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PRELIMINARY ASSESSMENT AND SITE INSPECTION
OF
ROCKY MOUNTAIN BANK NOTE
COLORADO SPRINGS, COLORADO

TDD R8-8303-07

CO D980635858

Submitted to:
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Submitted by:
Michael Glaze, FIT Project Officer

April 28, 1983

PRELIMINARY ASSESSMENT AND SITE INSPECTION
ROCKY MOUNTAIN BANK NOTE, COLORADO SPRINGS, COLORADO

I. INTRODUCTION

This report has been prepared to satisfy the requirements of Technical Direction Document (TDD) R8-8303-07, issued to the Ecology and Environment, Inc., Field Investigation Team (Fit) by Region VIII, U. S. Environmental Protection Agency (EPA).

The Preliminary Assessment (PA) of the Rocky Mountain Bank Note site was developed based on information submitted to EPA by that company in the form of a "Notification of a Hazardous Waste Site". The PA was conducted during the week of April 2, 1983.

The Site Inspection (SI) of the Rocky Mountain Bank Note Site was conducted by Michael Glaze and Malcolm Castor on 8 April, 1983. Permission to conduct the site inspection was granted by Mr. Richard Grapp, Plant Manager of Rocky Mountain Bank Note. Mr. Grapp was the only contact made during the inspection.

This report includes a site description and site recommendations. Preliminary Assessment and Site Inspections forms are included in Appendices A and B, respectively. Supporting photographs are attached in Appendix C.

II. SITE DESCRIPTION

The site is a printing office operated by Rocky Mountain Bank Note (RMBN) (Figure 1). The land is owned by Victor J. Ferrari, address unknow. This site is located in T. 14 S., R. 65 W., Section F, on a half acre of land at 715 Valley Street. The area is east of Colorado Springs in an industrial park (Figure 2). The area is a former broad dry wash, and the land slopes gently towards the west where a stream bed was formerly located. City workers have diverted the stream further westward. The hill slope behind the RMBN office was excavated to construct the buildings along east Valley Street. An embankment, 30 to 40 feet high, is approximately 100 feet behind RMBN's office. Periodically, seeps occur along the embankment, and on

