

PRELIMINARY ASSESSMENT REPORT
FOR
TRICON MINING
FAIRBANKS, ALASKA

December 1989

Prepared for:

STATE OF ALASKA
Department of Environmental Conservation
3220 Hospital Drive
Juneau, Alaska 99801



ecology and environment, inc.

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International Specialists in the Environment

1.0 Introduction and Purpose of the Preliminary Assessment:

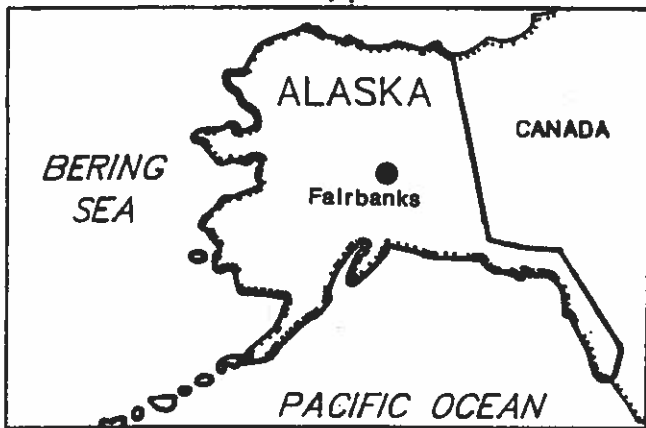
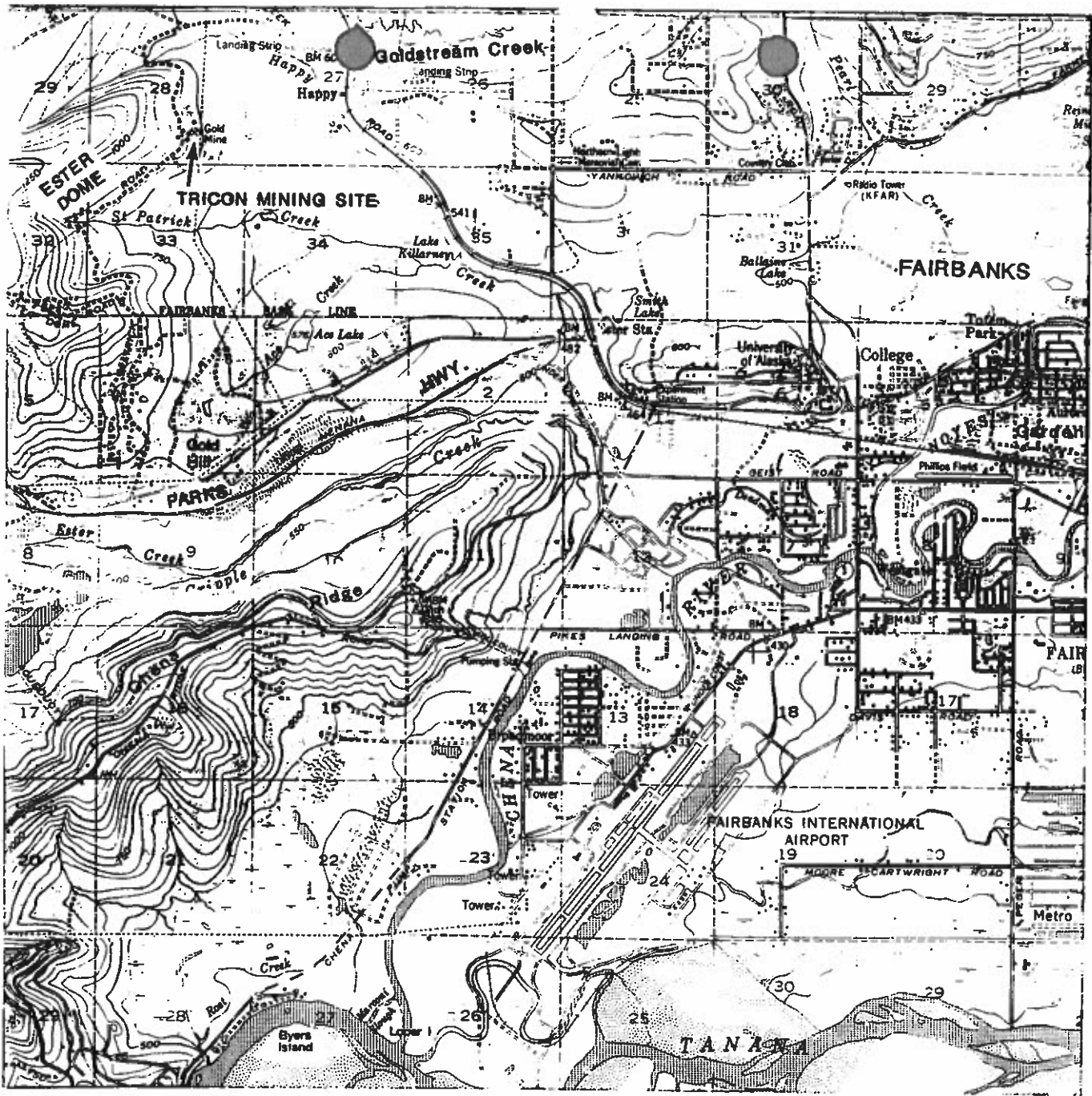
Pursuant to Alaska Department of Environmental Conservation (DEC) Contract No. 18-444-88 and Work Order No. 13, Ecology and Environment, Inc. (E & E) conducted a Preliminary Assessment (PA) of the Tricon Mining site located near Fairbanks, Alaska. The PA represents the second of a three-step assessment process which begins with Site Discovery and concludes, if necessary, with a Site Inspection. The assessment process, in general, is intended to identify, compare, and rank the potential hazards associated with a particular site relative to other sites across the nation for the purpose of identifying priority sites requiring remedial responses. It does not include extensive or complete site characterization, contaminant fate determination, or quantitative risk assessment.

