Technical Evaluation Report

Final Site Observational Work Plan,
Preliminary Final Ground Water Compliance Action Plan,
Durango, Colorado Uranium Mill Tailings Remedial Action Project Site

Date: December 22, 2008

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Summary and Conclusions:

The U.S. Department of Energy (DOE) submitted a final Site Observational Work Plan (SOWP) (DOE, 2002) for the referenced site to the U. S. Nuclear Regulatory Commission (NRC) on January 24, 2002. The DOE submitted a Preliminary Final Ground Water Compliance Action Plan (PFGCAP) (DOE, 2003) to the NRC on August 28, 2003, for the site. It also submitted four Durango Site Verification Monitoring reports (DOE, 2005, 2006, 2007. 2008b), and a Data Validation Package (DOE, 2006) to the NRC. The proposed ground water and surface water compliance strategy for the mill tailings area is natural flushing with an alternate concentration limit (ACL) for selenium in conjunction with institutional controls and continued monitoring of ground water and surface water. The proposed ground water and surface water compliance strategy for the raffinate ponds area is no remediation with the application of supplemental standards based on the criterion of limited-use ground water due to widespread selenium contamination, use of institutional controls, and continued monitoring of ground water and surface water as a best management practice. Based on a review of the SOWP, PFGCAP, the Durango Site Verification Monitoring reports and the Data Validation Package, the staff concurs with the SOWP and the PFGCAP with the following conditions:

- Verification ground water monitoring of cadmium, manganese, molybdenum, selenium, sulfate and uranium in the mill tailings area should continue annually to verify the application of natural flushing to reduce contaminants to required levels in a 100-year time frame.

- Verification ground water monitoring of selenium in the raffinate ponds area should be completed on an annual basis to support the selection of no remediation and supplemental standards based on limited use ground water.

- DOE should execute the environmental covenant for the raffinate ponds area as originally planned.

Background:

Regulatory Framework

The Durango Uranium Mill Tailings Remedial Action (UMTRA) Project site is a former uranium-ore processing site located near the city of Durango, Colorado. The Durango site is designated for remedial action as an inactive uranium ore processing site under Title I of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, as amended (42 U.S.C. 7901 *et seq*.).

UMTRCA directs the Environmental Protection Agency (EPA) to develop standards for remedial action at this site and several other inactive uranium mill sites. Health and environmental protection standards for these sites are published in 40 CFR 192. While surface reclamation under Title I is complete at most of the mill sites, ground water contamination persists. The UMTRCA Amendments Act of 1988 (42 U.S.C. 7922 *et seq*.) authorizes the DOE to extend, without limitation, the time needed to complete ground water remediation at the listed sites.

Ground water remediation at inactive uranium ore processing sites is regulated by Subparts B and C of 40 CFR 192. Subpart B requires that site ground water concentrations meet supplemental standards or meet one of the following: background levels, maximum concentration limits (MCLs) or ACLs that have been shown to be protective of human health and the environment. Subpart B also allows the use of natural flushing if it is projected that compliance with standards will be met within 100 years, enforceable institutional controls are in place to protect public health and the environment, and ground water is not used, or projected to be used, for a public water system. DOE may apply supplemental standards in lieu of background levels, MCLs, or ACLs in certain situations as listed in Subpart C. The DOE compliance strategy at any of the listed Title I sites requires concurrence by the NRC in consultation with the States and local tribes.

Site History

From 1880 to 1930 the American Smelting and Refining Company operated a lead smelter at the Durango site adjacent to the Animas River. At the beginning of World War II, the Reconstruction Finance Corporation (RFC), a Federal agency, acquired the smelter facility. RFC contracted with U.S. Vanadium Corporation to convert the facility to produce vanadium for Metals Reserve Company, which purchased strategic materials for the Government during the war. In 1943-1944, U.S. Vanadium also operated a uranium-vanadium sludge plant at the site to process old vanadium mill tailings under contract with the Manhattan Engineer District. The sludge was treated at U.S. Vanadium's Grand Junction, Colorado, refinery where vanadium was removed and uranium was produced as black oxide. The Durango mill produced vanadium until early 1944, when, with adequate vanadium stocks, federal purchasing ended. At that time, U.S. Vanadium Corporation purchased the facility from RFC, and it continued to produce vanadium for commercial sales until the mill closed in August 1945.

