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**CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
QUALITY ASSURANCE
SURVEILLANCE REPORT**

PROJECT NO.: 20.04420.171

REPORT NO.: 2002-23

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SURVEILLANCE SCOPE: Surveillance performed on activities associated with Structural Deformation

REFERENCE DOCUMENTS:

Quality Assurance Procedure QAP-004, Surveillance Control; Quality Assurance Procedure QAP-013, Quality Planning, Technical Operating Procedure TOP-012, Identification, Control, Storage, Handling, Shipping, And Archiving Of Samples.

STARTING DATE: August 29, 2002

ENDING DATE: September 12, 2002

QA REPRESENTATIVE: Mark R. Ehnstrom

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: John Stamatakos, Paul Bertetti, Jim Prikrly, Britt Hill, and Ron Green

SATISFACTORY FINDINGS:

Surveillance activities were performed on activities associated with the Structural Deformation Key Technical Issue. John Stamatakos was the Principal Investigator and main point of contact during this surveillance. Discussions were held with him prior to the start of the surveillance. During our initial discussion, Dr. Stamatakos requested that the surveillance pay particular attention to the specimen retrieval requirements and the storage of CNWRA specimens in accordance with TOP-012, Identification, Control, Storage, Handling, Shipping, and Archiving of Samples. A review of the specimen storage area for geologic samples under Dr. Stamatakos' control found the specimens placed on shelves and the shelves identified by which samples they contained. The Sample Log contained the required mandatory information specified in TOP-012. Sample Control Logs for several other Principal Investigators were also reviewed during the surveillance. One method (attachment A) is the database form used by Dr. Hill. The form Dr. Hill uses is both informative and efficient.

UNSATISFACTORY FINDINGS:

TOP-012 needs to be revised and updated to reflect current CNWRA practices. For example, Form TOP-004 has been changed and is not comparable to the form identified in the procedure. Paragraph 4.4.2 in the procedure contains an incorrect paragraph reference. TOP-006 requirements could possibly be located in the revised TOP-012 procedure. Possible "ARCHIVAL" samples, (i.e. samples that are not to be used for any testing), are not physically identified. TOP-012 contains provisions for identification of laboratory reagents and standards. These activities are now more accurately described in QAP-016, Procurement. The Identification Codes identified in TOP-012 need to be updated to be in line with current sample retrieval sites.

NONCONFORMANCE REPORT NO.: 2002-12

Corrective Action Request No.: N/A

ATTACHMENTS: Attachment A showing an example of Dr. Hill's Sample Control Log.

RECOMMENDATIONS/ACTIONS: Input from Principal Investigators and appropriate Element Managers shall be used to identify essential parameters which must be documented during retrieval, identification, control, storage, handling, and shipping activities of samples. The evaluation should be broadened to allow for additional methods for documenting required information. At a minimum Form TOP-004 shall be revised to assure that information required by the form is consistent with the required information contained in the revised TOP-012 procedure. A meeting should be held to discuss the possibility of creating spreadsheets for the other identified log books to gather the information and make it more accessible.

APPROVED: 
CENTER DIRECTOR OF QUALITY ASSURANCE

DISTRIBUTION:

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ORIGINATOR

PRINCIPAL ENGINEER: J. Stamatakos, P. Bertetti,
J. Prikrly, R. Green, B. Hill

ALL ELEMENT MANAGERS

DATE:

