

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF011906	Letter: Summarizes the results of a technical review of DOE's revised calculation of contaminant dispersion below the Tuba City UMTRA site after remediation.	6/29/1989	L. Shingoite wa, Hopi Tribe	M. Logsdon, Adrian Brown Consultants	TUB 699.21(A)	TUBS 22
SURF011907	Letter: Tuba City Radon Barrier Calculations Informal NRC Comments. MK agrees that data points used in the RAECOM modeling of the final radon barrier calculation are incomplete.	12/13/1988	W. Arthur III, DOE	J. Oldham, MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF011908	Letter: For your review are two copies of the calculations for the radon barrier thickness for the Tuba City, Arizona, UMTRA site. The calculations are based on actual field data from the test fills	11/16/1988	E. Hawkins, NRC	J. Arthur, III UMTRA	TUB 699.21(A)	TUBS 22
SURF011909	Letter: Enclosed for your use, is a copy of the Engineering and Radiological Calculations, prepared by the Technical Assistance Contractor during the conceptual design of the Tuba City Site remedial a	2/25/1986	L. Shingoite wa, Hopi Tribe	W. Mason, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011910	Fax: The numbering sequence for preliminary design calculation volumes does not correspond with the numbering sequence for final design calculations.	2/3/1988	D. Mann	B. Andberg, MK	TUB 699.21(A)	TUBS 22
SURF011911	Package, 8 sheets, Project UMTRA, Site Tuba City: 10 yr and 25 yr, 1hr precipitation events and 10 yr, 24 hr precipitation event.	5/2/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011912	Package, Project UMTRA, Site Tuba City: Radiological Services. (Radon Cover Thickness)	10/21/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011913	Package, Project UMTRA-Tuba City: Embankment Design-Radon Barrier, Final Calculation of Radon Flux.	2/2/1989	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011914	Package, Project UMTRA, Site Tuba City: Top and Side Erosion protection.	9/30/1985	File	B. Knight, Jacobs	TUB 699.21(A)	TUBS 22
SURF011915	Package, Project UMTRA, Site Tuba City: Radon Cover Volume. (Source Radiological Services)	10/10/1985	File	B. Knight, Jacobs Engineering	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF011916	Package, Project UMTRA, Site Tuba City: Soil Loss by water erosion. (Source Gradation Curve)	11/15/1985	File	V. Fry, Jacobs	TUB 699.21(A)	TUBS 22
SURF011917	Package, Project UMTRA, Site Tuba City: Erosion Protection Volume.	10/11/1985	File	B. Knight, Jacobs	TUB 699.21(A)	TUBS 22
SURF011918	Package, Project UMTRA, Site Tuba City: Erosion Protection Top Slopes with no Filter.	1/4/1987	File	B. Keshian	TUB 699.21(A)	TUBS 22
SURF011919	Letter: Tuba City Erosion Protection Issues. The NRC review of the Tuba City Remedial Action Plan identified three areas needing resolution under the heading of Erosion Protection.	9/13/1988	W. Arthur, DOE	J. Oldham, MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF011930	Package, Calculation Cover Sheet: Project UMTRA, Site Tuba City. Cover Design-Radon Emanating Fraction, Acid Tailings. Cougar Design-Radon Diffusion Coefficients.	11/1/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011931	Package, Project UMTRA, Site Tuba City: Rock sizes for top and sideslope of pile. Rock sizes for trapezoidal ditches.	10/2/1985	File	V. Delky, Jacobs	TUB 699.21(A)	TUBS 22
SURF011932	Package, Project UMTRA, Site Tuba City: Tuba City Processing Site- Stabilization in place alternate rock sizes for pile. (top and side slopes)	6/17/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011933	Package: Project UMTRA, Site Tuba City. Non-saturated analysis of Tuba City Sand/Slime Tailings using UNSAT 2. (Transient Drainage)	1/29/1990	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011934	Package, Calculation Sheets: Site TUB01, Drained and undrained strength parameters. (Source Chen Labs)	1/14/1986	File	N. Larson, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011935	Package, Project UMTRA, Site Tuba City: Peak Runoff Calculations.	10/25/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011936	Package, Calculation Sheets: Project TUB01, Site Tuba City, Settlement and Strain Calculations. (Source Reduced Laboratory Data)	2/17/1988	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF011937	Package, Calculation Sheets: Project UMTRA, Site Tuba City: Slope Stability Printouts.	12/23/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011938	Package of Calculation Sheets: Project UMTRA, Site Tuba City: Sedimentation/Evaporation Pond, Interstitial Flow Velocity on Top Slopes, Stabilization in Place Design, Collection Ditch Design and Volum	6/17/1985	File	Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011939	Letter: The NCR raised serious concerns regarding the content of the Tuba City, radon barrier (Cover design) calculations of September, 1988 and the apparent lack of "Quality Assurance of both field w	4/7/1989	J. Oldham, MK	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF011940	Letter: Responses to Phase II Final Design Comments, Tuba City. Responses have been restricted those comments directly impacting final calculations.	4/6/1987	J. Anderson, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011941	Letter: The submittal contains an adequate surface water hydrology section. There are, however, several data needs pertaining to geotechnical considerations and ground water hydrology which we underst	1/28/1987	J. Anderson, DOE	E. Hawkins, NRC	TUB 699.21(A)	TUBS 22
SURF011942	Letter: Tuba City Final Design Review to Comments. A number of items related to the Final Design have not yet been received and will be reviewed at a later date.	12/29/1986	J. Themelis, DOE	D. Dubois, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011943	Letter: Enclosed please find responses to your comments on the Tuba City preliminary design package. All comments have been taken into account during the preparation of the final RAP/final design pack	12/8/1986	C. Damon, Navajo Nation	R. Sena, UMTRA	TUB 699.21(A)	TUBS 22
SURF011944	Letter: Responses to comments provided by Terra Therma, Inc. on the Tuba City preliminary design package.	12/5/1986	L. Shingoite wa, Hopi Tribe	R. Sena, UMTRA	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF011945	Letter: Tuba City-Response Comments on Preliminary Design Documents. Responses to comments by NRC, DOE, TAC and Indian Nations on the Phase II Preliminary Design.	11/14/1986	J. Themelis, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011946	Summary Trip Report: 90 percent Design Review TUB, 30 percent HAT. Reviewed MK responses to TAC 60 percent design comments and M-K progress on design. Most issues have been resolved.	10/22/1986	R. Rager	M. Nelson, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011947	Memo: Jacobs Engineering Group Comments 60 percent Design Review-Tuba City. Information and response are the subject comments received from TAC.	10/14/1986	T. Wathen	R. Cooney	TUB 699.21(A)	TUBS 22
SURF011948	Memo: Review of Terra Therma/Hopi comments dated September 1986 on " Engineering Review of the Tuba City Remedial Action Project.	10/13/1986	T. Begay, Navajo Nation	C. Heaton, UMTRA	TUB 699.21(A)	TUBS 22
SURF011949	Report: MK-Ferguson responses to Navajo Comments on Tuba City Preliminary design.	10/10/1986	File	M. Thaker, Navajo Nation	TUB 699.21(A)	TUBS 22
SURF011950	Report: Engineering Review of the Tuba City Remedial Action Project.	10/9/1986	File	M. Thakur	TUB 699.21(A)	TUBS 22
SURF011951	Report: TUB 60 percent Design Review. Attached are additional review comments on the Tuba City 60 percent design. With these comments, the TAC has completed our review of the 60 percent design.	9/30/1986	J. Themelis, DOE	R. Williams, Jacobs	TUB 699.21(A)	TUBS 22
SURF011952	Letter and Report: Enclosed is Terra Therma's engineering review of the Tuba City 60 percent design for your review.		R. Sena, DOE	F. Marinelli, Terra Therma, Inc.	TUB 699.21(A)	TUBS 22
SURF011953	Letter: Preliminary Design Calculations and Miscellaneous Design Notes for Tuba City, Arizona. 95913	9/17/1986	J. Themelis, DOE	W. Brow, Department of Indian Affairs	TUB 699.21(A)	TUBS 22
SURF011954	Letter: Comments pertaining to the Tuba City UMTRA Subcontract	9/17/1986	J. Themelis,	T. Begay, Nava	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	act Documents and Design Calculations. Additional comments will be forwarded to you in the near future as they are made available.		DOE	jo Nation		
SURF011955	Comments on Preliminary Design: MK-Ferguson responses to TAC comments.	9/11/1986	File	C. Heaton	TUB 699.21(A)	TUBS 22
SURF011956	Letter and Report: TUB 60 percent Design Review. Additional TAC comments are in response to the supplemental design calculations recently submitted by the RAC.	9/9/1986	J. Themelis, DOE	R. Williams, Jacobs	TUB 699.21(A)	TUBS 22
SURF011957	Report: Prepared for the Hopi Tribe, Engineering Review of the Tuba City Remedial Action Project, Sixty Percent Design.	9/1/1986	File	Terra Thermal Inc.	TUB 699.21(A)	TUBS 22
SURF011958	Letter: Here are the DOE comments on the Tuba City Preliminary Design Documents. Also are preliminary comments provided by the TAC.	8/21/1986	J. Oldham, MK	J. Themelis, DOE	TUB 699.21(A)	TUBS 22
SURF011959	Letter and Attachments: Attached are the TAC's preliminary comments on the Tuba City 60 percent design. The TAC's final comments will be submitted by September 5, 1986.	8/21/1986	J. Themelis, DOE	R. Williams, Jacobs	TUB 699.21(A)	TUBS 22
SURF011960	Letter: We are concerned with the type and extent of the deficiencies identified during our technical review of the Final Cover Design for Tuba City and feel that it should be brought to your attention	12/23/1988	J. Arthur, DOE	E. Hawkins, NRCC	TUB 699.21(A)	TUBS 22
SURF011961	Letter and Report: Technical Assistance Contractor review comments on the specifications for the Tuba City compaction test plots.	7/30/1987	J. Oldham, MK	J. D'Antonio, UMTRA	TUB 699.21(A)	TUBS 22
SURF011962	Letter: TAC review comments on the RAC's specifications for the Tuba City compaction test plots. These comments have been informally transmitted to MK-Ferguson.	7/16/1987	J. Anderson, UMTRA	D. Dubois, Jacobs	TUB 699.21(A)	TUBS 22
SURF011963	Memo: Subcontract Documents-Final Design for Construction U	7/15/1987	F. Marinelli,	J. Oldham, MK	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	MTRA Project, Tuba City.		Terra Thermal Inc.			
