

Los Alamos Environmental Restoration
Records Processing Facility

ER Record I.D.# 33167

 **ENTERED**
LOS ALAMOS
LOS ALAMOS NATIONAL LABORATORY

ENVIRONMENTAL RESTORATION
Records Processing Facility
ER Record Index Form
(Side 1 of 2)

DATE RECEIVED: 01-11-93 PROCESSOR: HW

Part I: Complete all fields; indicate if not applicable or appropriate; please write legibly.

DOCUMENT TO: C.W. Christenson DOCUMENT DATE: 03-23-62

ORIGINATOR NAME: John H. Abraham ORGANIZATION: Ground Water Branch

SYMBOL: - PAGE COUNT: 2

SUBJECT/TITLE: Inspection of the Bandelier Tuff

RECORD TYPE (Circle relevant type for primary record; type of attachments should be selected on *Keywords List*):

Analytical Data
Chain-of-Custody
Computer Output
Contract
Controlled Distribution
Drawing

FAX
Figure
Form
Interview
Letter
Logbook

Map
Memo
Microform
Notebook
Personal Notes
Photo

Plan
Procedure
Purchase Request
Receipt Acknowledgment
Report
Review

Study
Telephone Record
Transcription
Video
Work Plan
Other _____

RECORD CATEGORY: P
(P for Programmatic or R for Reference)

RECORD PACKAGE #: _____

RECORD FILMED (Y/N): Y

RECORD LOCATION: _____
(Indicate location of record if not filmed.)

Part II: Complete all fields; indicate if not applicable or appropriate; please write legibly. Use *ER Record Index Form Attachment Sheet* if needed.

ATTACHMENTS FILMED (Y/N): _____
(Were attachments to this record filmed?)

LOCATION: _____
(Indicate location of attachments.)

TECH AREA(S)

LIST RELEVANT TECH AREA(S)

21

ADS NO(S)

LIST RELEVANT ADS NO(S)

1106

WBS NO(S)

LIST RELEVANT WBS NO(S)

1.4.2.6.1.14

STRUCTURE NO(S)/MDA

LIST RELEVANT STRUCTURE NO(S)/MDA

21-4
21.35

39247



Part III: Complete all fields; indicate if not applicable or appropriate; please write legibly. Use *ER Record Index Form Attachment Sheet* if needed.

PRS NO(S)

LIST RELEVANT PMS NO(S).

DOCUMENT TO

USE MULTIPLE RECIPIENTS.

ORIGINATOR NAMES

LIST MULTIPLE ORIGINATORS.

CORRECTION (Y/N): _____

(Is this a correction to a record previously processed?)

CORRECTED #: _____

(If answer is Yes, please give ER Record # for corrected record.)

CORRECTION DESCRIPTION (Optional): _____

SUPERCEDE: REPLACE: DELETE: ADD: REVISE:

ATTACHMENT LIST

KEYWORDS: Circle relevant KEYWORDS from the list below for ER Record #: 33167

MISCELLANEOUS (List other indexing criteria as necessary; please write legibly): Subject File; Sandell's Tuff
Floor, tunnel, open joint

