



CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES  
QUALITY ASSURANCE  
SURVEILLANCE REPORT

57/83

PROJECT NO.: 20.01402.159

REPORT NO.: 2001-01

PAGE 1 OF 16

**SURVEILLANCE SCOPE:** To determine if quality assurance record folders in the CNWRA Records Room have electronic media (diskette, CD, etc.) as backup for the hard copy version.

**REFERENCE DOCUMENTS:** QAP-004, Surveillance Control Procedure; QAP-012, Quality Assurance Records Control; QAP-002, Review of CNWRA Documents, Reports and Papers.

**STARTING DATE:** December 21, 2000

**ENDING DATE:** August 13, 2001

**QA REPRESENTATIVE:** Bruce Mabrito

**PERSONS CONDUCTING TEST/EXAM/ACTIVITY:**

None. QA records were reviewed in the QA Records Room by B. Mabrito.

**SATISFACTORY FINDINGS:** This surveillance was specifically asked for by CNWRA management to generally determine how many of the QA folders do not have electronic media by doing a sampling surveillance. This surveillance was conducted inside the CNWRA QA Records Room A140, from late December 2000 through early August 2001. The purpose was to determine whether appropriate electronic media were present in the final QA records folder. It should be noted that in the case of small documents, such as abstracts, short reports, proposals, and internal research & development papers, there is no attempt to capture an electronic version of the document. However, in the case of large major and intermediate level deliverables, an electronic media copy is requested. Two surveillance methods were used. First, surveillance was accomplished by randomly opening various drawers and then checking QA record folders to assure they contained the electronic media. The second approach was by selecting certain documents from the database list and checking random folders to see if it contained the electronic media. The selected QA record folders were from a printed list of QA records with the subject code "301" (technical reports) and "302" (papers and presentation materials) dated from 1/1/2000 through 11/30/2000. Folders checked are identified on the printed ELF database list (see list attached to the original surveillance report).

Based on the surveillance of QA record folders, well over 95% of the folders held the electronic media desired for major and intermediate milestones since the beginning of the year 2000. Many other QA Record folders in earlier years also have CDs of the electronic text because of a special electronic copying program in 1999 that CNWRA QA requested.

It should be noted that there is no current requirement in either QAP-002 or QAP-012 that electronic media be included in the QA records folder. Part of the reason is because it was anticipated early in the CNWRA HLW program that "scanning of documents" would take place (as in the case of manual scientific notebooks) as electronic images were to be entered into the Licensing Support System (now called the Licensing Support Network).

**UNSATISFACTORY FINDINGS:** None.

**NONCONFORMANCE REPORT NO.:** None.

**ATTACHMENT:** Database printout information of CNWRA "301, Technical Reports," and "302, Papers and Presentation Materials."

**RECOMMENDATIONS/ACTIONS:** From the printed database list, there were four folders that did not have electronic media contained in them. Folders for: Q200004130001, Tracking the Volcanic Plume of Mt. Erebus, Antarctica Using an Unmanned Aerial Vehicle (large proposal); Q200005230004, Cation-Exchange Properties of Natural Zeolites (professional paper presentation); Q200007100004, Calculating Risk from Future Basaltic Volcanic Eruptions of the Proposed YM Repository Site, NV (professional paper); and Q200007170001, Polygenetic Secondary Calcite Mineralization in YM, NV (professional paper abstract) did not contain a CD or diskette.

Based on LSN requirements, the CNWRA should consider adding an electronic media requirement to QAP-012.

**APPROVED:**   
CENTER DIRECTOR OF QUALITY ASSURANCE

**DATE:** 8/15/2001

**DISTRIBUTION:** ORIGINAL - CENTER QA DIRECTOR / QA Records

ORIGINATOR B. Mabrito  
PRINCIPAL SCIENTISTS (N/A)  
ALL ELEMENT MANAGERS  
B. Sagar, H. Garcia  
M. Ehnstrom

Surveillance Information

Abstracts do not have CDs or diskettes - those being prepared to accompany progress, etc.

Q200001100001	01/04/2000	CDF Sensitivity Analysis Technique for Ranking Influential Parameters in the Performance Assessment of the Proposed High-Level Waste Repository at Yucca Mountain, Nevada.
	<i>1 CD - OK ✓</i>	
Q200001180001	01/07/2000	CNWRA 98-005/NUREG/CR-6666: Survey of Solidification Process Technologies. Note: in press
Q200001130002	01/10/2000	Subsurface Applications of Scaling Models: Experiences and Challenges
Q200001130003	01/12/2000	MULTIFLO User's Manual MULTIFLO Version 1.2, Rev. 2. Chg. 0
Q200001100002	01/04/2000	An Abstracted Model Assessing the Effect of Seismically Induced Rockfall on the Waste Package Performance for High-Level Radioactive Waste Disposal
Q200001100003	01/04/2000	Capability Demonstration of a Performance Assessment Review Tool for the Proposed High-Level Radioactive Waste Repository at Yucca Mountain, NV, USA
		<i>Customize paper = no CD ✓</i>
Q200001170004	01/13/2000	Passive Dissolution and Localized Corrosion of Alloy 22 High-Level Waste Container Weldments
Q200002010001	01/28/2000	Operations Plan for Technical Assistance to the Spent Fuel Project Office on NWPRA-Related Projects
Q200002010002	01/24/2000	IM 01408.001& 002.010: Preliminary Comments and Questions on the SKB SR-97 Post-Closure Safety Report - Letter Report
Q200002010003	01/25/2000	Second Progress Report on Studies of Tectonic Setting, Fault Geometry, and Structural Analog Models for Evaluation of Petroleum Traps
Q200001180005	01/17/2000	Adaptation of the Existing Raman Spectrometer for In-situ Real-Time Composition Analysis of Gaseous Bubbles in Glass Melts - Final Report on the Quick-Look Internal Research Project
Q200002010004	01/28/2000	PREDECISIONAL: Review of Topical Report on HI-STAR 100 and HI-STORM 100 System Deployment at High ZPA ISFSI Sites (HOLTEC Report No: HI-982004): Round 2 Request for Additional Information
		<i>1 diskette</i>
Q200002010005	01/27/2000	PROPRIETARY: PRETREAT: A Spreadsheet-Based Mass-Balance Model for Hanford Tank Waste Remediation System Pretreatment Processes
Q200002010006	01/31/2000	Building Confidence in U.S. Nuclear Regulatory Commission Quantitative Safety Assessment Methods: External Peer Review of the Total-System Performance Assessment Version 3.2 Code
		<i>1 CD OK</i>
Q200002010007	01/27/2000	PREDECISIONAL: Yucca Mountain Review Plan - Section 4.2-Repository Safety After Permanent Closure Rev. 0