The Tricon Mining PA was conducted to identify potential public health and/or environmental hazards related to the site and, if present, evaluate the need for additional investigative action. The PA is based on data derived from available files and literature pertaining to the site. Information developed during the PA is summarized in Appendix A on EPA Form 2070-12.

2.0 Information Obtained During the Site Visit and File Review:

2.1 Site Location and Description - The Tricon Mining site is located in the southwest 1/4 of Section 28, Township 1 North, Range 2 West of the Fairbanks Meridian, at latitude 64°52'54" North and longitude 147°57'25" West. The site is located on the eastern slope of Ester Dome mountain, approximately seven miles northwest of Fairbanks, Alaska. The site is accessed via a dirt road (Ester Dome Road) from Sheep Creek Road (Figure 1) (USGS 1945).

2.2 Site History/Potential Problem(s) at the Site - In 1976, Silverado Mines (US), Inc. (claim holder) and their operations contractor Tricon Mining, began mining operations at the Grant Mine on Ester Dome. The United States Bureau of Land Management (BLM) owns the Grant Mine property and has released it to Silverado Mines under Federal Claim #F45490. From 1976 until 1985, a pilot mill processed ore from the mine to determine the economic feasibility of extracting gold. In September 1985, a full scale mill was put into operation at the site. This mill has operated from September to December, 1985, and from December 1987 until February 1989 (approximately 18 months of total operation). The mill is currently inactive while Tricon Mining searches for a joint venture partner (Armstrong 1989a).



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Job: TRICON MINING	JK5011
Drawn by: D.P.	Date: NOV. 8, 1989

FIGURE 1
LOCATION MAP
TRICON MINING SITE
Fairbanks, AK.