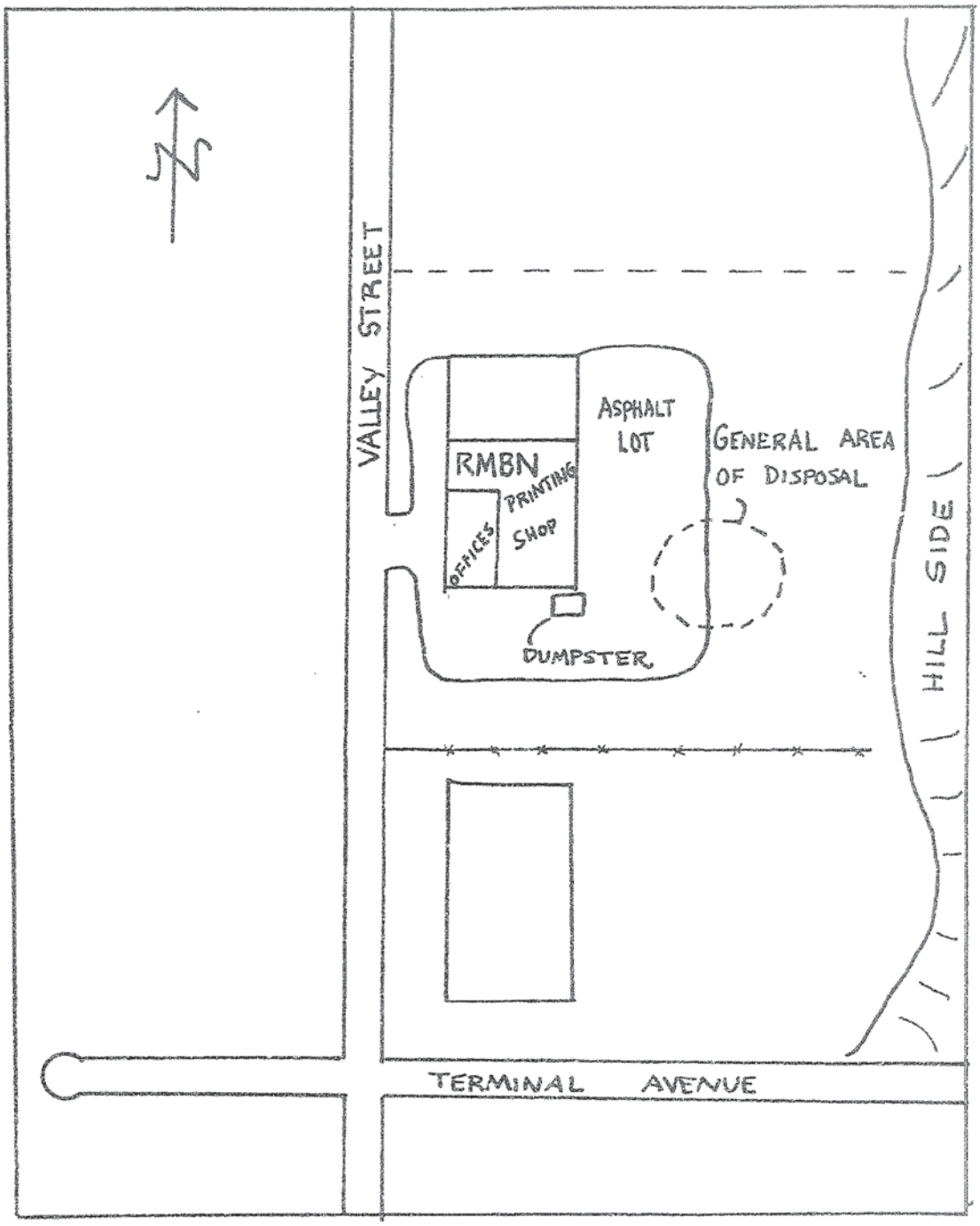

FIGURE 1: GENERAL SITE MAP OF
ROCKY MOUNTAIN BANK NOTE OFFICE,
COLORADO SPRINGS, COLORADO

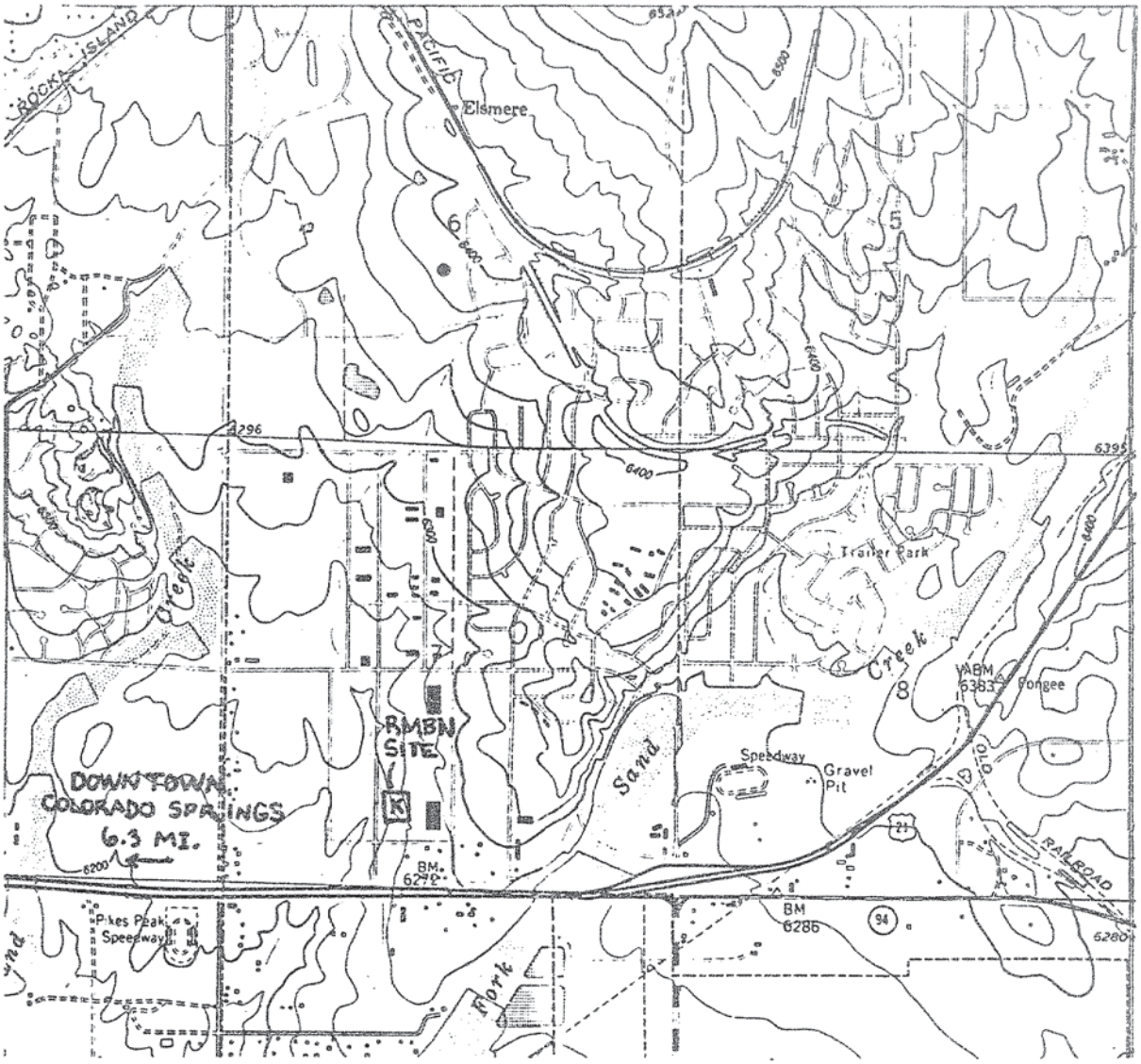

FIGURE #2 LOCATION MAP OF ROCKY MOUNTAIN BANK NOTE OFFICE

a couple of occasions, small landslides have occured from slope destabilization.

The office is a branch printing office which prints checks. For a brief period of approximately two to three months in 1980, waste solvent resulting from cleaning numbering machines was poured in the lot behind the office. Mr. Grapp estimates that a maximum of 30 gallons of cleaning fluid were disposed of in this manner. He indicated that the fluid was poured on both the bare earth and the asphalt parking lot in September and October, 1980. The cleaning fluid has been analyzed and consists of:

75% methylene chloride
15% methanol
9% D-25 (possibly an emulsifier)
1% water

A manufacturer's description of the product is included in Appendix D. Disposal was stopped due to company concern about the practice. Currently, RMBN pours the solvent over waste check cuttings in the sanitation dumpster, where the solvent either evaporates or is hauled to the dump. They still produce approximately 1/2-gallon per week.