Abandon	Burn	Contaminant	ERDA (Energy Research and Development Administration)	Glove Box
Aboveground Tank	Burn Site	Contract	Erosion	Graph
Absorption	.....	Control	Error	Guidance
Abstract	Cadmium	Controlled Distribution	ES&H (Environment, Safety, and Health)	Gun
Accelerator	Calsson	Core	Estimate	.....
Access	Calibration	Corrective Action	Evacuation	Handling
Accident	Canyon	<u>Correspondence</u>	Evaluation	Hazardous
Accumulation	Capacitor	Criteria	Evaporator	Health
Acid	Caustic	Cyanide	Excavation	HE (High Explosive)
Active	<u>CEARP (Comprehensive Environmental Assessment and Response Program)</u>	.....	Exclusion	History
Administrative	Comment	Data	Exhaust	<u>Hole</u>
ADS (Activity Data Sheet)	CERCLA	Deadline	Experiment	Home Owner
Adsorption	(Comprehensive Environmental Response, Compensation, and Liability Act)	Debris	Explosive	Hood
AEC (Atomic Energy Commission)	Certification	Decision Analysis	Exposure	HSWA (Hazardous and Solid Waste Amendments)
Aerial	Cesium	Decommission	Extension	Hydrology
Agenda	Chain of Custody	Decontamination	Extraction	Hygiene
Agreement	Chamber	Deficiency	.....	Impact
Air	Change Control	Deliverable	Facility	Implementation
Alpha	Change Order	Demolition	Fallout	Implosion
Americium	Charge	Description	Farm	Impoundment
Analysis	Chart	Detection	FAX	Inactive
Analytical	Checklist	Detonation	Fence	Incident
AOC (Area of Concern)	Chemical	Development	Field	Incinerator
Approval	Chromium	<u>Discharge</u>	Figure	Industrial
Aquifer	Cleanup	<u>Disposal</u>	Filter	Infiltration
ARAR (Applicable, Relevant, or Appropriate Requirements)	Closure	Documentation	FIMAD (Facility for Information Management, Analysis, and Display)	Injection Well
Archaeology	Clothing	DOE (Department of Energy)	Finding	Injury
Archive	CMI/RA (Corrective Measures Implementation/Remedial Action)	Dose	Fire	Inorganic
Area	CMS/FS (Corrective Measures Study/Feasibility Study)	DQO (Data Quality Objectives)	Firing Site	<u>Inspection</u>
Arsenic	Cobalt	Draft	Fiscal	Installation
Asbestos	Comment	Drainage	Fission	Interim
Asphalt	Committee	Drainline	Five-Year Plan	Interim Action
Assessment	Community Relations	Drawing	Flow	Internal
Audit	Compliance	Drilling	Flow chart	Interview
.....	Compressed Gas	Drop Tower	Fluid	Inventory
Backfill	Computer Modeling	Drum	Form	Investigation
Bacteria	Computer Output	Dry Well	Framework	IRM (Interim Remedial Measure)
Barium	Concern	Dump	Free	Isotope
Baseline	Concrete	Duplicates	Fuel	IWP (Installation Work Plan)
BCP (Baseline Change Proposal)	Concurrence	.....	Fume	.....
Beds	Configuration	Ecology	Gamma	Lab Job
Bermed Area	Construction	EIS (Environmental Impact Statement)	Gas	Laboratory
Beryllium	Container	Emission	Generation	Lagoon
Beta	Containment	Engineering	Generic	Land
Biology		Environmental	Geochemistry	Landfill
Blank		EPA (Environmental Protection Agency)	Geology	Laundry
Boiler		Equipment	Geophysics	Leach
Boneyard			Glass Beaker	Lead
Bunker				Leak
Buried				Legal