9/16/2002

SAMPLES.XLS Sample log, Volcanism Research					Last Update 8/14/98			
Brittain Hill					# of Samples:	356	Sample # = Center-sequence-sub-sub, Field # = date-sequence-sub	
Sample #	TS	XRF	INAA	Field #	Area	Type	Description	Status
LW-31				102693-1	Lathrop Wells	Xeno	Highly deformed tuff, S Summit crater wall	B 57
LW-32				102693-2	Lathrop Wells	Xeno	Tuffaceous pebbly ss, S flank main cone	B 57
LW-33				102693-3	Lathrop Wells	Xeno	Cored xeno of v. FG tuffaceous	B 57
LW-34				102693-4	Lathrop Wells	Scoria	Primary fall 300m NW main cone, bulk sample	B 57
LW-35				102693-5	Lathrop Wells	Scoria	Bulk sample of 15cm bed, planar coarse lapilli	B 57
LW-36				102693-6	Lathrop Wells	Surge	Bulk sample of 5cm bed, planar finegrained seds	B 57
LW-37				102693-7	Lathrop Wells	Scoria	Bulk sample of primary fall, upper 5 cm, 40m N -4	B 57
LW-46				10594-A	Lathrop Wells	Scoria	Fall on lava, 200 m S of Quarry, oxidized	B 57
CFT*-1				10694-A	Crater Flat, Trench	Scoria	Reworked fall	
LW-47				2695-A1	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-48				2695-A2	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-49				2695-B1	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-50				2695-B2	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-51				2695-B3	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-52				2695-C1	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-53				2695-C2	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
LW-54				2695-C3	Lathrop Wells	Fall	Primary fall deposit about 3 km NNE of cone	B57
AMAR-1				2795-1	Amargosa Valley	lava	Stealth basalt, W outcrop	SI: 5/95
AMAR-2				2795-2	Amargosa Valley	lava	Stealth basalt, E outcrop	SI: 5/95
CFMS-1				2795-3	Crater Flat, Mlocen	lava	Base of lowest cliff, 2900'	SI: 5/95
FUNF-1				2895-1	Funeral Fm	Lava	Greenwater Range, massive lava, upper flow	A249
FUNF-2				2895-2	Funeral Fm	Lava	Greenwater Range, Reverse circ cuttings 0-280' @1'	A249
FUNF-3				2895-3	Funeral Fm	Lava	Greenwater Range, Reverse circ cuttings 0-220' @1'	A249
FUNF-4				2895-4	Funeral Fm	Lava	Greenwater Range, plg+ol basalt @ cinder cone	A249
FUNF-5				2895-5	Funeral Fm	Lava	Greenwater Range, Rev circ cuttings 90-240' @20-3	A249
FUNF-6				2895-6	Funeral Fm	Lava	Greenwater Range, Rev circ cuttings 0-320' @20-30	A249
GRAP-1				41996-1	Grapevine Mtns	lava	Fresh ol-bas, Plio lava	B57
GRAP-1-1				41996-1-1	Grapevine Mtns	lava	Split 1/2 sent to SI 5/96	SI 5/96
GRAP-2				41996-2	Grapevine Mtns	lava	hand sample, weathered basalt	B57
UBHB-1				41996-3	Ubehebe Crater	bomb	Xenolith breccia bomb, Little Hebe crater	B57
UBHB-2				41996-4	Ubehebe Crater	bomb	Interior low vesic, relative fresh bomb, Little Hebe	B57
UBHB-3				41996-5	Ubehebe Crater	bomb	Juvenile basalt lapilli, Ubehebe W crater wall	B57
FUNF-7				42096-1	Funeral Fm	lava	Agglut spatter summit, E Greenwater Range	B57
FUNF-7-1				42096-1-1	Funeral Fm	lava	Split 1/2 to SI 5/96	SI 5/96
FUNF-8				42096-2	Funeral Fm	lava	Hand sample basalt cliffs	B57
FUNF-9				42096-3	Funeral Fm	lava	Rel fresh Ol+Cpx basalt, E Ctrl Greenwater Range	B57
FUNF-9-1				42096-3-1	Funeral Fm	lava	Split 1/2 to SI 5/96	SI 5/96
FUNF-10				42096-4	Funeral Fm	dike	Mod fresh basalt, NE Greenwater Range	B57
FUNF-10-1				42096-4-1	Funeral Fm	dike	Split 1/2 to SI 5/96	SI 5/96
FUNF-11				42196-1	Funeral Fm	lava	Mod fresh rimrock, SW Eagle Mtn	B57
FUNF-11-1				42196-1-1	Funeral Fm	lava	Split 1/2 to SI 5/96	SI 5/96
FUNF-12				42196-2	Funeral Fm	dike	Hand sample, weather basalt SE Greenwater Range	B57
FUNF-13				42196-3	Funeral Fm	scoria	Cone-slope surge deposit, N Ctrl Greenwater Range	B57
FUNF-14				42196-4	Funeral Fm	lava	Drill site, 1600' basalt, largest cutting:	B57
CFNC-7				42296-1	Northern Cone	Scoria	1-6cm lapilli from NW vent area	B57
CFNC-7-1				42296-1	Northern Cone	Split	949.8g of >16mm, 1/2 of sample	SI: 6/98
CFNC-8				42296-2	Northern Cone	altn	Possible spring deposit CO3+SiO2, N Cone lava	B57
CFRC-14				42296-3	Red Cone	Scoria	Bulk sample cone-slope deposit, at N quarry	B57
LW-90				42296-4	Lathrop Wells	Scoria	Bulk sample, Block-ash slope deposit, S base of con	B57
LW-91				42296-5	Lathrop Wells	Scoria	Bulk sample, cone-slope deposit, S base of cone	B57
LW-92				42296-6	Lathrop Wells	lava	Varnished rinds from older Q11 lava	B57
LW-92-1				42296-6-1	Lathrop Wells	lava	Split 1/2 to SI 5/96	SI 5/96
SOLT-1				42396-1	Yucca Mountain	dike	Solitario Cyn dike, N Solitario canyon trench (T-10?)	B57
SOLT-2				42396-2	Yucca Mountain	dike	Solitario Cyn dike, SSE prow, mod fresh	B57
SOLT-2-1				42396-2-1	Yucca Mountain	dike	Split 1/2 to SI 5/96	SI 5/96
SOLT-3				42396-3	Yucca Mountain	dike	Solitario Cyn dike, contact zone, S of Prow	B57
SBLB-1				42496-1	Little Black Peak	bomb	xenolith-rich bomb from Q12 lava block	B57
SBLB-10				42496-10	Little Black Peak	altn	Small sample of CO3+SiO2 deposit, SW cone base	B57
SBLB-2				42496-2	Little Black Peak	lava	Q12 from vesic crops SW cone base	B57
SBLB-2-1				42496-2-1	Little Black Peak	lava	Split 1/2 to SI 5/96	SI 5/96
SBLB-3				42496-3	Little Black Peak	lava	SE terminus, Q11	B57
SBLB-3-1				42496-3-1	Little Black Peak	lava	Split 1/2 to SI 5/96	SI 5/96
SBLB-4				42496-4	Little Black Peak	scoria	Surface scoria from S cone flank, 4730	B57
SBLB-5				42496-5	Little Black Peak	xeno	Xenoliths >1cm from 1m2 area, S cone flank	B57