Photograph Nos. 1 and 2 at the site are shown in Appendix C. The area of dumping is not defined, and Mr. Grapp indicated that basically, workers carried the solvent from the building and just tossed the solvent at the far end of the parking lot.

Approximately one year ago, the Cherokee Water District (CWD) detected gasoline in their waste water lines and questioned several businesses along Valley Street, including RMBN, about the source of the gasoline. They found that the company immediately south of RMBN had leaking fuel tanks. Since that time, CWD has monitored water from the waste water line located under Valley Street for organics. This line also intercepts groundwater which is very near the surface. They have not seen halogenated organics in their analyses which would indicate contamination due to RMBN.

III. RECOMMENDATIONS

Preliminary Assessment and Site Investigations Forms are provided in Appendices A and B. Although RMBN did not properly dispose of hazardous materials which consisted primarily of waste methylene chloride in a cleaning solution, the amount which was thrown out is not of significant quantity to warrant further investigation. The Cherokee Water District has been monitoring water in their wastewater intake located in the middle of Valley Street in front of RMBN. They have not detected any halogenated hydrocarbons. It is recommended that no further action is needed to investigate this site.

APPENDIX A

PRELIMINARY ASSESSMENT FORM

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: VII | SITE NUMBER (to be assigned by Hq):

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries or on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy 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: Rocky Mountain Bank Note

B. STREET *(or other identifier)*: 715 Valley Street

C. CITY: Colorado Springs

D. STATE: Co

E. ZIP CODE: 80915

F. COUNTY NAME: El Paso

G. OWNER/OPERATOR *(if known)*
1. NAME: Rocky Mountain Bank Note
2. TELEPHONE NUMBER: 303-574-0150

H. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION
Check printing company

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*
Submitted "Notification of Hazardous Waste Site" Form

K. DATE IDENTIFIED *(mo., day, & yr.)*: 6/4/81

L. PRINCIPAL STATE CONTACT
1. NAME
2. TELEPHONE NUMBER

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION
☒ 1. NO ACTION NEEDED *(no hazard)*
☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION
1. NAME: Michael L. Glaze
2. TELEPHONE NUMBER: 303-757-4984
3. DATE *(mo., day, & yr.)*: 4/28/1983

III. 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.)*
☐ 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 ☒ 2. YES *(specify generator's four-digit SIC Code)*:

C. AREA OF SITE *(in acres)*: 0.5

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.-min.-sec.)*
2. LONGITUDE *(deg.-min.-sec.)*

E. ARE THERE BUILDINGS ON THE SITE?
☐ 1. NO ☒ 2. YES *(specify)*: Industrial Park - office buildings and warehouses

Continue On Reverse

Continued From Front

IV. 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		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		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	X	8. OTHER (specify): poured on ground
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Over two month period, company employees poured approximately 30 gallons of solvent onto ground, according to plant manager. Principal components of solvent were methylene chloride and methanol. Company ceased procedure due to internal concerns.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☐ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☐ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☒ 10. OTHER (specify): Material no longer present

C. WASTE CATEGORIES

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

yes - Letter with analysis of composition of solvent from manufacturer was provided

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 1/2	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Gal/week *	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
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		* for 2-3 months	(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

Methylene chloride
methanol
} substances were dumped over 2 years ago. It's unlikely that they are still present

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD	X			
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION Not Applicable

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT *(specify)*: _____
- [x] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER *(specify)*: _____

B. IN COMPLIANCE?

- [ ] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS Not Applicable

- [ ] A. NONE
- [ ] B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

- [ ] A. NONE
- [ ] B. YES *(complete items 1,2,3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

X. REMEDIAL ACTIVITY *(past or on-going)* Not Applicable

- [ ] A. NONE
- [ ] B. YES *(complete items 1, 2, 3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

APPENDIX B
SITE INSPECTION FORM

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: VIII

SITE NUMBER (to be assigned by Hq):

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 Tack Force (EN-335); 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Rocky Mountain Bank Note

B. STREET (or other identifier): 715 Valley Street

C. CITY: Colorado Springs

D. STATE: CO

E. ZIP CODE: 80915

F. COUNTY NAME: El Paso

G. SITE OPERATOR INFORMATION

1. NAME: Rocky Mountain Bank Note

2. TELEPHONE NUMBER: 303-574-0150

3. STREET: 715 Valley St.

4. CITY: Colorado Springs

5. STATE: CO

6. ZIP CODE: 80915

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

1. NAME: Victor J. Ferrari

2. TELEPHONE NUMBER: Unknown

3. CITY: Unknown

4. STATE: Texas ?

5. ZIP CODE:

I. SITE DESCRIPTION: Check Printing Company

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: Michael L. Glaze

2. TELEPHONE NUMBER: 303-757-4984

3. DATE (mo., day, & yr.): 26. April. 1983

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: Michael L. Glaze

2. TITLE: Project Officer

3. ORGANIZATION: Ecology and Environment, Inc

4. TELEPHONE NO. (area code & no.): 303-757-4984

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Michael L. Glaze	Ecology and Environment, Inc	303-757-4984
Malcolm Castor	Ecology and Environment, Inc	303-757-4984

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

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Richard Grapp	Plant Manager 303-574-0150	715 Valley St., Colorado Springs, CO 80915

Continue On Reverse

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Rocky Mountain Bank Note	303-574-0150	715 VALLEY ST./COLORADO SPRINGS, CO	Halogenated hydrocarbon cleaning solvent

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

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

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
8 April 1983	13:00	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

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. NOT APPLICABLE

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: Ecology and Environment Inc.

