

#### **UNITED STATES NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

March 5, 2001

Stephan Brocoum, Assistant Manager Office of Licensing and Regulatory Compliance U.S. Department of Energy Office of Civilian Radioactive Waste Management Yucca Mountain Site Characterization Office P.O. Box 30307 North Las Vegas, NV 89036-0307

SUBJECT:

U.S. NUCLEAR REGULATORY COMMISSION/U.S. DEPARTMENT OF

**ENERGY TECHNICAL EXCHANGE ON DATA VERIFICATION &** 

DATA/SOFTWARE QUALIFICATION (JANUARY 31, 2001)

Dear Mr. Brocoum:

Enclosed is the meeting summary for the January 31, 2001, Technical Exchange between the staff of the U.S. Nuclear Regulatory Commission and the U.S. Department of Energy. The main purpose of the meeting was to provide DOE the opportunity to brief the NRC staff on Yucca Mountain Project's progress on verification of data and data/software qualification. The meeting was held in Rockville, Maryland.

If you have any questions regarding this letter, please contact Ted Carter, Project Manger. Mr. Carter can be reached at (301) 415-6684.

Sincerely,

C. William Reamer, Chief High-Level Waste Branch Division of Waste Management

Office of Nuclear Material Safety

and Safeguards

**Enclosure: Meeting Summary** 

cc: See attached list

CC:

R. Loux, State of Nevada

S. Frishman, State of Nevada

L. Barrett, DOE/Washington, DC

A. Brownstein, DOE/Washington, DC

S. Hanauer, DOE/Washington, DC

C. Einberg, DOE/Washington, DC

J. Carlson, DOE/Washington, DC

N. Slater, DOE/Washington, DC

A. Gil, YMPO

R. Dyer, YMPO

S. Brocoum, YMPO

R. Clark, YMPO

S. Mellington, YMPO

C. Hanlon, YMPO

T. Gunter, YMPO

K. Hess, BSC

D. Krisha, BSC

S. Cereghino, BSC

M. Voegele, M&O

S. Echols, Winston & Strawn

B. Price, Nevada Legislative Committee

J. Meder, Nevada Legislative Counsel Bureau

D. Bechtel, Clark County, NV

E. von Tiesenhausen, Clark County, NV

A. Kalt, Churchill County, NV

G. McCorkell, Esmeralda County, NV

L. Fiorenzi, Eureka County, NV

A. Johnson, Eureka County, NV

A. Remus, Inyo County, CA

M. Yarbro, Lander County, NV

R. Massey, Lander County, NV

J. Pitts, Lincoln County, NV

M. Baughman, Lincoln County, NV

A. Funk, Mineral County, NV

J. Shankle, Mineral County, NV

L. Bradshaw, Nye County, NV

M. Murphy, Nye County, NV

J. McKnight, Nye County, NV

D. Weigel, GAO

W. Barnard, NWTRB

R. Holden, NCAI

A. Collins, NIEC

R. Arnold, Pahrump County, NV

J. Larson, White Pine County

R. Clark, EPA

F. Marcinowski, EPA

R. Anderson, NEI

R. McCullum, NEI

S. Kraft, NEI

J. Kessler, EPRI

D. Duncan, USGS

R. Craig, USGS

W. Booth, Engineering Svcs, LTD

J. Curtiss, Winston & Strawn

N. Rice, NV Congressional Delegation

T. Story, NV Congressional Delegation

J. Reynoldson, NV Congressional Delegation

S. Jova, NV Congressional Delegation

J. Pegues, City of Las Vegas, NV

L. Lehman, T-Reg, Inc.

Stephan Brocoum, Assistant Manager
Office of Licensing and Regulatory Compliance
U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 30307
North Las Vegas, NV 89036-0307

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Sincerely,

/RA/

C. William Reamer, ChiefHigh-Level Waste BranchDivision of Waste ManagementOffice of Nuclear Material Safetyand Safeguards

**Enclosure: Meeting Summary** 

cc: See attached list

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## MEETING SUMMARY OF THE JANUARY 31, 2001 U.S. NUCLEAR REGULATORY COMMISSION/U.S. DEPARTMENT OF ENERGY TECHNICAL EXCHANGE ON DATA VERIFICATION & DATA/SOFTWARE QUALIFICATION

On January 31, 2001, staff of the U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Energy (DOE) met at NRC headquarters in Rockville, Maryland with telephone conference with the DOE office in Las Vegas, Nevada and the Center for Nuclear Waste Regulatory Analyses in San Antonio, Texas. The purpose of the meeting was to provide DOE the opportunity to brief the staff on Yucca Mountain Project's (YMP's) progress on verification of data and qualification of data and software.

#### **Attendees**

Attachment 1 provides the name, affiliation and telephone number of the attendees.

#### **Agenda**

Attachment 2 provides the agenda.