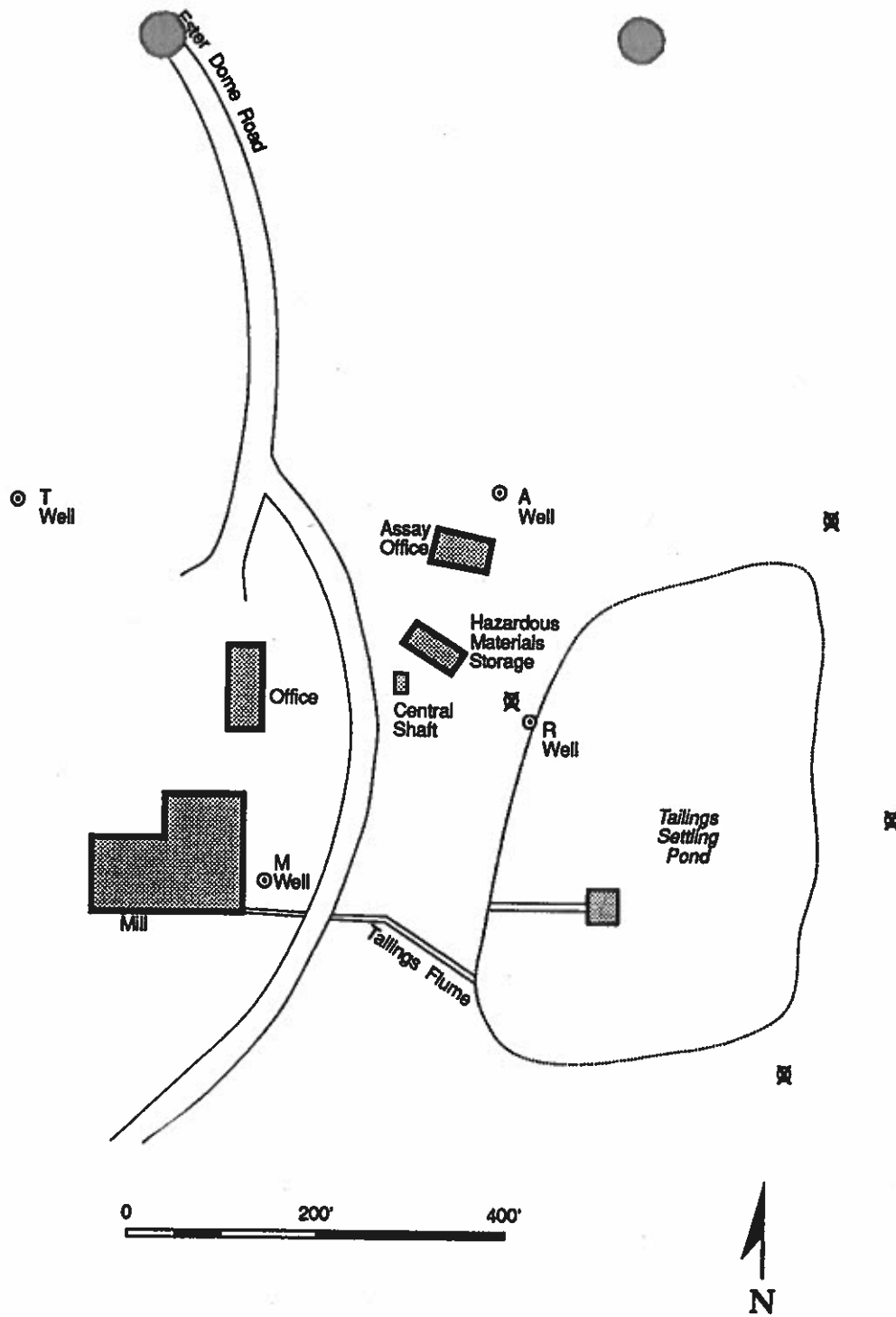
The mill utilized a cyanidization process for gold extraction. The process involves crushing ore in a ball mill, and mixing the crushed ore with a sodium cyanide solution. Waste rock, lime, and wastewater containing sodium cyanide are discharged to a tailings pond located east of the mill (Figure 2).

The tailings pond, built in 1985, has been used for the disposal of all solid and liquid mill wastes generated to date. The pond was lined with a layer of natural silt. Berms surround the entire tailings pond and are approximately 15 feet in height. At the time of the E & E site visit, the pond contained little water. Tricon has been recently aerating the pond liquids to degrade trace cyanide by atmospheric oxidation to hydrogen cyanide gas. The result of this aeration process is presently unknown (E & E 1989; Armstrong 1989a).

On April 28, 1989, Tricon collected a water sample from an on-site production well (Well A, Figure 2). The sample was analyzed by Tricon personnel using a colorimetric method for detection of total cyanide. Tricon's result was reportedly greater than 0.2 mg/L cyanide (Alaska MCL = 0.2 mg/L). The well was pumped for 4 hours at a rate of 5.7 gallons per minute and resampled. The colorimetric method detected 6.5 mg/L cyanide in the second sample. In addition, samples collected from several on-site wells in November, 1988 reportedly exceeded 0.2 mg/L cyanide (BLM 1989) (Armstrong 1989a).

