

**U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**PRESENTATION TO
THE NUCLEAR WASTE TECHNICAL REVIEW BOARD**

**SUBJECT: CALICO HILLS RISK/BENEFIT
ANALYSIS - PROGRAMMATIC
INSIGHTS**

PRESENTER: DR. DAVID C. DOBSON

**PRESENTER'S TITLE
AND ORGANIZATION: ACTING DIRECTOR,
REGULATORY AND SITE EVALUATION DIVISION**

**PRESENTER'S
TELEPHONE NUMBER: (702) 794-7940**

**DENVER, COLORADO
MARCH 6-7, 1991**

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PROGRAMMATIC INSIGHTS

VALUE OF INFORMATION

- **TESTING PROGRAM, AS CONCEIVED, IS NOT "PERFORMANCE BASED"**
 - i.e., THE NEED FOR TESTING IS BASED MORE ON PROGRAMMATIC CONCERNS (e.g., PUBLIC ACCEPTANCE) THAN PROVIDING INFORMATION THAT WILL ACTUALLY RESULT IN IMPROVED SYSTEM PERFORMANCE
- **EVEN IF HUMAN INTRUSION AND GASEOUS RELEASE ARE TAKEN INTO ACCOUNT (RELEASES > AQUEOUS RELEASES; REFERENCE TPT REPORT) THE VOI FROM TESTING IN THE CH_n UNIT IS STILL LOW. THE VALUE OF THIS PARTICULAR INFORMATION IS LIKELY TOO LOW TO CHANGE THE VOI RESULT**
- **SATURATED ZONE WILL PROBABLY CONTRIBUTE SIGNIFICANTLY TO PERFORMANCE**

PROGRAMMATIC INSIGHTS

(CONTINUED)

MULTIATTRIBUTE UTILITY

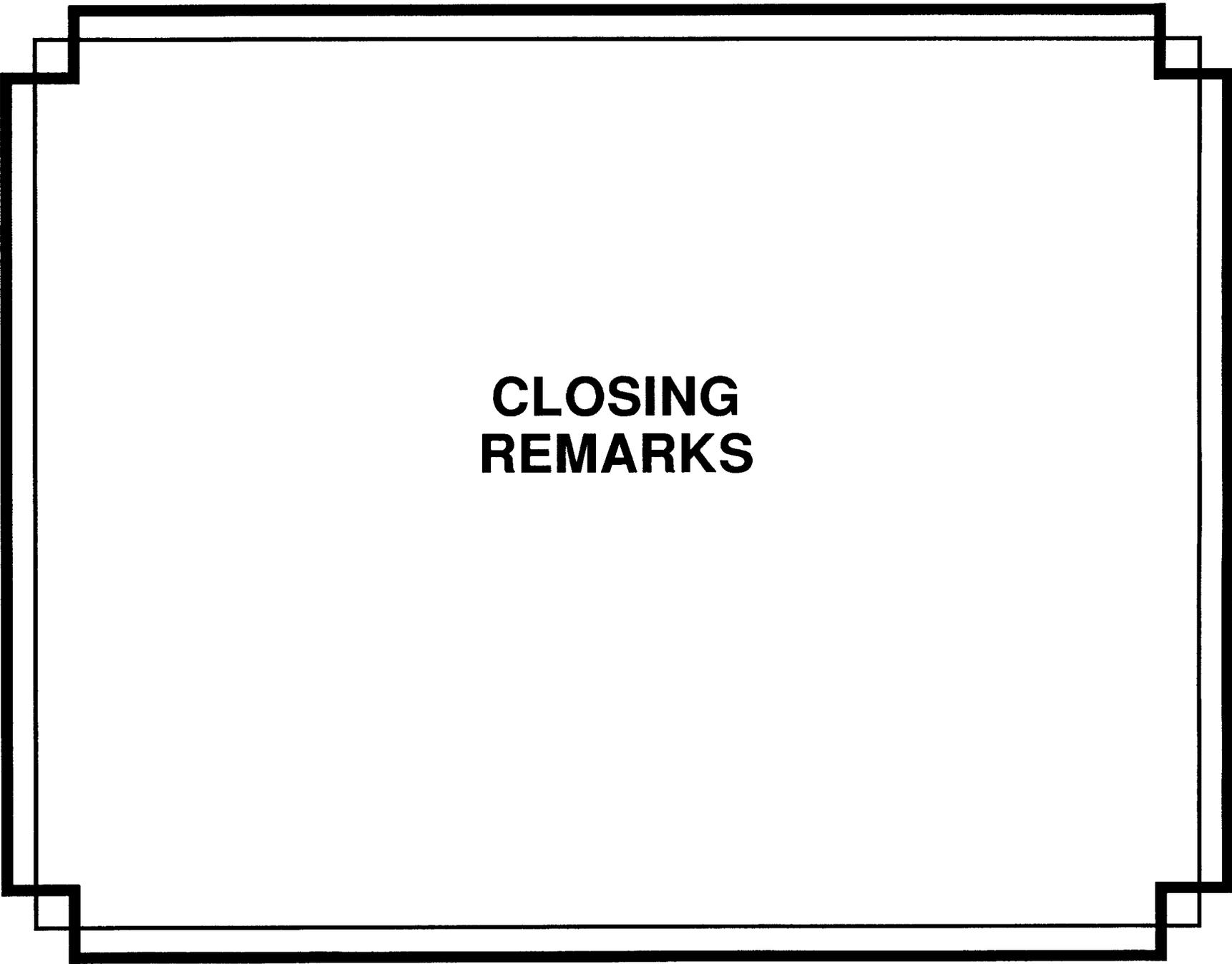
- **SCIENTIFIC CONFIDENCE ASSESSMENTS WITH YMP TECHNICAL STAFF INDICATE THAT THE "MAXIMUM LOOK" IS NOT NECESSARY TO ACHIEVE CONFIDENCE, AND SCIENTIFIC CONFIDENCE AS DEFINED CAN BE INCREASED BY EXPLORING OUTSIDE THE REPOSITORY BLOCK**
- **THE UTF SHOULD BE DESIGNED TO BE CAPABLE OF DRIFTING TO ANY PART OF THE REPOSITORY BLOCK. OTHERWISE, THERE IS A POTENTIAL FOR REGULATORY DELAY IN THE VIEW OF REGULATORY STAFF**