#### **Opening Remarks**

Ted Carter welcomed the attendees and introduced the DOE representatives. Robert Latta stated that the purpose of the meeting was to have DOE present the background on the methodology to verify data and to qualify data and software for the YMP.

#### **Presentations**

Dr. Robert Wemheuer presented the YMP basis for establishing a process to assure that previously-qualified data meets all of the project requirements for traceability, technical quality, and documentation. This need was based on a series of Corrective Action Reports (CARs) generated by the YMP in 1998. Root Cause evaluations, remedial actions and actions to preclude recurrence have been completed. The verification process discussed is a project initiative that has been continued after closure of the CARs.

Dr. Wemheuer stated that his presentations focused on information and data, and not on analyses. He provided an overview of the data verification/qualification and software qualification process with view graphs (Attachment 3). He illustrated the traceability of the processes with samples of process documents and DOE's web site. He also discussed some documents for these processes. These include: Plan for Resolution of TBV/TBD Issues for Data Used as Direct Input to AMRs/PMRs, Checklist for Compiling TBV/TBD Removal Records Package, Data Qualification Documentation Checklist and Reports. He concluded that the processes, applied together with the documentation, addressed the issues of traceability and reproducibility to ensure regulatory compliance.

Throughout the presentation, attendees' questions were answered to help the staff better understand YMP's processes on the subject.

#### **Closing Remarks**

No closing remarks were made.

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C. William Reamer High-Level Waste Branch Division of Waste Management U.S. Nuclear Regulatory Commission Dennis R. Williams
Deputy Assistant Manager
Office of Licensing and Regulatory Compliance
U.S. Department of Energy

#### **ATTACHMENT 1**

# ATTENDANCE LIST NRC/DOE TECHNICAL EXCHANGE DATA VERIFICATION AND SOFTWARE QUALIFICATION JANUARY 31, 2001 Rockville, MD

Name	Organization	Phone	E-Mail
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Darlen Higgs	NRC	301.415 6711	adhience gov

# ATTENDANCE LIST NRC/DOE TECHNICAL EXCHANGE DATA VERIFICATION AND SOFTWARE QUALIFICATION JANUARY 31, 2001 Rockville, MD

Name	Organization	Phone	E-Mail
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Dave Dencer	USKRC	(301)415-6612	LANDA OPC 9017
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# ATTENDANCE LIST NRC/DOE TECHNICAL EXCHANGE DATA VERIFICATION AND SOFTWARE QUALIFICATION JANUARY 31, 2001 Rockville, MD

Name	Organization	Phone	E-Mail
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	DUE/MEO/ DSQD	702-295-5785	MIKE_JLEYER @ YM1. GOV
MIKE JAEGER ROBGET WEMHEUER	•		ROBERT WEMHEURE & YMP, GOV
	·		

## CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES MEETING ATTENDANCE Data Variation

SUBJECT OF MEETING DOE-NAC TEChnical Exchange Agenda = Qualification

DATE: 1/31/2001 LOCATION: SWAT Bldg 189/CNEWS CONF Room A 237			
PERSON	ORGANIZATION	TITLE/FUNCTION	TELEPHONE NUMBER
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Blasco Russell	COURT	(one ultimate	210-522-6249
BRITIAN HILL	CNWRA	Sn. Ros. Scienter	210-522-6087
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Sames Welly	Cura	Sr. Kr. 67	210-572-6800
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CNWRA Form AP-5

#### **ATTACHMENT 2**

#### DOE-NRC TECHNICAL EXCHANGE AGENDA

#### Data Verification & Data/Software Qualification

January 31, 2001

10:00-11:30 AM EST NRC Headquarters Conference Room T7A1 11545 Rockville Pike Rockville, MD 20852

7:00-8:30 AM PST DOE Hillshire Conference Room 475 Las Vegas, NV (via voice bridge)

Bridge Number: 301-231-5539 Pass Code: 9962 followed by #

Introductions - Ted Carter

10:00 AM

Purpose of Interaction - Bob Latta

Data Qualification Presentation - Dr. Robert Wemheuer

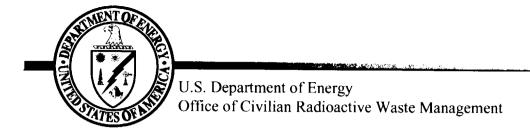
10:05 AM

- Introduction (Data Definitions, Terminology, Priority, Grading, and Classification)
- Data Verification Process
- Data Qualification Process
- Software Qualification Process
- Forms and Status

**Closing Remarks** 

11:30 AM

ATTACHMENT 3	



## DATA VERIFICATION & DATA/SOFTWARE QUALIFICATION TECHNICAL EXCHANGE

Presented to:

**Nuclear Regulatory Commission** 

Presented by:

Dr. Robert F. Wemheuer



### Introduction

#### Information/Data

- Yucca Mountain Project uses many forms of inputs subject to appropriate quality control (e.g. Technical Information and Data)
- Data is defined in the Yucca Mountain Site
   Characterization Project (YMP) Quality Assurance
   Requirements Description (QARD), Supplement III, as
   "...information developed as a result of scientific
   investigation activities, including information extracted
   from reference sources, and performance assessment
   analysis."