Tricon personnel have indicated that an abandoned on-site well (Well R, Figure 2) may have acted as a conduit for cyanide to reach groundwater due to improper well construction. The R well is reportedly located on a fault line which trends toward and may be connected with Well A where cyanide contamination was detected in April 1989 (Armstrong 1989a).

2.3 Physical Environment - The Fairbanks area experiences an arid climate with warm dry summers and cold winters. Snow cover usually remains on the ground from October to April. Total annual precipitation averages approximately 12 inches with a potential evapotranspiration rate of 18 inches per year (-6 inches net precipitation). The one year 24-hour rainfall for Fairbanks is approximately 1.2 inches (USDA 1968; USDC 1963).



LEGEND

- ⊙ Existing well
- ⊠ Planned monitoring well location

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FIGURE 2
SITE MAP
 TRICON MINING SITE
 Fairbanks, AK

On-site soils consist of a well drained silty loam of the Fairbanks Series. These soils have an estimated maximum permeability of 0.0004 cm/sec (USDA 1963). Unconsolidated materials in the site area are estimated to extend to a depth of 400 to 600 feet below ground surface (bgs). Underlying bedrock consists of metamorphosed sedimentary rocks (USGS 1963). Available information indicates that groundwater occurring in sediments overlying the metamorphic formations in the Fairbanks area (including Ester Dome) are hydraulically connected with the groundwater reservoir of the Tanana River plain. No confining layers have been documented in these deposits. Consequently, all wells within three miles of the site are assumed to be drawing water from a single water bearing unit (USGS 1963). The average static water level in the on-site wells (Figure 2) is approximately 196 feet below the ground surface. In general, groundwater flows from Ester Dome to the surrounding stream valleys. In the site area, groundwater flows toward Sheep Creek (Figure 1) (USGS 1963; Armstrong 1989).

Groundwater is used as a primary drinking source for private homes and public supplies in the site area. A well search of the area was initiated to determine the number and depth of wells within 3 miles of the site. Information obtained from United States Geological Survey (USGS) and Alaska Department of Natural Resources (DNR) data bases indicate that approximately 105 to 120 private wells serve an estimated 400 to 450 persons within 3 miles of the site. In addition, a community well for the town of Ester serves approximately 40 persons with drinking water on a permanent basis. The nearest well to the site presently used for drinking purposes is located 0.75 miles northwest of the site (USGS 1989; DNR 1989; Justice 1989).

2.4 Waste Types, Quantities, and Characteristics - The primary waste stream generated by the ore processing mill is a solid/liquid mixture containing waste rock, lime, and process waste water. The process waste water reportedly contains an average concentration of 5.7 ppm total cyanide. An estimated 1,948 pounds of cyanide have been discharged to the tailings pond since the mill began operations (Armstrong 1989b). In addition, small quantities of sodium sulfide, muriatic acid, and sodium hydroxide in the mill waste stream are discharged to the tailings pond (Murton 1985).

2.5 Pollutants, Mobilization, Pathways, and Risks - In aquatic systems, cyanide occurs most commonly in the form of hydrogen cyanide, metal cyanides, and metalocyanide complexes; the latter being relatively persistent and very soluble. Cyanides are sorbed by clays, sediments, and biological solids and tend to be environmentally persistent. Although the most important processes affecting the environmental fate of cyanides in aquatic systems include

volatilization (to HCN) and biodegradation, neither are expected to play a major role in the degradation of cyanides in groundwater systems (USEPA 1979).

The fate of cyanides in soil is likely pH dependent. In subsurface soils, cyanide present at low concentrations is probably degraded by biotransformation. In soil with pH less than 9.2, cyanide is expected to be highly mobile and may leach to groundwater (Technical Resource, Inc. 1988). The pH of on-site soil is presently unknown.

The most likely means of cyanide mobilization from the Tricon tailings pond is through subsurface leaching to groundwater. Surface runoff or transport of particulate matter from the tailings pond is not expected to occur based on observations made during the site visit.

During March, 1989, DEC Northern Regional Office personnel collected samples from domestic wells in the Ester Dome area. The samples were collected in response to growing local concern of the effects to groundwater quality from mining activities on Ester Dome. The samples were analyzed for heavy metals and cyanide. None of the samples showed detectable levels of cyanide, however, naturally high levels of arsenic (exceeding 50 ppb) were detected in some of the wells (Alaska DEC 1989). The results indicate that off-site wells have not been affected by documented on-site groundwater contamination.

