

Supporting Documentation for a Modified List of Contaminants of Concern
Remediation #24046
Badger Wash Federal 1-32
Grynberg Petroleum

Background sample:

SS18 (5 feet bgs)
SS19 (1 foot bgs)

Soil Suitability for Reclamation (EC, SAR, pH, boron)

The EC exceedances in SS10, SS14, and SS16 are all below the background EC value in SS18. There are no exceedances of SAR, pH, or boron. Operator respectfully requests to remove the Soil Suitability for Reclamation analytes from the list of contaminants of concern.

Metals

Arsenic:

The arsenic exceedances in all our soil samples are all below the background arsenic values of 4.75 (1-foot bgs) and 7.39 (1 foot bgs) in SS19 and SS18, respectively.

Barium:

The barium exceedances in the 1-foot bgs interval (SS01 – SS09, SS11 – SS13, SS20) are all below 1.25x the barium concentration in SS19 (background sample at 1-foot bgs).

In the 5-foot bgs interval, two soil samples (SS15 and SS17) still exceed for barium after applying 1.25x the background (SS18).

Selenium:

The selenium exceedances in the 5-foot bgs interval (SS10, SS14 – SS16) are all below 1.25x the selenium concentration in SS18 (background sample at 5-foot bgs).

The selenium exceedances in the 1-foot bgs interval still exceed for selenium because selenium was non-detect in the background samples at the 1-foot bgs interval (SS19).

Operator respectfully requests to remove the metals from the list of contaminants of concern. The metals exceedances do not appear to represent impacts from a spill/release. The TPH and organic compound exceedances shown in the source area (SS15) and other areas (SS10, SS11, SS12, SS13, SS14, and SS16) do not have a correlation to the metals concentrations elsewhere. In other words, SS15 (heavily impacted with TPH) has lower arsenic and barium values than SS01 (non-detect for TPH and organic compounds). As such, Operator believes that the metals concentrations found in the soil samples are representative of background concentrations, not a spill/release.