#### **Background**

- Corrective Action Report (CAR) LVMO-98-C-002 reported deficiencies in the documentation of data listed as "Qualified" in the Technical Data Management System (TDMS)
- Deficiencies existed in data collected by the Management and Operating Contractor (M&O), U.S. Geological Survey (USGS), National Laboratories and subcontractors thereto
- Extent of deficient condition investigations resulted in all data being categorized as "To Be Verified" (TBV)
- Processes and procedures were developed to screen and track indeterminate quality legacy data used in calculations, analyses and models

## **Background** (continued)

- Remedial actions were implemented 06/30/99 so that new data was properly acquired and documented
- Initial efforts to reestablish data pedigree focused upon verification of the objective evidence that was available to show that the data had been properly acquired and documented
- For data which could not be verified, qualification processes and procedures were utilized
- In accordance with the QARD and Repository Safety Strategy, a data grading approach was formulated to differentiate between data supporting Principal Factors and non-Principal Factors

#### **Acronyms**

**AMOPE** – Assistant Manager, Office of Project Execution

PMR - Process Model Report

**AMR** – Analysis Model Report

**POC** – Point of Contact

AP - Administrative Procedure

**PVAR** – Process Validation and Reengineering

**ATDT** – Automated Technical Data Tracking

**QA** - Quality Assurance

**CAR** – Corrective Action Report

**QARD** – Quality Assurance Requirements Description

**DIRS** – Document Input Reference System

RISWeb - Record Information System

**DOE** – U.S. Department of Energy

**RPC** – Records Processing Center

**DR** – Deficiency Report

TBD - To Be Determined

**DSQD** – Data/Software Qualification Department

TBV - To Be Verified

**DTN** – Data Tracking Number

**TDMS** – Technical Data Management System

IOC - Interoffice Correspondence

**USGS** – United States Geologic Survey

**M&O** – Management & Operating Contractor

**VL** – Verification Level

**OQA** – Office of Quality Assurance

YMP - Yucca Mountain Site Characterization Project

### **Data Terminology**

- Accepted: Data considered to be established fact (e.g., such as engineering handbooks, natural laws, physical constants) or generally accepted by the scientific or engineering community
- Acquired: Data obtained as a result of a data gathering activity or procured from project field and laboratory sources. Raw data converted to scientific or engineering terms is acquired data
- Corroborative: Data used to support or substantiate other data. This data does not directly support the safety case, but may be used to augment arguments
- Data Tracking Number (DTN): A unique identifier assigned to each data set to be tracked in the TDMS