SURF011964	Letter: Tuba City Request for Proposal. Subcontract documents, final Design for construction, information to bidders, Volumes I, II, III, and IV, dated June 1987.	7/1/1987	L. Shingoite wa, Hopi Tribe	J. D'Antonio, U MTRA	TUB 699.21(A)	TUBS 22
SURF011965	Memo: Difference Between Laboratory and Field Determined Permeability. Two of the main reasons brought up by the discussions are that inadequate quality control during construction and the type of eq	6/23/1987	M. Nelson	B. Keshian	TUB 699.21(A)	TUBS 22
SURF011966	Letter: MK's comments on the paper entitled "Procedures to Follow if a Conductivity of 10-8 CM/SEC cannot be met for the Tuba City Radon Barrier".	5/12/1987	J. Anderson, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011967	Letter: For your review and concurrence are the following documents for the Tuba City Mill Tailings Site: Final Remedial Action Plan; Final Design for review Calculations, Volume V Supplemental.	5/8/1987	E. Hawkins, NRC	J. D'Antonio, DOE	TUB 699.21(A)	TUBS 22
SURF011968	Letter: Responses to MK's comments, which were transmitted by your letter on the paper entitled "Procedures to follow if a conductivity of 10-8 cm/sec cannot be met for the Tuba City Radon Barrier".	5/12/1987	J. Oldham, MK	J. D'Antonio, U MTRA	TUB 699.21(A)	TUBS 22
SURF011969	Memo: Design Options to Reduce Infiltration into the Tuba City Tailings Pile.	3/23/1987	M. Nelson	B. Keshian	TUB 699.21(A)	TUBS 22
SURF011970	Letter: Tuba City Cover Design. The referenced letter raised several questions with regard to the radon barrier design for Tuba City. We would like to clarify the issues raised.	1/25/1989	M. Matthews, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011971	Letter: It has been brought to our attention that to facilitate construction at the Tuba City, DOE would appreciate our comments o	6/15/1989	M. Matthews, DOE	E. Hawkins, NRC	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	n the final design of the cover system prior to issuance of a final T					
SURF011972	Letter: The Technical Specifications for the Tuba City Remedial Action construction currently call for Compaction of the bedding layer by four passes of a smooth drum roller.	9/22/1989	K. Agoging	J. Caldwell	TUB 699.21(A)	TUBS 22
SURF011973	Letter: Cost Savings: The bedding layer is better not being compacted, infact, it might be detrimental to the erosion barrier performance.	9/20/1989	M. Matthews , UMTRA	D. Dubois, Jacobs	TUB 699.21(A)	TUBS 22
SURF011974	Letter: Bedding Material Change, We have reviewed the proposal to blend materials from the Arrow Pit Quarry with the Shadow Mountain Pit Bedding Material to meet Specifications	6/21/1989	M. Matthews , DOE	B. Welch, Bureau of Indian Affairs	TUB 699.21(A)	TUBS 22
SURF011975	Letter: There is a significant body of logic, test data, and expert opinion to substantiate the conclusion that a riprap layer placed on a dense, unyielding, and smooth bedding layer is less stable	9/26/1989	M. Matthews , UMTRA	D. Dubois, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011976	Letter: Comments on the mixing of materials from two sources to form the bedding material for the Tuba City Disposal Cell. The mixture of the two materials meets applicable standards.	11/3/1989	K. Agogino	J. Caldwell	TUB 699.21(A)	TUBS 22
SURF011977	Letter: Information and diagrams showing the planned locations of various facilities at the Tuba City Site. These include the greenhouse and shade structure that you will be building.	9/19/1995	D. Baumgartner	R. Saar, Jacobs	TUB 699.21(A)	TUBS 22
SURF011978	Letter of Transmittal: Tuba City - UMTRA, Concerning Water Tank Submittal. Tempe Industry Supply Crosslinked 11,100 gal water tank, also, Pedestrian Walkway Design and Calculations.	1/18/1996	D. Hart, Brian Construction	G. Hartman, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF011979	Letter: Location of Retention Ponds at Tuba City UMTRA Site. There is a concern about the location of the retention ponds at Tuba City UMTRA Site. Should have been placed on the eastern side instead of	5/9/1996	R. Edge, DOE	B. Martin, Navajo Nation	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF011980	Memo: Location and Configuration of Water and Electrical Trenches and Lines for Pumps P2 and P3. Construction request that the water and electrical line be in the same trench. This alternative is acceptable	5/21/1996	P. Pehrson, TAC	G. Hartmann, TAC	TUB 699.21(A)	TUBS 22
SURF011981	Letter: Review and Comment on the following documents- Subcontract Documents, Preliminary Design for Review, and Calculations, Volume I, II, and III.	9/11/1986	L. Shingoite wa, Hopi Tribe	J. Themelis, MK	TUB 699.21(A)	TUBS 22
SURF011982	Letter: Differences between TUB EA Fact sheet design and current RAP design. Refinements in the RAP design will continue to occur. The values presented above are considered by the engineers to be preliminary	9/26/1985	D. Lechel	J. Hoopes	TUB 699.21(A)	TUBS 22
SURF011983	Memo: TUB Design Review Meeting, October 2, 1985, at 8:00am in the 14th floor Conference room. The RAC has proposed the attached agenda for a TUB design review meeting.	9/26/1985	B. Knight	W. Mason	TUB 699.21(A)	TUBS 22
SURF011984	Memo and Attachment: The Attached Project Interface Document Recommends Deletion of the TUB Phase I specification 2200.33. (Quality Control Frequency)	12/2/1985	J. Caldwell	B. Mason	TUB 699.21(A)	TUBS 22
SURF011985	Memo: The Rogers correlation has no technical basis and is not an accepted method by the TAC for determining the long term moisture content. The correlation is based on very few samples and for soils	3/12/1986	B. Knight	B. Keshian	TUB 699.21(A)	TUBS 22
SURF011986	Letter: Preliminary Design Documents for Review, Tuba City. (Attached for TAC's Review)	7/28/1986	S. Law, Document Control	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011987	Memo: Preliminary Design Documents for Review, Tuba City.	7/28/1986	J. Themelis, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011988	Letter: Balance of Preliminary Design for Review by Government	7/29/1986	J. Themelis,	J. Oldham, MK	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	and Indian Nations, Tuba City.		DOE			
SURF011989	Letter: This letter is to inform your office that the present working schedule for delivery of the final design documents for Tuba City is November 12, 1986.	10/16/1986	J. Themelis, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011990	Letter and Attachments: Final Design Documents for Review, Tuba City, consisting of Bid Schedule, Special Conditions, specifications, Subcontract Drawing.	11/17/1986	J. Themelis, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011991	Letter: Tuba City Final Design for Review Cost Estimate. As requested by the Technical Assistance Contractor (TAC) we are submitting the above subject estimate to the DOE and Jacobs.	11/19/1986	D. Dubois, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011992	Meeting Notes: The meeting was held to acquaint other agencies and concerned groups with current activities and specific design is scheduled for July and Final Design for late October.	7/2/1986	MKF, TAC, DOE, Navajo, and Hopi	W. Andberg	TUB 699.21(A)	TUBS 22
SURF011993	Memo: TUB Alternate Design Considerations and Selections.	11/22/1985	B. Mason	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF011994	Letter: The purpose of this review is to enhance an earlier understanding of the proposed design, which will allow a more responsive view of the preliminary design.	6/25/1986	C. Damon, Navajo Nation	J. Themelis, UMTRA	TUB 699.21(A)	TUBS 22
SURF011995	Fax: UMTRA, Tuba City Alternative Draft RAP Designs Proposals to Reduce Construction Costs.	11/18/1985	J. Oldham, MK	T. Wathen, MK	TUB 699.21(A)	TUBS 22
SURF011996	Memo and Attachment: Review of Tuba City Proposed Action. Two additional figures are being prepared. One showing the pile configuration, Cross-section and Cover.	5/27/1982	Distribution	E. Caywood, Ford, Bacon and Davis	TUB 699.21(A)	TUBS 22
SURF011997	Letter and Attachments: Enclosed please find 5 working copies of Tuba City proposed Action and Alternative Report. Please review it for our approach to the remedial action at this site and the various	6/1/1982	F. Bingham, Sandia National Laboratory	E. Caywood, Ford, Bacon, and Davis	TUB 699.21(A)	TUBS 22
SURF011998	Memo: Ambrosia and Tuba City Cover Volumes. The numbers of	5/19/1982	R. Gainer	V. Winkler	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	n this memo assume truncated pyramid stacking, 50 feet high, with no berms required.					
