Summary of Shiprock EA Comments and Responses[a]

Category[b]	Navajo UMTRA (1–40)	Navajo EPA (41–64)	Navajo WCA (65–74)	Diné College (75)	Tufts (76–78)	Navajo Dept. of Water Resources (79–110)	USFWS (111–113)
Characterization and Modeling	1,5,16,23,24,25,27, 31,32,34,35	41,43,51,52, 53,54,57,59,60	72,73,74		76,77	80,86,88,93,94,96, 99,101,103	
Compliance Strategies	12,13,14,15,18, 19,21,22	45,50,56,57	70,71			96,108	
Ecological Risk	3,8,11,15,22,30, 38,40	63					111,112, 113
GCAP and Remediation Design	4,6,7,9,10,11,13, 17,20	56	65,66,67,71, 74				
Human Health Risk	3,15,36,37,38	55,62				101	
Monitoring		49,58		75	78	91	
Regulatory Compliance and Standards	2,19,28	42,45,47,48,58, 59,61	68,69			92,95,97,98,100, 106	112

[a]Only key comments are summarized. Comments that clarify text are not listed. Of the 113 comments received, 39 will result in changes to the EA. In many cases, DOE agreed with comments that did not require changes to the document.

[b]Categories were selected on the basis of key areas addressed by commentors.

Responses to Comments on the April 2001 Shiprock Draft Environmental Assessment of Ground Water Compliance

	EA Comments[a]	Issue Type[b]	Status[c]	Response/Resolution
	Navajo Nation Comments received 6/8/01			
	EA and SOWP Comments (Page 1)			
1	1: Contaminant sources may not be properly defined. Contamination from the disposal cell and in the vadose zone may need to be redefined in the conceptual and transport models.	T	NC	DOE believes that a thorough site characterization was conducted and that most sources of contamination are identified. However, it is impossible to eliminate all uncertainty. SOWP Sections 4.4, 4.5 and 5.0 describe the sources of contamination and how they were incorporated into the site conceptual model. Evaluations of the drainage of residual moisture from the disposal cell are planned; when data from these investigations are available, the conceptual model may need to be revised.
2	2: Documents contain no compliance plan; difficult to verify compliance with regulatory requirements.	R	NC	Section 2.0 of the SOWP identifies key regulatory drivers. Section 2.6 specifically identifies agencies consulted and requirements. DOE continues to work with federal and tribal agencies to accomplish compliance with federal and tribal regulations. Section 5.0 of the EA identifies the key agencies. In addition, work plans for each field activity incorporate a compliance plan that identifies compliance requirements. The Navajo UMTRA Project Office has reviewed the work plans.
3	3: The results of the risk assessment are not linked to the establishment of remedial goals.	R	NC	Remediation goals are set forth only for ground water in 40 CFR 192 and specify four options: background, MCLs, ACLs, or supplemental standards. Risk assessment under UMTRA was conducted at each site to establish a baseline of current risks. Determining the degree of risk assists DOE in determining the compliance strategy for each site. At the Shiprock site, DOE, in consultation with Navajo UMTRA and other agencies, implemented interim actions based on risk to human and ecological receptors. The long-term compliance strategies for each area of the site are intended to eliminate exposure pathways and reduce concentrations of key contaminants. However, due to other "non-DOE" contributions to contaminant concentrations, it is extremely difficult to establish prescriptive remediation goals for humans and ecological receptors.
4	4: The current design of the evaporation pond may pose environmental risks due to aerial dispersion of liquid contaminants and evaporites.	T	A	To address Navajo Nation concerns, DOE is no longer considering spray evaporation as a remediation plan. Instead, solar evaporation using side-drip entry is the initial plan for remediation. At a later time, enhanced evaporation methods will be evaluated. The EA will be revised to reflect the remediation plan using solar evaporation with side drip.
	General Comments (Page 1)			
5	1: What method was used to determine dewatering from the disposal cell…please elaborate. Cell drainage is essential to the remedial action plan. Tailings dewatering can be a very slow process without active or passive drainage systems.	T	NC	Agree with comment but no change is required in the EA. The drainage of residual moisture from the cell was obtained from flow model calibration and consequently is dependent upon other estimated parameter values, including areal recharge, terrace hydraulic conductivity, and Mancos Shale hydraulic conductivity. The flow model is sensitive to each of these parameters. Water levels in the flow model are more sensitive to areal recharge, Mancos Shale hydraulic conductivity, and terrace hydraulic conductivity than they are to drainage from the disposal cell. Because chemical mass is introduced to the transport model via drainage from the disposal cell, however, this component is of equal importance with the parameters.

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6	2: Sequestering the flow from well 648 may be very unpopular with locals.	S	NC	Success of the proposed remediation for the floodplain depends on artesian well 648 continuing to flow. DOE requests that the outflow from this well continue eastward in the outflow ditch that empties directly to Bob Lee Wash. This would not hinder the historical use of this well water by the local population.
7	3: Will the terrace east area stay dry once active remediation is complete? Consider a land use restriction that will limit activities (e.g., irrigation) that may remobilize contamination.	T	NC	Remediation in the short term is intended to dry up the seeps in the washes and along the escarpment. The extraction wells pumping from the axis of the buried channel will lower ground water levels but will not remove all the ground water in the terrace system. Some residual water will remain in the system as a result of limitations of pumping and the water-holding capability of the clayey, weathered Mancos Shale and coarse alluvial material. Water levels in the extraction wells will be monitored after active remediation; if water levels rise, the need for additional action would be evaluated.
8	4: Is there an exposure pathway from salt deposits to ecological receptors? Do fauna use deposits as salt licks?	S	NC	For the purposes of risk assessment, it was assumed that terrestrial wildlife and livestock receptors could directly ingest salt crusts. Section 6.2.3.7 of the SOWP and Section 4.8 of the EA discuss the risks associated with salt crusts, and it was determined that the risk to wildlife and livestock is low. The actual existence of this pathway, however, has not been confirmed.
9	5: The spray evaporation system may be undersized. Retention ponds with hazardous materials must be properly designed. A study needs to be conducted to ensure the design is correct.	T	A	As stated in the response to comment 4, spray evaporation is no longer being considered. The remediation plan is to construct a 4-acre pond for solar evaporation using side-drip entry. The pond would accommodate a relatively low pumping rate of 20 gallons per minute.
10	6: Meteorological data should be evaluated to see if the evaporation system can be operated 78% of the time without affecting humans and the environment.	T	NC	Meteorological data (primarily wind speed and net evaporation) will be used for the final design of the pond.
11	7: There is a concern with recontaminating surrounding areas when operating the spray evaporation system. Studies should be conducted to ensure that evaporites will not pose risk to humans and the environment.	T	NC	As stated in the response to comment 4, spray evaporation is no longer being considered.
12	8: More specific information is needed to support the proposed compliance strategies (e.g., locations and numbers of background wells and point of compliance wells). Recommend summarizing from data in the draft GCAP.	T	A	Tables 3 and 4 will be updated to list background wells and other wells and surface locations planned for sampling. These changes will be reflected in the draft GCAP, in preparation.
	Specific Comments, Environmental Assessment (pp 2–4)			
13	Executive Summary: Mention that success of the compliance strategy is dependent upon rapid dewatering of the disposal cell. This must be explained.	S	NC	For the next 5 years DOE will be evaluating the effect of drainage of residual moisture from the disposal cell. Review of this after 5 years may result in modifications to the remediation strategy.
14	Table 1: An additional column "Remediation Goal" should be added to the table. This information should also be incorporated into the selection framework process.	R	A	Remediation Goal will be added to the Rationale column in Table 1 of the EA. A statement on the goal for each area will be made there but will not carried into the selection framework (Figures 4, 5, and 6).

