

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF009575	Report of Hydrology and Geology of Uranium Tailings Site at Tuba City, Arizona.	7/1/1976	File	D. Fuhrman, Professor of Civil Engineer	TUB 625.10(A)	TUBS 09
SURF009576	Package, Reports and Photographs: This report presents our evaluation of the potential seismic effects on the reclaimed tailings embankment at the Tuba City Site. The work performed in this study includes	4/12/1983	K. Krishnan, Jacobs Engineering	G. Beckwith, Sergeant, Hauskins, Beckwith	TUB 625.10(A)	TUBS 09
SURF009577	Document: The attached document presents our preliminary findings related to site erosion issues for the referenced sites. This submittal is quite preliminary in nature due to the limited amount of	6/21/1983	K. Krishnan, Jacobs Engineering	G. Beckwith,	TUB 625.10(A)	TUBS 09
SURF009578	Report: Geologic, Geomorphic, and Seismic Evaluations of the Tuba City Uranium Mill Tailings Site, Tuba City. Included Geomorphic Hazard Evaluation Tuba City, Mexican Hat, Monument Valley. (Photograph	9/15/1984	File	R. Weeks,	TUB 625.10(A)	TUBS 09
SURF009581	Memo: Concerns of Geologic Interpretation at Tuba City Site.	5/3/1993	E. Artiglia	G. Lindsey	TUB 625.10(A)	TUBS 09
SURF009582	Memo: Additional Field Investigations for the Tuba City UMTRA Project Site.	12/3/1985	R. Weeks	A. Harvey	TUB 625.10(A)	TUBS 09
SURF009583	Map: Seismicity map, 153 earthquakes plotted, no intensity or magnitude.	1/1/1985	File	National Geophysical Data Center	TUB 625.10(A)	TUBS 09
SURF009584	Project Communication: Confirmation that she had run the survey and had wanted to start in the area of the Tuba City Mill Site but could not get permission from the tribes.	7/20/1993	J. McCarthy, U.S. Geological Survey	G. Lindsey, Site Geologist	TUB 625.10(A)	TUBS 09
SURF009585	Project Communication: Steven never got a chance to get by and look at the site geology. He doesn't expect now that he will have another opportunity in the near future.	7/16/1993	S. Rauzi	G. Lindsey	TUB 625.10(A)	TUBS 09

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SURF009586	Memo: Since the TUB, MON, and HAT sites were evaluated early in the program, the seismic studies do not contain the level of effort we feel will be required to satisfy the reviewing agency.	6/19/1985	W. Mason	R. Rager	TUB 625.10(A)	TUBS 09
SURF009587	Map: Geological map showing the distribution of bedrock formations in relation to the Tuba City Millsite Tailings.	1/1/1976	File	Fuhriman and Hintze	TUB 625.10(A)	TUBS 09
SURF009588	Memo: The purpose of the trip was to examine air photo lineations in view of the newly reported fault trend near the site and the concerns of the Hopi Tribe regarding implications of structural control	6/16/1993	R. Bennett	G. Lindsey	TUB 625.10(A)	TUBS 09
SURF012206	Memo: Resource Estimate for Preparation of Updated Site Conceptual Model for Tuba City, AZ.	4/18/1996	S. Wright, TAC	J. Carman, TAC	TUB 625.15(A)	TUBS 09
SURF012207	Report: Hydrology and Geology of Uranium Tailings Site at Tuba City, Arizona.	7/1/1976	File	D. Fuhriman, Professor, Engineering	TUB 625.15(A)	TUBS 09
SURF012208	Memo: Status of the Tuba City UMTRA Disposal Site Groundwater Characterization Program.	7/15/1993	R. Edge, UMTRA	E. Artiglia, TAC	TUB 625.15(A)	TUBS 09
SURF009536	Letter: Requesting water quality data for surface and groundwater and water level data.	6/19/1985	D. Lewis, Jacobs Engineering	R. MacNish	TUB 625.15.05(A)	TUBS 09
SURF009537	Letter: Review of Work to date on that pile has led me to believe that there is not sufficient evidence to conclude that there is no groundwater contamination at the site resulting from past milling	7/14/1983	D. Lewis, Jacobs Engineering	C. Vandermoer, College of Agriculture	TUB 625.15.05(A)	TUBS 09
SURF009589	Letter: Laboratory Results on Organic Testing of Groundwater Samples at Tuba City Project Site.	10/15/1996	E. Nuttall	A. Holm, Jacobs Engineering	TUB 625.15.05(A)	TUBS 09
SURF009590	Fax: Attached are the analytical results for before 1x treatment. Please fill in what you've measured for TDS, return tomorrow	1/24/1996	D. Liles, Accurex	G. Hartmann,	TUB 625.15.05(A)	TUBS 09