The U.S. Atomic Energy Commission (AEC) purchased the 147-acre Durango mill site from U.S. Vanadium Corporation in 1948. Later that year, AEC leased the facility to Vanadium Corporation of America (VCA) with an option to purchase the plant at the end of the first lease period (1953). In late 1948, the first of three AEC uranium procurement contracts was signed with VCA. In 1949, production of uranium concentrates for sale to AEC began. Milling capacity was increased from 175 tons of ore per day (TPD) in 1953 to 750 TPD in 1958. From 1949-1963, mill throughput averaged about 350 TPD, and about 1.6 million tons of ore averaging 0.29 percent U_3O_8 and 1.55 percent V_2O_5 were processed. In 1953, VCA exercised its option to purchase the facility, and afterward the mill was operated as a private facility. VCA shut down the mill in March 1963, and it was later dismantled.

The uranium and vanadium milling process at the site involved two stages. Initially ores were roasted with sodium chloride. Sodium carbonate was added which produced a solution containing both uranium and vanadium. The tailings were physically separated from this solution and treated to recover uranium and vanadium. The tailings were washed with water, stored, and leached, using an acid solution of both hydrochloric and sulfuric acids. Potassium permanganate was used to separate this leachate from the tailings. Uranium and vanadium

were removed using an organic solvent. Once they were removed, the spent solutions from the process, which are known as raffinate, were disposed.

Before 1959, all solutions and acid leach tailings were discharged into the Animas River which borders the site. Starting in 1959, water from the stored alkaline leach and acid leach tailings was mixed in an unlined settling pond on top of a large tailings pile in a part of the site known as the mill tailings area. Overflow from this pond was treated and settled in another unlined pond on top of a smaller tailings pile. Overflow from this pond and spent alkaline leach solutions from the first stage of uranium vanadium recovery were directly discharged into the Animas River. Leachate from these unlined ponds entered the ground water in the mill tailings area. The volumes of fluid released and stored in the ponds is unknown. The raffinates from the second stage of processing were pumped to a tank above the mill. This tank discharged fluid into a 3000 ft long unlined ditch which carried it to a part of the site known as the raffinate ponds area. Another 3000 ft of ditch transferred the fluid through a series of unlined ponds. The volume of raffinate disposed in the ponds is unknown. The raffinate evaporated and percolated into the underlying soil, alluvium, colluvium and finally bedrock, and contaminated the ground water.

In 1991, reclamation of the mill tailings area was completed with the removal of the small and large tailings piles, the infrastructure and remaining residual radioactive materials. Reclamation of the raffinate ponds area was also completed with the removal of all of the raffinate ponds area residual radioactive materials and the alluvium which was replaced by colluvium and fill. The tailings were moved to an offsite location and are not subject to this technical evaluation.

Site Description and Characterization

The former mill site is located 0.25 miles southwest of the city center of Durango in LaPlata County, Colorado, along the Animas River. It consists of two hydrologically separate but contiguous areas: the mill tailings area which included large and small tailings piles with the mill infrastructure and the raffinate ponds area. Ground water contamination at both the mill tailings area and raffinate ponds is a consequence of disposal of mill tailings and raffinate solutions from the milling operations.

The mill tailings area covers approximately 40 acres. It is located on a river terrace bounded on the west by Smelter Mountain, on the east and south by the Animas River, and on the north by Lightner Creek. Ground water in the mill tailings area is unconfined in surficial alluvial and colluvial deposits underlain by the Mancos shale. The colluvium is located near the base of Smelter Mountain and is up to 25 ft thick. Near the Animas River and Lightner Creek, the aquifer is composed of deposits of river laid sand and gravel. After reclamation, a layer of vitreous lead smelter slag as much as 25 ft thick from early lead smelting operations remains along the Animas River.

The ground water at the mill tailings area is located some 10-40 feet below the ground surface. In the alluvial aquifer, it flows to the southeast at a seepage rate of 0.2-1.4 ft/day in response to an average gradient of 0.02 ft/ft and a hydraulic conductivity of 10-70 ft/day. Ground water flow in the underlying Mancos shale is considered insignificant as a consequence of the very low conductivity of the shale. Recharge to the alluvial aquifer is received from precipitation and runoff from Smelter Mountain. The aquifer also receives inflow from Lightner Creek to the north.

Surface water monitoring and ground water monitoring well water levels demonstrate a seasonally variable recharge and discharge from ground water/surface water interaction with the Animas River to the south and east.

