan 8.3.1.15.1.7, In Situ Mechanical Properties, was in project review. Pending receipt of comments, no additional work was performed.

WBS 1.2.3.2.7.3.4 In Situ Design Verification

Data collection from installed instrumentation for monitoring tunnel closure, stability, and ground support continued. Additional monitoring stations were added as the tunnel excavation progressed. Displacement monitoring stations were also added to Alcove #5 at key locations. Preparations were initiated for blast monitoring during the construction of Alcove #6, should the alcove be constructed by drill-and-blast methods. Preparations were also initiated for in situ stress measurements in Alcove #5. A TDIF was prepared to document the data collected during the second quarter of the FY.

WBS 1.2.3.2.7.4 Rock Mass Analyses

Drafts of chapters 5, 6, and 7 of the Site Geotechnical Report were completed. The draft chapters are being prepared for internal review.

WBS 1.2.3.6.2.1.6 Future Regional Climate and Environments

The global climate run for the control case has been completed. This provides input for the regional model which is the next step in evaluating the future climate for the control case.

WBS 1.2.3.13.2 Sealing Testing

Proposed resolutions for comments on Study Plan 8.3.3.2.2.3, In Situ Seals Testing, were completed and a revised study plan was submitted to the study plan coordinator for comment resolution with the reviewers. Study Plan 8.3.3.2.2.1, Laboratory Testing of Seal Materials, was submitted in November, 1995. No review comments have been received, so no further progress on this study plan was possible.

Work on the first in situ seals test was halted because of a pending change request to remove work scope and budget for this effort.

Proposed resolutions of Project Office comments on Study Plan 8.3.3.2.2.3, "In Situ Seals Testing," and the revised text that incorporates the comments were submitted to the M&O study plan coordinator. Assuming that most proposed resolutions to the comments are accepted, the final study plan should be ready to submit to DOE in April. Study Plan 8.3.3.2.2.1, "Seal Material Properties Tests," is in Project Office review.

WBS 1.2.3.14.2 Thermal Testing

Proposed resolutions of comments on Study Plan 8.3.1.15.1.6, In Situ Thermomechanical Properties, were completed and a revised study plan was submitted to the study plan coordinator for final resolution.

The location for the single heater test alcove was defined and instrumentation hole locations for drilling from the access drift were marked. Additional funding for the initiation of test installation were received and work began on organizing the installation process. Insulation, hangers, and other miscellaneous items were ordered to facilitate the installation.

Work continued on completing the draft of the thermal test design report. Additional sections on thermomechanical analysis of the Drift-Scale test were initiated.

WBS 1.2.5.4.6 Development and Validation of Flow and Transport Model. Two organizational meetings were conducted in March. One discussed the lab scale modeling work, the second discussed the mountain-scale modeling work. The lab-scale modeling was productive in that it started the flow-lab people assessing how much work needs to be done to get their data in usable form for the modelers. Brainstorming also began on what can actually be accomplished by these modeling exercises.

Planning for lab-scale modeling has also continued. On March 12, Srikanta Mishra, Chunhong Li, Bob Glass, Vince Tidwell and Susan Altman met to discuss the modeling work that has already been done, where it can go from there, what data are presently available, what data are potentially available, and what we actually want to accomplish from these exercises.

Holly met with Bob Andrews on March 27 in Albuquerque, to talk about the meeting with Eric Smistad and Abe Van Luik.

The work-agreement is presently being reviewed by all of the suppliers who should complete comments by the end of the week. After the comments are incorporated, the official review process can begin.

Level 3 milestone T6540A, "Scaling and Modeling Testing for TSPA Status" was submitted the week of March 15. This milestone consists of a short memo outlining the progress made in the modeling work for 12546 and the specific modeling plans.

B. Personnel Staffing Issues

The Project Control Team Supervisor and one budget coordinator are leaving the project in April. An additional person to assist the budget coordinator will be put on the project in May. The Training Team Supervisor will leave the project in May. A decision will be made on how best to fill this position.

C. Unusual Costs Incurred or Anticipated Financial Performance Problems WBS 1.2.3.2.7.3.4 In Situ Design Verification.

<u>Cumulative Schedule Variance:</u>

Cause: This effort is overrunning because the ESF is progressing at a greater rate than planned, requiring a larger up-front construction monitoring effort. The timephasing of the budget was not adjusted to reflect increased up-front effort. Also, additional construction monitoring not planned in the Basis of Estimate is being performed for the Thermal Test (#5) and Ghost Dance Alcoves (#6).

