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WM-60



CHIEF BLACK COAL

October 9, 2003

Certified Mail
7002 2030 0003 3196 1102
The Honorable Spencer Abraham
Secretary of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

Re: Riverton UMTRA Site

Dear Secretary Abraham,

The Joint Business Council (JBC) of the Eastern Shoshone and Northern Arapaho Tribes writes to express its concern over Department of Energy's (DOE) implementation of groundwater cleanup at the Riverton, Wyoming, Title I, Uranium Mill Tailings Remedial Action UMTRA site. Over the past two years, the Wind River Environmental Quality Commission (WREQC), using funding provided by the Environmental Protection Agency (EPA) under Section 106 of the Clean Water Act, conducted a detailed audit of the cleanup at the Riverton site. WREQC's findings are contained in the enclosed reports.

DOE's Groundwater Compliance Action Plan (GCAP) for the Riverton site determined that natural flushing combined with institutional controls over an extended 100-year cleanup period would be sufficient to achieve compliance with EPA cleanup standards. An alternate water supply system was supposed to be developed at the site to protect local residents from potential exposure to contaminated groundwater during the extended cleanup period.

The WREQC audit has clearly shown that important institutional controls provided for in the GCAP have either not been implemented, or have been implemented in an ineffective manner. While an alternate water supply system was developed, DOE took no measures to ensure that local residents actually hooked up to it. DOE allocated no funds for maintenance, repair or expansion of the system over the extended 100-year cleanup period. DOE failed to ensure that legally enforceable measures were put in place to prevent new wells from being drilled in the affected area or to restrict new land uses, such as gravel pits, that could bring contaminated groundwater to the surface. Homes and businesses in the affected area are still using groundwater from the affected area for domestic consumption and new gravel pits and other surface disturbing activities continue to be developed in the affected area.

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WREQC's sampling has now detected elevated levels of uranium and other constituents of potential concern in domestic wells. Elevated levels of radionuclides have also been detected in the alternate water supply. The source of these radionuclides may be the result of cross-connections with private domestic wells that are still in use within the affected area. Our audit shows that institutional controls have not prevented such cross-connections from being established.

The WREQC audit has also revealed serious technical deficiencies in the analysis used to select the natural flushing strategy at the site and in DOE's verification monitoring program. It shows that DOE's conceptual groundwater model overlooks preferential pathways for groundwater migration, does not consider residual contamination left on site during the surface remediation phase (specifically thorium-230), and underestimates the areal and vertical extent of the actual groundwater contamination at the site. Elevated levels of uranium have now been detected in wells drilled into a confined aquifer, which was assumed to be isolated from the contaminated surficial aquifer, as well as in a shallow well to the east of the location of the plume predicted by the model. The verification monitoring program provided for in the GCAP failed to detect these anomalies.

The JBC is extremely concerned about DOE's failure to implement required institutional controls at the Riverton site. Given that public health is at stake, immediate steps must be taken to ensure that the institutional controls provided for in the GCAP are fully implemented. All homes and businesses in the affected area must be connected to the alternate water supply. All wells drilled in the affected area must be abandoned and plugged. Funding must be provided which assures adequate long-term maintenance and repair of the alternate water system and future expansion of the system to allow for projected population growth. The source of radionuclides found in the alternate water supply must be investigated and the problem eliminated. DOE must work with both the Tribes and the State of Wyoming to put in place a legally enforceable well drilling moratorium and other land use restrictions in the affected area.

While effective institutional controls are essential to resolve the immediate danger to public health, the WREQC audit also raises substantial questions about the adequacy of the natural flushing strategy to meet the requirements of EPA standards over the long-term. Accordingly, the JBC asks DOE to formally reconsider in a supplemental NEPA document whether the natural flushing strategy selected in the 1998 GCAP and accompanying Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) continues to be appropriate. Specifically, DOE needs to reconsider whether, in light of the findings of WREQC's audit, effective institutional controls can be maintained for the next 100 years and natural flushing will reduce groundwater contamination to acceptable levels within that period.

We have been working with your Grand Junction office for many years on these issues but that office has failed to commit to any concrete action to resolve these serious concerns. We would therefore like to meet with you at your earliest convenience to discuss how DOE intends to implement the institutional controls provided for in the GCAP and otherwise meet its obligations to protect public health and environment at the Riverton site. We will be calling you shortly to schedule a meeting.

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In the remainder of this letter we explain in greater detail the technical and legal basis for the Tribes' concerns.