The raffinate ponds area covers approximately 20 acres on a hydrologically separate river terrace about 1500 ft south of the mill tailings area. It is bounded by the Animas River on the east in the northern portion of the area and a small intermittent creek known as South Creek to the south. The creek is dry except during heavy rainfall events and other wet periods. The creek drains into the Animas River approximately 1000 ft east of the raffinate ponds area. The site was originally alluvium underlain with bedrock of the Menefee Formation and the Point Lookout sandstone of the Mesaverde Group. The Bodo Fault runs from the southwest to northeast across the site. The fault is downthrown by 200 ft to the southeast and juxtaposes the Point Lookout Sandstone and Menefee Formation correspondingly.

The alluvium in the raffinate ponds area was removed during the reclamation and replaced with colluvium and fill. As a consequence, the ground water is found in the underlying bedrock, including the Point Lookout sandstone, the Bodo Fault and the thick coal and carbonaceous shales of the Menefee formation. Slug tests show the Menefee formation to be a low conductivity sandstone which is more transmissive in its fractures and lenticular coal beds. Measurements of conductivity in the Menefee formation range from 0.003 ft/day- 5.3 ft/day. The Point Lookout sandstone has a lower member composed of interbedded lenticular sandstones and shales and an upper massive sandstone member. The upper member has low conductivity and the lower member behaves as an aquitard. The Point Lookout sandstone conductivity was measured at 0.0015 ft/day. The Bodo fault is the most conductive feature in the area with a measured conductivity of 6.4 ft/day.

Ground water in the raffinate ponds area is unconfined and flows very slowly to the east on the northwestern side of the Bodo fault at a seepage rate of about 0.0022 ft/day. It flows to the northeast on the southeastern side of the fault with a seepage rate of about 0.008 ft/day. Ground water discharges to the Animas River from this area. Recharge is from precipitation, lateral inflow from Smelter Mountain, and seasonal recharge from South Creek located to the southwest. Surface water monitoring well and ground water monitoring well water levels in the raffinate ponds area suggest ground water flow in the Point Lookout and Menefee formations is hydraulically connected to the Animas River. Wells in the Bodo Fault do not demonstrate this interaction.

The Florida River is the primary source of drinking water to the City of Durango with a population of about 13,000. Ground water from either the mill tailings area or the raffinate ponds area is not a source of drinking water for the City of Durango or any other entity. There are no known wells in use within the city limits. The Animas River is used as a supplemental source of drinking water for the City during high demand periods. The pumping station for the City on the Animas River is approximately 2 miles upstream from the northern border of the mill tailings site. The City is considering developing additional water resources to supplement the existing ground water supply, but ground water is not currently under consideration as it is of poor quality due to elevated levels of iron, manganese and hardness.

Technical Evaluation:

The final Site Observational Work Plan, the Preliminary Final Ground Water Compliance Action Plan (DOE, 2003), four Durango Site Verification Monitoring reports (DOE, 2005, 2006, 2007, 2008b), and a Data Validation Package (DOE, 2006) were reviewed following the standard review plan, NUREG-1724 (NRC, 2000). NRC staff reviewed the SOWP and finds that the history and site characterization are acceptable. The SOWP has established a list of hazardous constituents, concentration limits, points of compliance, and a comprehensive characterization

of the site that led to the development of the PFGCAP. DOE has proposed compliance strategies in the PFGCAP that are different for the two hydrologically separate areas of the site: the mill tailings area and the raffinate ponds area. These two areas will be discussed separately in the technical evaluation.

Mill Tailings Area

The compliance strategy proposed in the PFGCAP for the mill tailings area is natural flushing, verification monitoring of ground water in the mill tailings area, monitoring of surface water in the Animas River and institutional controls. DOE has proposed that annual verification monitoring for manganese, molybdenum, selenium, sulfate, and uranium continue for five years at several point of compliance (POC) wells throughout the mill tailings area to evaluate the effectiveness of the natural flushing compliance strategy. Annual verification monitoring for cadmium is proposed to continue for 10 years in POC well 0612. The results of this monitoring are to be reported annually.

Ground water contaminants of potential concern (COPC) were derived from the baseline risk assessment (BLRA) (DOE, 1995) and were updated in a BLRA in the SOWP. The COPC are identified as cadmium, lead, manganese, molybdenum, selenium, sodium, sulfate, and uranium, with the major risk contributors being uranium and manganese. NRC staff reviewed the updated BLRA contained in the SOWP and has determined the methodology used and the COPC derived are acceptable.