Impact: No level 3 or higher deliverables will be impacted. This effort will not overrun in FY96 because other construction monitoring activities have been preempted by the use of the Alpine Miner rather than drill and blast for the construction of the Alcove #5 and have not consumed the planned resources.

Recovery Plan: Additional budget has been added (\$329,000) to support the higher than anticipated rate of progress in the ESF. The variance will be recovered before the end of FY96. Also, instrumentation procurements have been nearly completed to support the remaining planned monitoring activities.

D. Adverse Programmatic Issues

WBS 1.2.3.2.7.3.1 Excavation Investigations

The start of the design of the Sequential Drift Mining test was delayed until March to allow the Drift-Scale thermal test to mature to the point that the mining test could be properly integrated with the thermal test activities. Thus, this activity is currently under running the projected spending. Additional resources are now being applied to this test and it is expected to rapidly recover and to meet the design report milestone in May.

WBS 1.2.3.2.7.3.3 In Situ Mechanical Properties

Completion of Study Plan 8.3.1.15.1.7, In Situ Mechanical Properties is behind schedule because it was necessary for SNL to limit personnel early in the FY to accommodate the financial constraints imposed by the Congressional budget process. A letter explaining the situation and outlining a recovery plan was sent to the M&O Scientific Programs manager.

WBS 1.2.3.2.7.3.4 In Situ Design Verification. Cumulative Schedule Variance:

Cause: This effort is behind schedule because activities 0S327341LA, "Collect/Compile Stress Measurement Data," 0S327341AA, "Collect/Compile Blast Monitoring Data," and their successor activities are behind schedule.

In-situ stress measurements are scheduled for Alcove #5. According to the construction schedule, Alcove #5 will not be available until early August 1996. The in-situ stress measurement effort was scheduled to start in October 1995. Some preparatory work has been completed so the measurement effort can begin as soon as the alcove is ready.

Blast monitoring was planned for Alcoves #5 and #6. Preparations for Alcove #5 were completed, but no blast monitoring has yet been required because mechanical excavation is being employed.

Impact: No level 3 or higher deliverables will be impacted. Some data will be collected towards completion of level 4 deliverable 0S32734L, "TDIF Stress Measurement Data/Analysis." Available data will be TDIF'd by the end of FY96. If Alcove #6 is to be constructed by drill and blast. The level 4 deliverable 0S32734J, "TDIF Blast Monitoring Data/Analysis," will report data for Alcove #6 on 7/30/96 as scheduled, contingent on the construction schedule. If mechanical excavation is employed, the blast monitoring effort should be replanned to reflect the actual construction monitoring that is taking place.

Recovery Plan: Because the construction of Alcove #5 was performed using mechanical excavation, fewer resources will be required for blast monitoring in FY96 and additional efforts were used to monitor the mechanical excavation. The activity must be replanned to reflect the actual construction monitoring that is taking place due to changes in the TBM advance rate and use of alternate construction techniques. Replanning this activity will recover the schedule variance. A meeting will be held with M&O project controls staff, technical staff, and management staff on 4/18/96 to address replanning this activity.

WBS 1.2.3.13.2 Sealing Tests

Completion of Study Plan 8.3.3.2.2.3, In Situ Seals Testing, and Study Plan 8.3.3.2.2.1, Laboratory Testing of Seal Materials, are behind schedule because of financial limitations imposed early in the FY and because reviews of the laboratory plan was delayed in being initiated. A letter explaining the situation and outlining a recovery plan was sent to the M&O Scientific Programs manager.

WBS 1.2.3.14.2 Thermal Testing

Completion of Study Plan 8.3.1.15.1.6, In Situ Thermomechanical Properties, is behind schedule because of financial limitations imposed early in the FY. A letter explaining the situation and outlining a recovery plan was sent to the M&O Scientific Programs manager.

Instrumentation installation for the single heater test is expected to begin in early May. Procurement packages for instrumentation and other items were forwarded to TRW for procurement action in early February. As of the end of March, orders had not been placed for critical instrumentation. Of special concern, because of the 8 to 10 week lead time, are the extensometers (to be ordered from Rock Test) and the thermocouple probes (to be ordered from STI Manufacturing). Getting orders to the venders and getting the instrumentation on site to keep the installation schedule are now very critical path items.