2001-01 ✓  
2000-19  
Surveillance  
- Rpt -

- Q200002070004 02/03/2000 CNWRA Operations Plans for the Repository Program
- Q200002070008 02/01/2000 Molecular Simulation of Uranium(6+) Adsorption on Quartz Surfaces
- Q200002070009 02/03/2000 Input to Safety Evaluation Report on Disposal Criticality Analysis Methodology Topical Report
- ✓ Q200002070010 02/01/2000 Development of a Risk-Informed and Performance-Based Review Plan for a Potential Repository at Yucca Mountain  
1 CD OK
- Q200002160001 02/14/2000 PREDECISIONAL: Assessment Report of Dry Transfer System Topical Safety Analysis Report Final Report
- C200002160002 02/14/2000 Input to Observation Audit Report OAR-00-04, Unsaturated Zone Flow & Transport PMR
- Q200002160003 02/14/2000 Input to Observation Audit Report OAR-00-04, on Unsaturated Zone Flow and Transport. Report for Nuclear Regulatory Commission.
- Q200002160004 02/15/2000 Successful Eruption Forecasting Before Unrest at Cerro Negro Volcano, Nicaragua
- ✓ Q200002280001 02/25/2000 Proposal for Technical Assistance for Reviewing Fee-Recoverable Uranium Recovery Licensing Caseload and Development of Non Fee-Recoverable Program Guidance Documents Technical and Management  
1 CD OK
- Q200002280002 02/16/2000 Classification of Process Systems Used in the Tank Waste Remediation System-Privatization Design - DRAFT
- ✓ Q200002280003 02/08/2000 Fractal Pattern Characterization of Acoustic Emissions for Continuous Damage Assessment of Reinforced Concrete Structures  
2 CDs - entire report OK 2 counts
- Q200002280004 11/20/2000 A discrete-fracture boundary integral model for unsaturated flow in a fractured porous medium  
conference paper - no CD
- Q200002280005 02/11/2000 CNWRA Comments on BNFL Inc. Report with Risk Risk Goals and Project Reliability Database, BNFL RPT-W375-SA00006

Q200002280006 02/04/2000 PRETREAT: A Graphical User Interface-Based Spreadsheet Model for Hanford Tank Waste Pretreatment Processes  
conference paper - no CD

✓ Q200002280007 02/09/2000 Development of an Integrated System Computer Code for Reviewing the Performance Assessment of the Proposed High-Level Radioactive Waste Repository at Yucca Mountain  
1 CD - describes TPA work

Q200002280011 02/17/2000 Review of Permeability Estimates Obtained From the Yucca Mountain Project. Letter Report.

Q200002280012 02/17/2000 External Peer Review of the Total-System Performance Assessment Version 3.2 Code. CNWRA 2000-01.

✓ Q200002280013 02/14/2000 Modeling Drift Stability in Fractured Rock Mass at Yucca Mountain, Nevada  
1 CD ✓

Q20002290003 1 CD ✓ Straw distribution and the Tectonic Setting ✓ OK  
TO GSA

- Q200002280014 02/18/2000 PVHA\_YM Version 1.0 - Probabilistic Volcanic Hazard Assessment Methods for a Proposed High-Level Radioactive Waste Repository at Yucca Mountain Nevada. CNWRA 2000-02.
- C200002290027 02/04/2000 Programmatic Review of Abstract, "Radionuclide Transport and Retardation in the Alluvial Aquifer Near Yucca Mountain, NV," by S. Painter and D. Turner
- Q200002290001 02/04/2000 Radionuclide Transport and Retardation in the Alluvial Aquifer Near Yucca Mountain, Nevada  
*NO CD - Groundwater 2000 Conference paper ✓*
- Q200002290002 02/20/2000 The Effects of Design on Coupled Thermal-Hydrologic-Chemical Effects on Radionuclide
- Q200003010002 02/01/2000 Studies of Tectonic Setting, Fault Geometry, and Structural Analog Models for Evaluation of Petroleum Traps
- Q200003010003 02/23/2000 Acoustic Emission as an Indicator of Microfailure Rock  
*1 CD Note: letter w/paper To symposium ✓*
- Q200003020001 02/11/2000 Effect of Heterogeneity on Radionuclide Retardation in the Alluvial Aquifer near Yucca Mountain, Nevada  
*1 CD Groundwater Journal/Conference ✓*
- Q200003100001 02/11/2000 Operations Plan for Assistance on International Peer Review of Swedish Nuclear Fuel and Waste Management Company Safety Report 97
- Q200003100002 03/08/2000 Input to Observation Audit Report OAR-00-06, Engineered Barrier System Process Model Report
- Q200003100003 03/02/2000 Information and Analyses to Support the Nuclear Regulatory Commission on Proposed 10 CFR Part 63.
- Q200003160001 03/15/2000 Effects of Design on Coupled Thermal-Hydrologic-Chemical Effects on Environment for Radionuclide Release
- Q200003170002 03/14/2000 Receptor Characteristics and Parameter  
Note:
- Q200003230002 03/16/2000 Modeling of Spatial Inhomogeneities Using Multi-Scale Random Fields
- Q200003230004 03/14/2000 Power-law Velocity Fluctuations in Networks of Rock Fractures: Numerical Evidence and Consequences for Contaminant Transport  
*AGU meeting OK ✓*
- Q200003230005 03/14/2000 Modeling of Spatial Inhomogeneities using Multi-Scale Random Fields  
*Conference paper ✓*  
Note: Abstract to be presented at the Eighth ASCE Joint Specialty Conference
- Q200003230006 03/13/2000 What Can U-Series Measurements Tell Us About Radionuclide Mobilization and Migration in a Low-Flux High-U Setting?  
*conference paper ✓*  
Note: Abstract to be presented at the Eighth ASCE Joint Specialty Conference
- Q200003230007 02/15/2000 A Proposal for Statistical Characterization of Multiple-Fracture  
*1 CD this CD ✓*