As described in the SOWP, a comprehensive and well documented ground water flow and transport model was developed and calibrated for the site. Using a starting concentration distribution based on 2002 field values, predictions from the model showed that all COPCs would be reduced to below MCLs with natural flushing within a 100-year time frame with the exception of cadmium and selenium. For cadmium, the field data showed it consistently exceeded the MCL in the mill tailings area at well 0612. The ground water model was not able to match the variable nature of cadmium concentrations at this well. It was also not able to demonstrate flushing to the cadmium MCL within the 100-year time frame at this well. However, DOE demonstrated that a straight line declining trend could be fitted through the measured data at this well to demonstrate cadmium would be reduced to MCLs within the 100-year time frame. For selenium, the ground water model predicted the MCL of 0.01 mg/l published in 40 CFR 192, Subpart A, Table 1, would not be met within the 100-year flushing period. DOE therefore applied for an ACL of 0.05 mg/l for selenium based on the EPA's Safe Drinking Water Act (SDWA) maximum contaminant level published in 40 CFR 141 and the State of Colorado ground water standard. The ACL application for selenium was submitted as an attachment to the PFGCAP. The ground water model predicted the ACL of 0.05 mg/l would be achieved within the 100-year time frame. The proposed ACL is equivalent to the selenium standard of the Colorado Department of Public Health and Environment, Water Quality Control Commission, Basic Standards for Ground Water, "Table 1, Domestic Water Supply – Human Health Standards", as published in 5 CCR 102-41, Regulation No. 41. NRC staff reviewed the ACL application for selenium and agrees that using the Colorado ground water standard and the current maximum contaminant level published in 40 CFR 141, as an ACL, versus the older MCL published in 40 CFR 192, is acceptable and will be protective of human health and the environment.

NRC staff reviewed the ground water flow and transport model developed for the site and determined that the parameter and input data used to develop the model are acceptable. However, model predictions in the PFGCAP are not yet being observed for all the monitored

constituents in the annual monitoring data that has been reported. NRC staff reviewed monitoring results of the COPCs in the mill tailings area that are presented in the Durango Site Verification Monitoring Reports (DOE 2005, 2006, 2007, 2008b). From 2002 through the middle of 2008, manganese, molybdenum, sulfate, selenium and uranium in many POC wells do not display the decreasing trends, or decreasing trends at the rate, predicted by the ground water flow and transport model. For example, selenium has experienced recent declines and was below the ACL in 2007. However, 2008 sampling has seen the levels increase such that the sample at location 0633 is above the ACL of 0.05 mg/l. Assuming the model is adequate, the lack of clear declining trends in the monitored COPCs since 2002 may indicate residual byproduct material remains in the aquifer or flushing is proceeding at a much slower rate than predicted by the model. Therefore, annual ground water verification monitoring of cadmium, manganese, molybdenum, selenium, sulfate and uranium in the mill tailings area should continue annually to support the use of natural flushing to reduce contaminants to MCLs in a 100-year time frame. The proposed DOE strategy in the PFGCAP for monitoring of these constituents for 5 to 10 years sets an arbitrary end point for contaminant monitoring. Over time, if the trends do not reflect the model predictions, a revised ground water compliance strategy may be required. DOE has stated in its latest verification monitoring report (DOE, 2008b) that it is too early in the 100-year natural flushing timeframe to draw definitive conclusions about the natural flushing compliance strategy.

Surface water is monitored in four locations near the mill tailings area. Sampling in 2008 (DOE, 2008b) has shown that concentrations of cadmium, molybdenum, selenium, and uranium are below the compliance goals and remain indistinguishable from background levels. NRC staff reviewed the proposed surface water monitoring plan and finds it acceptable.

Raffinate Ponds Area

The compliance strategy proposed in the PFGCAP for the raffinate ponds area is no remediation with supplemental standards based on limited-use of ground water as a consequence of widespread natural selenium contamination, institutional controls, and continued ground water and surface water monitoring as a best management practice. Annual monitoring of selenium and uranium in the raffinate ponds area at specific wells would be undertaken as a best management practice but verification monitoring would not be conducted.