Quality Assurance

Efforts within the QA Program for this fiscal year have been performed as needed to meet QA requirements and to support timely production of deliverables. This approach has led to the SNL QA budget being overrun. Due to this overrun, the special effort to revise QA implementing procedures to adhere to Revision 5 of the QARD are not proceeding at the pace desired.

Cost reduction actions have been taken (the only full-time Quality Engineer has been laid-off, and the Quality Management Information System operator now supports CRWM on a part-time basis). Those reductions, and the effort needed to revise QA implementing procedures are expected to result in the SNL CRWM QA program not meeting management needs and, very probably, not meeting QA requirements during the remainder of the fiscal year.

E. Summary of Work Planned in Next Performance Period

WBS 1.2.1.5 Special Studies

Thermal properties for backfill materials will be completed for other cases, completing level 4 milestone OS15B007D1. The letter report on the 200°C wall temperature thermal goal will complete review and be transmitted to the Systems Engineering thermal loading study group, completing level 4 milestone OS15B03D1.

WBS 1.2.3.2.2.2.2 Three-Dimensional Rock Characteristics Models.

Three-dimensional rock properties models for Calico Hills/Prow Pass Tuff will be completed. Completion of these thermal and hydrological properties models along with previously completed models for the Topopah Spring tuff will complete level 4 milestones OS322221D1 and OS322222D1.

WBS 1.2.3.2.7.1 Rock Properties

Incorporation of thermal information into the Site Geotechnical Report will be completed, completing level 4 milestone OS327111D1.

WBS 1.2.3.2.7.1.4 Laboratory Determination of Mechanical Properties

The current series of eight fracture tests at elevated temperature will be competed. Draft text for the Site Geotechnical Report will be reviewed and finalized for submission to the M&O Geoengineering office.

WBS 1.2.3.2.7.3.1 Excavation Investigations

A draft test plan for the Sequential Drift Mining test will be completed and processed for internal review. This plan will be completed and submitted to the M&O Scientific Programs office in May.

WBS 1.2.3.2.7.3.3 In Situ Mechanical Properties

Reviews will be completed and comments forwarded to SNL for action in early April. The comments will be addressed and proposed resolutions with a revised version of the study plan will be submitted to the study plan coordinator for processing.

WBS 1.2.3.2.7.3.4 In Situ Design Verification

The TDIF containing data collected in the second quarter of this FY will be submitted. Additional monitoring stations will be added according to the planed configuration.

WBS 1.2.3.2.7.4 Rock Mass Analyses

Drafts of chapters 5, 6, and 7 of the Site Geotechnical Report will complete internal review and will be submitted to the M&O Geoengineering manager for incorporation into the master SGR document. Sections of Chapter 2 will also be completed and submitted.

WBS 1.2.3.13.2 Seals Testing

Resolution of comments on Study Plan 8.3.3.2.2.3, In Situ Seals Testing, will be completed and a final study plan submitted. Review comments for Study Plan 8.3.3.2.2.1, Laboratory Testing of Seal Materials, will be forwarded to SNL for response.

WBS 1.2.3.14.2 Thermal Testing

A draft of the Thermal Test Plan will be completed and begin internal M&O review. The operations plan will be revised, based on internal comments and submitted in May. Additional instrumentation holes for the single heater test will be drilled and inspected. Preparations for instrumentation installation in May will be initiated.