Transport Pathways in Crystalline Rock  
Note: Abstract to be presented at the Eighth ASCE Joint  
Specialty Conference

- Q200004070002 04/03/2000 Proposal for Task Order No. 07 under Contract No. NRC-02-97-001, Technical Assistance for Reviewing Licensee Submittals Concerning Decommissioning "Re-evaluation of the Indoor Resuspension Factor for the Screening Analysis of the Building Occupancy Scenario for the NRC's License Termination Rule"  
*Hours CD ✓*  
Note: letter only
- Q200003240001 03/03/2000 Analysis of Niche Studies and Development of Bases for Total-System Performance Assessment Seepage Parameters.
- Q200003270001 03/21/2000 SwRI Proposal No. 20-28584: A Proposal for Investigation of Geological and Rock Mechanical Characteristics of the Braken Bat Cave, Comal County, Texas
- Q200004070003 04/07/2000 Effect of Environmental and Electrochemical Factors on the Localized Corrosion of Zircaloy-4.
- Q200003270002 03/24/2000 Estimation of Volcanic Hazards Related to Tephra Fallout  
*Hours CD ✓*
- Q200003300001 03/24/2000 Numerical Modeling of Large Underground Caverns for Hydro Power Projects  
*Hours CD ✓*
- Q200003300002 03/29/2000 PROPRIETARY Draft: Ultrafiltration in Low-Activity and High-Level Waste Processes: A Critical Review  
Note: Letter only
- C200003300004 01/27/2000 Present-day motion of the Sierra Nevada block and some tectonic implications for the Basin and Range province, North American Cordillera
- Q200003300003 01/27/2000 Present-day motion of the Sierra Nevada block and some tectonic implications for the Basin and Range province, North American Cordillera
- Q200004120002 04/12/2000 Staff Comments on the BNFL Inc. March 2000 Topical Report on LAW/HLW Melter and Offgas Systems. Letter Report.  
Note: RPT-W375-SA00009, Presentations at the March 2000 Topical Meeting
- Q200004040003 03/31/2000 Proposal 20.28465: Experiments and field investigations to model normal faulting in carbonate strata above salt structures: Analogs for Arabian Gulf Oil Fields  
Note: letter only  
*Hours CD ✓*
- Q200004050001 03/28/2000 NRC Staff's Position With Respect to Utah Contention L: Geotechnical
- Q200004130001 03/31/2000 Tracking the Volcanic Plume of Mount Erebus, Antarctica using an Unmanned Aerial Vehicle  
*NO CD - large proposal - not able*
- Q200004130002 04/06/2000 Review of Porosity Distributions in the Yucca Mountain. Letter Report.

- Q200004130005 04/11/2000 Effects of Design on Coupled Thermal-Hydrologic-Chemical Effects on the Waste Package Environment  
Note: letter only
- Q200004190002 04/18/2000 Proposal No. 20-22307 for Technical Assistance for Reviewing Fee-Recoverable Uranium Recovery Licensing Caseload and Development of Non Fee-Recoverable Program Guidance Documents Uranium Recovery Proposal: Add Task Order 10  
*Has CD ✓*
- Q200004190003 04/18/2000 Proposal No. 20-22307 for Technical Assistance for Reviewing Fee-Recoverable Uranium Recovery Licensing Caseload and Development of Non Fee-Recoverable Program Guidance Documents Uranium Recovery Proposal: Add Task Order 09  
*Has CD ✓*
- Q200004200001 04/07/2000 Proposal for Scientific Review of Integrated Hydrologic Model  
*Has CD ✓*
- Q200004200002 04/17/2000 Review of the Draft NUREG entitled, Re-Evaluation of the indoor Resuspension Factor for the Screening Analysis of the Building Occupancy Scenario for Nuclear Regulatory Commission License Termination Rule.
- Q200004280001 04/27/2000 Draft Private Fuel Storage Facility Safety Evaluation Report Input
- Q200004280002 04/26/2000 Geomechanical and Thermal Effects on Moisture Flow at the Proposed Yucca Mountain Nuclear Waste Repository  
*Has CD ✓*
- Q200004280005 04/24/2000 Effects of Environmental Factors and Potential on Stress Corrosion Cracking of Fe-Ni-Cr-Mo Alloys in Chloride Solutions.  
*Has CD ✓*
- Q200004280006 04/21/2000 Request for additional information for Erosion Model Proposed by the U.S. Department of Energy for the West Valley Site
- Q20000428000704/20/2000 Assessment of Seismically Induced Rockfall in the Emplacement Drifts of the Proposed Repository at Yucca Mountain-Progress Report
- Q200004280008 04/01/2000 PREDECISIONAL: Total-System Performance Assessment (TPA) Version 4.0 Code: Modules Descriptions and Users Guide
- Q200005040005 05/03/2000 Effects of Design on Coupled Thermal-Hydrologic-Chemical Effects on Seepage and Flow - Letter Report IRSR
- Q200005040004 05/01/2000 Particle-Based and Distinct-Element Techniques for Estimating the Damaged Zone Around Boreholes - Preproposal  
*NO CD*  
*preproposal overhead ✓*  
*Proposal*
- Q200005110001 04/12/2000 Flexible Scaling Model for use in Random Field Simulation of Hydraulic Conductivity  
Note: Letter only  
*IR&D work*  
*presentation*  
*NO CD*  
*IR&D*
- Q200005150003 04/21/2000 Stochastic Modeling of Large and Complex Systems Using Neural Networks  
*proposal*  
*NO CD*