SURF011999	Letter: Tuba City Site Design On-board Review Meeting, with meeting notes attached.	10/21/1985	J. Themelis, DOE	R. Hopkins, MK	TUB 699.21(A)	TUBS 22
SURF012000	Letter: Evaluation of Tuba City Design Alternatives. The following schemes will be evaluated by engineering and quantities established for each alternative, so that MK can prepare cost estimates for	11/6/1985	B. Mason	B. Keshian	TUB 699.21(A)	TUBS 22
SURF012001	Memo: TUB Concept Revision, "Development of Alternative Designs for TUB to save construction costs and a revised draft RAP" by November 30, 1985.	11/8/1985	R. Williams	B. Mason	TUB 699.21(A)	TUBS 22
SURF012002	Record of Meeting Notes: TUB Alternative Design, TUB Alternative Design Discussion with NRC. (Denver)	11/8/1985	J. Caldwell	B. Mason	TUB 699.21(A)	TUBS 22
SURF012003	Letter: We understand that the RAC is turned on early for two reasons: Coordination with TAC, and Preliminary design on areas which have no bearing on meeting standards.	11/5/1985	R. Williams	B. Mason	TUB 699.21(A)	TUBS 22
SURF012004	Memo: Sodium Sulfate soundness Testing of the Tuba City, AZ Bedding Materials.	11/17/1989	M. Matthews, DOE	J. Oldham, MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF012005	Package with Memo: Enclosed are revised specifications and drawings resulting from Project Interface Document 18-S-11 through 18-S-15 for the Tuba City, Arizona, Uranium Mill Site. This transmittal s	5/14/1990	R. Hall, NRC	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012006	Package: Enclosed is a copy of Project Interface Document PID 18-S-15 regarding the Tuba City, Arizona Site. The PID concerns the over-excavation of toe ditch 2.	2/13/1990	File	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012007	Package: Enclosed is a copy of Project Interface Documents PID 18-S-11 and PID 18-S-12 regarding the Tuba City, Arizona Site.	10/12/1989	File	M. Matthews, DOE	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	Both PID are considered to be a "Class II" change pursuant to Section 0.1					
SURF012008	Letter: This letter confirms verbal direction given to MK-Ferguson Company on September 19, 1989, to cease compaction of the Tuba City, Arizona, Site bedding layer. We have received a Class II Project	10/10/1989	J. Oldham, MK	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012009	Package with Memo: Enclosed for your use are revised Erosion Protection and Seeding Specifications for the Tuba City Mill Site. The revisions were generated by Project Interface Documents 18-S-09 and	8/21/1989	File	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012010	Letter: Consultants to the Hopi UMTRA Team have reviewed Project Interface Document 16-S-09 and its supporting materials addressing the blending of materials from the Arrow Pit Quarry with materials	7/24/1989	M. Matthews, DOE	L. Shingoitewa, Hopi UMTRA Project	TUB 699.21(A)	TUBS 22
SURF012011	Letter: In our opinion, it is premature at this time to act or react to what may or may not happen as a result of a major revision to the subcontract documents. The normal course of action in this type	7/5/1989	M. Matthews, DOE	J. Oldham, MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF012012	Letter: The timing of bedding material placement at the Tuba City site versus the time to verify the quality of the blended material may create a conflict. The recently approved PID 18-S-09 requires A	6/29/1989	J. Oldham, MK	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012013	Letter: Project Interface Document 16-S-09 and related technical data pertaining to the proposal to blend material from the Arrow Pit borrow area with Shadow Mountain bedding/filter material has been	6/13/1989	M. Matthews, DOE	P. Deswood, Navajo Nation	TUB 699.21(A)	TUBS 22
SURF012014	Letter: The lab tests performed on rock from the Arrow Mountain quarry indicate that the rock is not as durable as shadow Mount	6/9/1989	M. Matthews, DOE	E. Hawkins, NRCC	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	ain rock. However, it is good quality rock and when blended with shadow					
SURF012015	Letter: Although we agree the PID does not constitute a criteria change to the subcontract specs. since gradation requirements specified in Section 02278, item 2.1.D.2 must still be satisfied, the p	6/8/1989	J. Oldham, MK	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012016	Package with Memo: Enclosed for review and concurrence are PID 18-S-09 and information to support our proposal to allow the blending of material from the Arrow Pit Material with approved Shadow Mound	5/26/1989	E. Hawkins, NRC	M. Matthews, DOE	TUB 699.21(A)	TUBS 22
SURF012017	Letter: Copies of the test results from the recent samples of Arrow Pit material are enclosed. The specific gravity and sodium sulfate soundness are close to the required specifications. The character	5/22/1989	M. Matthews DOE	J. Oldham, MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF012018	UMTRA Project Office Project Interface Document (Seeding): The present specification requires that the mulch be placed immediately following seeding using a mulch crimper. Crimping leaves gaps between	4/5/1989	D. Bolton, MKE	M. Abrams	TUB 699.21(A)	TUBS 22
SURF012019	Memo and Package: Enclosed for your information is one copy each of project Interface Documents (PID) 10-S-05, through 18-S-07, concerning tuba City Phase II Construction. The PID's are considered to	7/1/1988	File	J. Arthur, UMT RA	TUB 699.21(A)	TUBS 22
SURF012020	Letter and Project Interface Document: The attached PID concerning deletion of the TUB site laundering facilities has been reviewed. The TAC staff has no objection to the proposed revision, as long as	12/3/1985	J. Themelis, DOE	R. Williams, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF012021	UMTRA Project Office Project Interface Document: Specification	3/17/1988	Distribution	R. Waddington,	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	Section 02220, Test Fills, Part 3.5.D states that both sand cone and nuclear gages will be used to check density after each pass. Discuss			MK		
SURF012022	UMTRA Project office Project Interface Document: The earth work under the Tuba City Phase I Package is part of the construction of temporary facilities requiring a useful life of approximately 2.5 years	11/19/1985	J. Oldham, MK	J. Jones, RAC	TUB 699.21(A)	TUBS 22
SURF012023	UMTRA Project Office Project Interface Document: The Reference specification requires on site facilities to laundry contaminated clothing. In the opinion of the Project Director, Acting Site Manager,	11/15/1985	J. Oldham, MK	J. Jones	TUB 699.21(A)	TUBS 22
SURF012024	UMTRA Project Office Project Interface Document: The subcontractor has overexcavated the toe ditch number 2 bottom width from STA. 9+00 to the outfall at STA 13 +00 as follows (attached).	1/31/1990	J. Themelis, DOE	R. Williams, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF012025	Memo and Project Interface Document: Enclosed for your information is a copy of PID Number 18-S-14 regarding the Tuba City site. The PID is a result of Long-Term surveillance and maintenance requirement	2/6/1990	L. Shingoite wa, Hopi Tribe	M. Matthew, UMTRA	TUB 699.21(A)	TUBS 22
