
All water quality samples from the monitor wells will be analyzed at the Nichols Ranch Unit laboratory for chlorides, total alkalinity, and conductivity within 48 hours of the sample being collected. All samples will be analyzed in accordance with accepted methods based on WDEQ-LQD Guideline 4 guidance. Standard Operating Procedures (SOP's) will be developed that will detail all water sampling and laboratory analysis procedures. The detailed SOP for water sampling and laboratory analysis is available onsite for employee's use.

5.7.8.10.3 Excursions

If any two **or more** of the UCL excursion parameters (chloride, total alkalinity, or conductivity) are exceeded, a **potential** excursion is suspected to have occurred. Within 24 hours of the **analysis review of the first sample**, a second verification sample will be taken and analyzed to confirm that two or more of the three UCLs have been exceeded. The verification sample is then split and analyzed in duplicate to assess any analytical error. **During an excursion event, all monitoring wells on excursion status will be sampled once every seven days for the UCL parameters until the excursion is corrected. If the second sample does not exceed two or more of the excursion parameters, a third sample is collected within 24 hours of receiving the analytical results of the second sample. The third sample will validate either the first or second sampling event and the potential excursion is either confirmed or rejected. An excursion is considered corrected when the concentrations of indicator parameters are below the concentration levels defining an excursion for three consecutive weekly sample events.**

If an excursion is verified the WDEQ-LQD and NRC Project Manager will be **notified by telephone or e-mail within 24 hours of confirming the excursion**. The WDEQ-LQD and NRC Project Manager will also be notified in writing within **five** days of a verified excursion. Corrective actions such as changes in the injection and recovery flow rates in the affected area will be implemented as soon as practical. The corrective actions will continue until the excursion is mitigated. A written report describing the excursion event, corrective actions, analytical results, and the corrective action results will be submitted to the **WDEQ-LQD and NRC Project Manager monthly until the excursion is corrected**.

In the event that the concentration of the UCL parameters that were detected in the monitor well(s) do not begin to decline within 60 days after the verification of an excursion, all injection into the

ore zone (production zone) adjacent to the excursion will be suspended to further increase the amount of net water withdrawal from the excursion area. Injection will be suspended until such time that a declining trend in the UCL parameters concentration is established. If a declining trend is not established in a reasonable time period, additional measures will be implemented. When a significant declining trend is established, normal operations will resume with injection and/ or production rates monitored such that net water withdrawals for the excursion area will continue. The declining trend will be maintained until such time that the concentrations of excursion parameters in the affected monitor well(s) has returned to concentrations less than the established UCL's. Addendum 3B, 3C and **3D of this Technical Report** include numerical modeling of how the retrieval of an excursion will be conducted in the event that an excursion does take place.

In the event that an excursion remains for more than 60 days, Uranerz will increase the posted surety amount to a level that is agreeable to the NRC. The increased amount will cover the full expected cost of correcting and cleaning up the excursion as stated in NUREG-1569 Section 5.7.8.5. (5). The surety increase will remain in force until the excursion is corrected.

5.7.8.11 Operational Surface Water Monitoring Program

Surface water samples will continue to be collected in the same locations that were used during the pre-mining baselining for the Nichols Ranch, **Jane Dough** and Hank Units. Additionally surface water samples will be collected whenever water is present in the locations outlined in Table D6A.1-1 of Appendix D6, Addendum D6A **for Nichols Ranch and Hank Units and Addendum JD-D6A for Jane Dough Unit. Refer to Section 5.7.7.3.1 for additional monitoring requirements.**

5.7.9 Quality Assurance

A quality assurance program **has been** established to provide a measure of the completeness and accuracy of sampling and measurement results. The results of the quality assurance

program **demonstrates** effectiveness of implemented programs or allow for identification of deficiencies so that corrective action can be taken. The quality assurance program will be applied to all radiological, effluent, and environmental programs.

5.7.9.1 Organization

The organizational structure described in Section 5.1 will be responsible for implementation of the quality assurance program.

5.7.9.2 Procedures

The quality assurance program will be implemented in accordance with written operating procedures as described in Section 5.2. These procedures will include consideration of quality assurance and quality control for activities of measurement, sampling, sample analysis, calibration, calculation techniques, data evaluation, and data reporting.

5.7.9.3 Records

Records will be maintained to document the activities performed in the program. The records will be specified in the applicable operating procedure. These records will include field logs, chain-of-custody, measurement results, instrument performance checks, calibration, data reduction, and data review and approval.

Record keeping will be in conformance with Section 5.3.2.

5.7.9.4 Quality Control in Sampling

Quality control for sample and measurement collection will be included in the respective operating procedure. Requirements will be designed to ensure that the sample or measurement is representative of actual conditions. Chain-of-custody records will be maintained for samples in accordance with an operating procedure.