- Q200005150004 05/01/2000 Pneumatic Permeability Tomography of Dry Fractured Rock  
*NO CD - Proposal - short ✓*
- Q200005150005 05/01/2000 An Integrated Geophysical Approach to Subsurface Imaging  
*NO CD - Proposal - New NRC work*
- Q200005150006 05/01/2000 A General Purpose Integrated Performance Assessment Framework for Complex Systems  
*NO CD - ~~File~~ Proposal - ✓*
- Q200005150007 05/01/2000 Kinetic Models for Transport in Fractured Rock  
*NO CD - ~~File~~ Proposal ✓*
- Q200005150008 04/26/2000 Fracture Film Flow in the Unsaturated Zone: A Porous Matrix Bypass Mechanism  
*NO CD - ~~File~~ Proposal ✓*
- Q200005150009 05/08/2000 Structural geology of the Tompire Bay outcrops, eastern Northern Range, Trinidad  
*Has CD ✓*
- Q200005150010 05/12/2000 Sensitivity Analysis of a Complex, Proposed Geologic Waste Disposal System Using the Fourier Amplitude Sensitivity Test Method  
*Has CD ✓*
- Q200005150011 05/08/2000 Structural Integrity Analysis of Metal-Ceramic Interfaces  
*NO CD - ~~File~~ Proposal ✓*
- Q200005150012 04/20/2000 Development of a Multi-Electrode Array Sensor for Monitoring Localized Corrosion  
*NO CD - ~~File~~ Proposal ✓*
- Q200005150014 05/04/2000 Failure Analysis of Type 316L Seawater and 304L Deslained Water Piping
- Q200005220001 05/19/2000 Staff Comments on BNFL Inc. Report on Waste Treatment Plant Chemical Hazards. Letter Report.  
Note: RPT-W375-SA-00010, Rev. 0
- Q200005220002 05/10/2000 Upper Split Wash Modeling in Support of Shallow Infiltration Estimates. CNWRA Letter Report.
- Q200005220003 05/11/2000 PROPRIETARY: Technical Review Report on Heat Exchanger Failures
- Q200005230003 05/19/2000 PROPRIETARY: Uptake of Sea Salts by Zeolites
- Q200005230004 05/11/2000 Cation-Exchange Properties of Natural Zeolites  
*NO CD - NRC work Professional Paper*
- Q200006010003 05/25/2000 IRSR KTI: Thermal Effects on Flow Issue Resolution Status
- Q200006010004 05/30/2000 Internal Research and Development Proposal No. 20.29138: Development of a Multi-Electrode Array Sensor for Monitoring Localized Corrosion
- Q200006010005 05/31/2000 Internal Research and Development Proposal No. 20.29172: Experimental and Modeling Study of Multicomponent Ion-Exchange Equilibria on Zeolite Minerals
- Q200006010006 05/26/2000 CNWRA Computer and Interface Requirements for FY20001
- Q200006010007 05/26/2000 Thermodynamic Modeling of the Adsorption of Radionuclides on Selected Minerals I: Cations  
Note: Prepared for submission to Geochimica et Cosmochimica Acta
- Q200006010008 06/10/2000 Internal Research and Development Proposal No. 20.29085: Structural Integrity Analysis of Metal-Ceramic Interfaces
- Q200006050002 05/30/2000 PREDECISIONAL: Review of Site Characteristics of Naval

Reactors Spent Fuel ISFSI Site at INEL: First Round Request  
for Additional Information - Draft Letter Report

64/33

Q200006050003	05/31/2000	Internal Research and Development Proposal No. 20.29111: Development and Integration of Volcanic Hazard Models into Geographic Information Systems
Q200005220004	07/24/2000	Quick Look IR & D Proposal Transient Electromagnetic Mapping and Monitoring of the Edwards Aquifer
Q200005220005	05/18/2000	Assessment of Mechanical Response of Drip Shields Under Repository Environment - Progress Report
Q200005230001	05/22/2000	Effect of Iron Chlorides on the Dissolution Behavior of Simulated High-Level Waste Glasses
Q200006050004	06/01/2000	Internal Research and Development Proposal No. 20.29141: Pneumatic Permeability Tomography of Dry Fractured Rock
Q200006050005	05/25/2000	Importance of Field-Scale Tracer Testing in Assessing the Performance of a High-Level Nuclear Waste Repository: A Regulatory Perspective
Q200006090006	06/09/2000	SUFLAT Version 1.0 Software Retirement
Q200006190001	06/16/2000	PREDECISIONAL: Input for an Environmental Assessment of the Proposed Decommissioning Plan for the MolyCorp, Inc. Facility in Washington, Pennsylvania
Q200006090001	06/01/2000	Internal Research and Development Proposal No. 20.29171: A General Purpose Integrated Performance Assessment Framework for Complex Systems
Q200006090002	06/01/2000	Internal Research and Development Proposal No. 20.29104: Java for Internet-Based Computing
Q200006090003	05/31/2000	Internal Research and Development Proposal No. 20.29110: A Hybrid Modeling Approach for Transport in Fractured Rock
Q200006090004	06/01/2000	Internal Research and Development Proposal No. 20.29099: Stochastic Modeling of Large and Complex Systems Using Neural Networks
Q200006090005	06/01/2000	Internal Research and Development Proposal No. 20.29086: Fracture Film Flow in the Unsaturated Zone: A Porous Matrix Bypass Mechanism
Q200006260001	06/22/2000	PREDECISIONAL: Issue Resolution Status Report, Key Technical Issue: Radionuclide Transport
Q200006260002	05/10/2000	Confidential: Request for Additional Information on the Naval Fuels Addendum to the Disposal Criticality Topical Report
Q200006260003	06/22/2000	Thermal-Mechanical Effects on Long-Term Hydrological Properties at the Proposed Yucca Mountain Nuclear Waste Repository. CNWRA 2000-03.
Q200006260004	04/28/2000	Pre-Proposal: Development and Integration of Volcanic Hazard Models into Geographic Information Systems Note: Letter only