I. The Riverton Site.

A. Regulatory History.

The Riverton UMTRA site is located 2 miles southwest of Riverton within the boundaries of the Wind River Indian Reservation on land now owned by the State of Wyoming. Uranium milling operations ceased in 1963 leaving approximately 1,000,000 cubic yards of tailings on approximately 70 acres southeast of the mill site. Another 120 acres of ground north and southeast of the tailings pile were also contaminated. Leachate from the tailings contaminated groundwater at the site.

DOE completed surface remediation activities at the site in 1990. Most, but not all, of the residual radioactive materials stored on site were removed for disposal at an active mill site located 45 miles east of Riverton. WREQC's audit found that an indeterminate amount of thorium 230 encountered at depth was left in place on site based on a site-specific "supplemental standard" adopted by DOE under 40 C.F.R. § 192.22. In January 1995, the NRC concurred with DOE's certification that the surface remedial action was complete and met applicable EPA standards.

In 1995, DOE conducted a Baseline Risk Assessment (BLRA) of the groundwater contamination. The BLRA found that there were numerous wells within a two-mile radius of the site that were used as a source of domestic drinking water. According to the BLRA, all but two of the wells pumped water from a deeper confined aquifer which the BLRA found was "not affected by site related contamination." While the BLRA concluded that contaminated shallow aquifer was not currently used as a source of drinking water, it evaluated shallow groundwater as a potential future source of drinking water for residents around the Riverton site. The BLRA concluded that because levels of arsenic, manganese, molybdenum, sulfate and uranium in the surficial aquifer could cause adverse health effects if this groundwater were used as a source of drinking water, access to contaminated groundwater had to be controlled.

In February 1998, DOE completed a Site Observational Work Plan (SOWP) for the site based on the findings of the BLRA. The SOWP recommended a compliance strategy based on natural flushing with "institutional controls to limit exposure to the contaminated ground water with verification monitoring to ensure the forecasts are accurate." SOWP at 1-1. The recommended strategy was based on a conceptual groundwater model which suggested that natural ground water movement and geochemical processes would decrease contaminant concentrations to within EPA's maximum concentration limits (MCL) within 100 years. *Id.* The SOWP stated that during that period of time, "effective monitoring, institutional controls, and an alternative water supply will be maintained to prevent the use of ground water in the affected aquifer for domestic consumption, stock watering, or crop irrigation." *Id.* There is no indication that the SOWP considered the residual amounts of thorium-230 left on-site as a source of continuing or potential future groundwater contamination.

In September 1998, DOE issued a final GCAP adopting the proposed natural flushing strategy. The GCAP concluded that "sufficient hydrological and ground water contamination characterization data exist[ed] to make an appropriate compliance strategy selection." The strategy chosen in the GCAP was to "allow natural flushing to meet EPA ground water standards within a performance period of 100 years, starting in 1998, and coupled with institutional controls and compliance monitoring." GCAP at 1. The GCAP concluded that institutional controls could be maintained during the flushing period. This conclusion was based on the following:

A viable and enforceable institutional control is in place through a Memorandum of Agreement [MOA] among the Indian Health Service, the Northern Arapaho Tribe, and the Northern Arapaho Utility Organization.¹ The institutional control is governed by the government entities because the contaminated ground water resides beneath tribal lands.² There is no current risk to human health because there are no known exposure pathways for ground water from the uppermost aquifer to reach a domestic user (i.e., private wells). Further, an alternate water supply is in construction that will provide potable water to existing and future residents and will create a moratorium on domestic wells in the affected area.

Id. at 2.

The GCAP included a monitoring compliance plan which provided for monitoring at 19 locations every year for 5 years. These monitoring locations did not include existing domestic wells in the affected area. The GCAP indicated that after five years of verification monitoring, the Riverton UMTRA Site would be transferred to the DOE's Long-Term Surveillance and Monitoring Program. Compliance monitoring under this program would occur only once every 5 years. GCAP at 2.

The Final GCAP was accompanied by an Environment Assessment (EA) and Finding of No Significant Impact (FONSI) prepared under the National Environmental Policy Act (NEPA). The EA evaluated only two alternatives: the proposed action and a no action alternative. An action alternative other than the natural flushing strategy selected in the GCAP was not considered. With respect to institutional controls, the EA stated:

DOE, the U.S. Department of Housing and Urban Development, and the Indian Health Services (IHS) have jointly funded the construction of a water supply system

¹ The referenced MOA does not include DOE as a party. In the portion of the MOA relating to institutional controls, the Tribe and IHS agreed not to drill any domestic wells in the affected area and to "support" a regulatory moratorium on the inappropriate use of contaminated groundwater in the area "recognizing that *such regulatory action is properly within the jurisdiction of the Water Resources Control Board of the Wind River Indian Reservation.*" Neither the Water Resources Control Board nor the JBC are parties to the MOA or any other agreement pertaining to institutional controls.