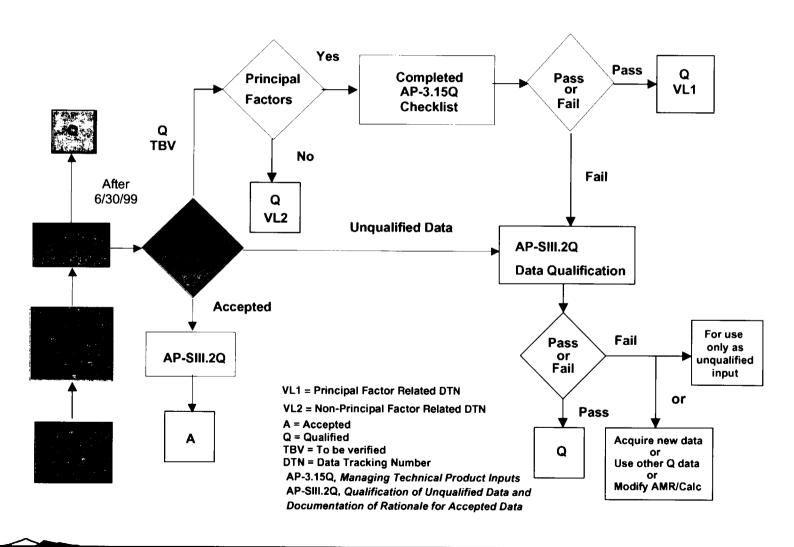
## **Data Terminology (continued)**

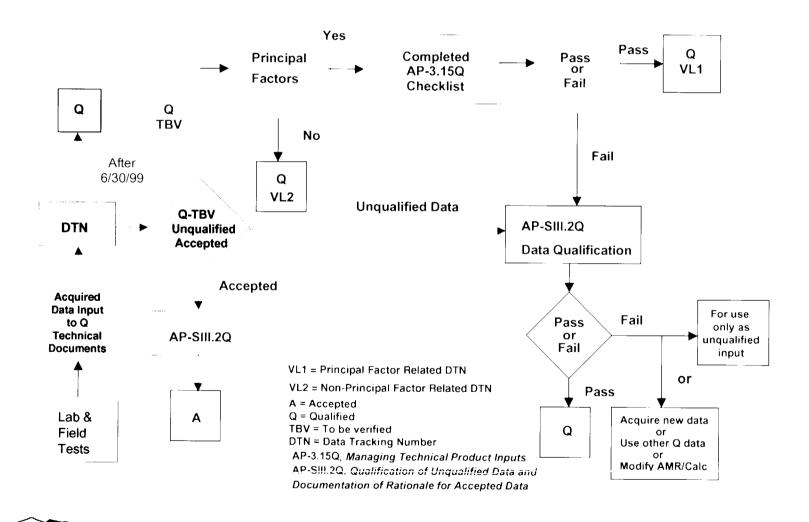
- Developed: Data that has been refined by analysis, reduction or interpretation
- Legacy: Data acquired or developed before the new Process Validation and Reengineering (PVAR) procedures were implemented on June 30, 1999
- Qualified: Data acquired or developed under an approved Quality Assurance (QA) program meeting the requirements of 10 CFR 60, Subpart G; or which have undergone a qualification process
- Unqualified: Data not acquired or developed in accordance with an approved QA program that meets 10 CFR 60, Subpart G and do not meet the definition of accepted data

## Data Terminology (continued)

- Qualified/Verification Level 1: Qualified data that have been processed through the Administrative Procedure (AP)-3.15Q (Managing Technical Product Inputs) Data Confirmation Checklist. Supports Principal Factors
- Qualified/Verification Level 2: Qualified data that were obtained using procedures in effect prior to June 30, 1999 and have not been confirmed using the Data Confirmation Checklist process. Supports factors that are not critical to the safety case argument

#### **Data Origination & Classification Process**



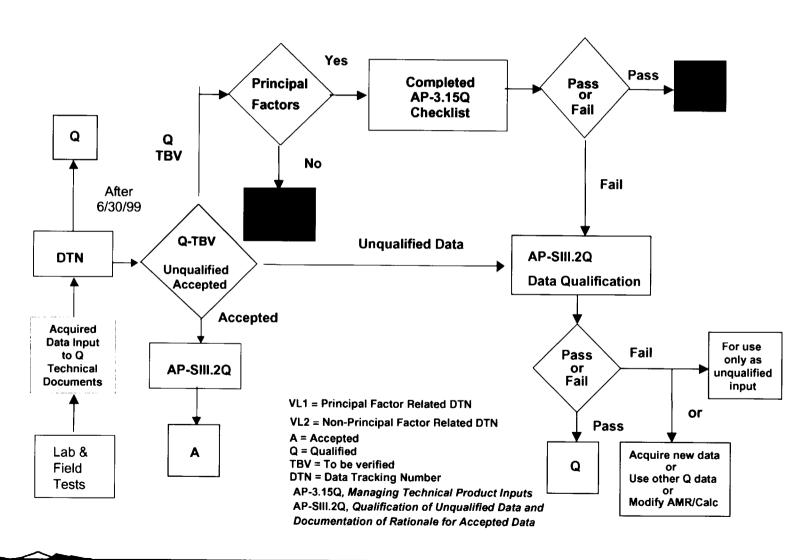


### Data Prioritizing/Grading

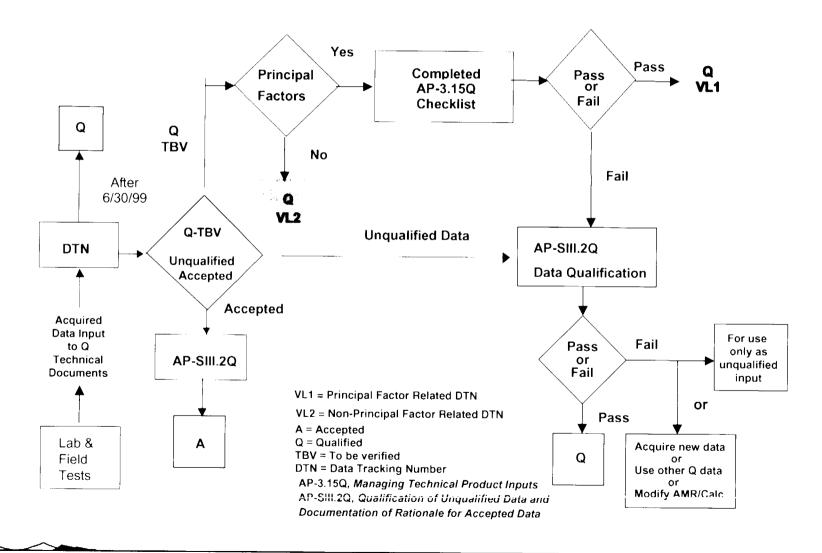
- Map Analysis Model Reports (AMRs) and Process Model Reports (PMRs) as defined in AP-3.15Q grading criteria
- Screen Principal Factors that support AMRs
- Screen AMR inputs for effect on conclusions
- Assign Verification Level (VL) 1 or 2 designation
- Verify VL-1 data and document on AP-3.15Q Data
   Confirmation Checklist if data used in Principal Factor
- Data used in non-Principal Factors are qualified, but Data Confirmation Checklists will not be applied
- Unqualified data supporting principal factors, or other factors, must be qualified in accordance with AP-SIII.2Q (Qualification of Unqualified Data and the Documentation of Rationale for Accepted Data)