D. SITE MAPPED? No - Sketch accompanies report

[ ] YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE (deg.-min.-sec.) 38° 50' 30"

2. LONGITUDE (deg.-min.-sec.) 104° 42' 30"

V. SITE INFORMATION

A. SITE STATUS

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

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

[X] 3. OTHER (specify): POURED ON GROUND AT SITE (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): _____

C. AREA OF SITE (in acres) ~ 1/2 acre

D. ARE THERE BUILDINGS ON THE SITE?

[ ] 1. NO [X] 2. YES (specify): INDUSTRIAL PARK. FACILITY BACK LOT WAS SITE AREA

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		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		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	X	8. OTHER (specify): POURED ON GROUND -
					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. RECYCLER/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

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

B. WASTE CHARACTERISTICS

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

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

[X] 9. OTHER (specify): material no longer present

C. WASTE CATEGORIES

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

YES. LETTER WITH ANALYSIS OF COMPOSITION BY MANUFACTORER OF SOLVENT WAS PROVIDED

 Continue On Reverse

Continued From Front

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 1/2	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Gal/Week *	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
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		* for 2-3 mos.	(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(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')			3. TOXICITY (mark 'X')				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			
methylene chloride		X								
methanol		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

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION *(continued)*

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

Continue On Reverse

Continued From Front

VIII. HAZARD DESCRIPTION *(continued)*

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

Continue On Page 7

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continued)*

☐ N. FIRE OR EXPLOSION

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

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION (continued)

☐ T. MIDNIGHT DUMPING

☐ U. OTHER (specify):

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	~250	0	~80	<1 mi
2. IN COMMERCIAL OR INDUSTRIAL AREAS	~200	~50	~30	<1 mi
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS (parks, schools, etc.)				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit)	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
~1 to 5 feet	South	NONE
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure)**	**F. DIRECTION TO DRINKING WATER SUPPLY**
UNKNOWN	22 miles from Site	EAST

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY <15 CONNECTIONS

☒ 2. COMMUNITY (specify town): Cherokee Water District >15 CONNECTIONS

☐ 3. SURFACE WATER

☒ 4. WELL

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 NO DRINKING WATER WELLS IN AREA

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

I. RECEIVING WATER

1. NAME

☒ 2. SEWERS ☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS
Cherokee Water District Waste Water line

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)
X	1. SAND	X	Dawson Formation - shales		
X	2. CLAY				
	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:

H. DISCHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS: WATER DISCHARGE FROM EMBANKMENT IMMEDIATELY EAST OF OFFICE BUILDING

I. SLOPE

1. ESTIMATE % OF SLOPE ~1-5°

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC. to the west

J. OTHER GEOLOGICAL DATA
AREA FORMERLY DRY WASH. MATERIAL AT SURFACE IS ALLUVIUM. BEDROCK GEOLOGY IS shales of DAWSON FORMATION.

Continue On Reverse

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

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☒ NONE ☐ YES (*summarize in this space*)

Approx. 2 years ago Cherokee Water District discovered gasoline in their waste water line and inspected water coming from businesses in area. Rocky Mountain Bank Note was an original suspect but the water district discovered the source was from the warehouse immediately south of RMBN's building. Since that time they have monitored waste water from these office buildings. They have not observed any halogenated hydrocarbons. This information was supplied by Stuart Loosley with the Cherokee Water District

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.