SURF012026	Report: On Tuba City Disposal Cell Observations of Cover Cracking. At the request of DOE and the TAC Quality Assurance Department, N. Larson and J. Caldwell of the TAC Engineering Department visited	9/13/1989	File	MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF012027	Field Operational Readiness Evaluation (FORE): Project-Tuba City Erosion Protection Installation.	10/17/1996	File	E. Artiglia	TUB 699.21(A)	TUBS 22
SURF012028	Daily Field Report: UMTRA Tuba City, deployment started late this morning and United Lining workers help prep subgrade. Closed out and seam all off Pond 2 except for East and West Tie ends.	2/28/1996	File	United Linings, Inc.	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	Had liner se					
SURF012029	Letter of Transmittal and Calculations: Water Tank Submittal. Tempe Industry Supply Crosslinked 11,100 gal Water Tank. Pedestrian Walkway Design and Calculations.	1/18/1996	D. Hart, Dine Bi Ghan Construction	R. Ivy, Jacobs Engineering	TUB 699.21(A)	TUBS 22
SURF012030	UMTRA Tuba City Site-Request for Categorical Exclusion: Based on the completed ECL, we believe that the proposed action qualifies for the Categorical Exclusion cited above and no further NEPA review is required.	8/23/1995	J. Robbins, NEPA	R. Edge, DOE	TUB 699.21(A)	TUBS 22
SURF012031	Letter: Evaluation was performed by Roy F. Weston, Inc. under contract with DOE and reviewed by the UMTRA Project Office. We concur with Weston's finding regarding the lack of support for the quantity of material.	1/26/1995	M. Thomas, CPD	R. Edge, DOE	TUB 699.21(A)	TUBS 22
SURF012032	Memo: Technical Analysis of Task 14 (Tuba city constructive change Proposal). You are requested to perform an evaluation of the attached subject proposal. A Technical Evaluation form is provided to assist.	2/2/1994	R. Edge, DOE	M. Thomas	TUB 699.21(A)	TUBS 22
SURF012033	Memo and Attachments: Tuba City Bedding Issues. The attached document details the activities associated with the bedding issue at the Tuba City site. The settlement reached with the subcontractor is final.	7/5/1990	M. Matthews, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012034	Letter: Tuba City, AZ Bedding Materials Placement, Testing, and Inspection. In our opinion, it is premature at this time to act or react to what may or may not happen as a result of a major revision.	7/5/1989	M. Matthews, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012035	Report: Tuba City Test Fills Construction and Laboratory Test Data.	5/10/1988	File	MK-Ferguson	TUB 699.21(A)	TUBS 22
SURF012036	Letter: We have been informed that the representative of the Navajo Nation has been identified.	9/22/1989	M. Matthews	D. Dubois, Jacob	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	aio Nation does not concur with our recommendation to halt compaction of the bedding layer at the Tuba City Disposal Cell. Please receive		, DOE	bs Engineering		
SURF012037	Letter: Due to the cover cracking at the Tuba City Disposal site, the TAC has been asked to complete several analyses related to our recommendations not to recompact dessicated soils.	9/20/1989	M. Abrams	D. Dubois	TUB 699.21(A)	TUBS 22
SURF012038	Letter: We are pleased to acknowledge there is now a consensus that heavy compaction of the bedding is not required or justified. However, we note MK support for light consolidation of the bedding process	2/14/1990	J. Oldham, MK	M. Matthews, U MTRA	TUB 699.21(A)	TUBS 22
SURF012039	Letter: Since the Remedial Action Inspection Plan (RAIP) does not address testing requirements for blended bedding materials, the RAIP should be revised. The NRC has indicated that as long as the revision	6/29/1989	J. Oldham, MK	M. Matthews, U MTRA	TUB 699.21(A)	TUBS 22
SURF012040	Letter: As a follow-up to our letter to you dated June 8, 1989, the DOE has received verbal concurrence for Project participants for the optional use of Arrow Pit material at the Tuba City Site.	6/13/1989	J. Oldham, MK	M. Matthews, U MTRA	TUB 699.21(A)	TUBS 22
SURF012041	Letter: Suggest combining sand from the Hamblin Wash with the Basalt bedding materials being produced at Shadow Mountain.	1/17/1989	J. Oldham, MK	M. Matthews, U MTRA	TUB 699.21(A)	TUBS 22
SURF012042	Memo: Through communications with MK-F, we have been made aware of the problem Mountain Gravel is having with producing the bedding from the Shadow Mountain Quarry.	12/5/1988	E. Banks	N. Larson	TUB 699.21(A)	TUBS 22
SURF012043	Letter: We believe that the results of the test fills have demonstrated a geometric mean of 1×10^{-8} cm/sec for the samples without bentonite. The DOE has achieved a desired permeability rate and the	10/21/1988	J. Arthur, DOE	P. Hayes, Department of Interior	TUB 699.21(A)	TUBS 22
SURF012044	Letter: We have re-evaluated the list of key construction milestones	10/21/1988	J. Arthur, D	J. Oldham, MK	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	es listed in MK-F contract with the Tuba City Remedial Action Subcontractor. The Attached is the subcontractors current forecast of th		OE			
SURF012045	Letter: Tuba City Test Fills. During construction of the non-bentonite test fill, considerable problems occurred with obtaining a homogeneous material as well as consistency of compaction test result	7/6/1988	J. Arthur, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012046	Letter: We have re-evaluated the list of key construction milestones listed in MK contract with the Tuba City Remedial Action Subcontractor. The following is our subcontractor's current forecast of	6/20/1988	J. Arthur, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012047	Record of Meeting Notes: Tuba City Bedding Material, Specifications stated that Shadow Mountain was specified as a sole source. Any change in source will have to be approved by the Project Office and	4/5/1989	File	M. Abrams, DOE	TUB 699.21(A)	TUBS 22
SURF012048	Report: Introduction on the Tuba Site rock issue. Also presented Slides 1, 2, 3, and 4 (attached) which represented what has been done on this subcontract.	7/20/1989	M. Abrams	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012049	Memo: Revised Procedure for Test Pads. This subcontract change notice supplements the specifications incorporated in SCN Number 09 and provides the direction used by the subcontractor for the construction	5/9/1988	Blue Eyes Fencing	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012050	Memo with Attachments: The attached procedures has been revised to fit discussions with DOE, M. Scoutaris and R. Brody. We will proceed on this basis until advised otherwise.	4/12/1988	T. Wathen, MK	R. Stearns, MK	TUB 699.21(A)	TUBS 22
SURF012051	Memo: The Construction Start for the Tuba City fills is tentatively scheduled for the week of April 4, 1988. Weather conditions ma	3/28/1988	E. Hawkins, NRC	J. D'Antonio, UMTRA	TUB 699.21(A)	TUBS 22

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	y dictate a change in the starting date.					