3.0 Priority Assessment: Site Inspection Recommended

A Screening Site Inspection should be performed for reasons discussed in Section 4.0.

4.0 Conclusions and Follow-Up Recommendations:

The Tricon Mining Facility has discharged cyanide-containing tailings to a settling pond from 1985 until February, 1989. Approximately 1 ton of cyanide (total) has been reportedly discharged to the pond. In early 1989, DEC was notified of elevated cyanide concentrations in an on-site well. Although subsequent sampling of nearby domestic wells indicated cyanide contamination of groundwater has not migrated to the domestic wells, the local groundwater gradient and geologic conditions might ultimately result in domestic well contamination.

Preliminary Assessment Report for
Tricon Mining
Page 7

The site inspection (SI) recommended for the Tricon Mining site should focus on the potential existence of continuing contaminant releases to groundwater from the on-site tailings pond, and the potential for or existence of off-site migration. New monitoring wells being installed by Tricon Mining will facilitate this data collection. In addition, follow-up sampling of nearby domestic wells should be conducted to verify that cyanide contamination is not affecting local drinking water supplies.

REFERENCES

- Alaska Department of Environmental Conservation (DEC), 1989, Analytical Data for five domestic wells, submitted by Northern Testing Laboratories, Fairbanks, Alaska, Data report obtained from Northern Regional Office Files.
- Alaska Department of Natural Resources (DNR), 1989, Water Neighbor Search for Tricon Mining, Inc. vicinity, Fairbanks, Alaska.
- Armstrong, Edward; September 14, 1989, Vice President, Tricon Mining, Inc., Personal communication during on-site visit with W. Richards, E & E.
- _____, September 29, 1989, Personal communication with W. Richards, E & E.
- Ecology and Environment, Inc. (E & E) September 14, 1989, Observations during on-site visit.
- Justice, Stan, October 30, 1989, Alaska DEC, Northern Regional Office, Personal communication with W. Richards, E & E.
- Murton, J. Wayne, April 4, 1989, Vice President, Tricon Mining, Inc. letter to Dennis Ward, Alaska DEC regarding industrial solid wastes, Grant Mine.
- Technical Resources, Inc., 1988, Toxicological Profile for Cyanide, USEPA Contract No. 68-03-3268.
- U.S. Department of Agriculture (USDA), 1968, Potential Evapotranspiration and Climate in Alaska by Thornthwaite's Classification, Forest Service Research Paper PNW-71.
- U.S. Department of Commerce (USDC), 1963, Probable Maximum Rainfall Frequency Data for Alaska, Technical Paper No. 47.
- U.S. Department of the Interior, Bureau of Land Management (BLM), 1989, Letter to E. Armstrong, Tricon Mining, Inc. regarding elevated cyanide concentrations in on-site groundwater.
- U.S. Environmental Protection Agency (EPA), 1979, Water-Related Environmental Fate of 129 Priority Pollutants, Vol. 1, EPA-440/4-79-029a.
- U.S. Geological Survey (USGS), 1954, Topographic Map: Fairbanks D2, Revised 1975.
- _____, 1963, Ground-Water Resources of the Fairbanks Area, Alaska, Water Supply Paper 1590.
- _____, 1989, Water well inventory for Ester Dome Area, Anchorage, Alaska.

Appendix A

EPA FORM 2070-12

EPA PRELIMINARY ASSESSMENT FORM 2070-12
FOR
TRICON MINING
FAIRBANKS, ALASKA

Work Order No.: 13

Report Prepared by: William Richards

Report Date: December 1989

Submitted to: Lynn J. Tomich Kent
Division of Environmental
Department of Environmental Conservation
Juneau, Alaska



ecology and environment, inc.