NO CD

pre-proposal - pre-proposal ✓

- Q200006260006 06/23/2000 Effects of Environmental and Electrochemical Factors on the Localized Corrosion of Zircaloy-4. Note: Revised version  
*Has CD ✓*
- Q200005310001 05/12/2000 The Role of the Regulator in Development of Performance Assessment Methods, by Budhi Sagar
- Q200006160002 06/14/2000 Input to Unsaturated and Saturated Flow Under Isothermal Conditions Issue Resolution Status Report , Rev. 3
- Q200006160003 06/13/2000 Changes to the Operations Plan for Technical Assistance on Department of Energy Aluminum Based Spent Nuclear Fuels Disposition Program, Rev. 2, Chg. 0
- Q200006160004* 06/15/2000 Pre-Proposal for Development of Lava Flow and Ash Dispersion Models for Use in Hazard Assessments for the Island of Hawaii  
*Has CD ✓*
- Q200006260007 02/15/2000 TPA Version 4.0 Beta (Software Retirement) TSPA & Technical Integration Code
- Q200006290001 06/27/2000 PREDECISIONAL: Summary of Review of Topical Report on HI-STAR 100 and HI-STROM 100 System Deployment at High ZPA ISFSI Sites (Holtec Report No: HI-982004)
- Q200006290002 06/28/2000 Classification of Process Systems Used in the Tank Waste Remediation System-Privatization Design. Letter Report. (Proprietary).
- Q200007100001 06/14/2000 The Electrochemical Behavior of Lithium in Alkaline Aqueous Electrolytes: Part III, Impedance Model Note: Ph.D work; not funded by NRC  
*No CD ✓*  
*conference paper*
- Q200007100002 06/29/2000 PREDECISIONAL: Issue Resolution Status Report, Key Technical Issue: Container Life and Source Term, Revision 3
- Q200007100003 07/07/2000 Input to NRC Observation Audit Report, Saturated Zone & Flow Transport Process Model Report
- Q200007100004 07/06/2000 Calculating Risk from Future Basaltic Volcanic Eruptions of the Proposed Yucca Mountain Repository Site, Nevada  
*No CD - NRC ✓*  
*discovery AE professional paper*
- Q200007170001 07/11/2000 Polygenetic Secondary Calcite Mineralization in Yucca Mountain, NV  
*No CD - NRC ✓*  
*discovery AE professional paper abstract*
- Q200007170002 07/14/2000 Ultrafiltration in Low-Activity and High-Level Waste Processes: A Critical Review. Letter Report (Proprietary)
- Q200007170006 07/14/2000 Final Report: Nonclassical Stochastic Methods in Subsurface Modeling Final report for IR&D project 20.9117
- Q200010020001 09/01/2000 Improved Hydraulic Properties Model for the Edwards Aquifer: Phase 1 Memorandum
- Q200010050004 09/29/2000 Simulation of Earthquake Effects on Underground Excavations Using Discontinuous Deformation Analysis (DDA)
- Q200010050005 09/12/2000 Discontinuous Deformation Analysis (DDA) with n Order Polynomial Displacement Functions

- Q200010050006 09/29/2000 Hydrological Implications of Thermally Induced Geomechanical Response at Yucca Mountain, Nevada
- Q200010050007 10/02/2000 In-Situ of Chemistry and Corrosion Process Under Heat Transfer and Episodic Wetting Conditions
- Q200006010001 05/26/2000 Thermodynamic Modeling of the Adsorption of Radionuclides on Selected Minerals II: Anions  
Note: Prepared for submission to Geochimica et Cosmochimica Acta
- Q200006010002 05/24/2000 Effects of Environmental and Metallurgical Conditions on the Passive and Localized Dissolution of Ti-0.15Pd.
- Q200007130001 07/13/2000 Predecisional Scoping Report of Changes to Uranium Recovery Regulatory Guidance Documents (Draft)  
Note: Deliverable under Task Order 09 of NRC-02-98-002
- Q200007140001 06/13/2000 Issue Resolution Status Report: Key Technical Issue: Evolution of the Near-Field Environment
- Q200007190001 07/13/2000 Drift Stability and Ground Support Performance Under Thermal and Dynamic Load in Fractured Rock Mass at Yucca Mountain, Nevada. CNWRA 2000-04.
- Q200007200001 07/01/2000 Software Requirements Description for the Preclosure Safety Analysis (PCSA) Software  
Note:
- Q200007240001 07/20/2000 Local Structure of Uranium (VI) Sorbed on Clinoptilolite and Montmorillonite
- Q200007240002 07/14/2000 Software Requirements Description of a Graphical Post-Processor (GPP) for the Total-System Performance Assessment (TPA) Version 4.0 Code
- Q200007240003 07/19/2000 Preliminary Determination of the Effect of Calcite Growth Rate on Neptunium Uptake by Coprecipitation With Calcite
- Q200007240004 06/01/2000 IR & D No. 20.29142: Proposal for An Integrated Geophysical Approach to Subsurface Imaging
- Q200007260001 07/25/2000 PRETREAT: A Graphical User Interface-Based Spreadsheet Model for Hanford Tank Waste Pretreatments Processes
- Q200008020003 07/31/2000 A Performance Assessment Review Tool for the Proposed Radioactive Waste Repository at Yucca Mountain, Nevada, USA  
*Has CD ✓*
- Q200008020004 07/31/2000 An Abstracted Model for Assessing the Effect of Seismically Induced Rockfall on the Waste Package Performance for High-Level Radioactive Waste Disposal  
*Has CD ✓*
- Q200008090001 07/01/2000 IR & D Proposal #20.29192 for Structural Controls on the Edwards Aquifer Recharge Zone  
*Has CD ✓*  
Note: no hard copy enclosed, only 1 CD
- Q200008090002 08/01/2000 The Carrara Fault: The Northeastern Edge of the Walker Lane in South Central Nevada  
*Conference NO CD  
paper ✓*