SURF012052	Letter and Maps: I'am sending you the following items. Proposed excavation locations for the test plots. Sampling plan and locations of the undisturbed samples on the test plots.	3/21/1988	M. Begaye, Navajo Nation	J. D'Antonio, UMTRA	TUB 699.21(A)	TUBS 22
SURF012053	Letter: This is to advise you that we agree that DOE may pursue construction activities at the Tuba City UMTRAP site without prejudice to NRC's future conditional concurrence of the remedial action	6/26/1988	J. Arthur, NRC	R. Smith	TUB 699.21(A)	TUBS 22
SURF012054	Memo and Attachment: Attached for your information are copies of the Compaction Test Plot Summary and Procedures to follow if a conductivity of 10-8 cm/sec can't be met for the radon barrier at Tuba	5/8/1987	L. Stepp	M. Nelson	TUB 699.21(A)	TUBS 22
SURF012055	Memo: Tuba City Compaction Test Plots. Different test plots should be constructed so the effect of different parameters on the hydraulic conductivities can be accurately evaluated.	4/29/1987	M. Nelson	N. Larson	TUB 699.21(A)	TUBS 22
SURF012056	Letter: Proposed Sampling and Testing Program-Tuba City. The scopes of work for the sampling and testing programs are presently being prepared by MKE for procurement action during the month of July	7/9/1986	J. Themelis, DOE	J. Oldham, MK	TUB 699.21(A)	TUBS 22
SURF012057	Memo: Attached is the Action Description Memorandum for Phase I Construction at Tuba City, AZ, addresses such initial construction activities as site access control, construction of a decontamination	11/15/1985	File	D. Groelsema	TUB 699.21(A)	TUBS 22
SURF012058	Memo: TUB Site Risk Analysis and Contingencies. 1) Basalt rock or local gravel for erosion protection. 2) Roads will be required to borrow sites. 3) Aquifer restoration may be required. 4) Navajos may	11/13/1985	P. Stassi	B. Mason	TUB 699.21(A)	TUBS 22

[illegible]

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF012064	Conference Record: New Signs for Tuba City. Requested Diana to take down one of the perimeter signs at Tuba and send the sign along with the hardware to us so we can use them for a template for the ne	1/16/1992	C. Jones, Geotech	D. Lucero, Hopi Tribe	TUB 699.21(B)	TUBS 23
SURF012065	Letter: This letter will serve to acknowledge that I'am in receipt of the two keys you sent recently. I will have custody of the keys to prevent any potential unauthorized entry to the disposal site.	10/4/1990	M. Matthews, UMTRA	A. Taylor, Hopi Tribe	TUB 699.21(B)	TUBS 23
SURF012066	Letter: The DOE has approved your request to retain the perimeter fence upon completion of the project to protect the seeded area. We have amended the contract to direct the contract to direct the sub	4/3/1990	L. Shingoite wa, Hopi Site Program	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012067	Package with Letter: Enclosed are marked-up drawings and specifications for the Tuba City fence Conceptual Design. Also request that a unit price bid form be prepared with units for lineal foot removal	11/23/1982	K. Krishnan, Jacobs Engineering	R. Campbell, UMTRA	TUB 699.21(B)	TUBS 23
SURF012068	Letter: In reference to your March 14, 1990, letter to the Department of Energy, the DOE has approved your request to retain the perimeter fence upon completion of the project to protect the seeded area		M. Begaye, Navajo Nation	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012069	Letter and Attachments: The Hopi Tribe, in consultation with the Navajo Nation, will hereby take responsibility for maintenance and upkeep of the fence upon completion of the construction project. We	3/16/1990	J. Oldham, MK	M. Matthews, UMTRA	TUB 699.21(B)	TUBS 23
SURF012070	Letter: The U.S. Department of Energy request MK Company to relocate the planned "disposal Cell Fence" at the Tuba City disposal site as shown on enclosed drawing number TUB-PS-10-0834. Refer to proj	1/8/1990	J. Oldham, MK	M. Matthews, UMTRA	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF012071	Letter: Attached is a copy of our estimate which justifies leaving the perimeter fence in place rather than proceeding with demolition and salvage by the subcontractor.	10/11/1989	M. Matthews, UMTRA	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012072	Letter: Pursuant to a conversation between M. Abrams and R. Cooney on this date, MK is proceeding with the preparation of a change order for the installation of the subject fence with the features specified.	8/7/1989	M. Matthews, UMTRA	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012073	Letter: Description should be modified to "furnish and install a 6 foot chain link fence with 3 strands of barbed wire plus top and bottom pipe rails". Also, the DOE recommends only one gate installed.	8/3/1989	J. Oldham, MK	M. Matthews, DOE	TUB 699.21(B)	TUBS 23
SURF012074	Letter: It is determined that DOE will not require the erection of fences around the Navajo sites unless they are strongly desired by the Navajo Nation and the local residents. Therefore, for the project.	8/29/1985	D. Dubois	W. Mason	TUB 699.21(B)	TUBS 23
SURF012075	Package of Correspondence: Fence Construction. This office has received concurrence from the Navajo and Hopi Tribes to install an exclusion fence around the Tuba City Mill Site. This is to request that.	8/2/1983	T. Cone	J. Morley	TUB 699.21(B)	TUBS 23
SURF012076	Letter: Enclosed for your information is a copy of the Completion Report for the Tuba City site fencing project. Section II contains information on the Navajo and Hopi laborers employed on the project.	5/17/1984	M. Nelson, Navajo Nation	J. Themelis, UMTRA	TUB 699.21(B)	TUBS 23
SURF012077	Letter: Enclosed are six sets of final drawing and specifications for the proposed exclusion fence at the Tuba City Site. We now have adequate funding to proceed with erection of the fence and request.	1/28/1983	H. Tso	J. Themelis, UMTRA	TUB 699.21(B)	TUBS 23
SURF012078	Letter and Attachments: There are two copies of the revised drawing.	1/3/1983	J. Morley, U	R. Krishnan, Ja	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	wings, specifications and bid form for the fence at the Tuba City Site. Please advise if additional assistance will be required with the		MTRA	cobs Engineering		
SURF012079	Letter: For your information a brief report on the fencing requirements, including preliminary drawings and specifications, for the Tuba City Uranium Mill Site. We are currently wrestling with the iss	9/17/1982	J. MacKinno n, People's Legal Service	J. Themelis, U MTRA	TUB 699.21(B)	TUBS 23
SURF012080	Letter: Recommendations, construction drawings, specifications and cost estimate for the fence around the Tuba City site as directed by your letter August 3, 1982. We believe that while no fence would	8/27/1982	R. Campbell , DOE	D. Phoenix, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012081	Letter: The Department of Energy will be installing a woven wire fence around the site to prevent access by livestock and children. Approximately 3400 LF of the fence will be along the highway right-o	8/26/1982	E. Gentsch, Engineer	W. Mason, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012082	Letter: We have obtained a USGS topo map and are having it enlarged to 1:200 scale. I will be at the site on August 16 and will make a cursory site survey. The Engineering Department is preparing cons	8/16/1982	D. Phoenix	W. Mason	TUB 699.21(B)	TUBS 23
SURF012083	Letter: You are requested to perform a special study of the fencing requirements for the Tuba City site. Your study should recommend the area to be fenced in order to provide reasonable radiation prot	8/3/1982	K. Krishnan, Jacobs Engineering	R. Campbell, U MTRA	TUB 699.21(B)	TUBS 23
SURF012084	Memo: The estimated costs appear to be sufficiently accurate. I do not believe the barbed wire fence would be adequate. The woven wire fence would adequately control domestic animal entry, although i	7/12/1982	D. Phoenix	D. Lewis	TUB 699.21(B)	TUBS 23
SURF012085	Memo: Tuba City Utility Location Investigation and Exploration T	5/20/1983	D. Lewis	B. Dorren	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	rip Report, May 5-6, 1983 and May 13, 1983.					
SURF012086	Memo: In response to your question regarding implementation of water treatment alternatives identified in the SOWP and NEPA compliance requirements, it would be my recommendation to discuss the pro		E. Artiglia	L. Ulland	TUB 699.21(B)	TUBS 23
SURF012087	Memo: Alternative Water Treatment System Designs and Cost for Treating Tuba City Long-Term Aquifer Pumping Test Water.	12/12/1994	E. Artiglia	G. Hartmann	TUB 699.21(B)	TUBS 23
SURF012088	Record of Telephone Conversation: The expense of the treatment facilities quoted on March 11, 1986, to B. Knight may not be adequate to satisfy our needs. the treatment facilities RTG considered adequate	3/13/1986	C. Schick, RTG	B. Deutsch	TUB 699.21(B)	TUBS 23