² In fact, the contaminated groundwater resides beneath lands which are owned by various entities in addition to the Tribes, including non-Indians and the State of Wyoming.

to serve residents near the site. The alternate water supply will consist of a storage tank filled with potable water from wells installed in the deeper confined aquifer upgradient (west) of the site. The water is supplied to eliminate the possibility of using contaminated ground water in the surficial aquifer as a drinking-water source. The system will have up to 13 miles of water line and a capacity to serve 100 to 130 homes. All domestic water near the site is currently taken from the deeper confined aquifer. Water lines at residences that use the confined aquifer will be disconnected and tied to the new water-supply lines.

EA at 9. The EA claimed that "Reservation authorities have agreed to place restrictions on use of ground water in the contaminated portion of the surficial aquifer and to place a moratorium on drilling permits issued for the affected area." *Id.* The EA concluded:

Human health would be protected by the natural-flushing alternative. Ground water in the uppermost aquifer has not been used historically as a source of domestic or drinking water. Through an agreement with the tribes and DOE, IHS has placed a moratorium on drilling in the area of the contaminant plume and is currently constructing an alternate water supply system planned for completion in 1998.³ Therefore, residential use of ground water from the surficial aquifer will not be a concern. Ground water monitoring would provide information about the effectiveness of natural flushing. When ground water standards are met, institutional controls on aquifer use can be removed.

Id. at 28. On the basis of the EA, DOE issued a FONSI which concluded that "no significant impact would result from either the proposed action to implement natural flushing with institutional controls or from the no-action alternative at the Riverton site."⁴

B. WREQC's Audit.

In 2001, WREQC obtained a grant from EPA to conduct an audit of DOE work at the Riverton site. In Phase I of this audit, WREQC hired Maxim Technologies Inc. to: (1) review and audit DOE's data; (2) evaluate the adequacy of the BLRA; and (3) determine whether DOE followed proper procedures during site remediation and has fulfilled its obligations at the site. WREQC's Phase I report identified a number of serious issues related to the effectiveness of institutional controls:

³ The MOA makes clear, however, that the IHS has *no* regulatory authority to impose a well drilling moratorium on either tribal or non-tribal lands.

⁴ It is not clear upon what basis DOE concluded that the no-action alternative would have no significant impact. The EA found that use of the surficial aquifer would be possible without institutional controls and that users of this aquifer would be almost 10 times more likely to develop cancer than the general population due to exposure to uranium. In addition, intakes of manganese could be up to 30 times higher than acceptable levels and sulfate concentrations could produce adverse health effects, particularly in infants. EA at 28-29.

With the exception of the alternate water supply, there are no additional in-place institutional controls to prevent exposure to contaminated groundwater. In addition, there are no requirements for mandatory hookups to the alternate water supply and well abandonment in the area of groundwater contamination has not be required. Use of impacted groundwater could still be occurring. There is no evidence of a plan for the DOE to provide funding for operation and maintenance of the alternate water supply during the natural flushing period. It appears that no discussions were ever held with the Tribes, including the [JBC], and the State of Wyoming, regarding additional institutional controls. There is no documentation that the WRCB [Water Resources Control Board] was ever contacted about a moratorium.

Phase I Report at 70. The report noted that wells drilled on tribal lands require joint State-Tribal approval of well permits, but that the Wyoming State Engineer claims to not have the legal authority to issue a moratorium on well drilling. *Id.* at 70. The Phase I report concluded that there was no program in place and no criteria defined to judge the effectiveness of institutional controls. *Id.* at 71.

The Phase I report also raised significant issues concerning DOE's conceptual groundwater model. These included:

- The assumption that all groundwater contamination is flushing to the Little Wind River is unsupported by monitoring data;
- DOE has not considered the effect of river paleochannels, which may result in preferential flow paths, anomalous contaminant concentrations, and variations in contaminant transport rates. Monitoring well spacing is inadequate to account for variations in subsurface lithology;
- There is insufficient data to support the assumption that the confined aquifer will be unaffected by surface contamination and otherwise accurately evaluate the areal and vertical extent and the degree of contamination in the groundwater plume.

