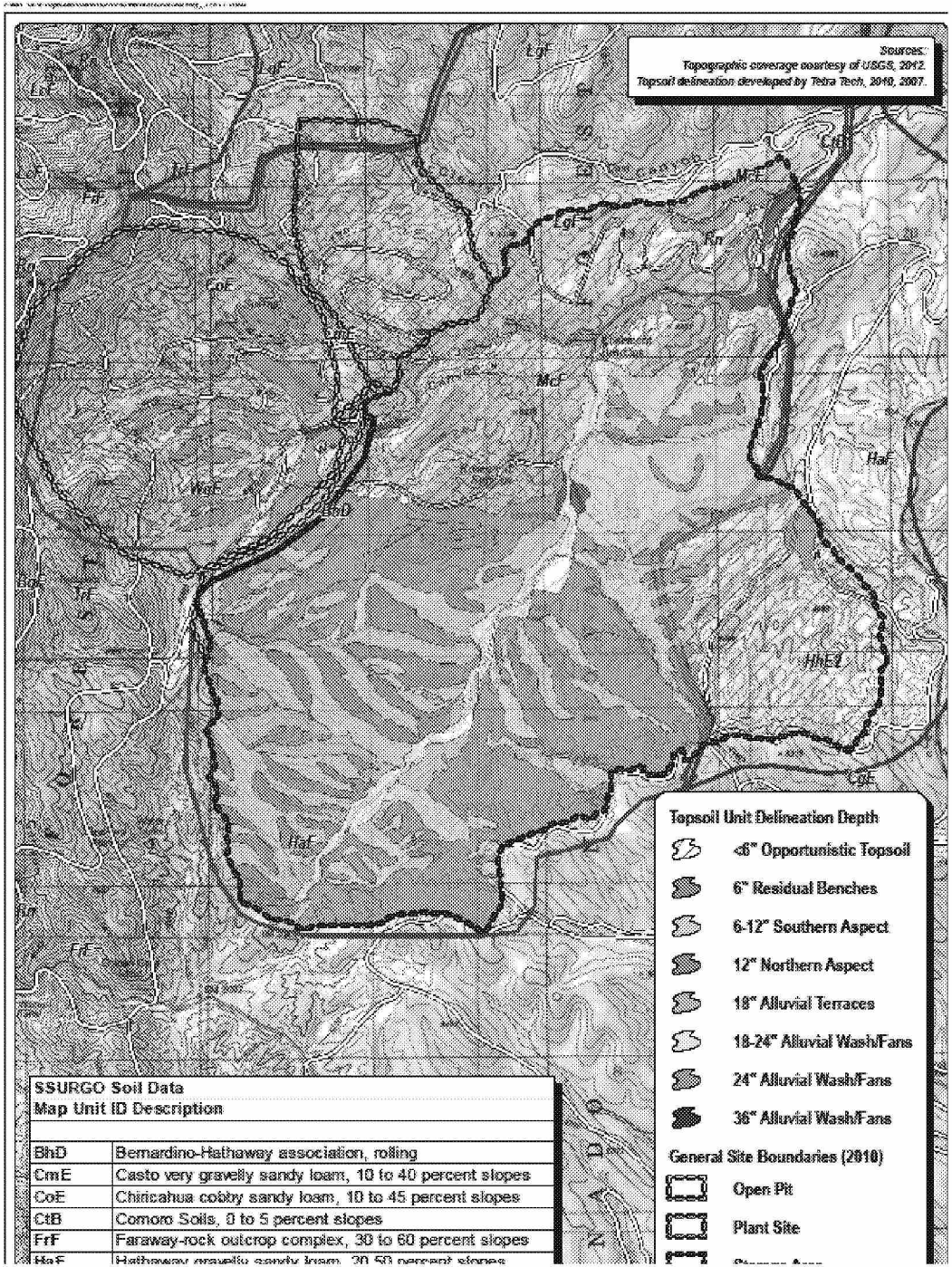
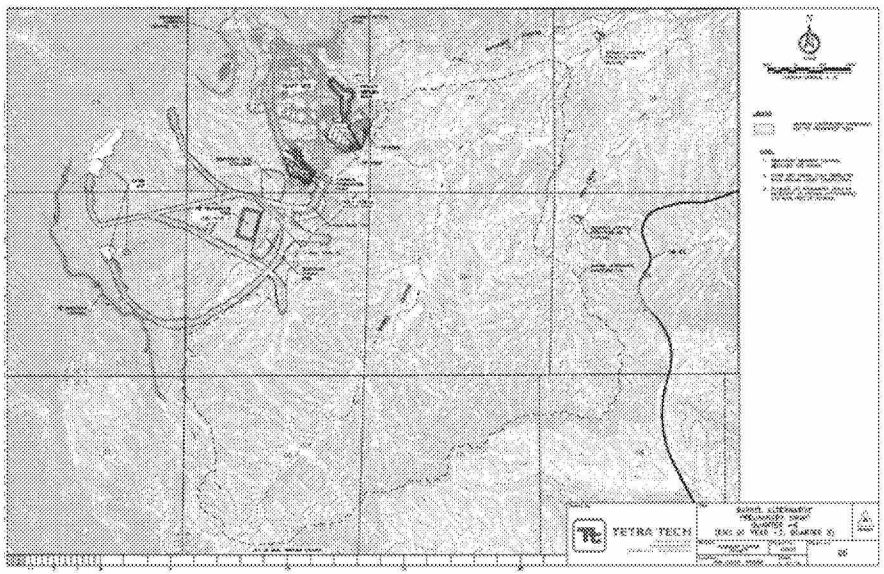