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15	Table 2: Remediation goals for human health and ecological receptors should be provided in separate tables. Goals for human health should be based on 40 CFR 192, and goals for ecological receptors should be back-calculated 95% UCLM values based on an HQ of 1.0.	S	NC	DOE is required under UMTRCA to remediate to the standards established by 40 CFR 192 and to be protective of human health and the environment. HQs are calculated to determine if an ecological risk may be present. HQs greater than 1 do not necessarily indicate risk to any particular receptor populations. DOE's primary concern is threatened and endangered species, and DOE has committed to work with the U.S. Fish and Wildlife Service to address contaminants that may pose a risk to these species.
16	Section 1.5: A monitoring plan should be in place to ensure interim actions remain effective. Inspections are recommended.	R	A	A sentence will be added to page 10 indicating that the improvements added to the areas as a result of interim actions will be inspected annually and, if necessary, modifications will be made.
17	Section 3.2.1: Provide calculations used to determine the sufficiency of a 100-foot buffer.	T	NC	As stated in the response to comment 4, spray evaporation is no longer being considered.
18	Section 3.4, paragraph 2: The no action alternative for the west terrace must be dependent upon dewatering of the east terrace. State this in Section 3.4.	R	NC	During the remediation period water levels and samples will be collected at six wells. Surface water samples and water levels will also be collected. Evaluation of these data will determine the effect of terrace east remediation. If lower contaminant concentrations and lower water levels are not occurring, then the remediation strategy will be modified accordingly.
19	(1) Section 3.2.1: ACLs may be developed for nitrate and uranium. DOE should try to determine background concentrations of these constituents prior to a lengthy ACL petition process. Background levels should become remediation goals. (2) Manganese: Discuss rationale for selecting maximum value instead of other statistical data. (3) Also discuss rationale for selecting 100 years as the remediation time frame.	R T R	NC NC NC	(1) DOE agrees that background should be determined as remediation progresses. DOE should be able to better identify contributions related to ore-processing activities. If it is determined that background is higher than MCLs, then it is feasible that background or ACLs could become remediation goals. (2) UMTRCA allows DOE to choose background, MCL, or ACL concentrations for a cleanup standard. The maximum background value for manganese was selected because it may never be possible to achieve levels lower than this. (3) The 100-year time frame is the maximum period allowed for natural flushing according to UMTRA regulations.
20	Section 4.3.2: Show capture zones for floodplain pumping. Recommend a map of simulated drawdowns.	T	NC	Section 4.3.2 presents a description of present conditions. Because there is presently no active pumping occurring on the floodplain, there are no drawdowns to plot; therefore, no map is required. Pages 4-243 through 4-245 in the SOWP describe a pumping scenario for the terrace. Projected drawdowns for that scenario are presented on SOWP Figure 4-73 (a) and (b). Capture zones and drawdowns for pumping wells planned in the floodplain will be included in the modeling as part of the preparation of the GCAP.
21	Section 4.4: High soil contamination in the floodplain should be considered in modeling because contaminated soils will contaminate the aquifer.	R	NC	Under the surface program, soils that had radium concentrations exceeding UMTRA cleanup standards were removed in 1985 and 1986. This eliminated the possibility that soils are a continuing source of contamination.
22	Section 4.8: Use maximum concentrations to determine risks to livestock in non-saltgrass samples.	R	NC	Maximum concentrations would represent an overly conservative approach due to the "roaming" nature of livestock. In addition, ecological risk assessment guidelines encourage risk management when a potential risk may occur. DOE has entered into an agreement with the Navajo Nation to restrict livestock grazing during ground water remediation.

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	SOWP Comments(pages 5–8)			
23	The entire floodplain may discharge to the river, thus removing a significant mechanism for flushing. Add a discussion of river stage to support the theory that a portion of the floodplain is gaining from the river.	T	NC	The plume maps in the SOWP (Figures 4-20 and 4-21) support the hypothesis that the terrace is recharging the panhandle of the floodplain east of the disposal cell. The absence of the chemical plume in the crescent area north-northwest of the panhandle is where San Juan River water is believed to enter the floodplain. The crescent region coincides with the area shown in Figure 4-13 (floodplain flow components) of the SOWP where San Juan River water is shown entering the floodplain.
24	The value used for precipitation infiltration may be high. Cite the reference for the higher 30%.	T	NC	Several factors combine to warrant the choice of 30 percent, including the granular character of the surficial deposits, the contributions of runoff from the terrace, and the shallow depth to ground water. Of all the heavy rainstorms we observed on the floodplain, overland flow was never observed. Because no recharge measurements exist for the floodplain, the 30 percent value is simply an estimate.
25	Explain why evapotranspiration was not accounted for in the flow from well 648 to the wash. It is assumed that total flow from 648 reaches the floodplain aquifer.	T	NC	Some of the flow percolates into the underlying terrace alluvial material (cobbles, gravel, sand) and weathered Mancos Shale. This flow eventually finds its way to the floodplain near the mouth of Bob Lee Wash.
26	The change in units to ft^3/year is confusing; keep units consistent.	T	NC	We apologize for this oversight. All future reports of water budget will use the units ft^3/day. The ft^3/yr terms can be multiplied by 1 yr/365 days to convert them to ft^3/day. Also, the terms were converted to an equivalent set of units in Table 5-1 of the SOWP.
27	Cite the source for the value of 4.4 inches per year.	T	NC	As described in the SOWP, this value was obtained from modeling studies. The calibration of the numerical flow model was accomplished using this value.
28	Determine point-of-compliance. If the point-of-compliance is location 940, recommend action to prevent violation.	R	NC	Location 940 is a surface water sampling location. Although uranium has been detected in the San Juan River, concentrations exceeded the surface water standard of 35 mg/L on only one occasion. The proposed action will reduce concentrations of contaminants at this location.
29	The mean is higher than the UCL_{95}. Fix.	T	A	Four numbers were in error in Table 4-12 of the SOWP. UCL_{95} for ammonium for Escarpment Seeps should be changed from 0.0448 to 0.52. Mean for nitrate for Other Floodplain should be changed from 0.40 to 89. UCL_{95} for nitrate from Other Floodplain should be changed from 0.63 to 146. UCL_{95} for nitrate from Escarpment Seeps should be changed from 132 to 397. These changes also apply to Table 7 in the EA.
30	Concentrations of SO_4 and U are high at location 880. Storm events could mobilize contamination and hit the floodplain with a slug of COCs.	T	NC	Salt crusts are more prevalent in Many Devils Wash than in Bob Lee Wash where samples were collected at location 880. A sampler will be installed at the mouth of Many Devils Wash to collect samples during a storm event. The analyses of these samples will be used to determine what levels of contaminants are being contributed to the San Juan River by dissolution of salt crusts during a storm event.
31	If an R_d has been determined, what is the applicability of a leaching test?	T	NC	Column leaching tests often provide more realistic portrayal of contaminant release than R_d tests because they incorporate a dynamic (flowing) situation. Also, Rd is more applicable to trace elements (e.g. U) but can be inaccurate for major ions (e.g. nitrate and sulfate) that may transport by mechanisms other than adsorption.

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32	There is no discussion of Mancos Shale as a source of nitrate. Very high nitrate concentrations have migrated from the raffinate ponds, and could reach the Shiprock school or the seep in 1st Wash. Explain fate and transport of nitrate in this area to justify no action.	T	NC	Nitrate has been found to leach from pelitic rocks in other areas and could be leached from the Mancos Shale. Nitrate fate and transport are discussed in section 4.4.7.8 of the SOWP.
33	What studies support a porosity of 0.3? It's at the high end of alluvial materials.	T	NC	The range in porosity for unconsolidated deposits is 25 to 40 percent for gravel, 25 to 50 percent for sand, 35-50 percent for silt, and 40-70 percent for clay (Freeze, R.A. and J.A. Cherry GROUNDWATER , Prentice-Hall 1979, pg 37). We believe that 30 percent is adequately within those ranges for the terrace alluvium.
34	The model simulation for nitrate concentrations is lower than actual field data. This could influence the simulation of nitrate flushing, and it may take longer to flush in the floodplain.	T	NC	The model simulates nitrate as nitrogen. Therefore, the simulated values are scaled down by a factor of 10 below what you're used to seeing. See page 4-233 (SOWP) second to last paragraph for an explanation. The actual duration of the flushing of nitrate as nitrogen might exceed the predicted times, but not for the reasons stated in the comment.
35	The model simulation for uranium concentrations is below actual field values.	T	NC	The comment is in agreement with the points listed in the last two paragraphs of page 4-234 in the SOWP. By honoring the laboratory-derived values for K_d, the plume has a smaller dimension than it would have if a lower K_d were used. Use of a lower K_d is perhaps justified in this case. This would cause the uranium plume to spread further and flush more readily.
36	SOWP Section 6.1 should include a human health conceptual site model, including plausible exposures pathways associated with the evaporation system. A quantitative risk assessment should be added to assess the effect to human receptors downwind from the evaporation pond.	S	NC	As stated in the response to comment 4, spray evaporation is no longer being considered. This will eliminate the risk to human receptors downwind from the evaporation pond.
37	Justify why arsenic was eliminated as a human health COPC. List the criteria for eliminating COPCs that were identified in the BLRA.	T	NC	As stated in section 6.1.2.1 of the SOWP, arsenic concentrations have been at or below the detection limit since about 1995. This justifies eliminating it as a COPC.
38	Explain the statements "if the maximum concentration of a constituent was much higher than the rest of the measured values, a more representative calculation is also provided," and "maximum *surface water concentrations are used to provide worst-case risk* estimates for these possible exposures." They appear to be inconsistent with the calculation of RME using a 95% UCL of the mean.	T	NC	The first statement means that if a very high outlier was present for a data set, this value was eliminated from use and the second highest value used. For the terrace area, 95% UCL values were not used because of the uncertainty of the areal extent of the site-related plume. For information purposes and to determine relative importance of each constituent in contributing to hypothetical risk, maximum values were generally used. Surface water in the terrace represents the only currently complete exposure pathway (assuming it was possible to access the site). Because the surface water tends to pool in spots, it would be possible for a receptor to be exposed at specific points. The maximum contaminant values were used to be conservative. The UCL 95 values were used for floodplain locations, where the extent of the plume is more well-defined.
39	Cancer and noncancer risks should be based on 95% UCLM rather than mean concentrations. Compare to the lower end of the risk range at 1.0×10^{-6}.	T	NC	The UCL_{95} values were used where data made this practical. Where means are used, these are provided for information purposes only. The maximum values in some *calculations were used for the purposes stated in response to comment 38.*