In Phase II of the audit, WREQC collected additional data and performed further analysis to fill data gaps identified in Phase I. The Phase II report confirmed that institutional controls have not been effective in preventing potential exposures to contaminated groundwater:

- Of the 25 wells that DOE identified as potentially affected, seven of these wells are still used for potable domestic supply. None of the other potentially affected wells has been properly plugged and abandoned and many wells are being used for other domestic purposes. At least one well currently used for domestic purposes (DOE Well 441) was found to contain concentrations of site contaminants, including manganese and uranium above the EPA's MCL levels. A shallower well used for livestock watering (DOE Well 445) also exhibited elevated levels of uranium.
- No well drilling moratorium has been implemented to date and there is considerable doubt

about whether such a moratorium could be legally enacted and enforced. New wells continue to be drilled in the site vicinity, and land use changes, including a new gravel pit, have created new exposure pathways not considered by DOE.

- The long-term performance of the alternate water supply system remains in question. The system consists of PVC pipes with rubber gaskets that deteriorate over time. Yet there are no funds allocated for maintenance and repair or system expansion, which will undoubtedly be required over the 100-year remediation period. A portion of the PVC water line was installed in contact with the contaminated groundwater plume. The long-term effect of site contaminants on the integrity of the line is unknown.
- At least one cross-connection between a private well in the affected area and the alternate water supply line has been discovered. Additional cross-connections cannot be ruled out. Sampling and analysis of the water system during system flushing found concentrations of radionuclides well above the MCL, compared to trace levels in the source water. No funds have been made available to investigate or correct this potentially serious public health problem.

In addition to findings confirming the inadequacy of the institutional controls, the Phase II audit yielded data that raises serious concerns about the adequacy of DOE's conceptual model:

- The finding of high levels of site contaminants in DOE Well 441, a well drilled into the confined aquifer, may indicate that the groundwater contaminant plume extends into the confined aquifer.
- The finding of elevated levels of uranium in Well 445 indicates that the groundwater plume extends further to the east than assumed in DOE's conceptual model.

WREQC's Phase II audit also raised concerns about DOE's verification monitoring program. DOE's monitoring program does not include sampling of domestic wells currently in use and hence did not detect the contamination found by WREQC in Wells 441 and 445. Furthermore, WREQC has determined that DOE is using filtered, rather than unfiltered, samples in its monitoring. On the Reservation, many people using private wells are exposed to unfiltered water which may contain much higher contaminant concentrations than water in which suspended solids have been filtered out.

Finally, WREQC's audit raises concerns about additional exposure pathways that may not have been fully considered in the BLRA or EA. Specifically, the audit found significant levels of uranium and other constituents of potential concern in the waters, sediment and aquatic biota of Oxbow Lake. No institutional controls have been implemented to limit public access to these waters for fishing or swimming.

II. DOE Must Take Immediate Steps to Assure that the Institutional Controls Provided for in the GCAP are Instituted and Maintained.

DOE has the legal duty under UMTRCA to “perform remedial actions . . . in accordance with the general standards” prescribed by EPA. 42 U.S.C. § 7918(a)(1). These EPA standards require DOE to “comply with conditions in a plan for remedial action.” 40 C.F.R. § 192.12(c)(1). Such a plan must bring groundwater contamination into compliance with EPA’s MCLs “as promptly as is reasonably achievable.” *Id.* The regulations allow the period to be extended for up to 100 years if the Secretary determines that sole reliance on active remedial procedures is not appropriate and that cleanup of the groundwater can be more reasonably accomplished through natural flushing. *Id.* § 192.12(c)(2)(i). However, such an extension is permissible only if:

Institutional control, having a high degree of permanence and which will effectively protect public health and the environment and satisfy beneficial uses of groundwater during the extended period and which is enforceable by the administrative or judicial branches of government entities, *is instituted and maintained*, as part of the remedial action, at the processing site and wherever contamination by listed constituents from residual radioactive materials is found in groundwater, or is projected to be found.

Id. § 192.12(c)(2)(i)(B) (emphasis added).

Under these provisions, DOE has a legal responsibility to “comply with the conditions” in the GCAP, including conditions relating to the establishment of institutional controls. A key condition in the GCAP for the Riverton site is the “viability of an enforceable institutional control that will prevent inappropriate uses of the contaminated groundwater during the flushing period.” In addition, because DOE has selected natural flushing as its groundwater cleanup strategy, it has a responsibility to ensure that institutional controls which will effectively protect public and satisfy beneficial uses of groundwater are “instituted and maintained” during the 100-year remedial action period.