## **Data Verification Process**

#### **Data Verification Process**



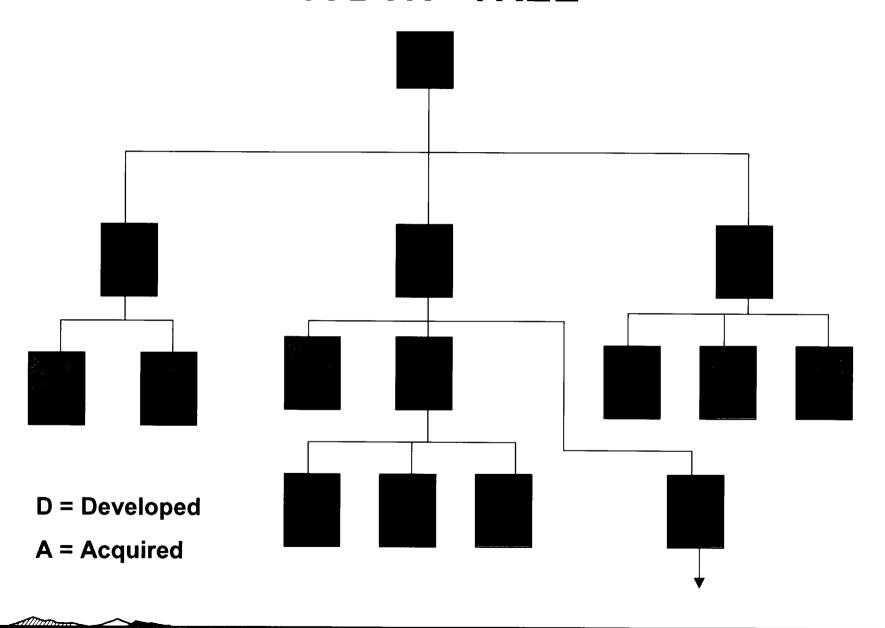
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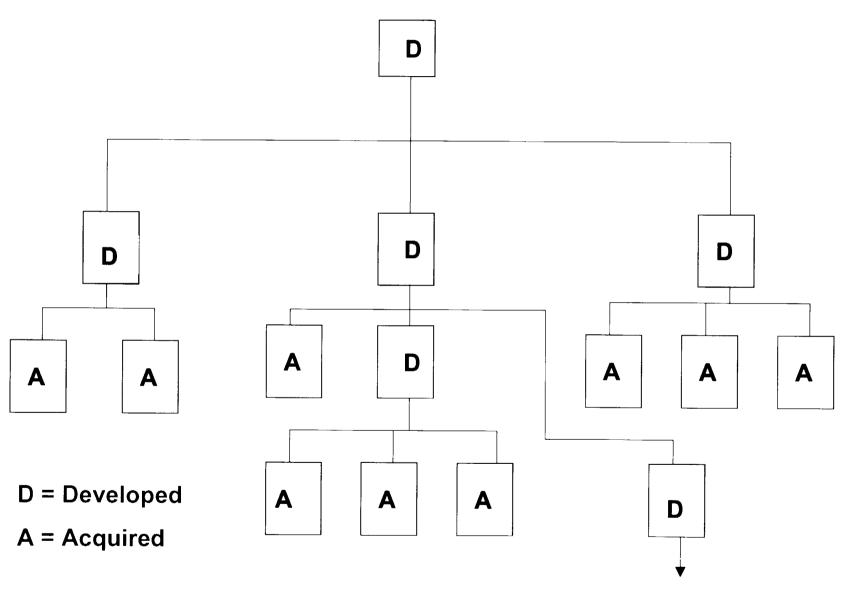


#### **Identification of Data**

- AMR/PMR Leads are responsible for identifying and grading data requiring verification and qualification on the Document Input Reference System (DIRS)
  - Early identification of DTNs is essential for schedule success
- AP-3.15Q controls the manner in which DTNs are identified, graded and used
- A DTN may be used many times as a source DTN
- A DTN may be used as either input to AMRs or as a source DTN

#### A DTN "TREE"





## Steps of the Data Verification Process

- Data verification planning is controlled by a generic AP-2.21Q (Quality Determinations and Planning for Scientific, Engineering, and Regulatory and Regulatory Compliance Activities) Technical Work Plan
- Identify data requiring verification on DIRS
- Prepare Checklist per AP-3.15Q, Managing Technical Product Inputs
- Prepare Records Roadmap
- Remove TBV (as applicable)
- Prepare and submit Records Package

