ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1989 NONPOINT SOURCE WATER QUALITY ASSESSMENT

*** WATERBODY ***

Name of Waterbody: Red Devil Creek

Location or Lat/Long: 61° 46' 157° 18'

Waterbody Type:
- [X] River/Stream
- [ ] Lake
- [ ] Fresh Wetland
- [ ] Tidal Wetland
- [ ] Estuary
- [ ] Coastal Shoreline
- [ ] Groundwater

Waterbody Size:
- ____ Miles
- ____ Acres/Hectares
- ____ Acres/Hectares
- ____ Acres/Hectares
- ____ Square Miles
- ____ Square Miles

ADEC USE ONLY
304l: N L M S
WQL: 0 - N
1 - PS
2 - NPS
3 - WQS
4 - Con/Enf
ID#: _____

Segment of Waterbody Addressed:
From: _____
To: _____
Other Description: _____
Size of Segment: _____

USGS Hydrologic Unit #: AK 190 - 30501-001

*** ASSESSMENT ***

Describe Source of Pollution and Documentation Provided: Abandoned Mine Site - Tailings with mercury contamination, arsenic. Hazardous waste report (CERCLA Site Inspection), 1987 See back page.

Type of Documentation (Attached If Possible):
- [X] Water quality data
- [ ] Documented oil spill
- [ ] Enforcement action
- [ ] Photos with documentation
- [ ] Photos without documentation
- [X] Written report
- [ ] Field notes
- [ ] Overflight
- [ ] Observation
- [ ] Other

Assessment type:
- [X] Monitored
- [ ] Evaluated

Violation of Water Quality Standards:
- [ ] **Past** Violation Documented
- [X] **Current** Violation Documented
- [ ] **Current** Violation Suspected
- [ ] **Future** Violation Projected

Waterbody Status:
- [ ] Impaired - Past
- [X] Impaired - Current
- [ ] Suspected
- [ ] Unimpaired

Comments: _____

Author of This Assessment: C Kent **Affiliation:** ADEC **Date:** 89 08 (YY/MM)

*** USE STATUS ***

Meets Clean Water Act Goals:

[ ] Fishable
[X] Not Fishable
[ ] Fishable Not Attainable

[ ] Swimmable
[X] Not Swimmable
[ ] Swimmable Not Attainable

Impaired Uses:

FRESHWATER
[X] Drinking
[X] Agriculture
[X] Aquaculture
[X] Industry
[X] Recreation, Contact
[X] Recreation, Secondary
[X] Fish, Shellfish, Wildlife

MARINE
[ ] Aquaculture
[ ] Seafood Processing
[ ] Industry
[ ] Recreation, Contact
[ ] Recreation, Secondary
[ ] Fish, Shellfish, Wildlife
[ ] Harvest of Fish, Shellfish

Support of Designated Uses:

[X] One or More Uses Not Supported (Impaired)
[ ] One or More Uses Partially Supported (Partially Impaired)
[ ] One or More Uses Suspected to Be Affected (Suspected)
[ ] One or More Uses Projected to Become Affected (Projected)
[ ] All Uses Fully Supported, sources present (Unimpaired)
[ ] All Uses Fully Supported, no sources present (Unimpaired)

Trophic Status:

[ ] Oligatrophic
[ ] Mesatrophic
[ ] Eutrophic
[ ] Hypereutrophic
[ ] Dystrophic
[X] Unknown

Trophic Trend

[ ] Improving
[ ] Stable
[ ] Deteriorating

*** TOXICS ***

Monitored for Toxics: [X] Yes [ ] No

Type of Toxics Monitoring:

[ ] 1 Organics in water column
[ ] 2 Organics in sediments
[ ] 3 Organics in fish tissue
[ ] 4 Organics in discharges
[ ] 5 Pesticides in water column
[ ] 6 Pesticides in sediments
[ ] 7 Pesticides in fish tissue
[ ] 8 Pesticides in discharges
[ ] 9 Metals in water column
[X] 10 Metals in sediments
[ ] 11 Metals in fish tissue
[ ] 12 Metals in discharges
[ ] 13 Other inorganics in water column
[ ] 99 Other inorganics in sediments
[ ] 99 Other inorganics in fish tissue
[ ] 14 Other inorganics in discharges
[ ] 15 Toxicity testing of water column
[ ] 16 Toxicity testing of sediments
[ ] 17 Toxicity testing of discharges

Fish and Shellfish Contamination:

