SINTER HOOD
DECISION TREE USE

SITUATION	ACTION STEP
Observe "Blue Haze" S02 gas	Sinter machine operator Adjust FA-6 & FA-7
Problem remains with: FA-6 & FA-7 Adjustment	Sinter machine operator *Shuts down FA-6 *Cuts back FA-5/FA-4 Dampers and contacts #3 Baghouse /Acid plant Operator
450 F Dilution damper opens in 10 x14 trail	*Acid Plant/3 Baghouse operator confirms: 2" Draft minimum Cells on line Need to shake bags Acid Plant/3 Baghouse operator checks % Acid plant is running
#3 Baghouse temperature reaches 475 F	#6 & #7 fans shutdown at #3 baghouse.

u:/casberry/mydocuments/data/mact/sinterhood.xls Revised 10/11/2000

Appendix B

EMISSIONS PREDICTOR PROFILE OPERATING PROCEDURES
SINTER PLANT #3 BAGHOUSE
WASTE GAS INLET TEMPERATURES TO #3 BAGHOUSE

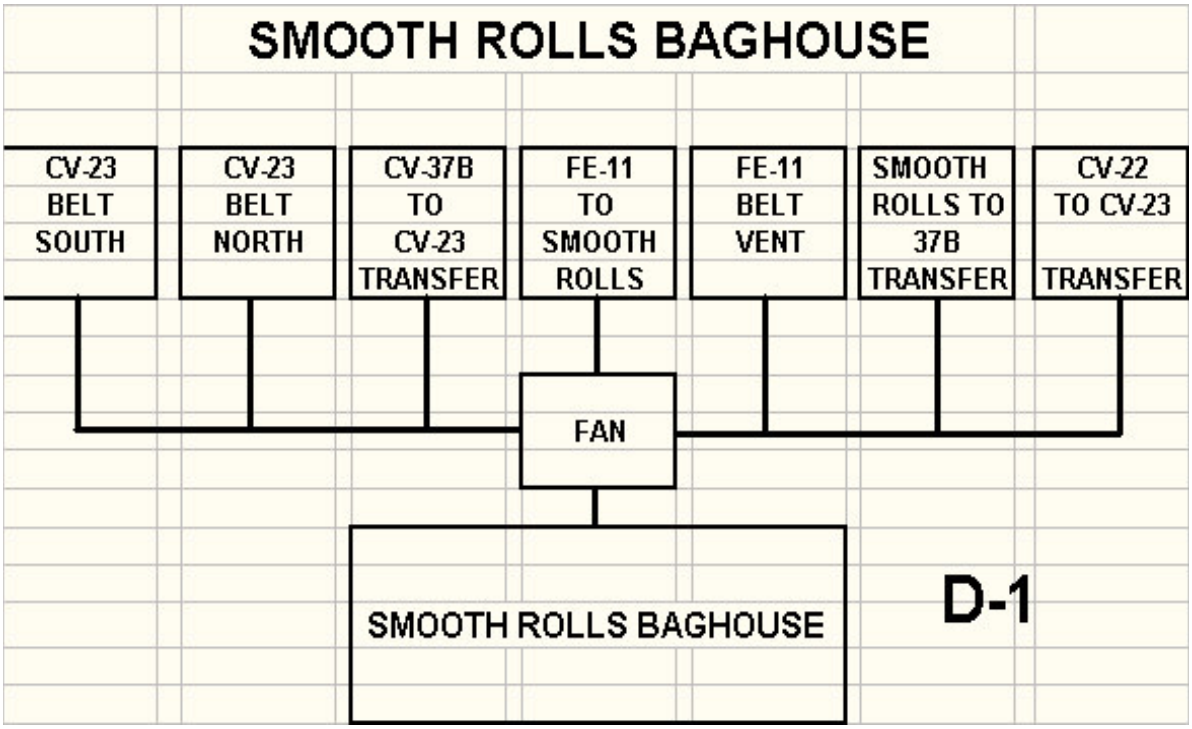
SITUATION	ACTION STEP
Optimum operating range (up to 425° F)	Only one vented by #3 baghouse is Sinter Plant
Caution operating temperature range (425° F to 450° F)	Sinter Plant Control Room Operator increases monitoring frequency of inlet temperature
450° F Dilution dampler opens in 10' X 14' trail within the Sinter Plant building	Warning light will come on to notify operator Operator notifies Sinter Plant Group Leader
Reactive operating temperature range (450° F)	Operator has dilution damper checked to cool gas stream to #3 baghouse Operator notifies group leader
Temperature has moved into danger area (475° F)	#3 Fans will automatically shutdown a second red light will come on the operating screen to warn of shutdown. Wheel Tunnel ventilation will shut down Sinter machine fans will shutdown.