- Q200008090003 07/31/2000 Experiences in Laboratory Studies on the Effects of  
*No CD* ✓ Biologging of Porous Media  
*Conference paper* Note: not NRC funded work
- Q200008090004 07/21/2000 Calibrating a 2-D Reactive Transport Model of Yucca  
*No CD* ✓ Mountain, NV, to Ambient Conditions: Implications for Uncertainty in  
*Conference paper* Thermally Perturbed Model Simulations
- Q200008090005 07/25/2000 Molecular Dynamics Simulation of the Uranyl Ion Near Quartz  
*No CD* ✓ Surface  
*Conference paper*
- Q200008090006 08/04/2000 Imaging an Active Normal Fault in Alluvium by High-Resolution  
*No CD -* Magnetic and Electromagnetic Surveys  
*NRC Deliverable - but presentation to Environmental and Engineering*  
*Geoscientists* ✓
- Q200007260002 07/25/2000 High-Level Waste Glass Dissolution in Simulated Internal  
Waste Package Environments
- Q200007260003 07/20/2000 Integration of fracture data into shallow infiltration models.
- Q200007260004 07/20/2000 A Modeling Study to Assess the Validity of a Steady-State  
Infiltration Boundary for the Site-Scale Unsaturated Zone Flow  
Model of Yucca Mountain, Nevada
- Q200008020006 07/27/2000 Total System Performance Assessment and Integration (TSPA  
KTI) Issue Resolution Status Report. Revision 3. Letter  
Report.
- Q200008110001 08/09/2000 Input to NRC Observation Audit Report, Near Field  
Environment Process Model Report
- Q200008110003 07/28/2000 Private Fuel Storage Facility Safety Evaluation Report Input -  
Letter Report
- Q200008290002 08/14/2000 Proposal No. 20-29718: Disbonded Coating Cathodic  
*Proposal - no CD* *Proposed* Protection Monitoring Coupon Proof-of-Concept
- Q200008290003 08/17/2000 Predecisional NRC Observation Audit Report, Total System  
Performance Assessment - Site Recommendation
- Q200008290004 08/25/2000 Review of the U.S. Department of Energy Evaluation of  
Thermal Performance Analysis and Dissolution Rates of Melt  
and Dilute Aluminum-Based Nuclear Spent Nuclear Fuel
- Q200008290005 08/24/2000 PRETREAT: A Spreadsheet-Based Mass-Balance Model for  
Hanford Tank Waste Remediation System (TWRS)  
Pretreatment Processes. Letter Report.
- Q200007260005 07/24/2000 Purchase Order: Preparation of Environmental Review  
Guidance
- Q200007260006 07/25/2000 PROPRIETARY Technical Review Report on Corrosion  
Induced Heat Exchanger Failures (Final). Letter Report.
- Q200007260007 07/25/2000 Prediction of Model Parameters for Zeolite Ion-Exchange  
Equilibria
- Q200007260008 07/25/2000 Apparatus for Elemental Analyses of Gold by Activation Using  
Neutron Source
- Q200008290007 06/27/2000 IRSR KTI: Repository Design and Thermal-Mechanical Effects

- Q200008290008 08/16/2000 NRC Request for Proposal for Modification No. 6 to Contract  
*Has CD ✓* NRC-02-98-007 (West Valley Proposal)  
Note: Ref. Meehan and Kalmbach Letter dated 7/27/2000
- Q200009060001 08/17/2000 Cask Tipover/Transporter Overturning (Part of Chapter 15, PFSF SER)
- Q200009060005 08/24/2000 Evaluation of the Drift-Scale Heater Test Thermal-Hydrological Conceptual Model Data, and U.S. Department of Energy Thermal Test Results-Status Report
- Q200009060006 08/30/2000 Process Hazards and Safety Issues for TWRS-P, Volume III: High-Level Waste Feed Makeup, Solidification, and Offgas Treatment. Letter Report. (Proprietary).
- Q200009060007 08/29/2000 Proposal for Technical Assistance in the Preparation and Review of Environmental Documents and Preparation of Environmental Review Guidance  
*Has CD ✓*  
Note: Request for Proposal No. RS-02-00-012 dated July 19, 2000
- Q200009070003 07/24/2000 Tectonic Evolution of the Crater Flat Basin, Nevada  
*No CD - conference presentation ✓*
- Q200009120002 09/01/2000 Aircraft Crash Hazard (Part of PFSF SER, Chapter 15)
- Q200009120003 09/08/2000 Electromagnetic and Magnetic Survey of the Active Lava Tubes of Kilauea Volcano, Hawaii  
*No CD - conference paper ✓*
- Q200009120004 09/08/2000 Quantifying hazards from basaltic tephra-fall eruptions  
*No CD - conference paper ✓*
- Q200008290009 08/18/2000 Proposal for Task Order No. 8 under Contract NRC-02-97-001, Technical Assistance for Reviewing Licensee Submittal Concerning Decommissioning  
Note: Ref. 1: Meehan e-mail note of August 10, 2000, to John L. Russell / Ref. 2: Meehan letter of July 10, 2000 to W.