## **Checklist Preparation**

- Checklist is required for data generated prior to June 30, 1999 if used as input to AMRs as Principal Factors
- Primary purpose is to provide defensibility for data used to support Principal Factor arguments
- Responses to each item should be in text form and adequate to address the issue
- The response will rely on the content of cited records to demonstrate compliance with procedural requirements
- The text of the response should tie the various records together to explain the data collection/reduction process
- References to records should be by reference to accession number or by cross-reference to the records road map
- If an issue is identified, a review of the impact of that issue on data quality should be included in the response or attached to the checklist

## **Completion of Verification Process**

- Data Confirmation Checklist is reviewed and approved by Responsible Manager
- Technical Work Plan require review by Data/Software Qualification Department (DSQD) on all M&O verification packages prior to Responsible Manager removal of TBV
  - Provides consistency across entire Project
- Responsible Manager notifies the TBV/To Be Determined (TBD) Administrator, by memorandum, of DTN resolution
- If Verification was successful, Responsible Manager requests update of the TBV/TBD designator
- TBV/TBD Administrator requests the Automated Technical Data Tracking (ATDT) Administrator to change the TBV status

#### Records Roadmap

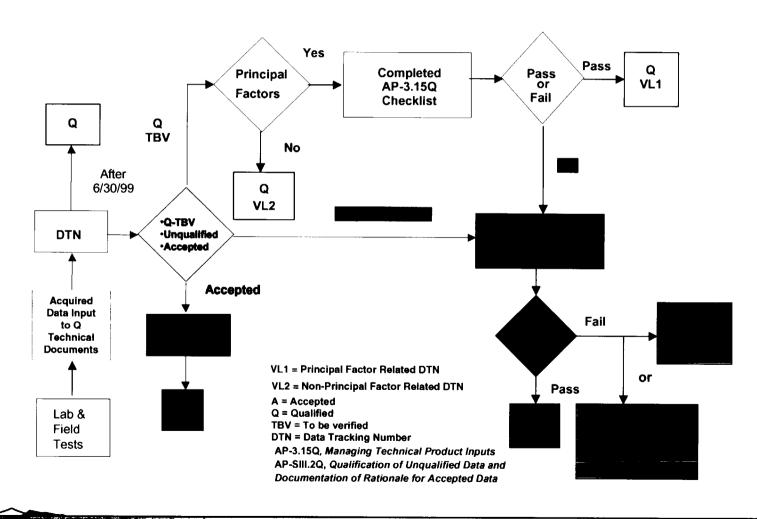
- The records roadmap is a summary listing of all the records identified or referenced on the Data Confirmation Checklist
- Road map entries should be consistent with the actual record in Record Information System (RISWeb). That is, record titles, Records Processing Center (RPC) record types, page counts, etc., should match what is specified in the records system

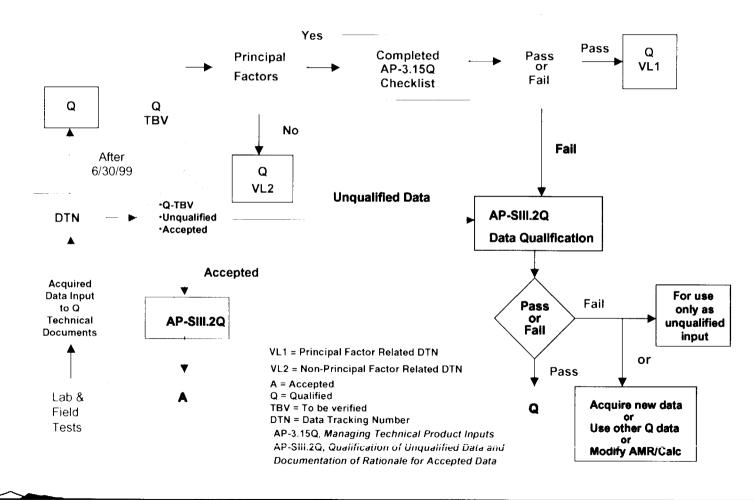
#### **Data Verification Records**

- DIRS reports become part of the technical product records package
- The following items are sent to the RPC
  - Data Confirmation Checklist
  - Records Roadmap
  - Resolution Request Interoffice Correspondence (IOC)
  - Memorandum of TBV/TBD closure

# **Data Qualification Process**

### **Data Qualification Process**





# **Steps of the Data Qualification Process**

- Identify/prioritize data requiring qualification
- Group data by similar characteristics
- Prepare a specific AP-2.21Q Technical Work Plan for each qualification package
- Prepare recommendation on method, etc. for U.S.
   Department of Energy (DOE) Assistant Manager,
   Office of Project Execution (AMOPE) concurrence if DTN supports Principal Factors
- Conduct qualification task
- Prepare Data Qualification Report
- Review and approve Data Qualification Report
- Submit report to AMOPE for concurrence (VL-1 only)
- Designate Data as Qualified, Remove TBV/TBD
- Prepare and submit records package