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40	Explain the rationale for categorizing risk from "low" to "very high." This categorization is misleading. A discussion of conservatism should be provided in the Uncertainty section of the ERA. Table 6-53 should be revised to include numerical HQ values for aquatic and benthic organisms, plants, wildlife, and livestock. Discuss the conservative nature of HQ calculations in the Uncertainty section of the document.	T	NC	The HQ values for each receptor/COPC pair are presented in the SOWP earlier in Section 6.2.3. It is not the purpose of Table 6-53 to repeat these values, but to qualitatively summarize these values based on the relative magnitudes of these HQs to highlight the COPCs and media of greatest concern in each of the five areas. The definitions of the categories used in this summarization and the factors associated with the conservative nature of the HQs are described in the SOWP, Section 6.2.3.11.
	Navajo Nation EPA Comments			
	General Comments			
41	The EA and SOWP emphasize irrigation water and other sources of ground water contamination and downplay the areal extent of mill-related ground water and contamination—despite strong evidence that the major source of both water and contamination in the terrace can only be from the area of the former millsite. Specifically:			
	(1) The subsurface contours of the impermeable layer beneath the area of irrigation show a strong gradient to the northwest; thus, any irrigation water infiltrating the terrace area would have to flow contrary to this gradient.	T	NC	(1) The "impermeable layer" referred to in the comment is the Mancos Shale bedrock surface in Figure 4-7 in the SOWP. The surface is not impermeable—saturation extends downward for varying depths into the weathered Mancos Shale. Irrigation water from the Helium Lateral Canal would percolate downward from the ground surface in a somewhat radial pattern creating a local mounding effect as it travels through the vadose zone. Upon reaching the ground water (potentiometric) surface, flow would be to the northwest, as shown in Figure 4-9 of the SOWP.
	(2) Under the irrigation area, the equipotential lines in SOWP Figure 4-9 indicate that ground water flow is to the northwest, with a strong gradient north of US Hwy 64. Ground water originating near the high school would have to flow across or up this gradient to affect the area immediately west of and under US Hwy 666.	T	NC	(2) Agree generally with this comment. The irrigated area shown on Plate 1 in both the SOWP and EA is that area affected by irrigation water from the Helium Lateral Canal and its subsidiary ditches. Water from this canal system enters the ground surface and percolates downward, eventually reaching the saturated ground water surface. From its initial point at the ground surface, some flow is radial in a lateral sense, and the effect of this descending ground water extends laterally for some distance. It is not known if the lateral flow from the east edge of the Helium Lateral Canal system would reach eastward far enough to the U.S. Highway 666 area. Also, the potentiometric surface map in Figure 4-9 of the SOWP was drawn using March 1999 water levels (at a time when water was not flowing through the Helium Lateral Canal system). A potentiometric map for water levels in late summer may show more clearly the influence of water imparted to the terrace west area from the canal system during its operating time.

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	(3) Contaminated ground water is predominantly from the milling operation. Irrigation water may have slowed down and even redirected mill-related ground water around the irrigated fields but has not contributed to ground water or contamination in the terrace in any other meaningful way. The nitrate plume, which most closely mirrors ground water flow from the former millsite, suggests that most of the water currently in the terrace came from mill operations and/or surface remediation at the site.	T	NC	(3) Agreed
	(4) Although selenium concentrations are attributed to leaching of Mancos Shale, concentrations in the irrigated area are lower than those in almost all other parts of terrace west. The elevated concentrations of constituents attributed to natural leaching are also due to the presence of mill-related water, not irrigation water. The conclusion that uranium concentrations are due to natural leaching of Mancos Shale is not supported by the evidence presented here [see original text attached]. The irrigation water is flowing toward the north/northwest and is not present long enough to leach significant amounts of contaminants, as evidenced by the low concentration in ground water in the irrigated area. Only water that has been sitting in the Mancos Shale for long periods of time, such as the mill-related water, can leach out the uranium, selenium, and sulfate in concentrations found throughout the terrace away from the irrigated fields. DOE needs to take more responsibility for the ground water in the terrace west area and should take a more active role in cleaning up the contaminated water in this area.	T	NC	(4) DOE agrees that the longer water is in contact with weathered Mancos Shale, the longer it has to leach U, Se, and SO_4 from it. The areas of the terrace that have been irrigated in recent times (e.g., terrace west) generally have lower concentrations of these constituents than do areas of terrace east. The higher ^{234}U:^{238}U ratios in these areas generally lower in total uranium suggest that water is not in equilibrium with respect to the isotopes and may represent non-milling-related water or a mixing of irrigation and milling-related water. DOE does not agree that Mancos Shale does not contribute concentrations of U and Se that can easily be above UMTRA MCLs.
	Specific Comments			
42	Sec. 1.1, first line: The citation in the USC given for UMTRCA is incorrect. The one provided is for NEPA.	R	A	The EA will be revised to show the correct citation as 42 USC 2022.
43	p.9, Sec. 1.4: The buried ancestral channel of the San Juan River is located well south of Bob Lee Wash, and terrace ground water in this channel flows west toward the Helium Lateral Canal (SOWP Figure 4-7). Also, the equipotential lines (SOWP Figure 4-9) indicate that some ground water does flow east toward Many Devils Wash.	T	A	The text will be clarified to reflect this.
44	Figure 3: The view is to the south or southeast, not northwest as the caption states.	S	A	Agree. The caption will be changed.
45	Table 2 should list the cleanup goals for constituents that do not have specific EPA maximum concentration limits.	S	NC	Cleanup goals for ammonium, manganese, strontium, and sulfate are not mandated by 40 CFR 192. For these constituents, we are looking at a risk-based standard, if available; also, SDWA standards may be applicable.

