MADISON
MOD073

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: VII

SITE NUMBER (to be assigned by HQ): Mo-0000204433

5-11-83

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Madison Mine

B. STREET (or other identifier): 401 No. Mine La Motte

C. CITY: Fredericktown

D. STATE: Mo.

E. ZIP CODE: 63645

F. COUNTY NAME: Madison

G. SITE OPERATOR INFORMATION

1. NAME: Anschutz Mining Corporation

2. TELEPHONE NUMBER: (303) 825-6100

3. STREET: 2400 Anaconda Tower 555 17th Street

4. CITY: Denver

5. STATE: Colo.

6. ZIP CODE: 80202

H. REALTY OWNER INFORMATION (if different from operator of site)

1. NAME:

2. TELEPHONE NUMBER:

3. CITY:

4. STATE:

5. ZIP CODE:

I. SITE DESCRIPTION: Mining tailings are stored in tailings ponds and piles.

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.):

B. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME: Helen L. Holm

2. TELEPHONE NUMBER: (913) 621-6240

3. DATE (mo., day, & yr.): 5/11/83

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: David Cargo

2. TITLE: TAT Leader

3. ORGANIZATION: Region VII Technical Assistance Team

4. TELEPHONE NO. (area code & no.): (913) 621-6240

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
David Cargo	Region VII Technical Assistance Team	(913) 621-6240
Helen L. Holm	Region VII Technical Assistance Team	(913) 621-6240

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
W. Randall Miller	Environmental Engineer (314) 783-7223	401 No. Mine La Motte Fredericktown, Mo. 63645

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EPA Form T2070-3 (10-79)

Continue On Reverse

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (source of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	INDUSTRY	4. WASTE TYPE GENERATED
Anschutz Mining Corporation	(314) 783-7223	401 No. Mine La Motte Fredericktown, Mo. 63645	Mining	Tailings

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
None			

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS
None		

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
1/25/83	9 a.m.	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

Overcast; temperature in the 30's; occasional snow flurries; ground was snow-covered

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

Continue On Page 3

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: [X] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF: Region VII TAT

D. SITE MAPPED?

[X] YES. SPECIFY LOCATION OF MAPS: Region VII TAT

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

V. SITE INFORMATION

A. SITE STATUS

[ ] 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

[X] 2. INACTIVE (Those sites which no longer receive wastes.)

[ ] 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

[ ] 1. NO [X] 2. YES (specify generator's four-digit SIC Code): 1031

C. AREA OF SITE (in acres)

D. ARE THERE BUILDINGS ON THE SITE?

[ ] 1. NO [X] 2. YES (specify): Office and mining related

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL	X	1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP	X	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

[ ] 1. STORAGE [ ] 2. INCINERATION [ ] 3. LANDFILL [ ] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL

[ ] 6. CHEM/BIO/PHYS TREATMENT [ ] 7. LANDFARM [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1. LIQUID [X] 2. SOLID [ ] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 1. CORROSIVE [ ] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE

[X] 5. TOXIC [ ] 6. REACTIVE [X] 7. INERT [ ] 8. FLAMMABLE

[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Mining tailings

VII. WASTE RELATED INFORMATION *(continued)*

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 98
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Acres
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER *(specify)*:	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER *(specify)*:	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER *(specify)*:			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	X (5) OTHER *(specify)*: Tailings ponds and the major solid tailings area
			(6) CYANIDE	(6) OTHER *(specify)*:	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER *(specify)*		

LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE *(place in descending order of hazard)*

1. SUBSTANCE	2. FORM (mark 'X') a. SOLID	b. LIQ.	c. VAPOR	3. TOXICITY (mark 'X') a. HIGH	b. MED.	c. LOW	d. NONE	4. CAS NUMBER	5. AMOUNT	6. UNIT
Lead compounds	X			X						
Copper compounds	X									
Nickel compounds	X						X			
Cobalt compounds	X					X				
Zinc compounds	X					X				