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	with your daily update.					
SURF009591	Memo: Request for additional Sample Analysis of December 1995 Tuba City Water Sampling Effort.	11/28/1995	M. Minter	G. Hartman	TUB 625.15.05(A)	TUBS 09
SURF009592	Memo: Trip Report on Tuba City Water Sampling and Well Logging for UNM.	11/13/1995	S. Wright	G. Hartmann	TUB 625.15.05(A)	TUBS 09
SURF009593	Letter: DOE technical assistance contractor Jacobs Engineering and Los Alamos Laboratory staff will be on the Navajo Nation to conduct water sampling at three UMTRA sites. I understand that Jacobs will	4/13/1995	R. Edge, DOE	B. Martin, UMTA	TUB 625.15.05(A)	TUBS 09
SURF009594	Memo: Here is the anticipated schedule and order of sampling. The actual well locations are shown on the attached work order plans.	4/10/1995	R. Saar	R. Sengebusch	TUB 625.15.05(A)	TUBS 09
SURF009595	Memo: Cancellation of April, 1995 Ground Water Quality Sampling Tuba City, Arizona UMTRA Disposal Site. (Justification for Cancellation)	2/6/1995	R. Edge, DOE	E. Artiglia, TAC	TUB 625.15.05(A)	TUBS 09
SURF009596	Memo: This Memorandum discusses the reasons for cancelling the next round of ground water quality sampling at Tuba City, Arizona.	12/29/1994	E. Artiglia	A. Holm	TUB 625.15.05(A)	TUBS 09
SURF009597	Memo: This memo is a request for permanent gas analysis of ground water samples that will be collected at TUB01 during early November. At the request of the DOE, Biological sampling of select wells will	11/7/1994	P. Zietz	A. Groffman	TUB 625.15.05(A)	TUBS 09
SURF009598	Memo: Tuba City Water Samples for Savannah River. Please send 2-liter samples from Tuba City Monitoring Wells.	9/9/1992	J. Fritts	G. Hartmann	TUB 625.15.05(A)	TUBS 09
SURF009599	Memo: Attached are the results of the Tuba City water usages and well measurements.	9/19/1988	W. Arthur, DOE-AL	J. Oldham, MK	TUB 625.15.05(A)	TUBS 09
SURF009600	Memo: Classification of Groundwater at the Gunnison and Tuba	5/18/1988	B. Mukhopa	G. Rice	TUB 625.15.05(A)	TUBS 09

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	a City Processing Sites.		dhyay			
SURF009601	Package: Memo-TUB Water Sampling; Tuba City Ground Water Data; Water Sampling Procedure Check; Sampling Schedules for TUB; Sampling of Monitor Wells at Navajo sites.	11/6/1984	D. Miller	G. Rice	TUB 625.15.05(A)	TUBS 09
SURF009602	Memo: The TAC is beginning another round of water sampling at Tuba City. As a quality assurance measure, the water sampling team will be submitting duplicate and spiked samples to the analytical laboratory	3/25/1985	Hydrology Group	J. Price/D. Miller	TUB 625.15.05(A)	TUBS 09
SURF009603	Memo: The attached letter and draft Tuba City report has been received from C. Vandemoer of University of Arizona. This material is provided for your use in developing the field program for subsurface	7/22/1983	K. Baker	W. Mason	TUB 625.15.05(A)	TUBS 09
SURF009604	Memo: Cancellation of April, 1995 sampling round at Tuba City.	1/11/1995	R. Edge, DOE	G. Ruskauf	TUB 625.15.05(A)	TUBS 09
SURF009605	Letter and Attachments: Towards preparing the conceptual designs for the high priority sites, additional geotechnical effort is necessary as set forth in the attached scope of work.	4/12/1983	J. Morley, UMTRA	R. Krishnan, Jacobs Engineering	TUB 625.15.05(A)	TUBS 09
SURF009606	Memo: Emergency Justification for Water Sampling Equipment.	8/15/1994	J. Gibb	A. Groffman	TUB 625.15.05(A)	TUBS 09
SURF009607	Memo: Justification for the Purchase of Organic and Gas Analytical Services.	8/11/1994	P. Zietz	A. Groffman	TUB 625.15.05(A)	TUBS 09
SURF009608	Package: Ground Water Sampling Requirements for Tuba City Site; TUB01 locations with pH Values < 9.	7/7/1994	DOE-AL	Center of Radioactive Waste Mgmt.	TUB 625.15.05(A)	TUBS 09
SURF009609	Report: General Statement-Comparatively high values for NO <sub>3</sub> , Gross Alpha, U were observed in general at sampling locations 0916 and 0919. Sampling locations with high parameter values tended to remain	9/24/1992	Department of Energy	Kevin McKeown, Geologist	TUB 625.15.05(A)	TUBS 09