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46	Figure 5: The same symbol (*) references two different notes, making this figure confusing unless both notes are supposed to be referenced each time.	S	A	Agree. This will be changed in the EA. Remove the "* Strategy will be reevaluated if conditions change or if monitoring indicates that EPA standards will not be met."
47	Sec. 3.2.1, para. 1, p.21: ACLs must also consider water quality standards for surface waters that are hydrologically connected to the contaminated ground water. Large exceedences of Navajo Nation Water Quality Standards are not acceptable to the Navajo EPA, and any ACLs established should not be set at levels that would allow these exceedences to continue.	R	NC	The regulations require that ACLs consider effects to surface waters. Therefore, DOE agrees that Navajo Nation surface water quality standards must be considered. ACLs will be developed in consultation with Navajo and federal regulatory agencies during the GCAP and implementation phase of the project.
48	Sec. 3.2.1, last sentence, para. 3, p.21: The New Mexico State Engineer's Office has no jurisdiction over withdrawal of water from the San Juan River on the Navajo Reservation. Approval must come from the Navajo Nation Water Code Administration.	R	NC	DOE has communicated with the Office of the State Engineer and has been informed that a permit from their office will be required. However, they have informed DOE (by letter dated May 24, 2001) that 1,200 acre-feet of water was filed for by the Navajo Nation. They have expressed willingness to work with DOE and the Navajo Nation to address this issue when the time is appropriate. It is DOE's understanding that the State of New Mexico does have jurisdiction over surface water rights flowing in the San Juan River.
49	Sec. 3.2.1, para. 1, p.22: (1) The SOWP states that monitoring will be conducted quarterly during the remediation period. Why was this changed to semiannually; during which seasons will sampling be conducted; and how will that decision be made?	S	NC	(1) From December 1998 to February 2001, ground and surface water sampling at the Shiprock site occurred at a near-quarterly frequency. Many new wells and surface water sampling locations were established during this period of site characterization. Data from frequent sampling during all seasons and at high and low river flows provided an understanding of the extent of contamination and its seasonal variation. With this framework of site data, site conditions can be monitored using fewer, well-chosen, representative locations that are sampled less frequently. Future sampling is planned semiannually to occur in late winter and late summer.
	(2) It is unclear how DOE can determine if terrace west is contributing uranium and selenium to the floodplain when no monitoring of wells is proposed for the area between the floodplain and terrace west. Also, as discussed in detail [see original text attached], it is difficult to see how the irrigation water will flow upgradient from the irrigated area to the floodplain.	T	A	(2) Ground water in the floodplain (north of the disposal cell) receives inflow from the terrace ground water system, as stated on page 2 of the EA, but that inflow is from the terrace east area. The statement on pages 21 and 22 of the EA that leaching of Mancos Shale in the irrigated area of terrace west contributes uranium and selenium to the floodplain aquifer is not correct. As correctly pointed out, ground water from terrace west would have to flow upgradient to reach the floodplain. The EA text will be corrected to reflect this.
	(3) The last line in this paragraph states that interim actions "prevent" exposure to contaminated ground water at the seeps. Though the interim actions substantially reduce exposure, it is misleading to state that exposure is prevented, since water flows out from under the netted and fenced seeps, and ponded water is still visible in places around the rip-rap.	T	A	(3) The wording in the EA will be changed to state "... interim actions are substantially reducing exposure to contamination...." for the interim actions on page 22, first paragraph.

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50	Sec. 3.3: (1) It is unclear whether the compliance strategy for terrace east is simply to pump the ground water down until the washes and seeps dry up as stated in this section and a note in Figure 5, or if all water in this area is to be removed as the SOWP states (p.7-2). (2) Since the MCLs are "irrelevant" as the SOWP states on p.7-2, and no ACLs or other cleanup goals are mentioned, what EPA standards are referred to in the note under Box 16 of Figure 5? (3) Unless all mill-related water (i.e., all water) in the terrace east area is going to be removed, it must be assumed that supplemental standards have been instituted, because no cleanup concentration goals are mentioned. DOE needs to state what these supplemental standards are and justify their selection under 40 CFR 192.21, because it is not clear how DOE came to the conclusion that this compliance strategy is acceptable under EPA regulations. If supplemental standards have been chosen, 40 CFR 192.22 states that the alternate remedial action taken to meet these standards must come as close to meeting the otherwise applicable standard in 40 CFR 192.02(c)(3) as is reasonably achievable. (4) The compliance strategy does not address the seeps between the [US Hwy 666] bridge and 1st Wash, which are hydrologically connected to the mill-related ground water. As presented above, the evidence for this connection is provided by the Mancos Shale contours, the equipotential surface, and the nitrate plume.	T R R T	NC A NC A	(1). The compliance strategy for terrace east is to pump the ground water down until the seeps dry up. Water will probably not be completely removed from the terrace. See the response to comment 7. (2) The * footnote stating "Strategy will be reevaluated if conditions change or if monitoring indicates that EPA standards will not be met" will be removed from Figure 5. (3) The supplemental standards criterion that will be invoked under 40 CRF 192.11 paragraph (e) "Limited use ground water – means ground water that is not a current or potential source of drinking water because" use criterion(2), there is "widespread ambient contamination not due to activities involving residual radioactive materials from a designated processing site exists that cannot be cleaned up using treatment methods reasonably employed in public water systems." In other words, if the ground water is naturally of sufficiently poor quality such that it exceeds UMTRA MCLs for one or more constituents, and it is not currently or projected to be a source of drinking water, then it can qualify for this criterion. This can be invoked even if the millsite contributed additional contamination to the ground water. (4) Seeps in 1st Wash (933), 2nd Wash (934), and between the two washes (936) will be sampled semiannually and analyzed to evaluate ecological risk concerns. Also, the flow rate of seep 786 below the U.S. Highway 666 bridge will be measured along with sampling for ecological risk concerns. This sampling is shown in the revised Table 4 of the EA. After about 7 years of active short-term remediation in the terrace east system, the remnant milling-related water supplying the seeps should be depleted and the seeps would be drying up.
51	Sec. 4.1.1, para. 1, p.37: How could bentonite be more permeable than the other layers within the Mancos Shale? Bentonite is essentially impermeable when wet.	T	A	Seepage has been observed along thin (less than 1-inch thick) bentonitic layers in the Mancos Shale along the escarpment, particularly at seep 427. This will be noted in the text of the EA on page 37. Rather than flowing through the bentonite, water movement may be along horizontal discontinuities bordering the bentonite layers.
52	Sec. 4.1.1, para. 2, p.37: It is difficult to see how irrigation water could migrate such great distances upgradient.	T	A	The text will be modified to state that irrigation water is one component of saturation in the west part of the terrace west alluvial material.
53	Sec. 4.1.1, para. 3, p.37: The lower concentrations of ground water contaminants are downgradient from the irrigated area. There are very high levels of contamination in terrace west upgradient from the irrigated area, along the east side where the main portion of the contaminant plume is moving north along US Hwy 666.	T	A	Clarification will be made in the text.

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54	Sec. 4.1.1, para. 4, p.37: Although the discussion in the SOWP shows how relatively high concentrations of U, SO_4, and Se can be leached out of the Mancos Shale, it does not show:			
	(1) that the water is not mill related.	T	NC	(1) DOE assumes that some contribution to the contamination in terrace west is millsite related.
	(2) that concentrations of SO_4 or Se anywhere near those found in the southeast portion of terrace west can be leached from the Mancos Shale.	T	NC	(2) Concentrations of Se and SO_4 are probably higher in the southeastern part of terrace west than can be accounted for by leaching Mancos Shale. This is thought to be a contribution from milling-related contamination.
	(3) how the nitrates got there.	T	NC	(3) DOE assumes that nitrates could be from milling-related activity, but they could also be from septic systems or from fertilizer. Having said this, DOE maintains that levels of Se and U in ground water associated with weathered Mancos Shale would be expected to be higher than MCLs for these constituents. DOE did not find background ground water on the terrace and has instead used the surrogate argument that these levels would be expected to be higher based on published information about the formation and on information from other DOE sites.
55	Ground Water Use, p.38: What is well 848 used for?	T	NC	Well 848 on Shiprock High School property is not being used. At the time the UMTRA Ground Water Project received permission to open the well and take samples in the fall of 1998, the well cap was welded shut. The last time the well was sampled was in February 2001.
56	Terrace Ground Water, p.47: Again, how is irrigation water supposed to flush mill-related contaminants out of terrace west when the only significant irrigation will be north of US Hwy 64 once the college construction begins?	T	NC	Irrigation water will flush mill-related contaminants from a large part of the terrace west area. After the new Dine College campus is completed, it is assumed that some landscape irrigation will occur and that would promote flushing.
57	It would be nice if Table 7 also included the cleanup concentration levels.	R	NC	The table shows the summary for surface water chemistry on the floodplain and terrace. Cleanup concentration levels are listed and described in Table 2 of the EA.
58	Sec. 4.2.1, para 3, p.49:			
	(1) The Navajo Nation surface water quality standard for dissolved U is 35 µg/L for waters with domestic water supply as a designated use. This would include the San Juan River.	R	A	*(1) The Navajo Nation surface water quality standard for domestic use will be* included in the EA, page 49.
	(2) Though the distributary channel is lumped in with terrace west, it is part of the San Juan River. Thus, contrary to the last sentence of this paragraph, DOE's monitoring does indicate that mill-related constituents are affecting the water quality in the river.	T	NC	(2) The distributary channel itself is included with the floodplain, not terrace west. The San Juan River stage has to be high before flow passes through the distributary channel. This flow threshold is estimated to be about 3,000 cfs. Locations 887 and 939 in the distributary channel sampled during a high river flow in June 1999 had very low uranium concentrations (below detection limit). At other sampling times of low river flow, locations 887 and 939 have exceeded or nearly exceeded the EPA ground water standard for uranium of 0.044 mg/L. At these times, the high concentrations are believed to be related to ground water seepage containing some mill-related constituents from the escarpment area west of the US Highway 666 bridge (Washes 1 and 2 and nearby seeps).