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

A. HUMAN HEALTH HAZARDS

None apparent

Continue On Page 5

Continued From Page 2

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

None

☐ C. WORKER INJURY/EXPOSURE

None

☐ D. CONTAMINATION OF WATER SUPPLY

None documented

☐ E. CONTAMINATION OF FOOD CHAIN

None documented

☐ F. CONTAMINATION OF GROUND WATER

None documented

☐ G. CONTAMINATION OF SURFACE WATER

A dam collapsed in 1977 on one of the tailings ponds. Tailings and water from the pond flowed into the Tollard Branch and into Saline Creek. A new dam has since been built that is structurally more sound than the previous dam. This dam will prevent contamination from the southern tailings pond. However, it appears that contamination could occur from the northern tailings pond areas 14

Continued From Front

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

There was a reduction in the number of invertebrates in Saline Creek and in the Little St. Francis River after the dam collapsed in 1977. The new dam should prevent further incidents from occurring from the southern tailings area.

☐ I. FISH KILL

None documented

☐ J. CONTAMINATION OF AIR

None

☐ K. NOTICEABLE ODORS

None

☐ L. CONTAMINATION OF SOIL

None documented

☐ M. PROPERTY DAMAGE

None

 Continue On Page 7

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

None

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

None

☐ P. SEWER, STORM DRAIN PROBLEMS

None

☐ Q. EROSION PROBLEMS

None

☐ R. INADEQUATE SECURITY

No

☐ S. INCOMPATIBLE WASTES

None

VIII. HAZARD DESCRIPTION (continued)

☐ T. MIDNIGHT DUMPING

None

☐ U. OTHER (specify):

A new dam in place at the site should prevent additional surface water contamination from the site from the southern tailings pond. However, there is a potential for surface water contamination from the northern tailings areas.

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	4,300 -- Fredericktown and Cobalt Village			< 1/4 mile (minimum distance)
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS (parks, schools, etc.)				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify units)	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
75 to 100 feet	No data available	Residences in Cobalt Village and in rural areas.
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure)**	**F. DIRECTION TO DRINKING WATER SUPPLY**
No data available	1/4 mile to 3/4 mile	

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS ☒ 2. COMMUNITY (specify name): City lake upstream of the site > 15 CONNECTIONS

☐ 3. SURFACE WATER ☒ 4. WELL -- Private wells in Cobalt Village and in rural areas

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
	75-120ft.		X	

I. RECEIVING WATER

1. NAME: Tollar Branch

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS: The Tollar Branch flows into the Saline Creek. The Saline Creek is used as a water supply for livestock.

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☒ F. CRITICAL HABITAT* ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

*X	A. OVERBURDEN	*X	B. BEDROCK (specify below)	X*	C. OTHER (specify below)
	1. SAND		Lamotte Sandstone		Goss Soil
	2. CLAY		Bonneterre Dolomite		
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)
☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☒ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS: No data available

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS: No data available

I. SLOPE

1. ESTIMATE % OF SLOPE: Moderately rugged 2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.

J. OTHER GEOLOGICAL DATA

Depth to bedrock ranges from 1 to 2 feet below surface to as much as 185 feet.
There are various types of soils in the area. Goss soil is the major type of soil in the steeper areas near the site. There is an underlying layer called fragipan within 2 feet of the surface with a very low permeat

* There are several endangered species in Madison County. The exact location of these species is not known.

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X') 1. YES	2. NO	3. UNKNOWN
NPDES (Mine dewatering)	State of Missouri	MO-0098752	Dec. 11, 1982	Dec. 1982 *	X		
**							

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☒ YES (summarize in this space)

EPA received a citizen's complaint that industrial wastes were being deposited in mine shafts at the Madison County site. Rick Roberts of the Missouri Department of Natural Resources inspected the site in December 1980. There was no evidence of the alleged disposal.

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.

EPA Form T2070-3 (10-79) PAGE 10 OF 10

* They are filing for an extension of the NPDES permit.

** Anschutz will be applying for a tailings pond dam permit from the State of Missouri.