Will dredge and fill of WUS contribute to violations of SWQ stds?

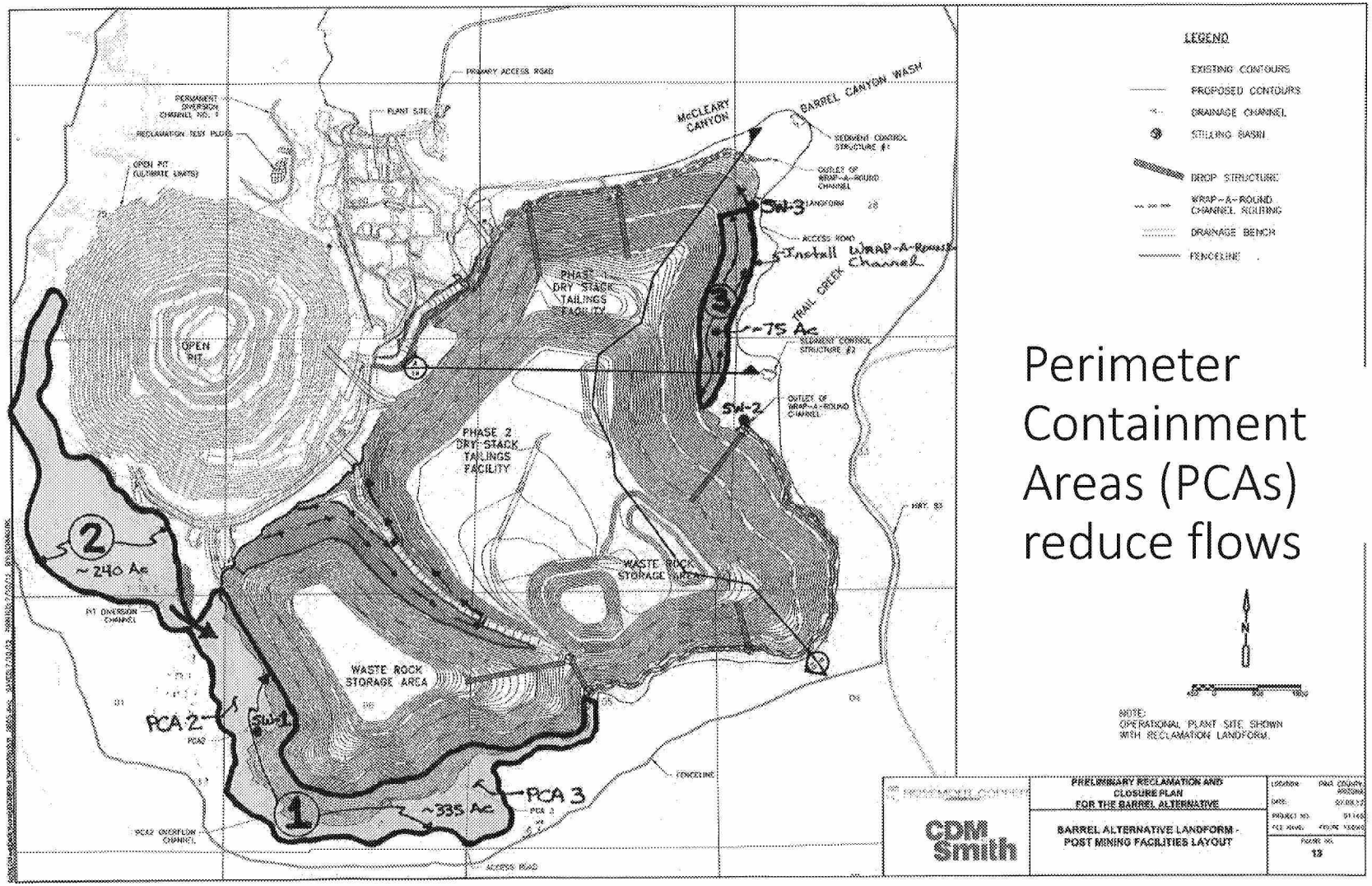
Agencies have not examined WQ consequences, including altered rates of loading, infiltration and assimilation.