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59	Sec. 4.2.1, para. 2, p.50: The scenario depicted in Appendix C is not very reasonable. A 4-hour storm is not going to produce a hydrograph that starts at 500 cfs, lasts exactly 4 hours, and ends at 500 cfs. The hydrograph will have rising and falling limbs where flow is much lower. This lower flow (particularly on the rising limb) will be moving in and around the rocks, flushing out the salts and dumping into the San Juan River with very high concentrations of the evaporites.	T	NC	Calculations used simplistic assumptions that were a best guess. A sampling device will be installed at the mouth of Many Devils Wash to collect samples during a storm event. Analyses of these samples will give us actual concentrations of contaminants being discharged to the San Juan River.
60	Sec. 4.2.1, Terrace West Area, para. 2, p.51: The water quality data for surface water sites 0942, 1063, and 1064 seem to indicate that different ground water sources are feeding them. Site 0942 is located along the edge of the plume that has migrated around the upper irrigated area and has water chemistry similar to that in wells 0848, 0846, and 0836. Sites 1063 and 1064 are located in abandoned gravel pits and clearly have no connection with the contaminated ground water. This is reflected by the similarity of water chemistry between these sites and nearby wells within the currently irrigated area (e.g., 0847 and 0838). Thus, it would be useful to maintain either 1063 or 1064 for long-term monitoring along with 0942.	T	NC	Paragraph will be rewritten for clarity. Sampling of 942, the major spring in the area, will be sampled semiannually for chemistry. Sample locations 1063 and 1064 were sampled only once during the winter of 1999 and are small potholes from an old gravel extraction area that contained stagnant water.
61	Sec. 4.3.1, para. 1, p.53: It is unclear whether Bob Lee Wash would be considered part of terrace east, but portions of that wash other than those delineated in EA Figure 22 would likely be considered jurisdictional wetlands, in contrast to the statement made in this paragraph.	R	NC	The jurisdictional wetlands was delineated in accordance with Corps of Engineers criteria. Due to potential conflicts with historical grazing rights, DOE has suggested to Navajo regulatory agencies that the wetlands be provided protected status if the Navajo Nation wishes to promote wetland values. To date a final response has not been received.
62	Sec. 4.4.2, Terrace West Area, p.71: Is the water clean enough for people to eat food such as beans, leaf lettuce, or fruit from an orchard (without washing first) if those plants have been watered with a sprinkler irrigation system? What if the yield is sufficient for agricultural uses in the highly contaminated portions along the east side of terrace west? Any water that may be used for irrigation or watering of food crops will need to meet standards similar to drinking water standards.	T,R	A	Concentrations of selenium are high enough in terrace west ground water that they could accumulate in certain types of plants to levels that are higher than recommended for dietary intakes of some animal species. Selenium is the constituent present in terrace west ground water that has the greatest potential for bioaccumulation. Selenium is an essential nutrient for humans, though it can be toxic at higher than dietary levels. Selenium uptake by plants and fruits is highly variable and it is impossible to say, in the absence of site-specific and plant-specific data, whether the ground water is safe for irrigation use. It is recommended that some other source of irrigation water be used for watering food crops.
63	Sec. 4.8.1, Floodplain Area, p.72: The estimated risks are high in the distributary channel, which is part of the San Juan River and which is where young endangered fish are likely to reside.	R	NC	The distributary channel (Area A) is considered part of terrace west area for risk assessment purposes because it is potentially influenced by RRM from this area. Potential risk to aquatic receptors in this area is acknowledged and discussed under the subsection "Terrace West Area." on page 73. DOE has agreed to continue working with the U.S. Fish and Wildlife Service, Navajo Fish and Wildlife, and Navajo EPA to address this concern under the consultation process in 50 CFR 402.

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64	Section 5.0: Window Rock should be added to the list of Navajo EPA locations—Patrick and Wilma both work out of that office.	S	A	Changes will be made to Section 5.0 of the EA.
	Navajo Nation Water Code Administration Comments			
	Overview			
65	The EA could benefit from greater description of the major remediation technique of spray evaporation—its design, specific location, operation, and efficacy. The EA, as a public document with a legally defined public mission, should be able to stand largely on its own.	T	A	The EA will be revised to reflect a remediation plan that uses solar evaporation and drip evaporation initially and will evaluate the possibility of enhanced evaporation at a later time.
	Comments on Individual Sections			
66	Section 3 should include information on the spray evaporation strategy, as discussed in *Overview* above.	T	A	As stated in the response to comment 4, spray evaporation is no longer being considered.
67	How was the size of the 100-ft buffer zone around the evaporation pond chosen?	T	NC	As stated in the response to comment 4, spray evaporation is no longer being considered.
68	p.21, para. 3, last sentence: We recommend that DOE coordinate any relevant State contacts with the Navajo Nation Department of Justice before making any such contacts.	R	NC	See response to comment 48. DOE agrees that the Navajo Water Code Administration will be a key regulatory agency in resolving water rights issues. DOE will rely on the judgement of the Navajo UMTRA Program and the Navajo Water Code Administration as to the level of involvement required by the Navajo Nation Dept. of Justice.
69	p.22 last sentence and top of p.23: A few sentences of clarification are needed here concerning dispersing ground water brought to the surface, since at least some of the ground water will be contaminated.	R	NC	Dispersing ground water during mill development has been common practice at all UMTRA sites. Calculations have been completed to ensure that concentrations will not recontaminate the surface.
70	Sec. 3.2.2: It would be useful to briefly describe what possible "additional compliance strategies" will be evaluated if the disposal cell proves to be a continuing contaminant source.	T	NC	DOE would rather not discuss this at the present time because additional information will be gathered and evaluated during the next 5 years to address this possibility. DOE will be open to any number of possibilities should the disposal cell prove to be a continuing source of contamination.
71	Sec. 3.3, p.24: It is unclear whether DOE plans to pump terrace east ground water only to the point at which the seeps dry up, or to the point where DOE can no longer reasonably extract the contaminated ground water.	T	NC	See comment 50
72	Sec. 3.4, p.25, regarding the 7 years of remediation: We want to underscore the importance of eliminating uncertainty about whether contaminants in the terrace west area are naturally occurring or result from mill-related contamination in terrace east.	T	NC	See comment 41
73	p.47, first para., "...no water was present in the terrace...": The Navajo WCA has reservations about that statement and suggests that the presumption not be completely relied on.	T	A	Some rewording of the first sentence in first paragraph on p. 47 of the EA will be made.

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74	The Navajo WCA supports DOE's wish to allow well 648 to flow and may request assistance from AML/UMTRA and DOE regarding the best way to proceed with questions such the need for signs, fencing, special water use permit, periodic inspections, and periodic maintenance.	T	NC	Continued flow from well 648 is integral to the success of the proposed remediation for the floodplain. DOE appreciates the ongoing support of Navajo UMTRA and the Navajo Water Code Administration to resolve this issue.
	Diné College/Navajo Dryland Environments Laboratory			
75	Why was 5 years chosen as the time period for semiannual monitoring? The EA indicates that the terrace east active remediation will require 5–7 years. Semiannual monitoring should continue until the levels of the seven COCs in the terrace east monitoring wells and seeps fall below MCLs or within background; or until it can be clearly demonstrated that any elevated contaminant levels are unrelated to the former mill or disposal cell; or until the terrace east monitoring wells and seeps no longer produce water.	T	NC	DOE will monitor the system for longer than 5 years. This number was chosen because DOE will reevaluate the strategy after 5 years and make changes if necessary. DOE plans to monitor terrace east until it is demonstrated that the seeps have dried up.
	Tufts University			
76	The EA should be amended to include a discussion in more detail to convince the reader that the cell is not serving as the source for contamination, especially with respect to uranium.	T	NC	DOE plans a number of monitoring activities over the next 5 years after remedial action has been initiated (see Section 7.6 in the SOWP) and is committed to determining if "drainage of residual moisture" is coming from the disposal cell. DOE contends that it is better to start remedial action and remove contaminated ground water from the floodplain and terrace than to continue simply studying the system. The remedial actions planned would have to be performed regardless of whether the disposal cell is leaking or not.
77	It is puzzling that uranium decay products were not reported among the contaminants. It is hard to believe that there is not appreciable radium and thorium on site.	T	NC	The 1994 BLRA evaluated the concentrations and health risk implications of uranium daughter products. Total carcinogenic risks from radionuclides were within EPA's acceptable risk range of 1×10^{-4} to 1×10^{-6}. Ground water from several terrace wells west of the disposal cell have consistently exceeded the UMTRA MCL of 5 pCi/L for Ra-226 plus Ra-228. These wells were sampled frequently from fall 1998 to June 2000. To determine the carcinogenic risk for radium for the area east of US Highway 666 (generally terrace east), the recent radium data from wells in this area were averaged and the risk calculated. The resulting risk was 2.77×10^{-5}, which is well within the EPA's acceptable risk range. The calculation was somewhat conservative because the wells with high radium concentrations were sampled more frequently than the other terrace wells. Therefore, from a risk perspective, no problem with radium exists. Also, this ground water just west of the disposal cell is not accessible and, over time, flushing will improve the water quality by lowering concentrations.