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SURF009610	Memo: Nitrate Sampling at Tuba City Wells. I have selected the following shallow wells at the Tuba City Site for additional nitrate sampling and bacteriological characterization.	8/24/1993	A. Miller	A. Groff	TUB 625.15.05(A)	TUBS 09
SURF009611	Memo: Permanent gases and kerosene analysis at TUB01 groundwater samples.	8/18/1994	C. Sherlock	P. Zietz, Jacobs Engineering	TUB 625.15.05(A)	TUBS 09
SURF009612	Memo: Revisions to SPEAR database for Tuba City Wells. As we discussed today there are several discrepancies in the SPEAR database with regard to well construction data at Tuba City.	10/24/1994	G. Ruskauf	P. Zietz	TUB 625.15.05(A)	TUBS 09
SURF009613	Document: List of the contaminants of concern for the Tuba City, Site. Concentration versus time plots were generated for each dissolved analyte and reviewed for anomalies.	6/1/1994	File	L. Flowers, TAC	TUB 625.15.05(A)	TUBS 09
SURF009614	Document: Historical Data Validation. (Copy). The original was placed in Document Control.	8/10/1994	E. Artiglia	C. Arnold	TUB 625.15.05(A)	TUBS 09
SURF009615	Document: UMTRA Historical Data Validation, Tuba City-TUB01. (Volume 1 of 2)	7/1/1994	File	Jacobs Engineering	TUB 625.15.05(A)	TUBS 09
SURF009616	Document: UMTRA Historical Data Validation Tuba City-TUB01. (Volume 2 of 2)	7/1/1994	File	Jacobs Engineering	TUB 625.15.05(A)	TUBS 09
SURF009617	Letter: Procedure for Collecting Samples.	10/18/1994	D. Baumgartner, University of Arizona	P. Zietz, Jacobs Engineering	TUB 625.15.15(A)	TUBS 09
SURF009618	Letter with Attachments: Enclosed is a Tuba City site map depicting monitor well locations and the most recently recorded potentiometric surface at the site. Also enclosed is a table presenting a sta	10/28/1993	W. Webster, Boyle Engineering	C. Yancey, Jacobs Engineering	TUB 625.15.15(A)	TUBS 09
SURF009619	Letter: Requesting projections of water demands based on the expansion of the Tuba City and Moenkopi population centers a	2/12/1986	M. Zaman, Navajo Nation	J. Thackston, Jacobs Engineer	TUB 625.15.15(A)	TUBS 09