Ground water COPC's in the raffinate ponds area were derived from the baseline risk assessment (DOE, 1995) and were updated in a BLRA in the SOWP. The COPC's are identified as chloride, lead, manganese, selenium, sodium, sulfate, and uranium, with the major risk contributor being selenium and to a lesser extent, uranium and manganese. NRC staff reviewed the updated BLRA contained in the SOWP and has determined the methodology used and the COPC derived are acceptable.

The presence of naturally occurring selenium in the raffinate ponds area is supported by evidence in the SOWP and PFGCAP. Historical data indicate high concentrations of selenium were not present in the raffinate liquids which leaked from the site. Concentrations of selenium have increased without commensurate increases in other COPCs known to be derived from milling. DOE believes that high levels of selenium in the raffinate ponds area are derived from oxidizing conditions in coal beds and carbonaceous shales in the Menefee formation which release selenium to the ground water. One background well under oxidizing conditions had selenium values nine times the MCL. Other background wells under reducing conditions had selenium concentrations below MCL levels.

Although several lines of evidence were presented by DOE to support the claim of high natural selenium concentrations in the raffinate ponds area, the SOWP and PFGCAP indicate that selenium is present in the mill tailings area from milling operations. As the operations in the two areas shared similar waste streams and demonstrate similar COPC concentrations in POC wells, NRC staff has concluded it is possible that some of the selenium may be derived from anthropogenic sources in the raffinate ponds area. The Durango Site Verification Monitoring reports (DOE 2005, 2006, 2007, 2008b) did not provide any ground water measurements from the raffinate ponds area to verify that widespread selenium contamination persists. Therefore, DOE should institute annual verification monitoring of selenium in the raffinate ponds area to support the presence of widespread natural selenium contamination. Ground water monitoring data for the raffinate ponds area should be summarized in the Annual Site Verification Monitoring Report. NRC staff agrees with the DOE conclusion that ground water meets the definition of limited use ground water as defined in 40 CFR 192.11(e) (2), "ground water that is not a current or potential source of drinking water because widespread, ambient contamination not due to activities involving residual radioactive material from a designated processing site exists that cannot be cleaned up using treatment methods reasonably employed in public water systems", provided DOE can demonstrate that widespread naturally occurring selenium contamination occurs at the raffinate ponds site through continued monitoring of selenium.

DOE has reported in section 2.6.1 of the PFGCAP that officials from the City of Durango have no current or projected use of ground water from the raffinate ponds area. Additionally, DOE has provided an analysis of the reasonableness of ground water treatment in the raffinate ponds area to support the use of supplemental standards outlined in 40 CFR 192.21(g) and the definition of limited use ground water in 40 CFR 192.11(e). DOE's analysis was based on guidance in a 1988 EPA publication entitled Guidelines for Ground-Water Classification under the EPA Ground-Water Protection Strategy. DOE concluded that a total annualized typical cost per household of $916 was determined for a treatment system at the raffinate ponds area if the water was ever to be used. Based on this guidance, the cost of the system exceeded the 90th percentile economic threshold of $835 for a treatment system size serving a population of 116 individuals and would be an unreasonable economic burden on the user population. Based, on this analysis, DOE considered the ground water untreatable. NRC staff does not dispute the validity of this analysis.

NRC staff agrees that ground water and surface water monitoring for uranium and selenium should continue in the raffinate ponds area as a best management practice and to verify that selenium is naturally occurring. NRC staff reviewed both the proposed surface water and ground water monitoring plans and finds them acceptable. However, DOE has not provided sampling data for the raffinate ponds area in the verification monitoring reports submitted since the publication of the PFGCAP in 2003.

Institutional Controls

Institutional controls (ICs) on ground water use have been implemented at the Durango UMTRA site at both the mill tailings area and the raffinate ponds area. Institutional controls are restrictions that effectively protect public health and the environment by restricting access to contaminated ground water that is not undergoing active remedial procedures. Separate ICs were developed for the mill tailings area and raffinate ponds areas of the Durango UMTRA site to ensure restrictions were in place to prevent any future use of ground water.