Patrick

- Q200008290010 08/01/2000 Proposal for Task Order No. 8 under Contract NRC-02-97-001, Technical Assistance for Reviewing Licensee Submittal Concerning Decommissioning  
Note: Ref. 1: Meehan letter of July 12, 2000 to W. Patrick
- Q200008290014 08/24/2000 PRETREAT: A Graphical User Interface-Based Spreadsheet Model for Hanford Tank Waste Pretreatment Processes
- Q200009120001 09/06/2000 Scoping Report of Changes to Uranium Recovery Regulatory Guidance. Documents
- Q200009140001 09/11/2000 The case for a neoclassical approach to subsurface heterogeneity modeling  
*No CD ✓*  
*conference paper*  
Note: AGU 2000 Fall Meeting to be held December 15-19, 2000, in San Francisco, CA
- Q200009140002 09/11/2000 Liquid Bridges and Intermittent Flow Regimes in Unsaturated Fractured Porous Media  
*No CD*  
*conference paper ✓*  
Note: AGU 2000 Fall Meeting to be held December 15-19, 2000, in San Francisco, CA

- Q200009140003 09/12/2000 Imaging an Active Normal Fault in Alluvium by High-Resolution  
Magnetic and Electromagnetic Surveys  
Note: Annual Meeting of American Geophysical Union  
*NO CD - Conference ✓ paper* 69/83
- Q200009140004 09/11/2000 Heat and Mass Transfer through Partially Saturated Fractured  
Rock at the Drift-Scale Heater Test at Yucca Mountain  
Note: AGU 2000 Fall Meeting to be held December 15-19,  
2000, in San Francisco, CA  
*NO CD ✓ Conference paper*
- Q200009140005 09/12/2000 Predecisional Input to NRC Observation Audit Report,  
Disruptive Events Process Model Report
- Q200008290015 08/24/2000 Corrosion Processes Affecting the Performance of Alloy 22 as  
a High-Level Radioactive Waste Container Material  
Note: letter only
- Q200009210001 09/01/2000 Cation-Exchange Properties of Natural Zeolites  
*NO CD - NRC DESTROYED BY PROFESSIONAL PAPER*
- Q200009210002 09/01/2000 Thermodynamic Modeling of the Adsorption of Radionuclides  
on Selected Minerals II: Anions  
Note: Prepared for submission to Geochimica et  
Cosmochimica Acta
- Q200009210003 09/01/2000 Thermodynamic Modeling of the Adsorption of Radionuclides  
on Selected Minerals I: Cations  
Note: Prepared for submission to Geochimica et  
Cosmochimica Acta
- Q200009210004 09/18/2000 Proposal for Task Order No. 09 under Contract No.  
NRC-02-97-001, Technical Assistance for Reviewing  
Licensee Submittal Concerning Decommissioning  
*Has CD ✓*
- Q200010020002 09/21/2000 Progress Report for DECOVALEX III Task 2: Numerical  
Simulation of the Drift-Scale Heater Test at Yucca Mountain
- Q200010020003 09/28/2000 Fingering Flow Through a Superheated Fracture: Hele-Shaw  
Cell Experiment and Model Comparisons
- Q200010020004 09/29/2000 SwRI Proposal No. 20-29921: Modeling and Measuring Silver  
Diffusion in Vitreous Silica at Elevated Temperatures
- Q200010020005 08/21/2000 NUREG-XXXX, Rev. 1: Yucca Mountain Review Plan
- Q200010050002 09/29/2000 NUREG/CR : Hanford Tank Waste Remediation System  
Pretreatment Chemistry and Technology
- Q200010050003 09/27/2000 Assessment of Methodologies to Confirm Container  
Performance Model Predictions.
- Q200009210005 09/20/2000 Local Structure of Uranium (VI) Sorbed on Clinoptilolite and  
Montmorillonite  
Note: Poster only  
*NO CD Conference paper - poster ✓*
- Q200009210006 09/12/2000 DRAFT: Guidance for the Review and Preparation of National  
Environmental Policy Act (NEPA) Documents.
- Q200009210007 09/12/2000 Explosive magma-air interactions by volatile-rich basaltic  
melts in a dike-drift geometry  
*Has CD*

Q200009210008 09/14/2000 PREDECISIONAL: Statue Report - Summary of Total System Performance Assessment and Integration Staff Comments on U.S. Department of Energy Analysis Model Reports and Process Model Reports  
Note: letter and report

Q200010020006 09/01/2000 Interim Report on a Baseline Risk-Informed, Performance-Based Approach for In Situ Leach Uranium Extraction Licensees

Q200009210010 09/07/2000 PROPRIETARY: Consequence Criteria and Recommendations for Acceptable Accident Frequencies for the Hanford Tank Waste Remediation System (Final Report). Letter Report.

Q200009210011 09/19/2000 Transparency and Traceability in Performance Assessment  
*No CD - Conference Paper*

Q200010240004 10/19/2000 A Risk-Informed, Performance-Based High-Level Waste Review Plan  
Note: Paper: 2001 International High-Level Radioactive Waste Management Conference

Q200009070001 07/26/2000 Hydrostratigraphic characterization of a semi-arid alluvial fan: Fortymile Wash, Nevada

Q200009070002 07/31/2000 Risk-Informed and Performance-Based Evaluation of Seismotectonic Processes at the Candidate High-Level Nuclear Waste Repository, Yucca Mountain, Nevada

Q200010240001 09/28/2000 Preliminary Hydrostratigraphy of the Valley-Fill Aquifer in Fortymile Wash and the Amarogosa Desert

Q200010240002 09/28/2000 Development of a Multi-Electrode Array Sensor for Monitoring Localized Corrosion

Q200010240003 10/13/2000 Approaches to Confirm Waste Package Performance

Q200011020001 10/30/2000 Guidance for the Review and Preparation of National Environmental Policy Act (NEPA) Documents- Final.