								• • •
REPORT DATI PAGE NO.	E 10APR96 1 16:55			•••••		SANDIA NAT FY96 YUCC DELIV	TIONAL LABORATORIES CA MOUNTAIN PROJECT CERABLES STATUS VARCH 1996	
SUMMARY	ACTIVITY ID	DELIVERABLE DESCRIPTION	EARLY FINISH	BASELINE FINISH	EARLY MINUS BASELINE VARIANCE	DELIVERAB	GUE COMMENTS	• • • • • • • • <u>•</u> • • • • • • •
TR15EB003	Thermal Loe	ding System Study	•••••	•••••	********		•••	
	OS15803D1	Submit Inputs from Thermal Loading Sys Study	28JUN96	28JUN96	c) 4	Analysis memo to Saterlie will be completed by 4/5/96. This represents completion of most inputs.	
TR15E8007	Backfill St	rategy Study						
	05158007D1	Submit Memo Documenting Backfill Study Findings	28JUN96	28JUN96	C	9 4	2 memos have been sent on backfill properties. One additional case to be completed.	(
TR32221EB1	Drilling 5	upport						
	0\$32221N14 0\$32221M23 0\$32221M34	Submit Final SD-12 Summary Report and TDIF Submit Final SD-9 Summary Report and TDIF Submit Final SD-7 Summary Report and TDIF	26APR96 12FEB96A 10MAY96	26APR96 29NOV95 10MAY96	-47 0	1 4 7 4 1 4	On schedule. Completed. On schedule.	
TR32222EB1	Model 283-	D Thermal & Mech Rock Props						
	0\$322221D1	Input into 3-D Site Geologic FW Model	15APR96	15MAR96	-21	14	Delay will not impact M&O Level 3 due 6/3/96. Richard Quittmeyer has approved delay.	
TR32222EB2	Model 283-	D Hydrologic Rock Props						
	0\$32222201	Input into Site Geotechnical Report & PA Models	15MAY96	15MAY96	C	5 4	Might be delayed by late info from LBL.	
TR32711EB1	Lab Therma	l Props/Expansion Testing						
	05327111D1	Provide Inputs to Thermal Props YN Tuff Rpt	30APR96	30APR96	(D 4	Synthesis report revision complete. In review. Abstracting sections for SGR.	<i>.</i>
TR32714EB1	Mech Props	Exp's/Analysis, Fractures						
	05374	TDIF Mechanical Properties of Fractures	28JUN96	28JUN96	Ċ	0 4	On schedule. All samples prepared. Proof of principle completed. 8 fracture tests on tuff begin 4/1/96. Report on previous fracture work has been revised and used as input to the SGR. Report on mechanical properties of tuff is being revised wirest encouraged for the SGR	
	0s375	Submit Rpt, Mech Props of YM Tuff Meas'd in Lab	28JUN96	28JUN96	(0 4	On schedule. No new testing this year. This report will be combined with 05374.	
TR32731EB1	Sequential	Drift Hining Test						
	0\$32731101	Submit Sequential Drift Mining Test Des & Plan	31MAY96	31MAY96	(0 4	Information & integration w/thermal test is complete. Revised layout will be worked in early April. Draft report will be completed by 4/30/96. Final report is on schedule.	

.

REPORT DATI	E 104PR96	· ·				SANDIA NAT FY96 YUCC DELIV	TIONAL LABORATORIES CA MOUNTAIN PROJECT /ERABLES STATUS HARCH 1996	•
PAGE NO.	2 16:55							
SUMMARY ACCOUNT	ACTIVITY 1D	DELIVERABLE DESCRIPTION	EARLY FINISH	BASELINE FINISH	EARLY MINUS BASELINE VARIANCE	DELIVERAE LEVEL	BLE COMMENTS	•.
TR32733EA1	Study Plan	Completion	•••••	••••••••		********		
	05327331D1 05327331D2	Submit Draft SCP Study 8.3.1.15.1.7 Submit Final SCP Study 8.3.1.15.1.7	29JAN96A 03JUN96	27NOV95 02JAN96	-31 -10	9 4 3 3	Completed. Draft in DOE review. Awaiting comment resolution and final completion phase. The Thermal Test Plan definition task took precedence over this task. Funding constraints required 1.2.3 work to be prioritized.	<i></i>
TR32734EB1	ESF Instru	mentation and Monitoring						
	0532734105 05327341J	Submit Rock Mass Quality Assessment Data TDIF Blast Monitoring Data/Analysis	305ep96 30jul96	305EP96 30JUL96) 5) 4	On schedule. Dependent on ESF progress. Blast monitoring for Alcove #5 canceled. Set up for Alcove #6 is on	
	0\$327341L	TDIF Stress Measurement Date/Analysis	24FEB97	30aug96	-117	7 4	Cannot start as scheduled because alcove will not be ready to drill holes until 8/96 for stress measurements. However, this deliverable may still be mat be whatever data is available.	
	TR327A TR327B	Submit 1at Quarter Report, ESF Monitoring Submit 2nd Quarter Report, ESF Monitoring	02JAN96A 01APR96	02JAN96 01APR96) 4) 4	Completed. On schedule. Might be 1-2 weeks late due to transfer of data base.	
	tr327C tr327D tr327M	Submit 3rd Quarter Report, ESF Monitoring Submit 4th Quarter Report, ESF Monitoring Prelim Eval/Interpration of ESF Monitoring Data	01JUL96 010CT96 30AUG96	01JUL96 010CT96 30AUG96) 4) 4) 3	On schedule. On schedule. Will be met with whatever data is available. On schedule to be completed with available data.	
TR3274EB1	Site Geotec	hnical Report						
	0\$3274102	Submit for Colleague Review	15JUL96			4	On schedule to support M&O Level 3 due 9/3/96.	
TR36216EB1	Nested Cli	mate Model System Analysis						(
	05362161D2 0536216D4 0536216H11	Future Climate Scenarios Initial Greenhouse Case Submit Records Package, Results of Model Runs Submit the Model Validation Report	30AUG96 26JUL96 07FEB96A	30AUG96 26JUL96 30NOV95	-43) 3) 4 3 3	On schedule. On schedule, Level 3 due 8/30/96. Completed.	Ĺ
TR3D2EB1 S	eals Study	Plans						
	053D21D1	Submit Study Plan 8.3.3.2.2.3, in Situ Testing	25APR96	01FEB96	-64) 3	The DOE review is behind schedule. Depending on the nature of any DOE comments, this deliverable could be submitted as early as one week after	
	053D21D2	Submit Study Plan 8.3.3.2.2.1, Seal Mat Props	24JUN96	15APR96	-49	3	The draft has been lost on the study plan coordinator's desk for almost 4 months and is now entering DOE review.	
TR3D2EB2 I	n Situ Bore	hole Sealing Tests						
	OS3D2EJ	Submit Borehole Sealing Test Design	29AUG96	31JUL96	-2	14	May be cancelled. Work has been stopped.	