SURF012089	Letter and Attachments: The Attached print-out represents the X, Y, and elevation records from digitizing the Tuba City site topographic surface.	8/22/1984	B. Frailey, Olympus Surveys Inc.	K. Peil, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012090	Inter-Office Correspondence, UMTRA: On-Board site design review meeting in TAC-DOE, Albuquerque, discussions revealed that B. Knight of Jacobs Engineering was finalizing contract coverage for addition	10/4/1985	R. Hopkins, MK	T. Wathen	TUB 699.21(B)	TUBS 23
SURF012091	Memo with Attachment: Enclosed are details for possible additional topography mapping and clarification of the route to be aerially photographed.	10/8/1985	R. Barrentt, Summit Engineering	B. Knight, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012092	Letter: Comments and Suggestions for Topography Contractor, Tuba City, Arizona	4/8/1986	R. Williams, Jacobs	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012093	Letter: Comments pertain specifically to the five Tuba City sheets for finalization in ink per section 6.4 of exhibit A.	4/10/1986	R. Barrett, Summit Engineering	B. Knight, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012094	Letter: Topographic Map of Project Site and Borrow Areas-Tuba	5/19/1986	R. Williams,	J. Oldham, MK	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	City. Following your in-house review of the enclosed, please request your contractor to verify the difference between elevations and con		Jacobs Engineering			
SURF012095	Letter: Topographic map of project site and borrow area Tuba City, Arizona. The following are MKE's comments on the revised reproducible of the topographical mapping by Summit Engineering Company.	7/21/1986	R. Williams, Jacobs	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012096	Letter: Based on the work performed by Olympus Aerial Surveys, Inc. and San Juan Engineers, we cannot approve final payment. The accuracy of the total topography work done at Tuba City site is now i	10/9/1986	R. Barrett, Summit Engineering	K. Agogino, Jacobs	TUB 699.21(B)	TUBS 23
SURF012097	Letter: Closed Horizontal and Vertical Traverse Survey-Tuba City. The previous surveys were performed by Olympus Aerial Surveys, Inc, Salt Lake City, Utah, dated August 10, 1986, and by Summit Engine	9/24/1986	R. Williams, Jacobs Engineering	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012098	Letter: Tuba Survey, We have discussed the problems with the RAC to obtain on-site survey traverses of critical areas such as along the toe of the pile and the alignment of swales and ditches. RAC wi	8/8/1986	J. Themlis, DOE	R. Williams, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012099	Memo: Optional Work, This memo is written to request that the subject contract be advised that the following options are to be exercised.	9/25/1985	B. Kern	B. Knight	TUB 699.21(B)	TUBS 23
SURF012100	Memo: Modification to TUB Land Surveys Contract. A revised SOW and purchase requisition will be forthcoming directly.	9/25/1985	B. Kern	B. Mason	TUB 699.21(B)	TUBS 23
SURF012101	Memo: Schedule and Modification. We would like to have the Tuba City site and borrow site surveyed ASAP. The TUB wells are complete and are ready to be surveyed in. The road topo is unne	9/10/1985	B. Kern	B. Mason	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	cessary since					
SURF012102	Memo: In order to reduce the strain of the project's budgets, I have decided to reduce the surveying required for the hydrological characterization of the Tuba City site.	7/25/1985	B. Knight	D. Betsill	TUB 699.21(B)	TUBS 23
SURF012103	Deliverable Review Request and Record: We need to know what portion of the work is applicable and completed for each site in order to allocate payment to the correct job site number.	11/19/1984	W. Sanchez, Summit Engineering	W. Mason	TUB 699.21(B)	TUBS 23
SURF012104	Memo: The following dates are provided to give guidance to the TUB surveyor, but cannot, of course to contractual.	8/30/1984	W. Sanchez	B. Keshian	TUB 699.21(B)	TUBS 23
SURF012105	Memo: Tuba City legal Survey Analysis. Have completed an official legal survey analysis for the Tuba City Site using the ICES COGO model.	9/16/1983	D. Mohr	R. Hillman	TUB 699.21(B)	TUBS 23
SURF012106	Survey Notes for Tuba City UMTRAP General Services Contract. (Construction Staking Service)	1/20/1996	File	Dine Bi Ghan Construction, Inc.	TUB 699.21(B)	TUBS 23
SURF012107	Report: U.S. Department of Energy Albuquerque, New Mexico. UMTRA Project Tuba City, Survey Report.	2/6/1990	File	Indian Affiliates	TUB 699.21(B)	TUBS 23
SURF012108	Letter of Transmittal: Approval of Dine Bi Ghan 4" PVC pipe and anchor was received Monday for the Tuba City Pilot Plant change order work. The submittal is attached.	3/19/1996	D. Hart, Dine Bi Ghan Construction	G. Hartmann, Jacobs Engineering	TUB 699.21(B)	TUBS 23
SURF012109	Memo: The drawing is not to scale, but we want to place the power pole in the edge of the embankment and the guy wire will be 25' west of the base of the pole.	3/19/1996	G. Hartmann	P. Pehrson	TUB 699.21(B)	TUBS 23
SURF012110	Memo: Underground Electrical for Collection Pond Pump. Request permission to change to PVC conduit and single conductors in lieu of direct bury cable.	3/13/1996	S. Wright, UMTRA	S. Cox, Jacobs Electrical Engineer	TUB 699.21(B)	TUBS 23
SURF012111	Letter of Transmittal: Synthetic Membrane Panel Diagram. (Panel layout drawing)		D. Hart	G. Hartmann	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF012112	Letter of Transmittal: Submittal for Pre-fab building and Paint. Need more information for painting pre-primed steel and for water storage tank.	1/19/1996	D. Hart	G. Hartmann	TUB 699.21(B)	TUBS 23
SURF012113	Letter of Transmittal : DBG submittals for Manhole and concrete valve boxes. Bilco door for valve box, and piping valves and yard hydrant.	1/18/1996	D. Hart	G. Hartmann	TUB 699.21(B)	TUBS 23
SURF012114	Tuba City Electric, Report 66 pages: Transformer, Fused Cutout, Surge Arrester, Guy Anchor, Anchor Rod, Alumaweld Guy Strand, Automatic Guy Dead End, Hot Line Dead End, Hot Line Clamp, PVC Conduit and	12/28/1995	R. Starr	J. Vandevan, Arrow Head Power	TUB 699.21(B)	TUBS 23
SURF012115	Letter of Transmittal : Water Tank concrete specifications for tank pad. Approval for concrete use on site.	1/9/1996	D. Hart	G. Hartmann	TUB 699.21(B)	TUBS 23
SURF012116	Memo: Tuba City Submittals. 1) Pole mounted transformer submittal shows 25-50 KVA ratings, but Job Sketch shows 25 KVA. 2) 600V Paronite XHHW wire submittal shows 500 MCM, where is it used?	1/8/1996	R. Ivey	S. Cox	TUB 699.21(B)	TUBS 23
SURF012117	Letter: Confirms verbal direction given to MK on September 19, 1989, to cease compaction of the Tuba City Site bedding layer.	10/10/1989	J. Oldham, MK	M. Matthews U MTRA	TUB 699.21(B)	TUBS 23
SURF012118	Memo: Compaction of Bedding Layers. The 2-inch median stone diameter riprap was tested in the outdoor facility on a 20 percent slope with and without a 6-inch thick filter blanket. The average unit di	9/22/1989	K. Agogino	J. Caldwell	TUB 699.21(B)	TUBS 23
SURF012119	UMTRA Project Phase II Construction Subcontract Documents: Enclosed for your use are revised erosion protection and seeding specifications for the Tuba City Mill Site. The revisions were generated by	8/21/1989	M. Abrams	M. Matthew, U MTRA	TUB 699.21(B)	TUBS 23
SURF012120	Letter and Attachment: Enclosed for your information and use is	6/8/1989	E. Hawkins,	M. Matthews, U	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	one copy of the revised seeding specifications for the Tuba City UMTRA Site.		NRC	MTRA		
SURF012121	Letter: Tuba City Radon Barrier Construction Procedures Presently in Use.	11/21/1988	W. Arthur, DOE	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012122	Memo: Revised Specifications Section 02220, Test Fills Tuba City, AZ.	4/22/1988	W. Arthur, DOE	J. Oldham, MK	TUB 699.21(B)	TUBS 23
SURF012132	Memo: Revised TUB Fact Sheet. Attached is the subject document for your use.	11/27/1985	D. Lechel	B. Knight	TUB 699.21(B)	TUBS 23
SURF012133	Memo: Revision of TUB DEA. The selection of an additional borrow site. The use of material excavated during construction of the drainage ditch as part of the radon cover. The use of a lesser thickness	11/27/1985	G. Muenier	M. Nelson	TUB 699.21(B)	TUBS 23
SURF012134	Memo with Attachments: Transmitted herewith is the revised copy of the TUB Fact Sheet based on the following. (Attached)	6/25/1985	D. Lechel	B. Knight	TUB 699.21(B)	TUBS 23
SURF012135	Memo: Radiological Services has advised us that the volumes of windblown contamination and of contaminated material in the evaporation ponds will be available on April 30, 1985.	4/23/1985	B. Mason	B. Knight	TUB 699.21(B)	TUBS 23