PROGRAMMATIC INSIGHTS

(CONTINUED)

MULTIATTRIBUTE UTILITY (CONTINUED)

- **TO EFFECTIVELY IMPLEMENT THE CHRBA RECOMMENDATION, ATTENTION NEEDS TO BE DIRECTED TO MANAGE THE EMPHASIS AND SCOPE OF TESTING DURING SITE CHARACTERIZATION**
 - **TEST DESIGN AND LOCATION**
 - **SEQUENCING OF EXPLORATION vs. TESTING**
 - **REEVALUATE IMPACTS FROM CHARACTERIZATION**
 - **REASSESS PERFORMANCE BASED ON UPDATED INFORMATION**
 - **USE INDEPENDENT EXPERTS TO EVALUATE SCIENTIFIC CONFIDENCE**
 - **ASSESSING ADEQUACY OF INFORMATION**



**CLOSING
REMARKS**

FINAL OBSERVATIONS

- **DOE CONSIDERS THAT THE CHRBA IS ADEQUATE TO MEET THE COMMITMENT MADE BY DOE IN RESPONSE TO OBJECTION # 2 (CDSCP) AND THAT THE ANALYSIS PROVIDES SUFFICIENT BASIS FOR DESIGN**

- **DOE CAUTIONS THAT NEITHER THE PRECISE TESTING CONFIGURATION NOR THE TREATMENT OR WASTE ISOLATION IMPACTS SHOULD BE CONSIDERED FINAL**
 - **IT IS EXPECTED THAT BOTH WILL CHANGE AS DATA ARE ACQUIRED DURING SITE CHARACTERIZATION AND ENGINEERING TRADEOFF STUDIES ARE PERFORMED**

 - **NRC WILL HAVE ADDITIONAL OPPORTUNITY TO COMMENT AS THE DESIGN EVOLVES**

FINAL OBSERVATIONS

(CONTINUED)

- **DOE BELIEVES THAT THE INTEGRATION BETWEEN THE CHRBA AND THE ESF AS HAS BEEN EFFECTIVE AND THAT THE CURRENT TOP-RANKED ESF OPTIONS WILL SUPPORT AN EFFECTIVE CHARACTERIZATION PROGRAM IN THE CALICO HILLS**
 - **ACCESS TO THE CALICO HILLS VIA RAMPS FROM THE EAST WILL PROVIDE MORE EXTENSIVE CHARACTERIZATION DATA THAN STRATEGY 2,5 ALONE**
 - **ACCESS VIA RAMPS FROM THE EAST WILL ELIMINATE ANY DIRECT VERTICAL PATHWAYS THAT COULD AFFECT FLUID FLOW, SO IMPACTS ON WASTE ISOLATION WILL LIKELY BE EVEN SMALLER THAN THOSE CALCULATED IN THIS STUDY**
 - **THE ROBUSTNESS OF THE RECOMMENDATION FOR STRATEGY 2,5 WOULD BE INCREASED BY A COMBINATION WITH RAMP ACCESSES FROM THE EAST**