· · ·

	•••••				······	SANDIA NATIONAL LABORATORIES Fy96 Yucca mountain project Deliverables status		
REPORT DAT PAGE NO.	E 10APR96 3 16:55					MAR	ICH 1996	
SUMMARY ACCOUNT	ACTIVITY ID	DELIVERABLE DESCRIPTION	EARLY FINISH	BASELINE FINISH	EARLY MINUS BASELINE VARIANCE	DELIVERABLE LEVEL	COMMENTS	•••••••
TR3E2EB1 F	Prepare Test	Design					• • • • • • • • • • • • • • • • • • • •	
	0\$32732202	Submit Study Plan 8.3.1.15.1.6	15APR96	OZJAN96	-74	5	Late receipt of DOE comments. Comments currently being signed off. May require additional modifications.	
	0532732203 0532732204	Submit Test Design Draft WA-205 Rev1 Submit Test Design Revision 1	15NOV95A 30AUG96	01DEC95 30AUG96	10) 4	Completed.	
TR3E2EB2 F	Prep Ops Pla	n for 1st ESF Thermal Test						5
	0532732205 0532732206	Submit Draft Ops Plan for 1st ESF Thermal Test Submit Final Ops Plan for 1st ESF Thermal Test	09FEB96A 15JUL96	15FEB96 15JUL96		4 0 3	Completed. On schedule.	Ľ.
TR3E2EB3 C	Characterize	ESF Thermal Test Area						
	05327322D1	Submit Pre-Test Characterization Report	30AUG96	30AUG96	C	3	On schedule.	
TR3E2EB4K	Install Hea	ter/Instrments & Sheke Down					·	
	0S3EZ41D	Initiate Heat-Up Cycle of Shake Down Phase Test				4	NEW(1)////////////////////////////////////	
	OS3E24DM	Letter Rpt, First Thermal Test Progress Rept	30AUG96	30AUG96	(0 3		
TR541EB010) Complete F	EP of Seismic Activity						
	T6520	Seismic Activity Scenarios	31MAY96	29mar96	- 44	5	Dependent on USGS approval. An injury to Dr. Fridrich, owner of the remaining 10 DCR's, will delay completion.	
	T6520A	Status Report: Seismic Activity Scenarios	18JAN96A	18JAN96	C	0 3	Completed.	
TR541EB020) Revise Doc	umentation for TSPA-95						(
	05541101	Submit DCR's on TSPA-95 Report to TRW	15NOV95A	3100795	-11	1 4	Completed.	Ĺ
TR541EB040) Plan TSPA							
	055418D1 TR54182	Submit Memo Describing Process Status Report: TSPA Investment Analysis Plan	15AUG96 18MAR96A	15AUG96 20MAR96		0 4 2 3	On schedule. Supports Level 3 due 9/13/96. Completed.	
TR541EB050) Interact w	/Site Char & Design						
	05541901	Submit Memo Outlining Interactions	30AUG96	30AUG96	(0 5	On schedule.	
TR541EB060	D Test Model	Abstractions for TSPA ID						
	05541AD1 T6523A	Submit Memo Outlining Interactions TSPA Test Model Abstractions Status Presentation	035EP96 18MAR96A	035EP96 20mar96		0 5 2 3	On schedule. Supports Level 3 due 5/30/96. Completed.	
TR541EB08	0 Continue D	ev of PA Working Data Set						
	T6524	Performence Assessment Working Data Set	30AUG96	30AUG96	(0 5	On schedule.	