Letter	-----	Quality	Scrap	Technical
Limit	Observation	QA (Quality Assurance)	Scrap Detonation Site	Technical Team
Lines	Off-gas	QP (Quality Procedure)	Screening	Technology
Liquid	Oil	Quarterly Report	Scrubber	Telephone Record
List	Open	-----	Search	Test Area
Log	Open Burning	Radioactive	Security	Testing
Logbook	Operation	Radiochemistry	Seep	TLD (Thermoluminescent Dosimeter)
-----	Order	Radionuclide	Seminar	TOC (Table of Contents)
Magazine	Organic	Radium	Semivolatile	Townsite
Management	Organization	Rationale	Septic	Toxic
Manhole	OSHA (Occupational Safety & Health Administration)	RCRA (Resource, Conservation, and Recovery Act)	Sewer	Tracking
Map	OU (Operable Unit)	Reactor	Sheet	Training
Material	Outfall	Receipt	Shell	Transcription
MDA (Material Disposal Area)	Outline	Acknowledgment	Shot	Transfer
Media	-----	Recommendation	Silver	Transformer
Meeting	Pad	Reconnaissance	Site	Transport
Memo	PA/RFA (Preliminary Assessment /RCRA Facility Assessment)	Records	Sludge	Treatment
Mercury	PCB (Polychlorinated Biphenyl)	Recovery	Soil	Trench
Metal	Permit	Recycle	Solid	Trip Report
Microform	Personal Notes	Reduction	Solvent	Tritium
Minimization	Personnel	Reference	SOP (Standard Operating Procedure)	TRU (Transuranic)
Minutes	Personnel Qualification	Regulation	SOW (Statement of Scope of Work)	TSCA (Toxic Substances Control Act)
MIS (Management Information System)	Photo	Release	Specific	Tuballoy
Mixed Waste	Pilot Study	Remediation	Spill	Tuff
MOA (Memo of Agreement)	Pipe	Removal	Stack	-----
Model	Pit	Report	Standard	Underground
Modification	Plan	Request	Statistics	Uranium
Money (Allocation, Appropriation, Budget, Cost, Funding, etc.)	Plant	Requirements	Steamline	Urine
Monitoring	Plutonium	Research	Steel	USGS (United States Geological Survey)
Monthly Report	Pollution	Resin Bed	Storage	UST (Underground Storage Tank)
Mortar Impact Area	Polonium	Resolution	Strontium	Utility
MOU (Memo of Understanding)	Polaroid	Resource	Structure	-----
MSA (Major System Acquisition)	Potential	Respirator	Study	Validation
-----	Presentation	Response	Subcontractor	Variance
NEPA (National Environmental Policy Act)	Prevention	Restoration	Subsurface	VE (Value Engineering)
NFA (No Further Action)	Priority	Restriction	Summary	Ventilation
Nitrate	Procedure	Results	Sump	Verification
NMED (New Mexico Environment Department)	Program	Review	Support	Video
NMEID (New Mexico Environmental Improvement Division)	Programmatic	Revision	Surface	Volatile
NOD (Notice of Deficiency)	Project	RFI/RI (RCRA Facility Investigation/Remedial Investigation)	Surveillance	Volume
Nonexplosive	Project Leader	Risk	Survey	-----
Notebook	Propellant	RPF (Records-Processing Facility)	Swipe	Warehouse
Notification	Property	-----	SWMU (Solid Waste Management Unit)	Waste
NPDES (National Pollutant Discharge Elimination System)	Proposal	Safety	System	Water
NRC (Nuclear Regulatory Commission)	Protection	Salamander	-----	WBS (Work Breakdown Structure)
Nuclear	Protocol	Salvage	Table	Weapon
	PRS (Potential Release Site)	Sample	Tank	Well
	Public	Sampling Plan	Task	Work
	Pump	Sanitary	TCLP (Toxicity Characteristic Leaching Procedure)	Working Group
	Purchase Request	Satellite	TDD (Technical Document Description)	-----
	-----	Schedule		Zinc
		Scope		

Ground Water Branch
P.O. Box 4217
Albuquerque, New Mexico
March 23, 1962

Mr. C. W. Christenson
Group Leader, H-7
Los Alamos Scientific Laboratory
Los Alamos, New Mexico

Dear Chris:

Part of the floor of the tunnel beneath the southeast corner of Building 4, EF-West, at Los Alamos was removed on March 20, 1962 so that a suspected site of an open joint in the Bandelier Tuff could be inspected. The workman uncovered two holes, one about 15 feet south of the entrance to the tunnel and the other about 8 feet south of the entrance. I briefly inspected both holes and believe that the following information should be brought to your attention.

The south hole is a rough oval shape about $1 \times 1\frac{1}{2}$ feet wide at the top and apparently continuing this size for a depth of at least 30 feet. A joint trending west-southwest is approximately coincident with the south wall of the hole. The joint, angling southward about 10 degrees, is about one-quarter inch wide and filled with sediments and roots in the upper several feet. Below that the joint cannot be distinguished, but the hole continues downward at about this same angle. The walls of the hole appear serrated or bumpy which suggests that the original opening, probably the joint, was enlarged by a strong solvent. The tuff consists of approximately 75 percent silica (SiO_2). Only the upper 8 to 10 feet of the hole can be seen because it is directly beneath a footing of the building. A stone was dropped down the hole to estimate its depth.

The north hole is part of a joint about 4 inches wide. The open part of the joint is about 2 feet long, and it trends south-southwesterly. The joint is bridged with dirt at a depth of about 2 feet, but a 12-foot rod poked through the bridge was pushed in with only moderate resistance. This joint also appears to continue downward to some undetermined depth, but did not seem to have been enlarged by solvents.

Received by ER-RPF

JAN 11 1993

The total depths of these holes cannot be determined without additional effort. The north joint may not be continuous with other joints, and it may pinch out with depth. However, the flow of wastes or water through the larger hole (south joint) apparently was continuous and may have reached a considerable depth or may have moved southward toward Los Alamos Canyon. It may be possible to pour tap water into the hole to determine its continuity, but this could flush wastes from the tuff. The disposal pit at building 35 may contain similar conditions, which may help explain some of the results of the recent study.

JHA/mwm

John H. Abrahams
Soil Scientist