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78	The Shiprock emergency water intake is in a bad location. Despite assurances in the EA that levels of contaminants are not elevated at the site, this seems like an accident waiting to happen. Monitoring should be conducted before every use of the intake, and plans should be made to move the intake upstream from the site.	T	NC	Sample location 956 was established on the San Juan River at the intake structure during the June 2000 sampling. The location was subsequently sampled in July 2000, November 2000, and February 2001. Very low concentrations of uranium, similar to upstream background concentrations, have been found in all samplings at this location. The sample in July 2000 was collected at the time of an extremely low river flow (approximately 250 cfs). Similarly low uranium concentrations have been found in earlier samplings from location 548 about 100 yards upstream from the intake structure. From these numerous samplings, we conclude that uranium concentrations are not significantly above background for river water at the present location of the intake.
	Navajo Nation Department of Water Resources			
79	p.ix, Executive Summary, first sentence in para. 1: Change "Navajo Indian Reservation at Shiprock" to "Navajo Nation at Shiprock."	S	A	Change will be made to the text.
80	p.1, para. 3, fourth sentence: Change from "thick radon barrier ...fine-grained soil.." to "thick radon barrier composed of mixed clay soils...."	T	A	Partly agree – sentence will be reworded.
81	p.2, first sentence in para. 1: Description of site location is incorrect because the three areas (floodplain and terraces) can be referenced to different distances.	T	A	Information was expanded and clarified into two sentences.
82	p.4, para. 1, first sentence: For more clarity, add the number of milling years to the first sentence : "Throughout the 14-year milling period...."	T	A	Change will be made to text.
83	p.4, para. 2, second sentence: The term "plugged" is used incorrectly, since the well has never been abandoned. Change to "capped."	T	A	Change will be made to text.
84	p.4, second sentence in para. 3: Change "City" to "municipal," since Shiprock is not considered a city.	S	A	Change will be made to text.
85	p.4, second sentence in para. 4: Remove "saturated," since the first sentence refers to both terrace and floodplain alluvial sediments; at the end of the paragraph the author refers to insufficient recharge to saturate the terrace sediments.	T	A	Partly agree. Saturation in the terrace system does occur in the lower part of the alluvial material and in the weathered part of the Mancos Shale. Clarification will be made to the last sentence indicating that natural recharge, considered alone, would not sustain a water table.
86	p.4, para. 5: Fluids leaching from processing ponds during milling operations, water used for dust control during the cell stabilization, and residential septic tanks and leach fields may also have contributed to the shallow aquifer recharge.	T	A	These will be added/combined to those events listed in the text.
87	Plate 1 and maps: If prominent locations are listed, then please list the Nataani Nez Shiprock Elementary School and the police station. Both are located directly north of the floodplain across the San Juan River.	S	NC	Emphasis was south of the San Juan River; only a few locations were shown north of the river.

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88	p.5, Figure 2: The map may not be to scale, but the cross-section showing the geologic features should be somewhat realistic. Alluvial sediments generally do not lie flat when deposited; rather, the stream profile should indicate the flow characteristics from channeling caused by erosion and deposition.	T	A	Some bedding surfaces will be added to Figure 2 in an attempt to show the channeling in the alluvial material.
89	p. 6: There is no page 6.	S	NC	Page 6 is the back of page 5. All figures except Figure 1 are printed separately on a color printer. Running the figures through again to print the even page numbers on the reverse side would add considerable time and expense to the preparation of the report. Also, if pages with color figures are used for two-sided printing, the text tends to burn through onto the figure.
90	p.7, Figure 3: Change caption to "Looking Southeast from Northwest."	T	A	The caption will be changed.
91	p.9, para. 1, first sentence: "Monitoring over the past 15 years...." Please indicate which wells or areas were sampled, since those wells located near the river may have been sampled during low river flows and re-sampled during high flows, causing the concentrations to dilute.	T	NC	Concentrations of antimony and cadmium were plotted historically for wells 732 through 736 along the San Juan River. For Sb, consistently low concentrations occurred after 1996 in low and high flow times of year. For Cd, consistently low concentrations occurred after 1994 in both low and high flow times of the year.
92	p.9, para. 1, second sentence: Is DOE still using both EPA and Navajo EPA standards? If both, then indicate with citations throughout the document when Navajo ground water standards were considered.	R	A	DOE will revise the EA to include "Navajo surface water standards." The Navajo Nation does not currently have ground water standards other than those applied by 40 CFR 192. DOE appreciates the Navajo Department of Water Resources bringing this error to our attention.
93	(1) p.9, para. 3: It is likely that several buried ancestral channels are present, and these channels could explain the contaminant flow pathways throughout the terrace areas. An extensive seismic refraction survey could identify fractures, offsets, gravel/boulder contacts with the shale, and topographic features of the shale. Terrace fractures are likely the conduits to the buried ancestral channels. Once these pathways have been identified, DOE could properly place extraction wells for an effective remediation program.	T	NC	Numerous boreholes and wells have provided a fairly clear understanding of the top of bedrock profile for the terrace area. The conclusive drilling data has in many cases differed significantly from 1996 refraction survey data interpretations.
	(2) Also, it is believed that contaminated ground water in the terrace is following the more resistant layer that overlies the weathered Mancos Shale about 20–25 ft below the surface. It is highly unlikely that contaminants are being transported through the remaining Mancos Shale.	T	NC	The comment is unclear – as stated, it refers to a resistant layer that overlies the weathered Mancos Shale. This would be in the terrace alluvial material. No boreholes have shown such a layer in the alluvial material. A resistant layer known in the Mancos Shale is the east-dipping siltstone bed, which contaminated water is likely perched upon and moves on it downdip.

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94	p.9, paragraph 4: What assumptions did the transport model make? Did the model consider a scenario with no flows from well 648? Given the 100-year project period, it is highly unlikely that the Navajo Nation will grant institutional controls so that well 648 could remain free flowing for that time period.	T	NC	Details of the numerical modeling are beyond the scope of the EA; they are presented in the final SOWP, Section 4.5. The effects of no flows from well 648 were not simulated because the possible initial conditions for such evaluations are practically limitless, as described in the final SOWP Section 4.5.6. In addition, as discussed in Section 4.5.6 of the SOWP, it would be risky for DOE to proceed with construction of a remediation project if the status of well 648 remains unresolved. The highest chances for a successful remediation would exist if continued flow from well 648 is ensured.
95	p.11, Sec. 2.0: "...by complying with the final EPA ground water standards...." Change sentence to "...by complying with the final EPA ground water standards...and Navajo EPA ground water standards..." Throughout the document several references have been made to EPA's ground water standards, whereas only one statement is listed for Navajo EPA standards. Please list Navajo EPA along with EPA if both will be used.	R	NC	See response to comment 92.
96	p.12, para. 1: Navajo Nation Water Resources does not concur with DOE's dependence on well 648 to increase natural flushing. We would prefer that DOE use the San Juan River to enhance the flushing. We believe that the high concentrations of contaminants on the floodplain below the disposal cell are within the sediments and only receive significant flushing during high river stages. During low flows, the lack of hydraulic head prevents contaminant transport from the base of the terrace; during those times the extraction wells will enhance contaminant movement toward the saturated zone within the floodplain.	T	NC	The DOE believes that ensuring water from well 648 continues to flow onto the floodplain is an integral part of the proposed floodplain remedial action. Using water from the San Juan River to enhance flushing through gradient manipulation was strongly opposed by the USFWS because of its possible effects on endangered aquatic receptors in the San Juan River.
97	p.12, para. 1, fourth sentence: DOE should keep in mind that all wells must be filed with and all water data must be returned to the Navajo Nation Water Code program.	S	NC	The DOE will continue to comply with these conditions.
98	p.12, para. 3, first sentence: According to Figure 7, five extraction wells are proposed. Depending on the location of the wells, a water usage fee may be required. If the well is within the hydrologic barrier and at the base of Bob Lee Wash discharge on the floodplain, a permit would not be necessary if a water use permit for well 648 has been issued previously. Otherwise, all remaining floodplain extraction wells will require a water use permit, since the floodplain receives recharge from the San Juan River. Please clarify which are the first proposed extraction wells.	R,T	A	DOE is finalizing a water use agreement with Navajo UMTRA and Navajo Water Code Administration that covers monitoring and extraction wells for all four sites within the Navajo Nation. Water Use Permits will be submitted for any extraction wells. Proposed locations will be clarified in the final EA.