640 WEST 36TH AVENUE, ANCHORAGE, ALASKA 99503, TEL. (907) 561-7227

International Specialists in the Environment

EPA		POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT			I. IDENTIFICATION	
PART 1 - SITE INFORMATION AND ASSESSMENT					01 STATE AK	02 SITE NUMBER D983067513
II. SITE NAME AND LOCATION						
01 SITE NAME (Legal, common, or descriptive name of site) Tricon Mining			02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER Ester Dome Road			
03 CITY Fairbanks		04 STATE AK	05 ZIP CODE 99708	06 COUNTY Fairbanks North Star	07 COUNTY CODE --	08 CONG DIST --
09 COORDINATES		LATITUDE 64°52'54.6"		LONGITUDE 147°57'25.2"		
10 DIRECTIONS TO SITE (Starting from nearest public road) From Fairbanks, drive north on Parks Highway to Sheep Creek Road, turn right and drive north on Sheep Creek Road 4 miles to Ester Dome Road. Turn left and follow 2 miles to site.						
III. RESPONSIBLE PARTIES						
01 OWNER (If known) Bureau of Land Management			02 STREET (Business, mailing, residential) 1150 University Avenue			
03 CITY Fairbanks		04 STATE AK	05 ZIP CODE 99709-3844	06 TELEPHONE NUMBER 907/474-2355		
07 OPERATOR (If known and different from owner) Tricon Mining			08 STREET (Business, mailing, residential) P.O. Box 83730			
09 CITY Fairbanks		10 STATE AK	11 ZIP CODE 99708	12 TELEPHONE NUMBER 907/479-4686		
13 TYPE OF OWNERSHIP (Check one) <input type="checkbox"/> A. PRIVATE <input checked="" type="checkbox"/> B. FEDERAL: Department of the Interior Bureau of Land Management <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL (Agency name) <input type="checkbox"/> F. OTHER: _____ <input type="checkbox"/> G. UNKNOWN (Specify)						
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input type="checkbox"/> A. RCRA 3001 DATE RECEIVED: _____ <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: _____ <input checked="" type="checkbox"/> C. NONE MO/DAY/YR MO/DAY/YR						
IV. CHARACTERIZATION OF POTENTIAL HAZARD						
01 ON SITE INSPECTION BY (Check all that apply) <input checked="" type="checkbox"/> YES DATE 09/14/89 <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input checked="" type="checkbox"/> D. OTHER CONTRACTOR NO MO/DAY/YR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): Ecology and Environment, Inc. (E & E)						
02 SITE STATUS (CHECK ONE) <input type="checkbox"/> A. ACTIVE <input checked="" type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN			03 YEARS OF OPERATION 1985 1989 UNKNOWN BEGINNING YEAR ENDING YEAR			
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Ore milled and processed using cyanide-leaching methods on site. Tailings have been disposed of in a settling pond approximately 1/2 acre in size. Facility shut down in February 1989.						
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Cyanide has been detected in on-site well samples. Potential transport of cyanide may be affected by faults.						
V. PRIORITY ASSESSMENT						
01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous conditions and Incidents) <input type="checkbox"/> A. HIGH <input checked="" type="checkbox"/> B. MEDIUM <input type="checkbox"/> C. LOW <input type="checkbox"/> D. NONE (Inspection required promptly) (Inspection required) (Inspect on time available basis) (No further action needed. Complete current disposition form)						
VI. INFORMATION AVAILABLE FROM						
01 CONTACT Lynn J. Tomich Kent		02 OF (Agency/Organization) Alaska Department of Environmental Conservation			03 TELEPHONE NUMBER 907/465-2630	
04 PERSON RESPONSIBLE FOR ASSESSMENT William Richards		05 AGENCY --	06 ORGANIZATION E & E	07 TELEPHONE NUMBER 907/561-7227	08 DATE 09/18/89 MO/DAY/YR	

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS		
01 PHYSICAL STATES (Check all that apply) <input checked="" type="checkbox"/> A. SOLID <input type="checkbox"/> E. SLURRY <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> F. LIQUID <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> G. GAS <input type="checkbox"/> D. OTHER _____ (Specify)	02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent) TONS approx. 1 CUBIC YARDS _____ NO. OF DRUMS _____	03 WASTE CHARACTERISTICS (Check all that apply) <input checked="" type="checkbox"/> A. TOXIC <input type="checkbox"/> E. SOLUBLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> K. REACTIVE <input checked="" type="checkbox"/> D. PERSISTENT <input type="checkbox"/> H. IGNITABLE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE

III. WASTE TYPE				
CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	1,948	Pounds	Cyanide to tailings
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)					
01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
10C	Cyanide	57-12-5	Surface impoundment	5.7	mg/L
		*** ENVIRONMENTAL RELEASE DATA ***			
10C	Cyanide (total)	57-12-5	(Groundwater)	6.5	mg/L