#### **Conduct Data Qualification Task**

- Data qualification must be performed in accordance with the approved AP-2.21Q Technical Work Plan
- Methods used for qualification activities are:
  - Equivalent QA program
  - Corroborating data
  - Confirmatory testing
  - Peer Review
  - Technical assessment
- Document the results of the data qualification task in a Data Qualification Report

# **Data Qualification Report**

#### Contents:

- Executive summary
- Scope of task
- Data sets qualified
- Expertise of team
- Methods of qualification and rationale
- Documentation of technical reviews
- Evaluation criteria
- Recommendation criteria
- Data generated by evaluation
- Evaluation results
- Recommendation for/against changing qualification status
- Identification of any supporting information
- Reference to Development Plan

# **Review and Approve Report**

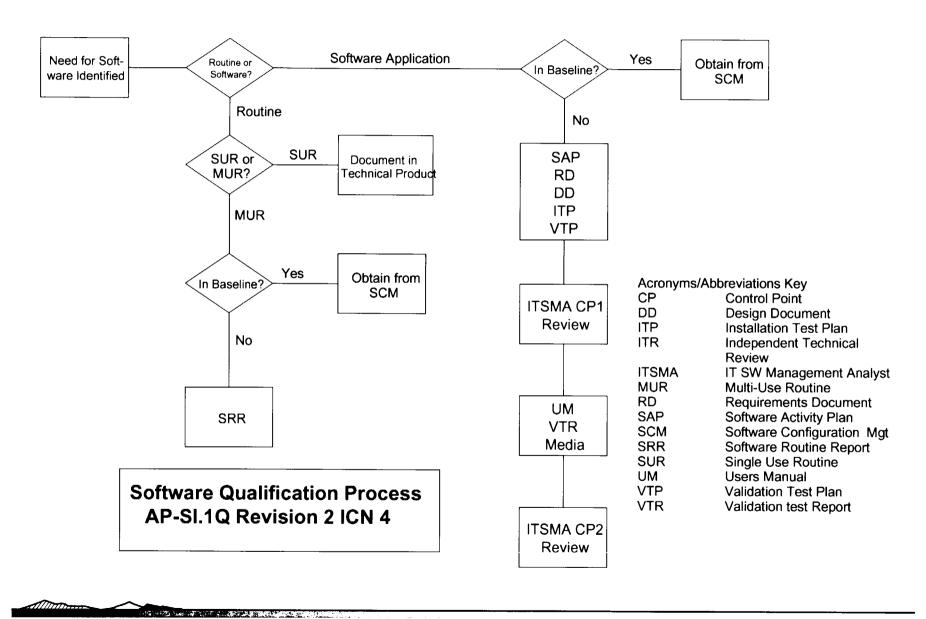
- Review report in accordance with AP-2.14Q (Review of Technical Products and Data)
  - TDMS Data Qualification Oversight Point of Contact
     (POC) must be a reviewer
  - OQA must be a reviewer
- Approve by Responsible Manager
- Submit report to TDMS Data Qualification Oversight POC
- Submit report to AMOPE for concurrence (VL-1 only)

#### **TBV Removal & Records**

- Notify ATDT Database Administrator of
  - Change in status of data
  - Accession number of qualification records package
  - DTNs
  - Method of qualification
- Submit data qualification records package
  - AMOPE concurrence/rejection of recommendation
  - Approved Data Qualification Package
  - Data Qualification Report
  - Report review documentation
  - Documentation of acceptance/rejection of qualification report

# **Software Qualification Process**

#### **Software Qualification Process**



# Steps of the Software Qualification Process

- The software qualification process is performed to qualify software used in quality-affecting products of the M&O and USGS
- Teams comprised of members from Software
   Configuration Management (Information Technology),
   Software Qualification Group (DSQD) and Technical
   Product authors (M&O, Labs, USGS) perform the
   qualification work
- Revision of AP-SI.1Q, (Software Management) is in process to streamline the procedure and incorporate QA grading

# **Software Deficiency Reports**

- DSQD software qualification personnel are managing the work associated with the resolution of Deficiency Reports (DR) generated due to issues with documentation and operational problems
  - DR LVMO-00-D-039 cites inaccurate documentation and validation of software routines and macros by developers
    - Commercial software used without identification of specific use
    - Developed software not adequately documented
  - DR LVMO-00-D-099 cites software codes submitted to configuration management which could not be installed and run
    - Typical installation problems include lack of supporting installation files, compiler errors and lack of adequate installation instructions
- Corrective Actions and resolution of both DRs is projected to take until March 30, 2001

# **Summary**

# **Technical Exchange Summary**

- Provided background for the data program development, including definitions of terms and acronyms
- Provided an overview of the data verification/qualification and software qualification process
- Demonstrated how the data verification/qualification and software qualification processes resolve the issues of traceability and reproducibility to ensure defensible, regulatory compliant documents are produced