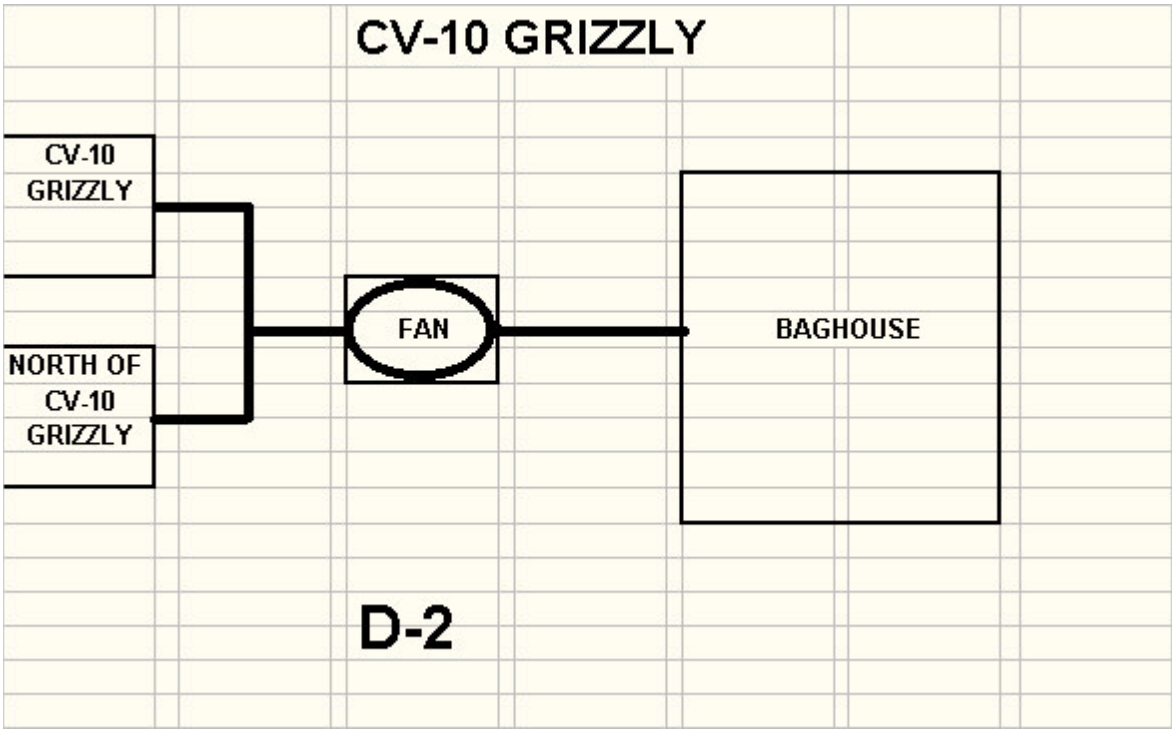
Appendix C

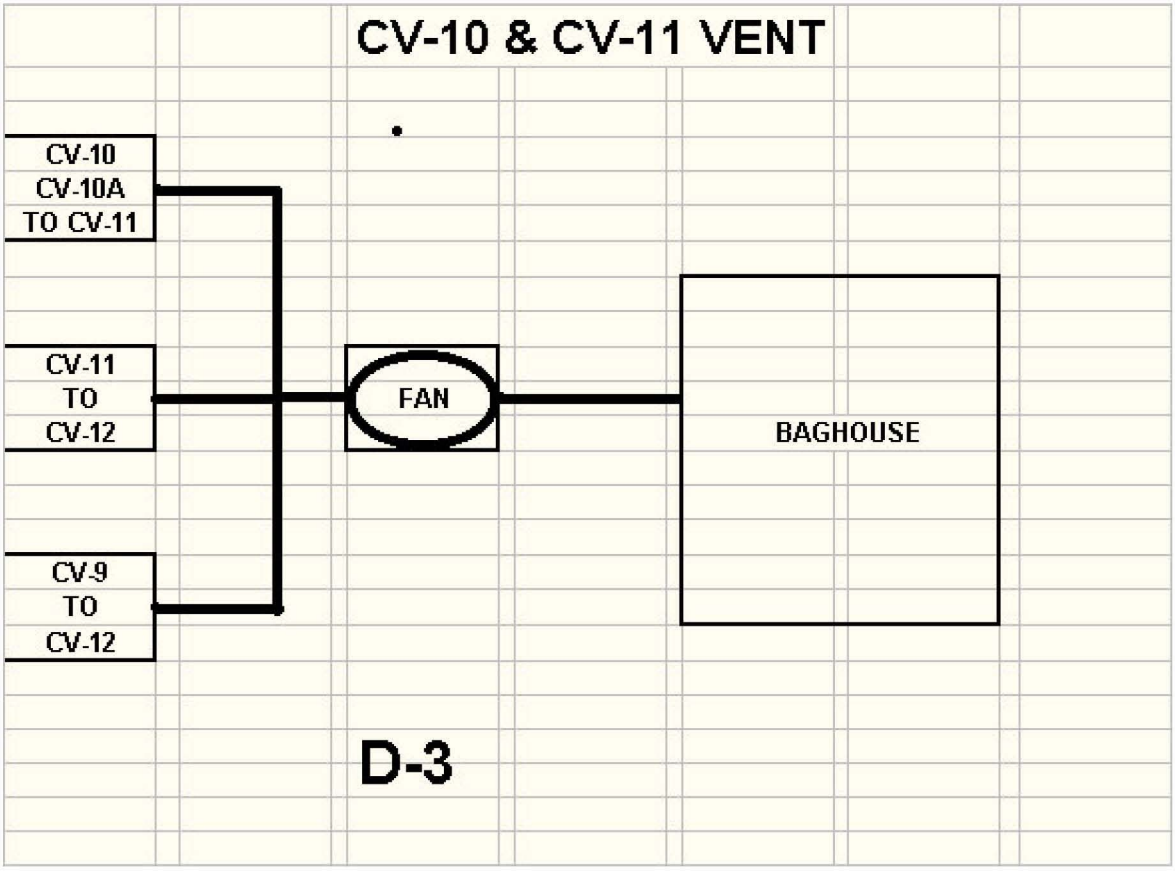
EMISSIONS PREDICTOR PROFILE OPERATING PROCEDURES
BLAST FURNACE #5 BAGHOUSE
WASTE GAS INLET TEMPERATURE TO #5 BAGHOUSE