· •

· ·

								• •
							· · · ·	• 1
REPORT DATE PAGE NO.	10APR96	•••••••••••••••••••••••••••••••••••••••				SANDIA NATI FY96 YUCCA Delive Ma	IONAL LABORATORIES A MOUNTAIN PROJECT RABLES STATUS IRCH 1996	e'
SUMMARY ACCOUNT	ACTIVITY ID	DELIVERABLE DESCRIPTION	EARLY FINISH	BASELINE FINISH	EARLY MINUS BASELINE VARIANCE	DELIVERABL LEVEL	.E Comments	-
TR541EB080	Continue D	ev of PA Working Data Set	••••	******	•••••	•••••	•• ••••••••••••••••••••••••••••••••••••	
TR541FR090	Biosphere	Nodel						
	05541CD1	Description of Bose-to-Human Pathways	30sep96	30APR96	-106	5	Needs to be redefined because some supporting activities were deleted. Supports Level 4 due 4/30/96.	ſ
TR541EB100	Document P	erformance Allocation						
	0\$54110001 15411002	Description of Performance Allocation Status of Performance Allocation Presentation	15aug96 18mar96a	15AUG96 20MAR96	0 2	5 3	Supports Level 3 due 9/13/96. Completed.	
TR543EB010	Dev UZ Hod	el Domain w/Thermal Effects						
,	055431D1 T6533A	Submit Memo Outlining Interactions Present Status: Calc Coupled Repos-Scale H-T Eff	15AUG96 27MAR96A	30AUG96 28FEB96	11 -20	5 3	Supports Level 3 due 8/30/96. Completed.	
TR544E8010	Complete 8	Document GWTT-95 Analyses						
	T6534	Prepare Ground Water Travel Time-95 Report	29MAR96A	29MAR96	0	3	Completed.	
TR544EB020	Conduct PM	Emplacement GWTT Calcs						
	T6536 T6536A	Post Waste Emplacement Ground Water Flow Writeup Status Report: Post-Emplacement Thermal Regimes	29MAR96 27MAR96A	30AUG96 27MAR96	108 0	3	Is SNL responsible for this milestone? Completed.	
TR546EB010	Dev of Sca	ling and Model Testing						
	085463D1 T6540A	Submit Hemo Outlining Interactions Status Rpt: Scaling/Modeling Testing for TSPA ID	13sep96 11mar96a	135EP96 18MAR96	0 5	5 3	Supports Level 3 due 9/13/96. Completed.	C
TR546EB020	Assimilate	/Synthesize Lab & Site Data						
	0\$54622	Provide and Analyze Lab and Field Data	305EP96	30APR96	-106	4	Holly is determining what this is and who is	
	0\$546201	Submit Memo Outlining Interactions	28JUN96	28JUN96	0	5	Supports YMSCO level 4 due 4/30/96. Workshop held later than anticipated.	
TR546EB030	Plng/Coord	Flow/Transport Model Dev						
	T6537	Plan and Coordinate Flow and Transport Modeling	07FEB96A	29MAR96	37	3	Completed.	
TR549EB020	Software D	evelopment Control for TSPA						
	05549AD1	Submit Software QA Records	30AUG96	30AUG96	0	5	May be deleted. Supports Level 4 due 8/30/96.	
TR549EB030	Software C	ev Control, Flow/Transport						
	T6544	Perform Sftwre Dev Control f/Select Flow/Trans	30AUG96	30AUG96	0	5	May be deleted.	