401 certification considers post-dredging period as baseline.

# Compliance Dams




- Capacity of dam will be exceeded frequently
- Will uncontrolled releases of contact water meet Arizona Surface Water Quality standards, including suspended solids?




# Perimeter Containment Areas (PCAs) reduce flows

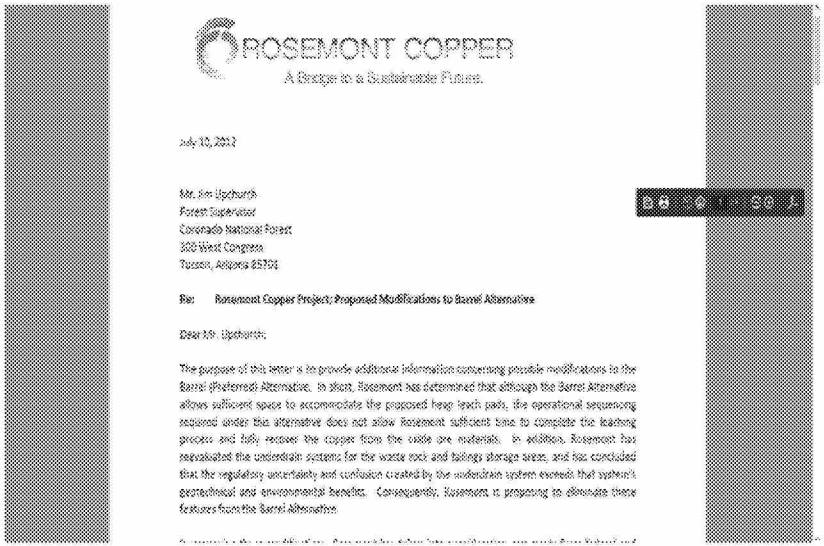
**County Findings**

- Perimeter containments could be drained to reduce impacts.
- No analysis of impacts of retaining this runoff.

**Consequences**

- Unnecessary reduction of flows to Barrel and Davidson
- Increased contact and potential for water quality impacts

# Consequences of Oxide Disposal


ROSEMONT COPPER

A Bridge to a Sustainable Future.

July 10, 2012

Mr. Jim Upchurch
Forest Supervisor
Coronado National Forest
300 West Congress
Tucson, Arizona 85701

Re: Rosemont Copper Project; Proposed Modifications to Barrel Alternative

Dear Mr. Upchurch:

The purpose of this letter is to provide additional information concerning possible modifications to the Barrel (Preferred) Alternative. In short, Rosemont has determined that although the Barrel Alternative allows sufficient space to accommodate the proposed heap leach pads, the operational sequencing required under this alternative does not allow Rosemont sufficient time to complete the leaching process and fully recover the copper from the oxide ore materials. In addition, Rosemont has reevaluated the underdrain systems for the waste rock and tailings storage areas, and has concluded that the regulatory uncertainty and confusion created by the underdrain system exceeds that system's geotechnical and environmental benefits. Consequently, Rosemont is proposing to eliminate these features from the Barrel Alternative.

- 65 million tons of Cu oxide-bearing rocks in waste rock
- SWCA 2013 identified Cu exceedance in some waste rock.
- Agencies have not considered practicable alternatives to the proposed discharge of oxides to WUS.

# Other Metals

- Exceedances of surface water standards in lab and in Barrel Canyon
- FEIS: stds for dissolved Ag, Cd, Hg, Pb, and total Pb and Se could be exceeded.
- Tetra Tech 2010 Tech Memo on Fate and Transport: 74% of the tailings is outside pit capture.

# Waste Rock Seepage Analysis

*Basis for 401 Cert* states that seepage is not expected based on FEIS.