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	nd the expansion of agricultural projects, Also, water level data for USGS well		on	ring		
SURF009620	Letter: Thank you for your comments on the Tuba City dpSCR. We are now in the process of responding to them. However, our responses would be more complete if you would provide us with the following in	1/9/1986	M. Zaman, Navajo Nation	J. Thackston, Jacoba Engineering	TUB 625.15.15(A)	TUBS 09
SURF009621	Memo: Information called in by D. Miller on list of bottles and samples taken.	8/2/1985	J. Thackston, Jacobs	L. LaVigne	TUB 625.15.15(A)	TUBS 09
SURF009622	Memo: Tuba City Ground Water Data.	4/3/1985	D. Betsill	D. Miller	TUB 625.15.15(A)	TUBS 09
SURF009623	Summary Trip Report: Biological Sampling and Measurment of Hydrochemical Parameters in Select Wells.	12/6/1994	G. Hartman, TAC	A. Groffman, Jacobs	TUB 625.15.15(A)	TUBS 09
SURF009624	Documents: Site ID. TUB01, Location ID. 901, 910, 911.	8/29/1985	P. Darr	G. Smith	TUB 625.15.15(A)	TUBS 09
SURF009625	Slug Test Data: Site ID. TUB01, Location ID. 903.	1/30/1985	File	D. Miller, Jacobs	TUB 625.15.15(A)	TUBS 09
SURF009626	Feasibility Report for Tuba City: Recommendations-Drill 12.25 inch bit from surfacr to total depth and collect drill cutting samples after every 10 ft. interval or at the change of stratic whichever i	3/4/1980	File	M. Zaman, Navajo Nation	TUB 625.15.15(A)	TUBS 09
SURF009627	Memo: Comments on Tuba City Long-Term Pumping Test Plan .	8/28/1996	R. Edge, DOE	L. Gardner, Gardner and Associates	TUB 625.15.15(A)	TUBS 09
SURF009628	Memos: Tuba city Aquifer Test Status and Testing Schedule; Tuba City DOE H and Safety Inspection and Electrical Work; Testing of Ponds/Aquifer Test.	3/9/1996	D. Metzler, DOE	S. Wright, UMT RA	TUB 625.15.15(A)	TUBS 09
SURF009629	Letter: Response to Letter of May 31, 1995 to R. Edge (DOE Tuba City UMTRA Site Manager) requesting DOE aquifer test data and interpretations for the Navajo Sandstone in the Tuba Ci	7/12/1995	J. Slater	J. Carmen	TUB 625.15.15(A)	TUBS 09

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SURF009630	Letter: Results of aquifer test interpretations for groundwater wells in the vicinity of the inactive uranium mill tailings site. (Tuba City)	5/31/1995	R. Edge, DOE	J. Slater, Hydro Geo Chem, Inc.	TUB 625.15.15(A)	TUBS 09
SURF009631	Memo: Irrigation area requirement at Tuba City.	1/27/1995	D. Metzler, DOE	H. George, UMTRA	TUB 625.15.15(A)	TUBS 09
SURF009632	Memo: Tuba City, Arizona UMTRA Site Aquifer Test Water Disposal. Attached is a cost estimate for three water treatment alternatives for the Tuba City Site aquifer pumping test.	1/6/1995	R. Edge, DOE	E. Artiglia, TAC	TUB 625.15.15(A)	TUBS 09
SURF009633	Memo: Storage and Disposal Alternative Cost for Tuba City Well Pumping Test Water.	8/11/1993	E. Storms	G. Hartman	TUB 625.15.15(A)	TUBS 09
SURF009634	Memo: Tuba City UMTRA Site, Aquifer Test NEPA Documentation.	6/15/1993	E. Artiglia,	A. Miller	TUB 625.15.15(A)	TUBS 09
SURF009635	Memo: Groundwater Remediation, Tuba City, documents were found in my office when I moved in. I haven't had a chance to thoroughly reviewed the paper, but it may provide some insights that will reduce	2/18/1993	J. Blount	D. Tarbox	TUB 625.15.15(A)	TUBS 09
SURF009636	Letter: The Navajo Nation and Hopi Tribe have recently submitted several aquifer restoration alternatives to DOE to be considered for implementation at the Tuba City Site.	12/24/1986	D. Doboys, Jacobs	J. Themelis, UMTRA	TUB 625.15.15(A)	TUBS 09
SURF009637	Letter: As suggested at our last meeting, we would like to request the following water supply information, if available. (Attached)	3/9/1979	H. Tso, Navajo Nation	R. Overmyer, Ford, Bacon, Davis	TUB 625.15.15(A)	TUBS 09
SURF009638	Memo with Attachments: Attached for your information are the following logs.	1/4/1985	R. Rager	B. Mason	TUB 625.15.15(A)	TUBS 09
SURF009639	Packer (drill Stem) Test: Site ID. TUB01, Location 907, Field Report. D. Silva. Used clear flow meter set up.	11/29/1984	File	Jacobs Engineering	TUB 625.15.15(A)	TUBS 09

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