WREQC’s audit has clearly shown that DOE has failed to “comply with the conditions” in the GCAP regarding institutional controls, 40 C.F.R. § 192.12(c)(1), and has failed to “institute and maintain” such controls for the extended cleanup period as required by EPA regulations. *Id.* § 192.12(c)(2)(i)(B). The GCAP relies on the construction of an alternate water supply as the primary institutional control to protect local residents from potential exposure to contaminated groundwater. WREQC’s audit has shown that DOE never took measures to ensure that local residents actually hooked up to the alternate water supply developed at the site. Seven homes remain unconnected and are still rely on wells drilled in the affected area for domestic consumption and other uses. Existing wells in the affected area have yet to be abandoned and plugged. Uranium levels above the MCL set by EPA have been detected in drinking water.

Another proposed institutional control relied on in the GCAP is a well-drilling moratorium. Such a moratorium does not exist at the present time. Given the presence of non-Indians and non-Indian owned fee land in the affected area, a well-drilling moratorium cannot be fully effective without the participation of the State of Wyoming.⁵ However, the Wyoming State Engineer has

⁵ Recent Supreme Court decisions have called the Tribes’ jurisdiction over non-members in the affected area into question. *Nevada v. Hicks*, 533 U.S. 353, 388-92 (2001); *Atkinson Trading Co. v. Shirley*, 532 U.S. 645 (2001).

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reportedly asserted that the State has no legal authority to implement such a moratorium. As a result, new wells continue to be drilled in the affected area.

The GCAP further lists as a "viable and enforceable institutional control" a Memorandum of Agreement (MOA) among the Indian Health Service (IHS), the Northern Arapaho Tribe and the Northern Arapaho Utility Organization. By itself, the referenced MOA is clearly inadequate to serve as an effective institutional control. The portion of the MOA relating to institutional controls does not prevent parties other than the Northern Arapaho Tribe or the IHS from drilling wells in the affected area. It recognizes that regulatory action to prevent inappropriate uses of contaminated groundwater is "properly within the jurisdiction of the Water Resources Control Board of the Wind River Indian Reservation." There is no evidence that DOE has approached either the Water Resource Control Board or the JBC with a proposal for a well drilling moratorium. And, as discussed above, a Tribal moratorium standing alone would not be fully effective to prevent inappropriate use of contaminated groundwater given the substantial presence of non-Indians and non-Indian fee land in the affected area.

The MOA also does not commit funding to the Northern Arapaho Tribe or its Utility Organization to maintain the effectiveness of the alternate water system or any other institutional control during the extended 100-year cleanup period. Despite the fact that the alternate water system was constructed from perishable PVC piping and rubber gaskets and pipes were laid in contact with potentially contaminated groundwater, no funds were ever allocated for maintenance and repair of the system. The Northern Arapaho Tribe has no readily available source of funding to investigate and eliminate the source of the radionuclide contamination that the WREQC audit found in the alternate system. No funding exists to expand the system to keep pace with inevitable population growth or economic development over the next 100 years.

The JBC asks that DOE take steps to immediately correct its failure to "institute and maintain" the institutional controls called for in the GCAP. All affected residences must be hooked up to the alternate water system as soon as possible. Existing wells in the affected area must be abandoned and plugged. DOE should work to ensure that a legally enforceable moratorium on drilling new wells is put in place jointly by the Tribes and the State of Wyoming. Further investigation must be undertaken to identify the source of the contamination found in the alternate water supply and eliminate the problem. Funding must be provided to ensure long-term maintenance, repair and future expansion of the system.

III. DOE Should Reconsider the Suitability of Passive Remedial Action Strategy Selected in the GCAP and the 1998 EA and FONSI.

In addition to taking steps to institute and maintain the institutional controls provided for in the GCAP, the findings of WREQC's audit warrant a broader reconsideration of the natural flushing strategy and DOE's 1998 finding of no significant impact.

EPA regulations permit institutional controls to be used in place of active remediation, but only when DOE is able to assure their effectiveness will be maintained during their period of use. The regulations specifically provide that institutional controls must "effectively protect public health

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and the environment and satisfy beneficial uses of groundwater” during their period of application. 40 C.F.R. 192.12(c)(2)(i)(B). EPA has stressed that to comply with these regulations, institutional controls must be “verified for effectiveness and *modified as necessary*.” 60 Fed. Reg. 2853, 2862 (Jan. 11, 1995) (emphasis added).