APPENDIX C

PHOTOGRAPHIC LOG

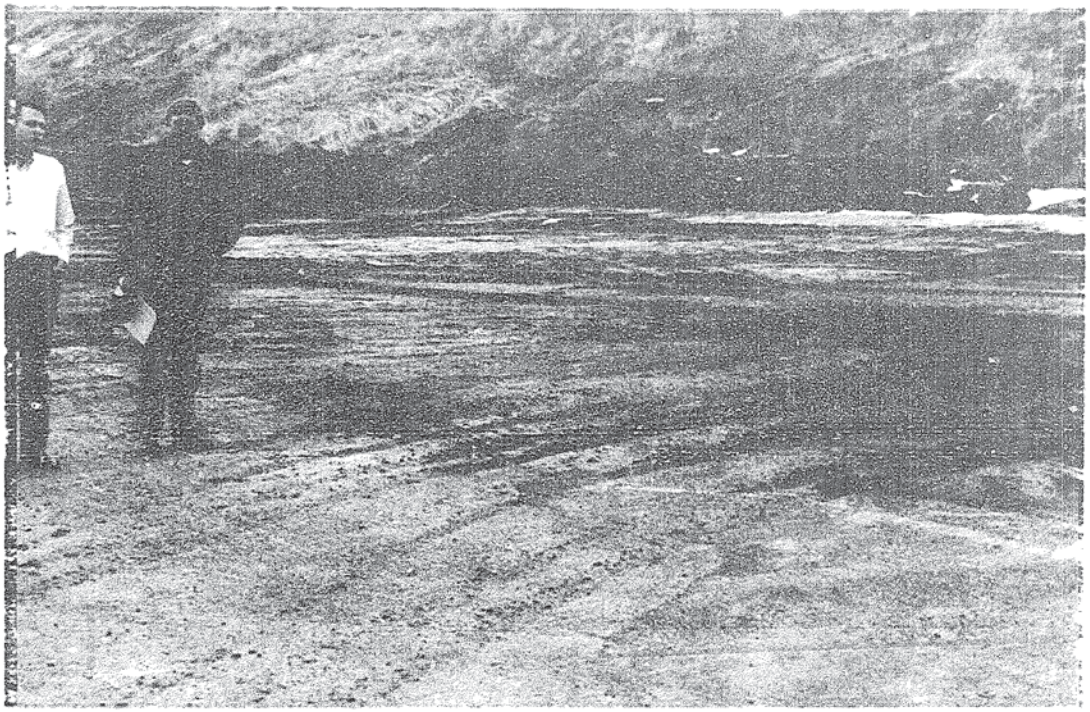

PHOTO #1 ESTIMATED AREA WHERE CLEANING SOLVENT WAS POURED ONTO GROUND AT ROCKY MOUNTAIN BANK NOTE

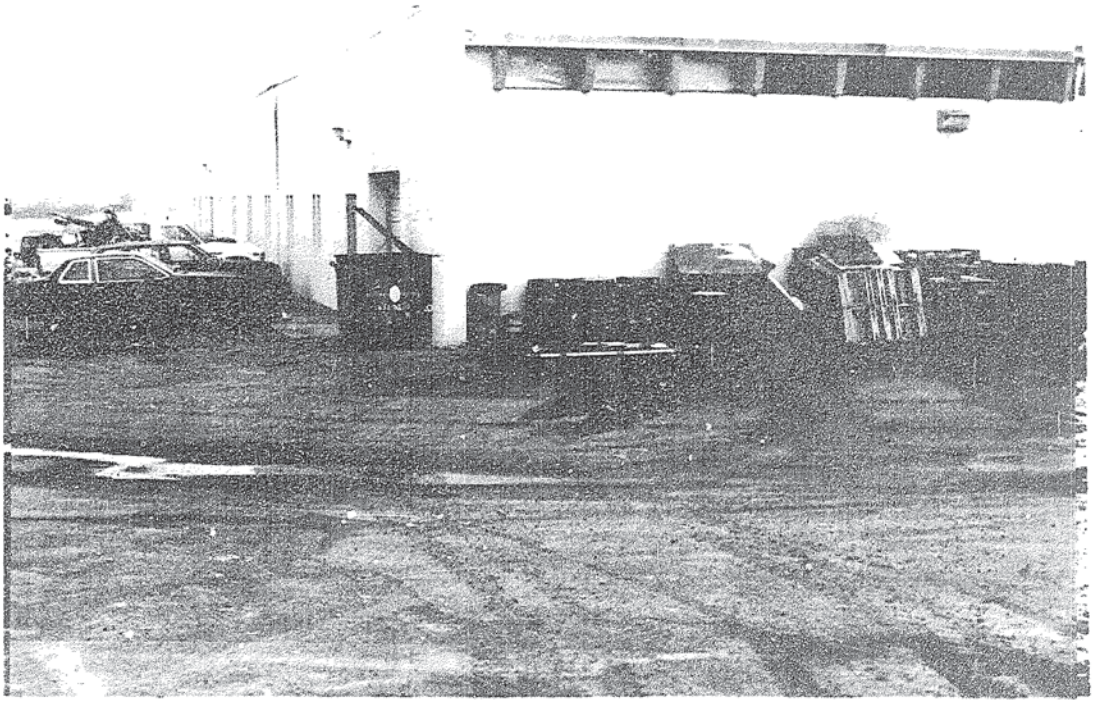

PHOTO #2 REAR OF RMBN PRINTING OFFICE, SHOT FROM DISPOSAL AREA ACROSS ASPHALT PARKING AREA

APPENDIX D

DESCRIPTION OF MATERIAL

John, FYI Nancy Z

Rocky Mountain Bank Note

P. O. Box 1420
Lawrence, Kansas 66044
913/841-1310 (Telex 42-305)

Memo:

October 27, 1980

FROM: Larry Burt

RE: Numbering Machine Cleaner - used in Lawrence

Attached sheets are from the lab report done on JH 55 and also the formula and mixing instructions for the numbering machine cleaning fluid we are using.

Barton has assigned #C-706 as a permanent number for this cleaner, so this should be referred to in any correspondence with Barton.

Per instructions from Barton, the mixing instructions are very important as some items in the formula are much heavier than others and will not mix satisfactorily if they should be added first.

We are paying Barton $3.43 per gallon in 55 gallon quantities - delivered - which is considerably less expensive than the JH 55 at this time.

My suggestion would be to get 5 gallons or so mixed locally for a trial; then go from there on price and quantity. It's proven to be very effective for us with considerable savings in cost.

If I can help, please call.

Best Regards,

Larry

Larry Burt

jmg

BARTON SOLVENTS
KANSAS BRANCH
P.O. BOX 366 • 201 SOUTH CEDAR • VALLEY CENTER, KANSAS 67147 • PHONE (316) 755-2305

October 23, 1980

Rocky Mountain Check Book
2220 Deleware
Lawrence, Kansas 66044

Attn: Larry Burt

Dear Larry:

In reference to your question on the formula of the stencil ink remover, you use C-706:

75% Methylene Chloride
15% Methanol
9% D-25
1% Water

POSSIBLE LUBRICANT?