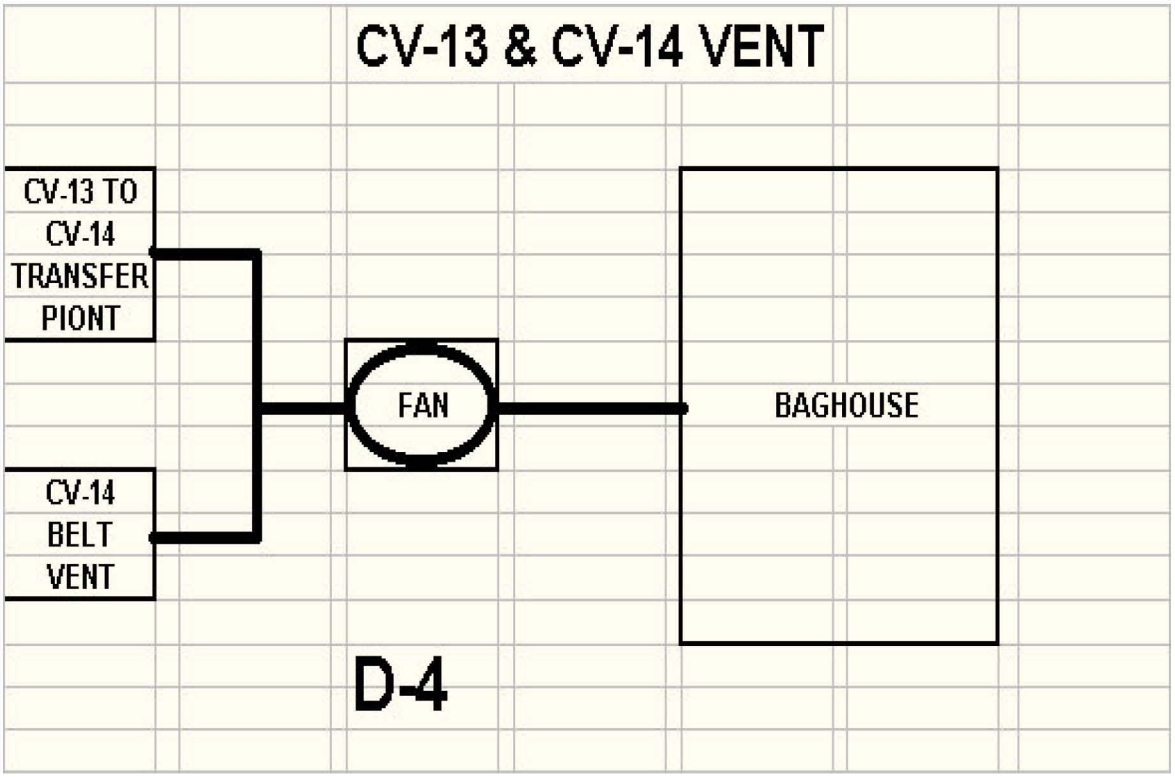
SITUATION	SIGNALS	ACTIONS
Temperature 0°F to 270°F	Green Light Steady	No action BH5 inlet trail and Balloon Trail emergency air cooling dampers are closed
Temperature 270°F to 299°F	Yellow Light Flashing	Signals Furnace operator of elevated temperature Furnace Operator takes measures to correct temp. by manually reducing air into the furnace as needed to drop temperature and shuts off the oxygen. Balloon trail cooling air will begin to open slowly and modulate to maximize furnace draft while maintaining baghouse inlet temps in a safe region. Cooling air will close as temperatures drop back to below 270°F.
Temperature reaches 300°F	Red Light Flashing	Signals Furnace operator of safety issue that furnace is beginning to shutdown due to #5 baghouse fans are preparing to shut down. Operator engages in measures to prevent safety issues by pulling the air down to no lower than 2000cfm and measures to prevent tuyeres from slagging by removing mud from v-notch. Balloon trail cooling air will open fully and the automatic control system reduces feed air into the furnace to roughly 15% within 20-25 seconds.
Temperature 300°F or greater for more than 1 minute	Red Light Flashing strobe light Flashing warning horn sounds	Most all of the air pressure has been filtered off of the furnace. Operators shut the blowers down after safety measures are assured to be complete. Mud must be cleared to the bottom of the v-notch and emergency dampers open to clear coke fuel gases out of bussel pipes to prevent pipes from blowing apart and injuring an operator.