In this instance, the institutional controls which the GCAP assumed would be put in place have either not been implemented or cannot be verified as effective. Not all affected residents have been hooked up to the alternate water system, domestic wells in the affected area have not been abandoned and plugged, and no legally enforceable institutional mechanism exists to prevent residents from drilling new wells. Because the GCAP strategy relies primarily on institutional controls as the basis for its conclusion that the passive remediation strategy will adequately protect public health, the fact that most of the institutional controls provided for GCAP have not been implemented five years after the strategy was adopted warrants serious reconsideration of DOE’s selection of the natural flushing strategy.

EPA regulations also provide that projections of plume movement and attenuation should be periodically verified during the extended cleanup period. 40 C.F.R. § 192.20(b)(4). WREQC’s audit has developed new information indicating that the original projections of plume movement underestimated the areal and vertical migration of the plume. WREQC’s sampling data indicates that groundwater contamination may extend into the confined aquifer and further east than predicted by DOE’s conceptual groundwater model. If contamination extends into the confined aquifer, not all contamination may be flushed into the Little Wind River as originally assumed. The original model also overlooked the existence of paleochannels and other lithographic anomalies that could act as preferential pathways for contamination. No consideration was ever given to whether the residual amounts of thorium-230 remaining on site could act as a source of new groundwater contamination after the 100-year cleanup period. In short, the audit raises questions about the groundwater modeling underlying DOE’s conclusion that natural flushing of groundwater contamination will meet EPA’s maximum concentration limits within 100 years. Under EPA regulations, these findings also warrant reconsideration of the natural flushing strategy.

In addition to reevaluating the GCAP, DOE should prepare a supplemental NEPA document reconsidering the conclusions of the 1998 EA and FONSI. The initial preparation of an EA and a FONSI does not terminate an agency’s obligations under NEPA. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989). An agency must prepare a supplemental NEPA document whenever there are “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c). “If there remains ‘major Federal actio[n]’ to occur, and if the new information is sufficient to show that the remaining action will ‘affec[t] the quality of the human environment’ in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.” *Marsh*, 490 U.S. at 374 (quoting 42 U.S.C. § 4332(2)(C)).

In this instance, there are “significant new circumstances or information relevant to environmental concerns” that require a supplemental NEPA analysis reconsidering the 1998 EA’s conclusion that the passive remediation strategy will have no significant environmental impact. First and foremost, the institutional controls which the EA assumed would be put in place have either not

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been implemented or have proven not to be effective. Because the EA relied primarily on institutional controls as the basis for its conclusion that the natural flushing strategy would adequately protect public health, evidence concerning the lack of effectiveness of these controls is "significant new circumstances or information" requiring reconsideration of DOE's finding of no significant impact.

Second, WREQC audit has uncovered information suggesting that the risks posed by the passive remediation strategy to public health and the environment may be more significant than predicted in the EA. Sampling data now suggests that groundwater contamination extends into the confined aquifer and further east than earlier believed. Phase II sampling data also suggests that the alternate water supply may have been cross contaminated by wells drilled in the affected area. The audit raises questions about the adequacy of the groundwater monitoring intended to verify DOE's conclusion that natural flushing of groundwater contamination will pose no significant long-term health or environmental risks and meet EPA's maximum concentration limits within 100 years. Higher than expected concentrations of site contaminants have been found in the waters, sediment, and aquatic biota of Oxbow Lake and other surface waters in the vicinity of the Riverton site. Under these circumstances, DOE has a legal obligation to reevaluate the technical assumptions underlying its 1998 FONSI in a supplemental NEPA document.

* * *

In conclusion, the JBC asks you to take immediate action to assure that the institutional controls provided in the GCAP are instituted and effectively maintained as required by EPA regulations. We also ask you to prepare a supplemental NEPA documents that carefully reconsiders the choice of the natural flushing strategy in light of WREQC's findings that institutional controls have not been effectively implemented and that DOE's conceptual groundwater model may not accurately replicate site conditions. The Tribes' greatly appreciate your conscientious attention to the serious public health concerns raised in this letter.

Sincerely,


Vernon Hill, Sr., Chairman
Shoshone Business Council


Burton Hutchinson, Sr, Chairman
Arapaho Business Council

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Enclosure

cc: Robert E. Roberts, Administrator,
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