TABLE I-2.C. SUMMARY OF SURFACE WATER QUALITY INFORMATION, CUMMINS CREEK MINE

BACKGROUND DATA AND STANDARDS

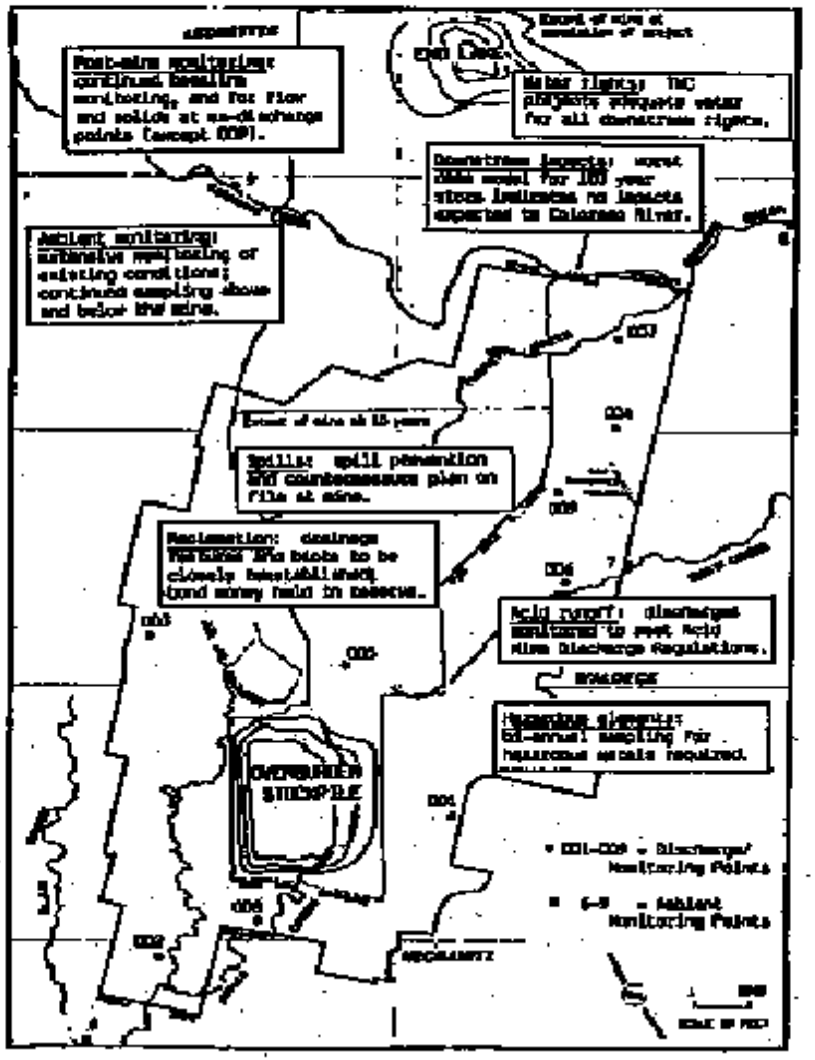
Regulated Parameters, All Discharge Points (mg/l unless indicated)	Ambient Range, Cumins Ck.	Discharge Limits[a] Daily Avgs (maximum in parentheses)	Applicable Standards for Subsequent Use
1) Flow (cubic feet/sec)[a]	0 - 5.3	report flows	min. of 0.5 to Cumins Ck.
2) Total suspended solids[a]	1 - 794	35 (70)	-500 (stream side-slots)
3) Iron, total	0.08 - 56.0	3.0 (6.0)	0.3 (drinking water)
4) Manganese, total	0.023 - 0.1	2.0 (2.0)	0.05 (drinking water)
5) pH (standard units)[a]	5.5 - 8.2	6 to 9	6 to 9 (all uses)
6) Oil and grease	not measured	no discharge (15.0)	virtually free (biota)
7) Hazardous elements[b]	b	b	b (drinking water-biota)
8) Float solids/foam	not measured	trace	0.5 (as foaming agents)

[a] Post-mine monitoring also; - means "less than".

MITIGATION MEASURES OF PARAMETER

General: Undisturbed water is diverted around the active mine; water from disturbed land and mine is diverted to sedimentation ponds (001-009; see map) for removal of contaminants; selected from ponds must meet limits listed above; reclamation and mining conducted simultaneously to minimize exposure and erosion.

1) Flow: normal release from ponds and and lake will meet water rights needs and provide a more regular flow for biological needs while reducing flood potential downstream; ponds will contain a 10-year, 24-hour storm; emergency spillways designed to pass the 100-year, 6-hour storm event.
2) Total Suspended Solids: use of clay lined sedimentation ponds (37 during life of project) to induce absorption onto sediments and to provide for settling; treatment with commercial flocculants or polymers if necessary; upper and lower level gates for selective release of settled water; use of silt fences, hay bales, and check dams to reduce sediment flow into ponds; measured as settleable solids in post-mine period (max. of .3 ml/l).
3 & 4) Iron, Manganese: (key elements in formation of acid runoff); should settle out in the sedimentation ponds; see 2.
5) pH: (key to controlling acid runoff); acid-forming material to be treated or buried under nontoxic, noncombustible material; pH to be adjusted with lime if necessary.
6) Oil and Grease: (applies only to discharge point 005, the maintenance support facility); oil skimmers and grease traps at vehicle wash and housekeeping areas; solvent handling and oil changes to take place over self-contained drain areas, with disposal to solid waste facilities.
7) Hazardous Elements: should settle out with sediment (see 2 above); close monitoring of pH (see 5 above) to prevent dissociation of heavy metals from sediment; anomalous radioactive materials will be buried below the oxidation zone in the mine pit.
8) Float Solids/Foam: screened; see 2 and 6.

a. Effluent limits for items 2, 3, 4 (avg.), 5, and 6 are based on Federal New Source Performance Standards for Acid or Ferruginous Drainage (Part 434.35) under Subpart C of the Coal Mining Point Source Category. Limitations for other parameters reflect Texas Water Commission regulations. The maximum for manganese reflects more restrictive Texas standards.
b. Metals sampled: arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, silver, and zinc. For existing conditions, see pp. 128-134 of the draft EIS. Bi-annual sampling must comply with Texas Water Commission Rule No. 329.41 - 329.49; standards for subsequent use given in the Draft EIS, Appendix D.

MAJOR CONCERNS: SUMMARY OF MODELING AND/OR MONITORING