SURF012136	Memo: Alternate Site Selection for TUB Engineering Fact sheet.	4/18/1985	B. Keshian	J. Hoopes	TUB 699.21(B)	TUBS 23
SURF014087	Calculation Cover Sheet: Project-UMTRA, Calculation Number-TUB-05-96-18-05-01, Feature-Wind Erosion Potential.	5/2/1996	File	J. Crain	TUB 699.21(B)	TUBS 23
SURF014088	Calculation Cover Sheet: Project-UMTRA, Calculation Number-TUB-11-95-11-01-00, Feature-Infiltration from South Toe Apron.	11/28/1995	File	J. Crain	TUB 699.21(B)	TUBS 23
SURF014089	Calculation Cover Sheet: Project-UMTRA, Calculation Number-TUB-12-89-12-02-00, Feature-Non Saturated Hydraulic Conductivity Parameters. (RETC)	12/20/1989	File	W. Pauser	TUB 699.21(B)	TUBS 23
SURF014106	Report: Uranium Mill Tailings Remedial Action Project Office. Site Conceptual Design for the Inactive uranium mill tailings site at	6/1/1983	File	J. Morley, DOE	TUB 699.21(B)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	Tuba City. (Included in Package is Maps)					
SURF026865	Tuba City Pilot Plant CCB. This CCB description outlines the assumptions and decisions made in developing the design for the Tuba City plant for treatment of ground water downgradient of the Tuba City	2/7/1996	File		TUB 699.21(B)	TUBS 23
SURF033328	Memorandum: Historical Power Outage Records for Tuba City, Arizona. Memo transmits a copy of the power outages for Tuba City for 1993-1995 obtained from Sanky Sangster of APS's Tuba City office. The	2/22/1996	Robert Saar	George Hartmann	TUB 699.21(B)	TUBS 23
SURF033331	Memorandum: Tuba City, Arizona Pilot Plan Design Concept Memorandum (DCM). Memo outlines the assumptions and decisions made in developing the design for the Tuba City Pilot Plant for treatment of ground	11/18/1995	Russell Edge	George Hartmann	TUB 699.21(B)	TUBS 23
SURF012137	Letter: We have discussed your interest in the mineral composition of the tailings site at the abandoned uranium mill, east of Tuba City, Az. Soil samples have been taken at the pile, but are not placed	11/26/1984	J. Wolfe, Jacobs	W. Mason, Roy F. Weston	TUB 699.22(A)	TUBS 23
SURF012138	Inventory of Toxic or Hazardous Materials: Laboratory, Office, and Recreation Hall-No suspected asbestos insulation was observed.	10/14/1983	File	R. Peel	TUB 699.22(A)	TUBS 23
SURF012139	Memo: Transportation of Water Samples from Navajo Sites to Analytical Laboratories.	8/27/1984	R. Rager	P. Darr	TUB 699.23(A)	TUBS 23
SURF014102	Report: Drilling, Coring and Monitoring Well Installation Services. (Site Health and Safety Plan, Tuba City)	9/26/1995	Jacobs Engineering	Maxim Technologies	TUB 699.27(A)	TUBS 23
SURF014105	Report: Tuba City Field Effort 95-96 Site Specific Health and Safety Plan. (Supplemental to the UMTRA Project Environmental, Safety, and Health Plan)	3/1/1995	Department of Energy	Jacobs Engineering (TAC)	TUB 699.27(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF012213	Letter: Proposed Construction within the Tuba City UMTRA Site Boundary.	9/6/1995	R. Edge, DOE	B. Johnson, Attorney	TUB 699.30(A)	TUBS 23
SURF012214	Letter: Relative to Phase two, the project needs additional geologic, Hydrogeologic, and Geochemical data from these sites. Over the next few years the DOE and Navajo UMTRA office will be collecting s	6/7/1995	T. Showa	R. Edge, DOE	TUB 699.30(A)	TUBS 23
SURF012215	Letter: Russ will call various parties today and try to arrange a new date for a meeting. Russ emphasized that he will continue to "Push" the various entities to complete review of the draft CCA language	4/25/1995	R. Nelson	M. Hansen, UMTRA	TUB 699.30(A)	TUBS 23
SURF012216	Memo: I received a request from J. Johnson, Hydro, to develop a checklist on permitting and cultural resource activities requirements for Tuba City. He also wants me to give him a list of agencies to	9/23/1994	C. Silva	L. Ulland	TUB 699.30(A)	TUBS 23
SURF012217	Letter: Tuba City UMTRA Project Shadow Mountain Borrow.	6/29/1989	W. Brown, BIA	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012218	Letter: This should provide the information needed to verify the surface damage areas and expedite the borrow permits.	12/6/1988	L. Yazzie, Navajo Nation	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012219	Letter: This data outlines two of the areas to be included in the total acreage subject to surface damage fees as agreed in the June 10, 1988 meeting.	6/16/1988	W. Arthur, DOE	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012220	Letter: To assist in resolving this unfortunate situation, the processing fee for the addendum to the shadow mountain borrow pit will be waived (\$500). The Navajo Nation would very much like to continue	5/26/1988	J. Arthur, DOE	T. Begay, Navajo Nation	TUB 699.30(A)	TUBS 23
SURF012221	Letter: We believe the grazing loss compensation requested by the Navajo Nation is excessive and cannot be justified. We have	5/10/1988	W. Arthur, DOE	J. Oldham, MK	TUB 699.30(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	estimated what we feel is a reasonable value for grazing loss based on go					
SURF012222	Letter: The MK Ferguson Company has submitted three applications for sand and gravel permits at Shadow Mountain Greasewood Lake and the supplemental gravel area.	4/22/1988	J. Arthur, DOE	S. Pollack, Department of Justice	TUB 699.30(A)	TUBS 23
SURF012223	Letter: Proposed Sand and Gravel Permit Application for Weeminuche Construction Authority.	4/18/1988	D. Dodge, BIA	P. MacDonald, Navajo Nation	TUB 699.30(A)	TUBS 23
SURF012224	Letter: A certified letter was sent to T. Begay, UMTRA Program Manager for the Navajo Nation, regarding revised applications on all borrow sites. Reviewing the letter and the permit for shadow Mountain	4/14/1988	R. Waddington, MK	L. Yazzie, Navajo Nation	TUB 699.30(A)	TUBS 23
SURF012225	Letter: Contact was made with Navajo Land Office to discuss the grazing issue. We were advised that formal request for the grazing would be made. We were also told that the borrow permits were being	4/14/1988	W. Arthur, DOE	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012226	Letter: An archeological survey will be performed on the additional borrow area, and the cultural resource inventory report will be submitted by the archeologist. We are requesting that this addendum	4/7/1988	L. Shingoite wa, Hopi UMTRA	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012227	Letter: Borrow Permit for UMTRA Project at Tuba City.	2/22/1988	L. Shigoitewa, Hopi UMTRA	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012228	Letter: Sand and Gravel Permit Application at Saint Michaels, Arizona.	1/3/1988	W. Brown, BIA	P. MacDonald, Navajo Nation	TUB 699.30(A)	TUBS 23
SURF012229	Letter: Sand and Gravel Permit Application for Navajo Engineering and Construction Authority at Shonto, Az.	12/3/1987	W. Wilkinson, BIA	P. MacDonald, Navajo Nation	TUB 699.30(A)	TUBS 23
SURF012230	Letter: UMTRA Project, Tuba City. Borrow Permit for Area A and	8/7/1987	A. Secakukk	J. Oldham, MK	TUB 699.30(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	Supplemental Gravel Area, Borrow Permit for Shadow Mountain, Borrow Permit for Greasewood Lake.		u, Hopi			
SURF012231	Letter: UMTRA Project-Tuba City, Borrow Permit for Area A and Supplemental Gravel Area.	7/27/1987	E. Store, Navajo Nation	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012232	Letter: Enclosed for your use in preparing sand and gravel permit applications correspondence from the Bureau of Indian Affairs and the Navajo Nation regarding sand and gravel permit application process	9/9/1985	D. Sanders, International	G. Norton,	TUB 699.30(A)	TUBS 23
SURF012233	Record of Telephone Conversation: Borrow Permit Procedures for Hopi Tribe.	7/22/1985	H. Honoin,	E. Mulford	TUB 699.30(A)	TUBS 23
SURF012234	Letter: Sand and Gravel Permit Application Guide.	6/7/1985	W. Mason, Jacobs	T. Begay, Navajo Nation	TUB 699.30(A)	TUBS 23
SURF012235	Letter and Attachments: Enclosed for your review are three copies each of our permit applications for three UMTRA Project borrow sites.	7/27/1987	T. Begay, Navajo Nation	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012255	Letter: Post-Cell-Closure Vicinity Property Material Management and Disposal Plan.	10/17/1991	M. Matthews, UMTRA	V. Masayesva, Chairman Hopi Tribe	TUB 699.30(A)	TUBS 23
SURF012256	Hand Written Memo: Restoration of Drill Sites and Road.	5/20/1985	D. Betsill	File	TUB 699.30(A)	TUBS 23
SURF012261	Memo: Transformers found near Tuba City. The Hopi Tribe is looking into real estate easements to find prior user of the land the transformers are located on.	7/16/1992	R. Edge, DOE	A. Artiglia	TUB 699.30(A)	TUBS 23