[X] 0 None detected
[ ] 1 Contaminated fish
[ ] 2 Fishing advisory
[ ] 3 Fishing ban
[ ] 4 Fish abnormalities
[ ] 5 Shellfish restrictions due to pathogens
[ ] 6 Fish kill

Pollutants: (H = High, M = Medium, S = Slight)

__ 0 Cause Unknown
__ 1 Unknown toxicity
__ 2 Pesticides — Type _____
__ 3 Priority organics — Type _____
__ 4 Nonpriority organics — Type _____
H 5 Metals — Type _____
__ 6 Ammonia
__ 7 Chlorine
__ 8 Other inorganics
__ 9 Nutrients
__ 10 pH
__ 11 Siltation
__ 12 Organic enrichment
__ 13 Salinity/TDS/Chlorides
__ 14 Thermal modifications
__ 15 Flow alteration
__ 16 Habitat alteration
__ 17 Pathogens
__ 18 Radiation
__ 19 Oil and Grease
__ 20 Taste and Odor
__ 21 Suspended solids
__ 22 Noxious aquatic plants
__ 23 Filling and draining

Sources of Pollutants: (H = High, M = Medium, S = Slight)

Point Sources
H 1 Industrial
__ 2 Municipal
__ 3 Municipal pretreatment
__ 4 Combined sewers
__ 5 Storm sewers
__ 6 Other dischargers

Nonpoint Sources
__ 9 Unspecified

Agriculture
__ 11 Non-irrigated crop production
__ 12 Irrrigated crop production
__ 13 Specialty crop production
__ 14 Pasture land
__ 15 Range land
__ 16 Feedlots
__ 17 Aquaculture
__ 18 Animal holding areas
__ 19 Manure lagoons

Silviculture
__ 21 Harvest, restoration
__ 22 Forest management
__ 23 Road construction/maintenance

Construction
__ 31 Highway/road/bridge
__ 32 Land development

Urban Runoff
__ 41 Storm sewers
__ 42 Combined sewers
__ 43 Surface runoff

Source Unknown
__ 90 Source Unknown

Resource extraction/exploration
H 51 Surface mining
__ 52 Subsurface mining
__ 53 Placer mining
__ 54 Dredge mining
__ 55 Petroleum activities
__ 56 Mill tailings
H 57 Mine tailings

Land Disposal (Permitted Activities)
__ 61 Sludge
__ 62 Wastewater
__ 63 Landfills
__ 64 Industrial land treatment
__ 65 Onsite wastewater systems
__ 66 Hazardous waste
__ 67 Septage disposal

Hydrologic Modification
__ 71 Channelization
__ 72 Dredging
__ 73 Dam construction
__ 74 Flow regulation/modification
__ 75 Bridge construction
__ 76 Removal of riparian vegetation
__ 77 Streambank modification
__ 78 Draining/filling of wetlands

Other
__ 81 Atmospheric deposition
__ 82 Waste storage/storage tank leaks
__ 83 Highway maintenance and runoff
__ 84 Spills
__ 85 In-place contaminants
__ 86 Natural
__ 87 Recreational activities
__ 88 Upstream impoundment
__ 89 Salt storage sites
__ 99 Septic tank seepage

DESCRIBE POLLUTANTS AND POLLUTANT SOURCES. THE BASIS FOR THE DETERMINATION THAT A WATERBODY IS IMPAIRED MUST BE EXPLAINED IN THIS SECTION. DESCRIBE THE NATURE OF THE VIOLATION OF WATER QUALITY STANDARDS, INCLUDING DATA OR OTHER DOCUMENTATION IN RELATION TO STANDARDS. ALSO DESCRIBE WHETHER THE VIOLATION IS CONSIDERED PAST OR CURRENT, AND OTHER RELEVANT INFORMATION.

Documented High readings of Hg and As in water entering creek from mine tailings.

Hg = 265 ug/l

As = 39,000 ug/l

"Red Devil Mine AKD-980495618 CERCLA site Inspection Report" Sept. 1987

Point Sources:

NPDES Permit Number: _____
NPDES Permit Name: _____
Causes Nonattainment: [ ] Yes [ ] No
Pollutant: _____

NPDES Permit Number: _____
NPDES Permit Name: _____
Causes Nonattainment: [ ] Yes [ ] No
Pollutant: _____

Nonpoint Sources:

Nonpoint Source Name: _____
Nonpoint Source Type: _____
Nonpoint Source Description: _____

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