" NUMBERING MACHINE CLEANER

MOC 4/8/83

Mix water with D-25 and then with Methanol and then add the Methylene Chloride. Enclosed is the lab report on this.

If you have any questions, please do not hesitate to call us. Thank you.

Very truly yours,

BARTON SOLVENTS, INC.
Kansas Branch

Leon Quandt

LQ:ss
Enclosure

Oklahoma Refining Company

P.O. Box 26386
Oklahoma City, OK 73126

From The RESEARCH DIVISION
3921 North Ravenswood Avenue
Chicago, Illinois 60613
Phone 312 525 5228

LABORATORY REPORT

Apco B 6056 is composed of:
74% Methylene Chloride
10% Methanol
1% Ammonia Water
15% Emulsifier

Report No.
Request Received
Sample Received
Work Started
Work Completed

Firm Name: Rocky Mountain Check Book

Address: ~~Wichita~~, Kansas
Lawrence

Requested by: Mr. L. Burt

Handled by: Mr. L. Quandt, Burton Solvents, V[illegible] Center, [illegible]

PROBLEM: Match submitted sample of JH55 Cleaner.

RESULTS: Apco B 6056 was developed using Gas Chromatography and physical data from the submitted solvent.

DATA REQUIRED

- X A.S.T.M. Distillation
- X Gravity
- ___ Color
- ___ Flash: ___ T.C.C. ___ T.O.C. ___ C.O.C. ___ P.M.
- X Flammability
- ___ Residue ___ On Watch Glass ___ From 100 ml
- ___ Odor from Filter Paper
- ___ Refractive Index
- ___ Acidity or Causticity
- ___ Corrosion
- ___ Evaporation: ___ Spot Dry ___ Evap. Curve
- ___ Viscosity
- ___ Toxicity
- ___ Appearance
- X Acid Absorption
- X Water Absorption
- ___ Barium Chloride Absorption
- ___ Kauri Butanol Solvency
- X Mixed Aniline Point ___ of Acid Insoluble
- ___ Aniline Point
- ___ Solvency Parameters (HKB, PKB, DKB)
- X Material Safety Data Sheet
- X Label
- ___ Benzene Replacement
- ___ Rule 66 Replacement
- ___ Tests in Coatings
- X Gas Chromatography ___ of Acid Insoluble
- ___ Special Tests

(See following sheets for data)

Report No. 15862

ORC—801

A. S. T. M. DISTILLATION (Method D86)

	Submitted JH55 Cleaner (Sample #30804)
I. B. P.	96°F
5%	98
10%	98
20%	99
30%	99
40%	100
50%	100
60%	102
70%	123
80%	-
90%	-
95%	-
Dry Point	123

SPECIFIC GRAVITY @ 60°F

Submitted Cleaner 1.230

ACID ABSORPTION (Distillate)

Submitted Cleaner 12%

WATER ABSORPTION (Distillate)

Submitted Cleaner 10%

MIXED ANILINE POINT (Acid Insoluble)

Submitted Cleaner 32°F/0°C

FLAMMABILITY	Industrial Labeling	OSHA Class
Submitted Cleaner	Combustible	Class II

GAS CHROMATOGRAPHY

Gas Chromatography was used to identify the components of the distillate and acid insoluble of the submitted sample.

Ashland

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

5200 PAUL G. BLAZER MEMORIAL PARKWAY, DUBLIN, OHIO 43017 • (614) 889-3333

ENVIRONMENTAL AND
OCCUPATIONAL SAFETY DEPARTMENT

R. H. Toenskoetter, Manager

August 9, 1982

REPLY TO:
P.O. Box 2219
Columbus, Ohio 43216

Rocky Mountain Bank Note
Attn: John Vradenburg
P. O. Box 1664
Colorado, Springs, CO 80901

TYPE CLEANER
USED ON RAG
TO WIPE DOWN
DISPOSAL BY EVAPORATION
FROM RAG/TYPE
Principal
Component
PERCHLOROETHYLENE

mse
4/8/83

Dear Customer:

In response to your recent request, an Ashland Material Safety Data Sheet is enclosed for the following product(s):

EC 100

If you have any questions, please contact me.

Very truly yours,

Tracy G. Smith

Tracy G. Smith
Product Safety
Coordinator

TGS/s.

Enclosure(s)

MATERIAL SAFETY DATA SHEET
ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20
AS[illegible]ANC CHEMICAL CO.ENVIRONMENTAL&OCCUPATIONAL SAFETY DEPT.BOX 2219.COLUMBUS.OH4321
24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

****

ASHLAND PRODUCT NAME: EC 100

DATA SHEET NO: 0067961-001
LATEST REVISION DATE: 11/78-78305

********** SECTION I-PRODUCT IDENTIFICATION **********

GENERAL OR GENERIC ID: BLEND

HAZARD CLASSIFICATION: (99) NOT APPLICABLE

********** SECTION II-HAZARDOUS COMPONENTS **********

INGREDIENT	PERCENT	TLV
CHLORINATED HYDROCARBON	10-30 %	100 PPM
CHLORINATED HYDROCARBON	>60 %	350 PPM

********** SECTION III-PHYSICAL DATA **********

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR COMPONENT(>60 %)	162.00 DEG F (72.22 DEG C) @ 760.00 MMHG
VAPOR PRESSURE	FOR COMPONENT(>60 %)	100.00 MMHG @ 68.00 DEG F (20.00 DEG C)
VAPOR DENSITY		HEAVIER THAN AIR
SPECIFIC GRAVITY		GREATER THAN WATE
PERCENT VOLATILES		100.00 %
EVAPORATION RATE		SLOWER THAN ETHE

********** SECTION IV-FIRE AND EXPLOSION DATA **********

FLASH POINT(C.C.) NOT APPLICABLE

LOWER EXPLOSIVE LIMIT (LOWEST VALUE OF COMPONENT) 8.0 %

EXTINGUISHING MEDIA: WATER FOG

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE., HYDROGEN CHLORIDE, PHOSGENE, ETC.