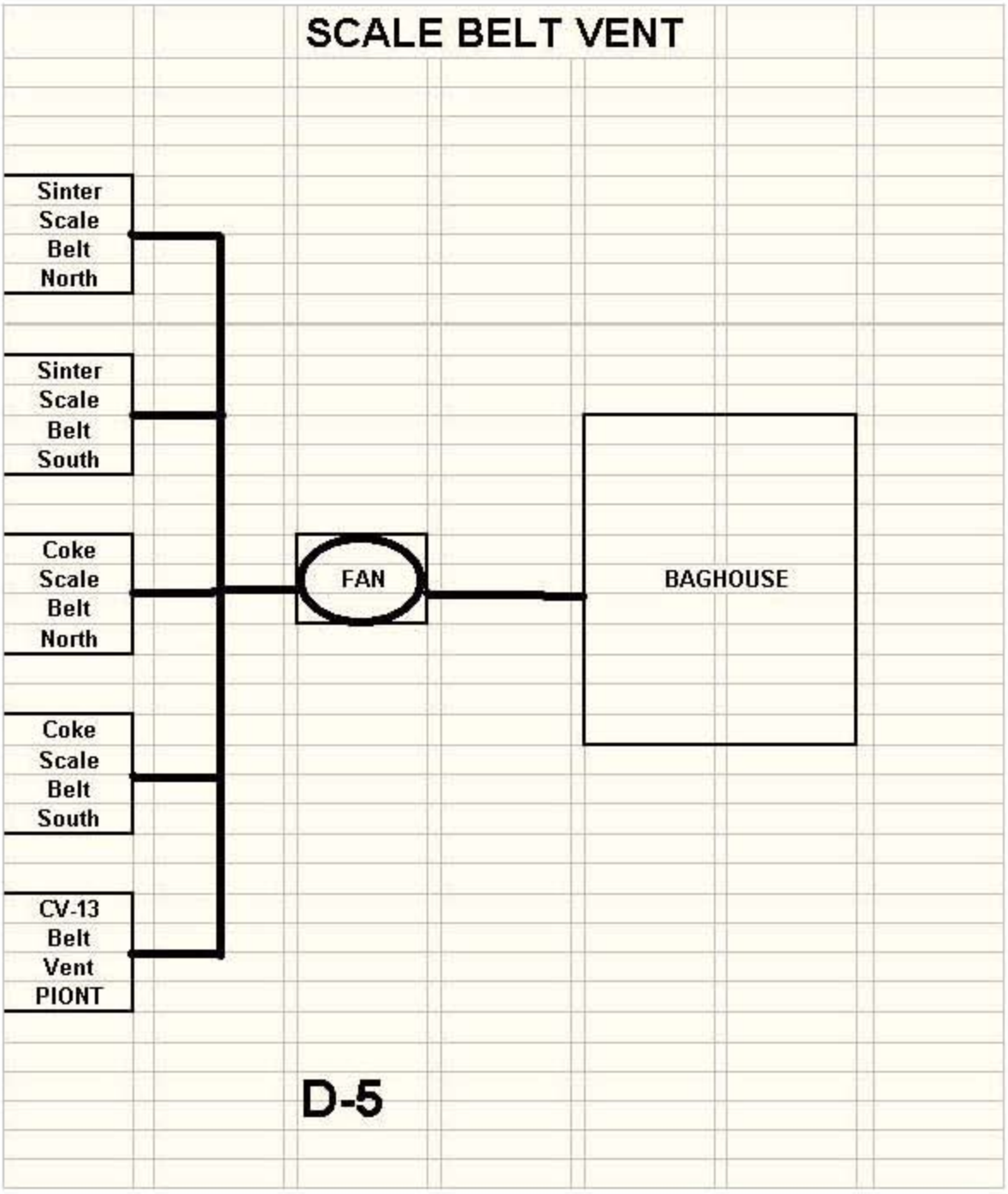
Appendix D

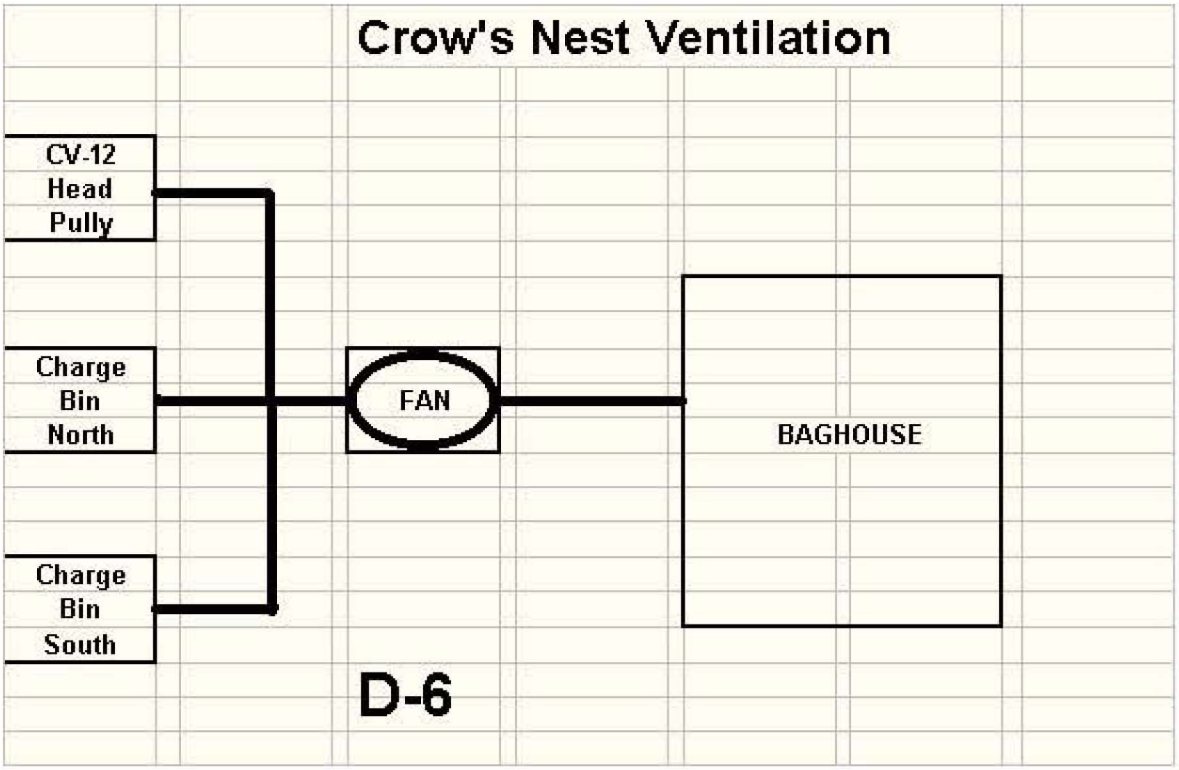

SMOOTH ROLLS BAGHOUSE
CV-23 BELT SOUTH
CV-23 BELT NORTH
CV-37B TO CV-23 TRANSFER
FE-11 TO SMOOTH ROLLS