**County Findings**

- FEIS did not correct hydraulic conductivity, precip or ET used in seepage analysis
- Ignores preferential flow paths
- Ignores 65 million tons of Cu oxide-bearing rocks

**Consequences**

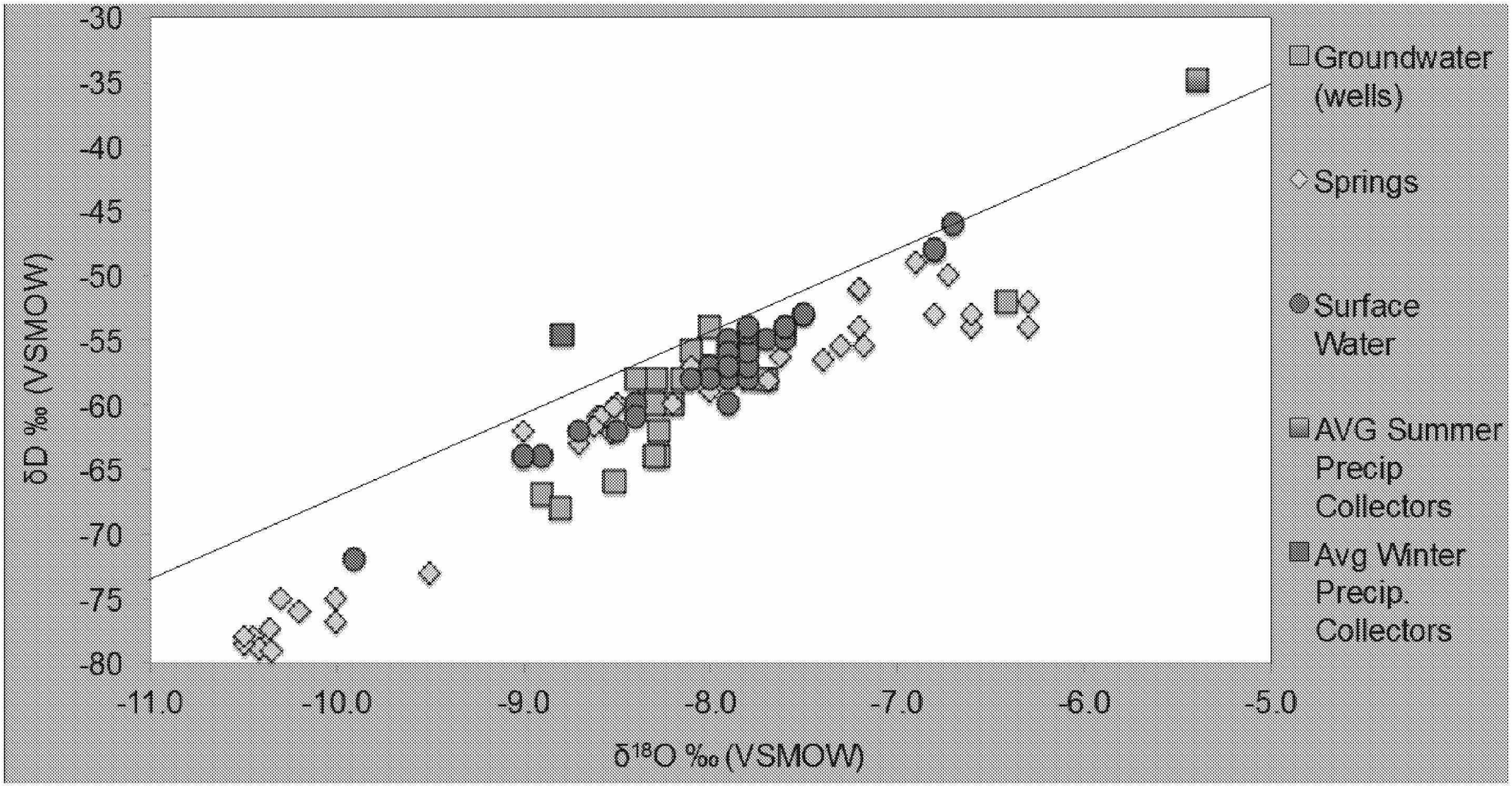
- Volume of seepage is higher than modeled.
- Inadequate provisions for detection.
- No protection should seepage reach surface waters outside the 2 compliance points.

# 401 “Baseline”

**County Finding**

ADEQ improperly approved a definition requiring water quality after construction impacts to be deemed natural variation.

**Consequences**

- Samples taken after mine diversions and land clearing impacts would be considered part of the baseline.
- No mitigation of water quality impacts would be required under this definition.

# Davidson and Lower Cienega Isotopes (McIntosh and Tucci, unpublished data)