# **Backup Information**

	OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT								A. Name: Phone:		
1. D	1. Document Identifier No./Rev.: Change: Title:										
	Input Document	,						8. TBV Due To			
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instry	ctions	i								
Detaile requir	ed ins ed inf	tructions are pro ormation on the I	vided at the end Record Road Ma	l of this attachm p.	ent. Note: If a	a question asi	s for identification	on of a recor	d(s), e	nter the
1.	Α.	Data-identify source DTN, where applicable, and identify records containing raw data (i.e., electronic data files) an formatted for presentation. Check that data files and formatted data are readily traceable and interpretable, includes the records to the TDNS and between related records in the records package (e.g., explanation of file in conventions, header rows adequately defined, etc.)						neludina		
	В	identify the reco were used to red	rds documenting fuce or analyze th	any calculations e data.	or data reducti	ion (e.g., sprea	dsheet calculation	ns or hand ca	lculatio	ons) that
2.	Pro	curement Were o	alibration or anal	ytical services pro	ocured? If Yes,		-			
	<b>A</b> .	Identify the proc procurement pro	curement docume cess.	ent (subcontract/r	memorandum p	ourchase order	/purchase order)	that describe	s the	specific
	В.	Identify the suppl	lier submittal (calil	bration certificatio	ns, certificates	of analysis, etc	.) specific to the p	rocurement(s)	) identi	fied.
	C.	Submit the inform with LP-16.1Q-C Information.	nation identified in CRWM, <i>Review</i>	Paragraphs 2 A of Procurement	and 2.B to the Records for	Office of Qualit Use <i>in th</i> e Ve	y Assurance (OQ) rification Confirm	A) to evaluate ation of Data	inacc or T	ordance echnical
		CALIBRATION (C	Complete after rec	ceipt of OQA revie	ew results)					
	D.	Identify the recon		of the measuring	and test equip	oment is docum	ented. Do the red	cords support	the ca	libration
	Ε.	If evidence (recordata significantly	rds) documenting affected? Explain	the procurement	t of calibration :	services canno	t be identified or l	located, is the	qualit	y of the
		ANALYTICAL SE review results)	ERVICES, INCLU	DING DATA AC	QUISITION/DE	VELOPMENT	SERVICES (Com	nplete after re	ceipt	of OQA
	F.	Identify objective (e.g., vendor audi	evidence (record its, technical revie	s) that the perfo ws, and/or accep	mance of the tance of deliver	analytical servi rable required b	ces adhered to g by contract/work a	enerally acce greement).	pted p	ractices
	G.	If evidence (recormissing or inadeq	ds) of adequate p juate, provide a st	procurement servi atement explaining	ces (analytical ng the impact to	services, includ the data. Exp	ling data acquisitio	on/developme	nt serv	/ices) is

### OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

		ATION CHECKLIST	QA: QA		
		(conti	inued)	Page:	of:
3.	<b>Soft</b> othe	ware—Were software (including routines or macros) (a wise manipulate technical information? If Yes,	as defined in AP-SI.1Q, Software Management) used t	o gather, o	onvert, or
	A.	Identify the software version, title, and unique identif software tracking number.	ier (if available). Is the software on the current softwar	e baseline?	? Identify
	OR B.	Address in accordance with AP-SI.1Q.			
Comm	nents o	Other Information:			
Check	dist Co	mpleted By: (Printed Name)	Signature:	Date:	
Revie	wed fo	adequacy, including identification of objective eviden	ce:		
Respo	nsible	Manager: (Printed Name)	Signature:	Date:	

# OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT DATA CONFIRMATION CHECKLIST

(continued)

QA: QA

Page: of:

#### **RECORD ROAD MAP - TEMPLATE**

Record Accession Number	Record Title	Document Type(s)	Record Type(s)*	Contents of Record (use pagination of RISweb to reference a specific record page
				_

<sup>\*</sup> Only data, procurement or software record types must be listed if identified in the checklist. Other types may be listed as applicable to the checklist response.

# **December PMR Data and Software Status**

PMR	% Data Qualified	% Data Verified	% Software Qualified
Biosphere			
Disruptive Events			
EBS			
ISM			
Near Field			
SZ F&T			
UZ F&T			
Waste Form			
Waste Package			
December 22, 2000	80	90	80
Goals			

Data status as of 12/22/2000 Software status as of 12/22/2000

Green = Meets or above December 22, 2000 Goal

Yellow = Below December 22, 2000 Goal

# 

PMR	% Data Qualified	% Data Verified	% Software Qualified
Biosphere	89	100	92
Disruptive Events	92	100	100
EBS	84	97	96
ISM	85	100	100
Near Field	87	100	100
SZ F&T	81	100	89
UZ F&T	81	93	98
Waste Form	87	91	100
Waste Package	90	93	100
December 22, 2000 Goals	80	90	80

Data status as of 12/22/2000 Software status as of 12/22/2000

Green – Meets or above December 22, 2000 Goal Yellow Below December 22, 2000 Goal