7. FEEDSTOCKS (See Appendix for CAS Numbers)					
CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Sodium Cyanide	151-50-8	FDS		
FDS	Muriatic Acid	7647-01-0	FDS		
FDS	Sodium Hydroxide,	1310-73-2	FDS		
FDS			FDS		

- | VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports) |
|--|
| <ol style="list-style-type: none"> E & E, Inc., 1989, On-site visit observations and communication with E. Armstrong, Vice President, Tricon Mining. DEC, 1989, Results of on-site well sampling performed by Tricon Mining. |

POTENTIAL HAZARDOUS WASTE SITE

I. IDENTIFICATION

EPA

PRELIMINARY ASSESSMENT

01 STATE
AK

02 SITE NUMBER
D983067513

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUND-WATER CONTAMINATION 02 X OBSERVED (DATE: 04/28/89) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 450-500 04 NARRATIVE DESCRIPTION

Elevated concentration of cyanide detected in an on-site well (Well A). Subsequent sampling has revealed detectable concentrations of cyanide.

01 B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

Tailings Pond is contained by a berm approximately 15 feet high. No leakage observed.

01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE:) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

None known. Degradation of sodium cyanide produces small quantities of HCN gas, although low concentrations likely generated should not be a health hazard.

01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE:) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

None known or reported.

01 X E. DIRECT CONTACT 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

Low potential direct contact hazard with tailings. Tailings Pond is fenced.

01 X F. CONTAMINATION OF SOIL 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED: 1/2 04 NARRATIVE DESCRIPTION
(Acres)

Potential subsurface soil contamination beneath tailings pond. Pond is lined with natural silt.

01 X G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 450-500 04 NARRATIVE DESCRIPTION

Potential drinking water contamination. Groundwater used as a primary drinking water source in site area. Nearest well used for drinking purposes is approximately 0.75 miles to the northwest.

01 X H. WORKER EXPOSURE/INJURY 02 X OBSERVED (DATE: 10/08/88) POTENTIAL ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 4 04 NARRATIVE DESCRIPTION

Worker exposed to cyanide while working in the mill. Tricon has since implemented stricter safety protocol.

01 X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 450-500 04 NARRATIVE DESCRIPTION

Potential exposure to local population through drinking water contamination.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
AK D983067513

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. HAZARDOUS CONDITIONS AND INCIDENTS (CONTINUED)

01 J. DAMAGE TO FLORA 02 OBSERVED (DATE:) POTENTIAL ALLEGED

04 NARRATIVE DESCRIPTION

None known or reported.

01 K. DAMAGE TO FAUNA 02 OBSERVED (DATE:) POTENTIAL ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

None known or reported.

01 L. CONTAMINATION OF FOOD CHAIN 02 OBSERVED (DATE:) POTENTIAL ALLEGED

04 NARRATIVE DESCRIPTION

None known or reported.

01 X M. UNSTABLE CONTAINMENT OF WASTES 02 X OBSERVED (DATE: 08/19/89) POTENTIAL ALLEGED

(Spills/runoff/standing liquids/leaking drums)

03 POPULATION POTENTIALLY AFFECTED: 2 04 NARRATIVE DESCRIPTION

BLM compliance inspection noted various groups of drums on site; some contained waste oil, others were used sodium cyanide containers.

01 N. DAMAGE TO OFF-SITE PROPERTY 02 OBSERVED (DATE:) POTENTIAL ALLEGED

04 NARRATIVE DESCRIPTION

None known or reported.

01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTFS 02 OBSERVED (DATE:) POTENTIAL ALLEGED

04 NARRATIVE DESCRIPTION

None known or reported.

01 P. ILLEGAL/UNAUTHORIZED DUMPING 02 OBSERVED (DATE:) POTENTIAL ALLEGED

04 NARRATIVE DESCRIPTION

None known or reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Natural high concentrations of arsenic occur in local groundwater.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 450-500

IV. COMMENTS

Population potentially affected includes surrounding groundwater users and on-site workers. This number could increase with more extensive research of well locations.

V. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

1. USGS, 1989, Anchorage, Alaska, Water Well Inventory for Ester Dome Area.
2. Alaska DNR, 1989, Fairbanks, Alaska, Water Neighbor Search for Tricon Mining.
3. DEC, Fairbanks, Alaska, Site Files.

Appendix B
PHOTOGRAPHIC DOCUMENTATION