Ownership of the Durango mill tailings area was transferred from the State of Colorado to the City of Durango by quitclaim deed. The deed contains language which explicitly states that no ground water from the site is to be accessed or used for any purpose unless prior written approval is obtained from the Colorado Department of Public Health and Environment (CDPHE) and the US DOE (DOE, 2008a). This language ensures any future landowner will be subject to these restrictions and fulfills the need for permanence and enforceability by government entities. The mill tailings area is also subject to an environmental covenant held by the CDPHE (DOE, 2008a). The signed institutional controls for the mill tailings area are not contained in the SOWP or PFGCAP provided by DOE. However, DOE has provided signed copies of the quitclaim deed and the environmental covenant for the mill tailings area in a separate submission to NRC (DOE, 2008a). NRC staff has reviewed the institutional controls for the mill site area and finds they are durable, enforceable and implement a degree of permanence and enforceability by government agencies to protect public health and safety.

Ownership of the raffinate ponds area was transferred from the State of Colorado to the Colorado Water Conservation Board by quitclaim deed. The deed contains the same restrictive language on ground water use as for the mill tailings area. The area has since been transferred to the Animas-La Plata Water Conservancy District by quitclaim deed. The Bureau of Reclamation (BOR) recently built an Animas River water pumping plant on the site to support the Animas-La Plata Water Project. Following the requirements of the deed restrictions for the raffinate ponds area, the BOR consulted with the CDPHE and DOE on land use and site monitoring for this project. BOR has committed to future consultations on any further land use plans for the raffinate ponds area. The signed quitclaim deed for the raffinate ponds area is contained in the PFGCAP and in a separate submission provided by DOE (DOE, 2008a). The PFGCAP contains an unsigned copy of an environmental covenant for the raffinate ponds area. DOE recently discovered the environmental covenant was never executed and therefore, the raffinate ponds area is not subject to an environmental covenant as is the mill tailings area (DOE, 2008a). Even without the environmental covenant, DOE is confident that the IC's can be effectively maintained via the deed restrictions as evidenced by ongoing site activities over the past several years. DOE has indicated that the language recorded with the deed ensures that any future landowner is subject to the same restriction that would be included with an environmental covenant and that this language fulfills the requirements for degree of permanence and enforceability by government entities (DOE, 2008a). NRC staff has reviewed the language contained within the quitclaim deed for the raffinate ponds area and finds it is adequate, durable and enforceable to protect public health and safety. However, DOE should execute the environmental covenant that was originally planned for the raffinate ponds area. If the covenant cannot be executed, DOE must provide NRC with documentation that reasonable attempts were made to execute the covenant and the reason the covenant cannot be executed.

Conclusion:

NRC staff has reviewed the SOWP and finds it adequately characterizes the Durango mill tailings site. The NRC staff has reviewed the PFGCAP and concurs with the compliance strategies developed for both the mill tailings area and the raffinate ponds area provided DOE continues monitoring selected contaminants on an annual basis to demonstrate conclusions reached in the PFGCAP are valid.

For the mill tailings area, the ground water compliance strategy presented in the PFGCAP of natural flushing is acceptable in accordance with 40 CFR 192.12(c) (2) for the following

reasons: MCL's or ACL's will likely be achieved within 100 years, enforceable institutional controls will protect health and the environment, and ground water is not now, nor is it projected to be, used as a source of public drinking water. However, ground water monitoring at the mill tailings site presented in the Durango Site Verification Monitoring reports (DOE 2005, 2006, 2007. 2008b) indicate that the concentrations of the majority of COPCs are not showing the declines predicted by the ground water model. NRC staff has concluded that annual verification monitoring should be continued to determine if natural flushing will reach the compliance goals within the 100-year compliance period as predicted.

For the raffinate ponds area, the ground water compliance strategy presented in the PFGCAP of supplemental standards based on limited use ground water is acceptable in accordance with 40 CFR 192.22. DOE presented substantial evidence in the SOWP that selenium is derived from natural sources. However, its presence in the adjacent mill tailings area could also be interpreted as an indication that selenium may be derived from milling operations. Additional ground water monitoring should verify that selenium levels remain elevated to support the conclusion that widespread natural selenium contamination is present at the raffinate ponds area. If the data show that selenium levels remain high, this evidence can be used to validate the compliance strategy of supplemental standards based on limited use ground water.

DOE has executed IC's at the mill tailings area consisting of a quit claim deed that restricts ground water use and environmental covenant. At the raffinate ponds area, DOE has only executed a quit claim deed and had planned on executing an environmental covenant, but DOE has determined recently that the environmental covenant was never executed. DOE should execute the environmental covenant for the raffinate ponds area as originally planned.

References:

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