SURF012262	Memo: Difficulty in obtaining electrical power at the Tuba City Site. It is suggested that your staff make a formal application for power usage through L. Shingoitewa and T. Begay.	5/8/1986	J. Oldham, MK	B. Mason, Jacobs	TUB 699.30(A)	TUBS 23
SURF012263	Letter: C. Taylor we have reviewed the available materials regarding your claim to the mill building at the Tuba City mill site. We	3/3/1986	C. Taylor	M. Begaye	TUB 699.30(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	do not have any documentation which would verify that you do have					
SURF012264	Letter: The borrow areas have been recontoured to blend with the surrounding terrain. The subcontractor is seeding the disturbed areas within the boundary limits of the borrow areas and is planning to	4/30/1990	M. Begaye, Navajo Nation	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012265	Memo: The specified gradation could be met by the contractor using only Shadow Mountain Rock, but about 400,000 yards of rock would have to be wasted in order to produce the required amount of rock.	11/3/1989	K. Agoging	N. Larson	TUB 699.30(A)	TUBS 23
SURF012266	Letter: The timing of bedding materials placement at the Tuba City versus the time to verify the quality of the blended materials may create a conflict. Since the Remedial Action Inspection Plan (RAIP	6/29/1989	J. Oldham, MK	M. Matthews, UMTRA	TUB 699.30(A)	TUBS 23
SURF012267	Letter: The DOE has received verbal concurrence from Project participants for the optional use of Arrow Pit material at the Tuba City UMTRA Site. Formal letters of confirmation will be forthcoming from	6/13/1989	J. Oldham, MK	M. Matthews, UMTRA	TUB 699.30(A)	TUBS 23
SURF012268	Letter and Attachments: Additional test results for the Arrow Pit Erosion Protection Material have been obtained as required and are attached for your information. These results are similar to those	5/10/1989	M. Matthews, UMTRA	E. Hawkins, NR C	TUB 699.30(A)	TUBS 23
SURF012269	Letter: Because of the difficulty in producing bedding material meeting the specified gradations from Shadow Mountain Basalt, the lower tier subcontractor has searched for alternative materials source	3/31/1989	M. Matthews, DOE	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012270	Letter: Reviewed test results of samples collected from Hamlin	1/17/1989	J. Oldham,	M. Matthews, D	TUB 699.30(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	Wash indicate the specific gravity is marginally unacceptable and the soundness is unacceptable by a factor of three. The Hamlin Wash ca		MK	OE		
SURF012271	Letter: When Tuba City was designed, the local pediment gravels and Shadow Mountain basalts were proposed as the rock sources. Because of the poor quality of the pediment gravels and the high costs o	12/5/1988	E. Banks	N. Larson	TUB 699.30(A)	TUBS 23
SURF012272	Letter: Enclosed is a check for \$52,940.00 to cover the surface damages established for the Tuba city UMTRA borrow areas. These funds should be distributed to the affected grazing permittees.	11/29/1988	L. Yazzie	J. Oldham	TUB 699.30(A)	TUBS 23
SURF012273	Letter: We believe the grazing loss compensation requested by the Navajo Nation is excessive and cannot be justified. We have estimated what we feel is a reasonable value for grazing loss based on goi	5/10/1988	J. Arthur, D OE	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012274	Memo: Revised Testing and Sampling Program for the Test Fill Construction.	3/24/1988	T. Swisse	R. Waddington	TUB 699.30(A)	TUBS 23
SURF012275	Letter and Attachment: I'am sending you the following items; Proposed excavation locations for the test plots; Sampling plan and locations (figure 1) of the undisturbed samples on the test plots.	3/21/1988	M. Begaye, Navajo Nation	J. D'Antonio, D OE	TUB 699.30(A)	TUBS 23
SURF012276	Letter: Concerning royalty rates to be paid to either or both the Hopi Tribe and Navajo Nation, the following table details the permit items subject to royalty as well as Gross Receipt.	11/17/1987	J. Arthur, D OE	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012277	Letter: UMTRA Project-Tuba City Radon Barrier Test Plots at Greasewood Lake Borrow Site.	7/16/1987	T. Begay, Navajo Nation	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012278	Memo and Attachments: Enclosed are the backhoe trench logs and location map for the borrow site investigation conducted from November 21-23, 1985.	11/25/1985	R. Rager	A. Harvey	TUB 699.30(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
SURF012279	Memo: Gravel sources located near mill site are to be screened by archaeologist and sampled by backhoe. The Merrick Pit was eliminated from further consideration because limited material above 6 inches	11/21/1985	B. Knight	D. Harvey, TAC	TUB 699.30(A)	TUBS 23
SURF012280	Memo: Requesting a floodplain determination on two additional sources of borrow materials that are proposed for remedial action at the Tuba City Uranium Mill Tailings Project Site.	9/26/1985	V. Harrell, Army Corps of Engineers	D. Lechel, Jacobs	TUB 699.30(A)	TUBS 23
SURF012281	Letter: We request that the U.S. Fish and Wildlife Service determine which threatened or endangered species may be present in the areas that may be used as sources of borrow materials for the remedial	8/1/1985	D. Metz, Fish and Wildlife Service	D. Lechel, Jacobs	TUB 699.30(A)	TUBS 23
SURF012282	Letter: The DOE Project Office received a letter from S. Pollack, Navajo Attorney outlining requirements for completing the permit applications among other concerns.	5/19/1988	M. Begaye, Navajo Nation	J. Arthur, DOE	TUB 699.30(A)	TUBS 23
SURF012283	Letter: Investigation of Potential UMTRA Borrow Sites. Before design of the cleanup plan for the inactive Tuba City Uranium mill site can be finalized, additional data are required.		Bureau of Indian Affairs	W. Mason, Jacobs	TUB 699.30(A)	TUBS 23
SURF012284	Letter: With respect to compensation to Navajo permittees, the Navajo Nation and Hopi Tribe have agreed that the permittees are to be paid the full amount of \$100 an acre without prejudice to any right	10/13/1988	J. Arthur, DOE	S. Pollack, Attorney Hopi Tribe	TUB 699.30(A)	TUBS 23
SURF012285	Record of Telephone Conversation: Fine Grained Borrow Sources for Five Mile Wash-TUB.	4/30/1985	P. Smith	B. Knight	TUB 699.30(A)	TUBS 23
SURF012286	Letter: Tuba City UMTRA Final Borrow Quantities. As requested by R. Cook of your staff, the final quantities for borrow materials and water usage were obtained as follows. (Attached)	8/16/1990	A. Zaman, Navajo Nation	J. Oldham, MK	TUB 699.30(A)	TUBS 23
SURF012287	Letter: The borrow areas employed for the UMTRA Project at Tuba City	4/30/1990	L. Shingoite	J. Oldham, MK	TUB 699.30(A)	TUBS 23

Barcode	Document Name	Document Date	Addressee (To)	Originator (From)	Code No	Box Code
	ba City have been recontoured to blend with the surrounding terrain. The subcontractor is seeding the disturbed areas within the boundary		wa, Hopi Tribe			
SURF012288	Letter and Attachments: Concerning the inactive uranium processing site near Tuba City Arizona two additional sources of borrow materials have been identified for use in the proposed remedial action,	6/25/1985	G. Norton	W. Mason	TUB 699.30(A)	TUBS 23
SURF012289	Record of Telephone Conversation: Supplying Road Gravel for Tuba City.	6/14/1985	D. Merrick	D. Lechel, Jacobs	TUB 699.30(A)	TUBS 23
SURF012290	Memo: Tuba City Rock Borrow Pit Investigation and Site Visit.	6/13/1985	W. Mason	N. Larson	TUB 699.30(A)	TUBS 23
SURF012291	Record of Meeting Notes: N. Larson presented the various borrow material sources. 1st and 2nd preferences were the Shadow Mountain Basalt and Limestone Pits, respectively.	6/10/1985	B. Knight, TAC	E. Mulford	TUB 699.30(A)	TUBS 23
SURF012292	Memo and Attachments: Borrow Sites-Navajo Reservation. The following five figures depict areas that have been identified by TAC for use as borrow sites to obtain various earthen materials to be used	6/3/1985	R. Rager	P. Darr	TUB 699.30(A)	TUBS 23
SURF012293	Memo: The DOE is planning the clean up of the inactive uranium mill tailings pile near Tuba City. The work is part of the Uranium Mill Tailings Remedial Action (UMTRA) Project. Jacobs Engineering Group	5/13/1985	G. Norton, Hopi Agency	W. Mason, Jacobs	TUB 699.30(A)	TUBS 23
SURF012294	Memo and Attachments: Enclosed, as we discussed, are marked-up prints of the candidate Borrow Locations near the Western Navajo UMTRA Sites.	11/1/1984	R. Barrett, Summit Engineering	W. Mason, Jacobs-Weston Team	TUB 699.30(A)	TUBS 23
SURF012295	Letter: As we discussed, we will initiate field investigation of six potential borrow pits near the TUB site about October 8-10, 1984	10/2/1984	R. Hopkins, MK	B. Mason, Jacobs	TUB 699.30(A)	TUBS 23
SURF012296	Memo: Preliminary Borrow Source and Geomorphic Hazard Assessment	6/15/1984	R. Rager	R. Weeks	TUB 699.30(A)	TUBS 23

[illegible]