CONTINUED ON PAGE: 2

********** SECTION IV-FIRE AND EXPLOSION DATA (CONTINUED) **********

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO KEEP FIRE-EXPOSED CONTAINERS COOL UNTIL FIRE IS OUT.
SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

UNUSUAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

********** SECTION V-HEALTH HAZARD DATA **********

THRESHOLD LIMIT VALUE: NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.

IF SWALLOWED: GIVE TWO GLASSES OF WATER: INDUCE VOMITING IMMEDIATELY BY STICKING FINGER DOWN THROAT. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION.
DO NOT GIVE STIMULANTS. EPINEPHRINE OR EPHEDRINE MAY ADVERSELY AFFECT THE HEART WITH FATAL RESULTS.

********** SECTION VI-REACTIVITY DATA **********

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE

INCOMPATABILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS (E.G. NITRIC ACID, PERMANGANATES, ETC.), STRONG ALKALIES (E.G. NAOH, NH4OH, ETC.).

CONTINUED ON PAGE: 3

********** SECTION VII-SPILL OR LEAK PROCEDURES **********

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

MALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

ARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL AND SHOVELLED INTO CONTAINERS. PREVENT RUN-OFF TO SEWERS, STREAMS, OR OTHER BODIES OF WATER.

STE DISPOSAL METHOD:

ALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING MATERIAL BY BURNING IN AN IRON PAN.

GE SPILL: DESTROY BY LIQUID INCINERATION WITH OFF-GAS SCRUBBER. MATERIAL COLLECTED ON ABSORBENT MATERIAL MAY BE DEPOSITED INA POSTED TOXIC SUBSTANCE LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

********** SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED **********

PIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE IS ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

ILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL), AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW TLV'S.

FCTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, POLYVINYL ALCOHOL

PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (SEE YOUR SAFETY EQUIPMENT SUPPLIER)

PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

CONTINUED ON PAGE: 4

********** SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS **********

CONTAINS PERCHLOROETHYLENE

THE NATIONAL CANCER INSTITUTE HAS CONCLUDED FROM THE RESULTS OF A BIOASSAY THAT PERCHLOROETHYLENE IS A LIVER CARCINOGEN WHEN GIVEN ORALLY TO LABORATORY TEST MICE.

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

OVEREXPOSURE TO COMPONENTS HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS:, LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE

OVEREXPOSURE TO COMPONENT HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS:, CARDIAC ABNORMALITY, LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE, BRAIN DAMAGE, SPLEEN DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P.O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

MATERIAL SAFETY DATA SHEET

DEFINITIONS

THIS DEFINITION PAGE IS INTENDED FOR USE WITH MATERIAL SAFETY DATA SHEETS SUPPLIED BY THE ASHLAND CHEMICAL COMPANY. QUESTIONS CONCERNING THESE SHEETS SHOULD BE DIRECTED TO THE ENVIRONMENTAL AND OCCUPATIONAL SAFETY DEPARTMENT.

SECTION I
PRODUCT IDENTIFICATION

PRODUCT CLASS: GENERAL OR GENERIC IDENTIFICATION.

HAZARDOUS CLASSIFICATION: PRODUCT MEETS DOT CRITERIA FOR HAZARDS LISTED.

SECTION II
HAZARDOUS COMPONENTS

A HAZARDOUS INGREDIENT IS ONE WHICH MEETS ONE OR MORE OF THE FOLLOWING CRITERIA:

1. IT IS LISTED IN THE ANNUAL REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, OR IT IS KNOWN TO BE TOXIC WITHIN THE PARAMETERS OF THAT REGISTRY.

AND/OR

2. IT HAS A OSHA ESTABLISHED, 8-HOUR TIME-WEIGHTED AVERAGE PERMISSABLE EXPOSURE LIMIT (PEL) OR ACCEPTABLE CEILING (C), OR AN AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS' (ACGIH) THRESHOLD LIMIT VALUE, AND BY NATURE OF THE PRODUCT OR ITS KNOWN USE, IT IS LIKELY TO BECOME AIRBORNE.

AND/OR

3. IT CONTRIBUTES TO ONE OR MORE OF THE FOLLOWING HAZARDS OF THE PRODUCT:
   - A. FLASHPOINT BELLOW 200 DEG F (CC), OR SUBJECT TO SPONTANEOUS HEATING OR DECOMPOSITION.
   - B. CAUSES SKIN BURNS. (DOT)
   - C. STRONG OXIDIZING AGENT. (DOT)
   - D. SUBJECT TO HAZARDOUS POLYMERIZATION.