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[c]**A** = agree with comment, EA will be revised as necessary; **R** = resolve before final EA; **NC** = no change, EA revision is not justified.

	EA Comments[a]	Issue Type[b]	Status[c]	Response/Resolution
99	p.21, para. 3, first sentence: Will the detailed modeling incorporate a detailed geologic framework based on drill cores, outcrop measurements, and/or geophysical data.? A detailed geologic framework would help delineate the permeability pathways (via buried channels) that would allow strategic placement of extraction wells.	T	NC	Geologic parameters used in the modeling will include results of extensive characterization conducted from fall 1998 to spring 2001.
100	p.21, para. 3, last sentence: We are checking with legal council to determine if this statement is correct. The water rights given by State of New Mexico to Kerr-McGee before the mill operations were recently returned to the Navajo Nation. Therefore, there is no need for approval from the State Engineer's Office, but there is a need to obtain approval from the Navajo Nation Water Code office.	R	NC	See response to comment 48.
101	p.24 Sec. 3.3, and p.47, Sec. 4.1.2: We do not concur with the institutional controls. We have some concerns that when the terrace extraction wells can no longer extract ground water, residual contamination may be left below the disposal pile. Navajo Water Resources Management cannot control future development south and southwest of the disposal cell, and development could introduce artificial recharge to the terrace and mobilize contaminants in the soil.	R	NC	Institutional controls are a necessary part of the compliance strategy. DOE assumes that the life expectancy of an IC is probably not more than 100 years,s and that is why natural flushing must be demonstrated within that period of time. DOE will monitor the disposal cell during the initial phase of remedial action to try and determine if and how much moisture is continuing to drain from it. This information will be shared with stakeholders and a review of the remedial action will be conducted after 5 years. DOE believes it is important to initiate the remedial action and start cleaning up the ground water at Shiprock.
102	pp. 27 and 28, Sec. 4.1.1: "...aquifer consists of unconsolidated medium- to coarse-grained sand, gravel, and cobbles..." DOE well logs indicate boulders, and some boulders can be seen at the ground surface. Please indicate that [descriptions of] the alluvial sediments should refer to sand, gravel, and boulders throughout the document.	T	A	Some alluvial material as large as small boulders is present. Text will be modified to reflect this.
103	p.27, last para., and p.28, 2nd and 3rd para: We believe that the San Juan River is losing water to the floodplain aquifer and provides most of the recharge. The higher water levels observed at the mouth of Bob Lee Wash (from well 648 discharge) create a hydraulic barrier from the base of the wash to the river. The term "ground water mound" is used incorrectly. Perhaps the term "ground water divide" could better explain the hydrologic conditions at the base of Bob Lee Wash.	T	NC	Figures 8-14 show that the San Juan River feeds the floodplain aquifer only along its southeast margin, the area where the aquifer is flushed. The largest component of ground water comes from discharge of well 648. The DOE does not share the commenter's suggestion that there is substantive advantage in using the term "ground water divide". A ground water mound is "a mound-shaped elevation in the water table or another potentiometric surface that builds up as a result of the downward percolation of water, through the zone of aeration or an overlying confining bed, into the aquifer represented by the potentiometric surface (Bates and Jackson, Glossary of Geology 2nd Edition and Wilson and Moore, Editors, Glossary of Hydrology). A divide, or ground water divide, is "a ridge in the water table or other potentiometric surface from which the ground water represented by that surface moves away in both directions..." (Bates and Jackson, Glossary of Geology 2nd Edition, and Wilson and Moore, Editors, Glossary of Hydrology). Because the flow radiates outward from the mouth of Bob Lee Wash and does not flow in an opposite direction, there is no divide; there is only a mound.

[a]Comments are paraphrased for summary. The entire text of the comment is attached.
[b]**T** = technical issue; **R** = regulatory issue; **S** = stakeholder concern that is not technical or regulatory in nature;
[c]**A** = agree with comment, EA will be revised as necessary; **R** = resolve before final EA; **NC** = no change, EA revision is not justified.

	EA Comments[a]	Issue Type[b]	Status[c]	Response/Resolution
104	p.28: "...sediments average about 20 ft thick..." Rather than use the average thickness for the sediments, DOE might want to indicate the range of lithologic thickness of the different sediments to show the variability.	T	A	Some modification will be made to the EA text on page 28; however, most of this detail is in Section 4.2 of the SOWP.
105	p.37, para. 1, 5th sentence: the thin bentonite layers—how deep are these layers?	T	NC	These thin bentonite layers occur throughout the Mancos Shale; several are exposed along the escarpment.
106	(1) The Navajo Nation does not favor any institutional controls for water permits or usage for any length of time. All the statements below [see original text attached] require that the Navajo Nation establish institutional controls for a 100-year period. We are unsure if the Water Code Administration will have the authority and resources to ensure that future employees will have oversight of restricting permits for drilling and water use in and around the UMTRA Project area.	R	NC	(1) DOE is continuing to address this concern with the Navajo UMTRA Program office under the terms of the cooperative agreement between DOE and the Navajo Nation. Although DOE recognizes the validity of this concern, the regulations allow for DOE and Navajo UMTRA to implement institutional controls.
	(2) Since DOE is requesting that artesian well 648 continue to flow for the next 100 years to assist the flushing, is DOE willing to pay for the well water used for flushing?	R	NC	(2) See response to comments 98 and 101.
107	p.49, para. 2, 3rd sentence: "...water intake structure on the north bank..." Change to "...water intake structure located approximately 400 ft from the north bank..."	S	NC	The water intake structure is along the north bank of the river and its position is accurately shown in Plates 1 and 2. The structure is about 400 ft upstream (east) of the U.S. Highway 666 bridge.
108	p.51, para. 1: "...(3) the Navajo Agriculture Products Industries Irrigation Canal and the proposed Navajo-Gallup Pipeline Project." This pipeline project is still in the negotiation phase and hasn't been approved by congress; it could be years before the pipeline is operating. Therefore, DOE should not depend on this pipeline for an alternative municipal water supply for Shiprock if the intake area becomes contaminated.	S	A	This change will be made in the narrative.
109	p.59, Figure 24: Remove the text "US HWY 66" on the northern highway.	S	A	Figure 24 will be revised.
110	p.80: "Dr. Steve Semken" should probably be written as "Steve Semken, Ph.D."	S	A	Revision will be made.
	U.S. Fish and Wildlife Service comments received June 14, 2001			
111	The Service cannot concur with DOE's conclusion that the proposed remedial actions "may affect but are not likely to adversely affect" federally listed species.	R	NC	DOE acknowledges the Navajo Fish and Wildlife and U.S. Fish and Wildlife Service concerns and is committed to working with both agencies to address protection of endangered species. DOE believes that remediation will have a positive effect on endangered species.
112	The Service would like to meet...to continue informal consultation on the project.	R	NC	Since the receipt of comments on the EA, DOE has communicated with the USFWS and Navajo Fish and Wildlife on several issues that still require resolution. DOE has agreed to continue consultation as the project progresses and has committed to determining if additional short-term actions in specific areas require mitigation beyond that already completed as interim actions.

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[b]**T** = technical issue; **R** = regulatory issue; **S** = stakeholder concern that is not technical or regulatory in nature;
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	EA Comments[a]	Issue Type[b]	Status[c]	Response/Resolution
113	This is a complex site...and will require development of a comprehensive approach to maximize ecological benefits.	R	NC	As a federal agency DOE is committed to the protection of endangered species and their habitat.