Q200011160006 11/09/2000 Review of Draft NUREG-1640, Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities.

Q200011160007 08/21/2000 First Progress Report on Experiments and Field Investigations to Model Normal Faulting in Carbonate Strata Above Salt Structures: Analogs for Arabian Gulf Oil Fields  
Note: Confidential Report

Q200011210001 11/17/2000 Draft Regulatory Guide 4.14-- Radiological Effluent and Environmental Monitoring at Uranium Recovery Facilities

Q200011020002 10/30/2000 Preliminary Aircraft Crash Hazard Assessment at Proposed Yucca Mountain Repository.  
Note: 10th International Symposium on the Interaction of the Effects of Munitions with Structures

Q200011020003	10/30/2000	Preliminary Assessment of Waste Package Response to Rock Block Impacts.	7/1/83
Q200011020004	10/30/2000	Methodology for Assessment of Preclosure Safety for Yucca Mountain Project.	
Q200011020005	10/18/2000	Effect of Palladium on the Localized and Passive Dissolution of Titanium. Note: Will be presented at the NACE 2001 in Houston, TX on March 11-16, 2001	
Q200011020006	10/30/2000	West Valley Demonstration Project, Task 2: Geographic Information System (GIS) Subtask B: Modeling Strategy Development	
Q200011020007	10/27/2000	Long-Term Dissolution Behavior of Alloy 22: Experiments and Modeling. Note: Will be presented at the NACE 2001 in Houston, TX on March 11-16, 2001	
Q200011020008	10/30/2000	Predecisional, Assessment Report Of Topical Safety Analysis Report for the Centralized Interim Storage Facility (Docket No. 72-21).	
Q200011020009	10/30/2000	Software Requirements Description for the Computer Code Multiflo Version 2.0	
Q200010270001	10/23/2000	Long Term Passive Behavior of Alloy 22.	
Q200010270002	10/25/2000	Progressive development of structural geometries and concomitant loss of reservoir connectivity; examples from analog models	
Q200010270003	10/25/2000	Development of synthetic layer dip adjacent to normal faults and implications for traps, barriers, and migration pathways	
Q200010270004	10/18/2000	CNWRA Management Plan, Revision 8, Change 1	
Q200010270005	10/25/2000	Draft Regulatory Guide 4.15	
Q200011160001	11/14/2000	Operations Plan for Technical Assistance Related to Tank Waste Remediation System Licensing, Rev. 3, Chg. 2	
Q200011160002	11/14/2000	Operations Plan for Technical Assistance on Department of Energy Aluminum Based Spent Nuclear Fuels Disposition Program, Rev. 2, Chg. 1	
Q200011160003	11/13/2000	Guidance for the Preparation of National Environmental Policy Act (NEPA) Documents-Considerations For Future Revision Note: Job Code J5330/Order No. DR-00-0265	
Q200011160004	11/13/2000	Dissolution Kinetics of High-Level Waste Glasses and Application to Performance Assessment Studies. Note: To be submitted for presentation at the Annual Meeting of the American Ceramic Society on April 22-25, 2001 in Indianapolis, Indiana.	
Q200011210002	07/28/2000	Fingering Flow Through a Superheated Fracture: Hele-Shaw Cell Experiment and Model Comparisons	

- Q200011210003 11/17/2000 *Has CD* Implementing Risk-Informed, Performance-Based Regulations for High-Level Waste Disposal  
Note: WM'01 paper to be held February 25 - March 1, 2001 at the Tucson Convention Center, Tucson, Arizona.
- Q200011210004 11/17/2000 *Has CD* Application of Integrated Geophysical Techniques to Characterize the Edwards Aquifer, Texas  
Note: To be submitted to the Bulletin of the South Texas Geological Society
- Q200011080001 11/02/2000 The Critical Potential for the Stress Corrosion Cracking of Fe-Cr-Ni Alloys and its Mechanistic Implications  
Note: To be presented at the Minerals, Metals and Materials Society (TMS) Symposium "Chemistry and Electrochemistry of Corrosion and Stress Corrosion: A symposium to Honor the Contributions of Professor Roger W. Staehle, to be held on February 11-15, 2001 in New Orleans, LA.
- Q200011220001 11/21/2000 *Has CD* Proposal No. 20-22307 for Technical Assistance for Reviewing Fee-Recoverable Uranium Recovery Licensing Caseload and Development of Non Fee-Recoverable Program Guidance Documents Uranium Recovery Proposal: Add Task Order 01
- Q200011220002 11/21/2000 Review and Evaluation of Site Characteristics of Naval Reactors Spent Fuel ISFSI Site at INEEL, CNWRA 2001-001.  
Note: Letter only
- Q200011220003 11/21/2000 Experiences in Laboratory Studies of the Effects of Bioclogging of Porous Media  
Note: Poster only
- Q200012040005 11/29/2000 Operations Plan for Technical Assistance to the Spent Fuel Project Office on NWSA-Related Projects, Revision 3, Change 2
- Q200012040006 09/25/2000 Development of a Tool and Review Methodology for Assessment of Preclosure Safety Analysis - Progress Report
- Q200011080002 09/22/2000 Geodetic and Seismic Constraints on Recent Activity at Long Valley Caldera, CA: Evidence for Viscoelastic Rheology.  
Note: To be published in the Journal of Volcanology and Geothermal Research
- Q200012040001 11/23/2000 Initial Properties for the Edwards Aquifer
- Q200012040002 11/28/2000 Draft Regulatory Guide 8.22, Bioassay at Uranium Recovery Facilities

*Allen Malin  
CNWRA QA  
EXT 5149  
Used to check availability of  
discettes and CDs for management  
Directed Surveillance.*