EACH INGREDIENT MEETING ONE OR MORE OF THE ABOVE CRITERIA IS LISTED IN SECTION II IF PRESENT AT A LEVEL AT LEAST GREATER THAN ONE PERCENT. INGREDIENTS WHICH ARE CLAIMED TO BE CARCINOGENS, TERATOGENS, MUTAGENS, OR CAUSATIVE AGENTS OF OTHER REPRODUCTIVE DISORDERS ARE LISTED IF KNOWN OR BELIEVED TO BE PRESENT, PROVIDED THAT THE DATA SUPPORTING SUCH CLAIMS IS CONSIDERED VALID.

EACH HAZARDOUS INGREDIENT IS LISTED BY CHEMICAL, GENERIC, OR PROPRIETARY NAME. ITS LEVEL IN THE PRODUCT IS EXPRESSED AS 1% OR LESS, 1-10%, 10-30%, 30-60%, OR GREATER THAN 60%, OR BY OTHER MEANS.

SECTION III
PHYSICAL DATA

INITIAL BOILING POINT: IF LIQUID AT 68 DEG F.

VAPOR PRESSURE: IF LIQUID AT 68 DEG F OR WHICH SUBLIMES.

VAPOR DENSITY: FOR VOLATILE PORTION OF PRODUCT.

SPECIFIC GRAVITY: IF SPECIFIC GRAVITY OF PRODUCT IS NOT KNOWN, INDICATED AS <1, =1, OR >1.

PERCENT VOLATILES: PERCENTAGE OF MATERIAL WITH INITIAL BOILING POINT BELOW 425 DEG F.

EVAPORATION RATE: INDICATED AS FASTER OR SLOWER THAN ETHYL ETHER, UNLESS STATED.

SECTION IV
PRODUCT IDENTIFICATION

FLASH POINT: CLOSED CUP.

LOWER EXPLOSION LIMIT: INDICATED FOR COMPONENT WITH LOWEST VALUE.

HAZARDOUS DECOMPOSITION PRODUCTS: KNOWN HAZARDOUS PRODUCTS RESULTING FROM HEATING, BURNING, ETC., OR REACTED RAW MATERIALS WHICH MAY ARISE THROUGH HEATING, BURNING, ETC.

SPECIAL FIREFIGHTING PROCEDURES: INDICATES EQUIPMENT TO PROTECT FIREMEN FROM TOXIC PROCEDURES OF COMBUSTION OR IF WATER IS NOT TO BE USED.

UNUSUAL FIRE AND EXPLOSION HAZARDS: HAZARDS NOT COVERED BY OTHER SECTIONS OF THIS REPORT ARE SHOWN HERE.

SECTION V
HEALTH HAZARD DATA

RECIPIENTS OF THIS DATA SHEET SHOULD CONSULT THE OSHA SAFETY AND HEALTH STANDARDS (29 CFR 1910), PARTICULARLY SUBPART G - OCCUPATIONAL HEALTH AND ENVIRONMENTAL CONTROL, AND SUBPART I - PERSONAL PROTECTIVE EQUIPMENT, FOR GENERAL GUIDANCE ON CONTROL OF POTENTIAL OCCUPATIONAL HEALTH HAZARDS.

PERMISSIBLE EXPOSURE LEVEL: OSHA ESTABLISHED PEL--IF NONE AVAILABLE, ADOPTED VALUE.

EFFECTS OF OVEREXPOSURE: GIVEN IN GENERAL TERMS, LOCAL AND SYSTEMIC EFFECTS TO THE EYES, SKIN, IF MATERIAL IS INHALED, UNLESS NOT APPLICABLE DUE TO PHYSICAL FORM OF PRODUCT.

SECTION VI
REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION RESULTING IN A LARGE RELEASE OF ENERGY.

STABILITY: CONDITIONS TO AVOID IF UNSTABLE UNDER NORMAL CIRCUMSTANCES.

INCOMPATIBILITY: MATERIALS TO AVOID.

SECTION VII
SPILL OR LEAK PROCEDURES

REASONABLE PRECAUTIONS TO BE TAKEN AND THE METHODS OF CLEAN-UP TO BE USED IN THE EVENT OF SPILLAGE OF THE PRODUCT. CONSULT FEDERAL, STATE AND LOCAL REGULATIONS FOR ACCEPTED PROCEDURES AND ANY REPORTING OR NOTIFICATION REQUIREMENTS.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

THIS SECTION INDICATES PROTECTIVE EQUIPMENT TO BE USED WHEN HANDLING THE PRODUCT.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

THIS SECTION IS TO COVER ANY RELEVANT POINTS NOT PREVIOUSLY MENTIONED.

ADDITIONAL COMMENTS

ASHLAND WISHES TO INFORM YOU THAT SERIOUS ACCIDENTS HAVE RESULTED FROM THE MISUSE OF "EMPTIED" CONTAINERS (DRUMS, 1 AND 5 GALLON PAILS, ETC.). REFER TO SECTIONS IV AND IX.

WE RECOMMEND THAT CONTAINERS BE EITHER PROFESSIONALLY RECONDITIONED FOR REUSE BY CERTIFIED FIRMS OR PROPERLY DISPOSED OF BY CERTIFIED FIRMS TO HELP REDUCE THE POSSIBILITY OF AN ACCIDENT. DISPOSAL OF CONTAINERS SHOULD BE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. "EMPTY" DRUMS SHOULD NOT BE GIVEN TO INDIVIDUALS.