[a]Comments are paraphrased for summary. The entire text of the comment is attached.
[b]**T** = technical issue; **R** = regulatory issue; **S** = stakeholder concern that is not technical or regulatory in nature;
[c]**A** = agree with comment, EA will be revised as necessary; **R** = resolve before final EA; **NC** = no change, EA revision is not justified.

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Howard Bitsui
Bitsui Environmental Consultants
P.O. Box 2250
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Bitsui:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

RECORD

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

Jane Farris
BIA/Rights Protection
Gallup Area Office
P.O. Box 1060
Gallup, NM 87305

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Farris:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

RECORD

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Roy Waters
Director of Construction
Central Consolidated Sch. Dist. #22
P.O. Box 1179
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Waters:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Dr. Steve Semken
Geologist
DINE College
P.O. Box 580
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Dr. Semken:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Anna Frazier
DINECARE
HC-61, Box 263
Winslow, AZ 86047

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Frazier:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Lori Goodman
DINECARE
10-A Town Plaza #138
Durango, CO 81301

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Goodman:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Kathleen Tsosie
Eastern Navajo Dine Against Uranium Mining
P.O. Box 150
Crownpoint, NM 87313

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Tsosie:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Mansel A. Nelson
Program Coordinator
Institute for Tribal Environmental Professionals
Environmental Education Outreach Program
P.O. Box 5756
Flagstaff, AZ 86011

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Nelson:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

April 27, 2001

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Ron Everson
Navajo Engineering & Construction
P.O. Box 969
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Everson:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Chili Yazzie
President
Shiprock Chapter
P.O. Box 576
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Yazzie:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

David Burbank
Shiprock Chapter Grazing Committee
P.O. Box 576
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Burbank:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Phil Harrison
Uranium Radiation Victim Committee
P.O. Box 1526
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Harrison:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.
Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Larry Martinez
Director
Office of Navajo Uranium Workers
P.O. Box 6035
Shiprock, NM 87420

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Martinez:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Elisa Arviso
Hydrologist II
Navajo Environmental Protection Agency
Public Water Systems Supervision
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Arviso:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Stephen Austin
Hydrologist II
Navajo Environmental Protection Agency
Surface Groundwater Protection Dept.
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Austin:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Yolanda Barney
Program Manager/ES III
Navajo Environmental Protection Agency
Public Water Systems Supervision
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Barney:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Cassandra Bloedel
Environmental Specialist III
Navajo Environmental Protection Agency
Resource Conservation & Recovery Program
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Bloedel:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Vivian Craig
Environmental specialist I
Navajo Environmental Protection Agency
Radon Program
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Craig:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Calvert L. Curley
Department Director
Navajo Environmental Protection Agency
Air & Toxics Department
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Curley:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Stanley Edison
Chemist
Navajo Environmental Protection Agency
Superfund Program
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Edison:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Eugene Esplain
Health Physicist
Navajo Environmental Protection Agency
Superfund Program
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Esplain:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

William Freeman
Hydrologist II
Navajo Environmental Protection Agency
Underground Injection Control Program
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Freeman:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Herbert Holgate
Environmental Specialist II
Navajo Environmental Protection Agency
Pesticide Enforcement & Development
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Holgate:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Arlene Luther
Department Director
Navajo Environmental Protection Agency
Waste Regulatory & Compliance Dept.
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Luther:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

George Padilla
Program Manager/ESIII
Navajo Environmental Protection Agency
Superfund Program
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Padilla:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Satya Deb Misra
Department Director
Navajo Environmental Protection Agency
Surface Groundwater Protection Dept.
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Misra:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Program Manager/ESIII
Navajo Environmental Protection Agency
Air & Toxics Department
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Sir:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Eugenia Quintana
Environmental Specialist II
Navajo Environmental Protection Agency
Administration
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Quintana:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

The DOE and Navajo UMTRA Program have consulted with several federal and tribal agencies to assist in the development of this EA. Agencies consulted include the New Mexico State Engineers Office, U.S. Fish and Wildlife Service, Army Corps of Engineers, Navajo EPA, Navajo Fish and Wildlife, Navajo Water Code Administration, and Shiprock Chapter representatives, among others.

Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Eric Rich
Hydrologist II
Navajo Environmental Protection Agency
Surface Groundwater Protection Dept.
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Rich:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Tom Morris
Environmental Specialist II
Navajo Environmental Protection Agency
Surface Groundwater Protection Dept.
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Morris:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Derrith Watchman Moore
Executive Director
Navajo Environmental Protection Agency
Administration
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Mr. Watchman Moore:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 27, 2001

Lynette Stevens
Hydrologist II
Navajo Environmental Protection Agency
Surface Groundwater Protection Dept.
Building No. W009-080
P. O. Box 339
Window Rock, AZ 86515

Subject: Shiprock Environmental Assessment – Request for Comment

Dear Ms. Stevens:

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site*. The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Sincerely,

Madeline Roanhorse
Director, Navajo UMTRA Program

Enclosures
cc w/o: D. Metzler, DOE-GJO
GWSHP 11.6.2 (P. Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 30, 2001

MEMORANDUM:

TO : Arvin Trujillo, Executive Director
Division of Natural Resources

FROM : Madeline Roanhorse, Department Director
Navajo AML Reclamation/UMTRA Department

SUBJECT : **SHIPROCK ENVIRONMENTAL ASSESSMENT — REQUEST FOR COMMENT**

The U.S. Department of Energy (DOE) is requesting your review and comments concerning the enclosed Draft *Environmental Assessment of Ground Water Compliance for the Shiprock Uranium Mill Tailings Site.* The groundwater within the site area has been contaminated with residual material which are constitutes associated with uranium mill processing. Federal regulations require the DOE to assess risks and comply with ground water standards in 40 CFR 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, revised as final rule and published January 11, 1995 (60 FR 2854). The EA proposes active remediation combined with natural flushing in the floodplain and active remediation in the terrace east area at the site and analyzes the environmental impacts associated with the proposed action.

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Please submit your comments to: Navajo UMTRA Program; P.O. Box 1875; Window Rock, AZ 86515, by June 8, 2001. A public meeting is tentatively scheduled for May 31, 2001, at 10:00 a.m. at the Shiprock Chapter in Shiprock, New Mexico. If you have any questions or concerns, please contact me, Ray Russell, or Levon Benally at (520) 871-6982.

Attachments

cc w/o: D.Metzler, DOE-GJO
GWSHP 11.6.2(P.Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 30, 2001

MEMORANDUM:

TO : Bennie Williams, Administrative Service Officer
Water Code Administration - Department of Water Resources

FROM : Madeline Roanhorse
Madeline Roanhorse, Department Director
Navajo AML Reclamation/UMTRA Department

SUBJECT : **SHIPROCK ENVIRONMENTAL ASSESSMENT — REQUEST FOR COMMENT**

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Attachments

cc w/o: D.Metzler, DOE-GJO
GWSHP 11.6.2(P.Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 30, 2001

MEMORANDUM:

TO : Al Downer, Department Director
Navajo Historic Preservation

FROM : Madeline Roanhorse
Madeline Roanhorse, Department Director
Navajo AML Reclamation/UMTRA Department

SUBJECT : **SHIPROCK ENVIRONMENTAL ASSESSMENT — REQUEST FOR COMMENT**

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Attachments

cc w/o: D.Metzler, DOE-GJO
GWSHP 11.6.2(P.Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 30, 2001

MEMORANDUM:

TO : John Nystedt, Environmental Review
Navajo Heritage Program - Navajo Fish and Wildlife Department

FROM : Madeline Roanhorse
Madeline Roanhorse, Department Director
Navajo AML Reclamation/UMTRA Department

SUBJECT : **SHIPROCK ENVIRONMENTAL ASSESSMENT — REQUEST FOR COMMENT**

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Attachments

cc w/o: D.Metzler, DOE-GJO
GWSHP 11.6.2(P.Taylor)

THE NAVAJO NATION

KELSEY A. BEGAYE
PRESIDENT

TAYLOR McKENZIE, M.D.
VICE PRESIDENT

April 30, 2001

MEMORANDUM:

TO : Alfred Dehiya, Department Director
Navajo Land Department

FROM : Madeline Roanhorse
Madeline Roanhorse, Department Director
Navajo AML Reclamation/UMTRA Department

SUBJECT : **SHIPROCK ENVIRONMENTAL ASSESSMENT — REQUEST FOR COMMENT**

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Attachments

cc w/o: D.Metzler, DOE-GJO
GWSHP 11.6.2(P.Taylor)