FE-11 BELT VENT
SMOOTH ROLLS TO 37B TRANSFER
CV-22 TO CV-23 TRANSFER
FAN
SMOOTH ROLLS BAGHOUSE
D-1

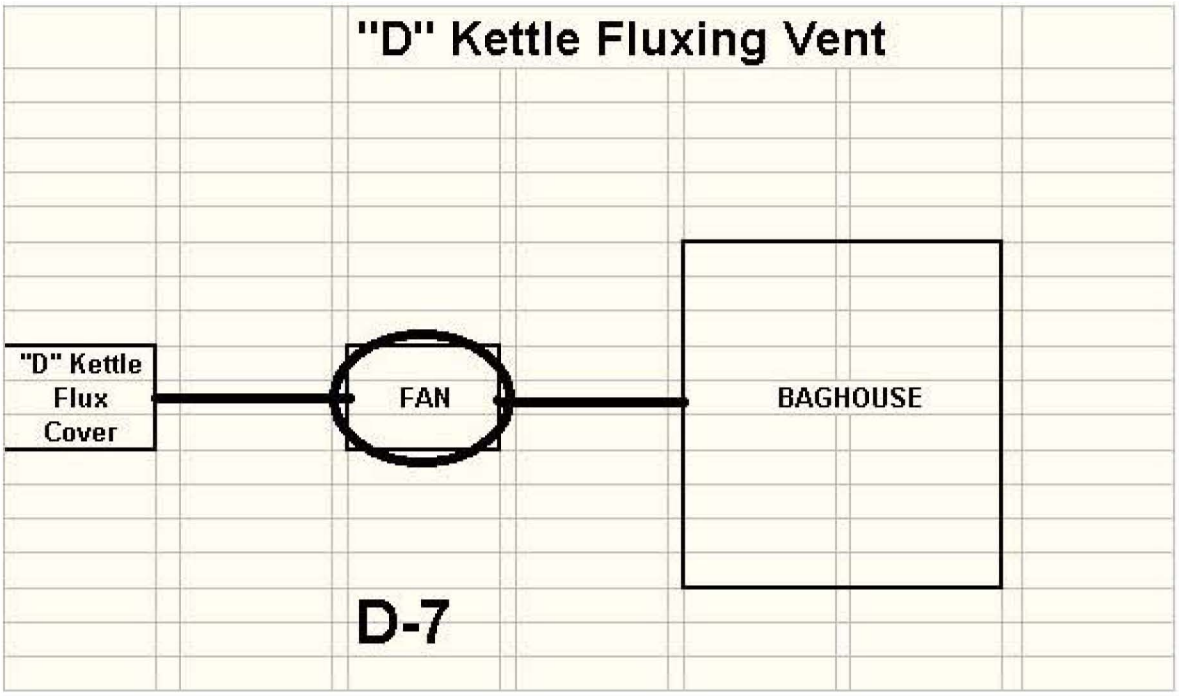

CV-10 GRIZZLY
CV-10 GRIZZLY
NORTH OF CV-10 GRIZZLY
FAN
BAGHOUSE
D-2

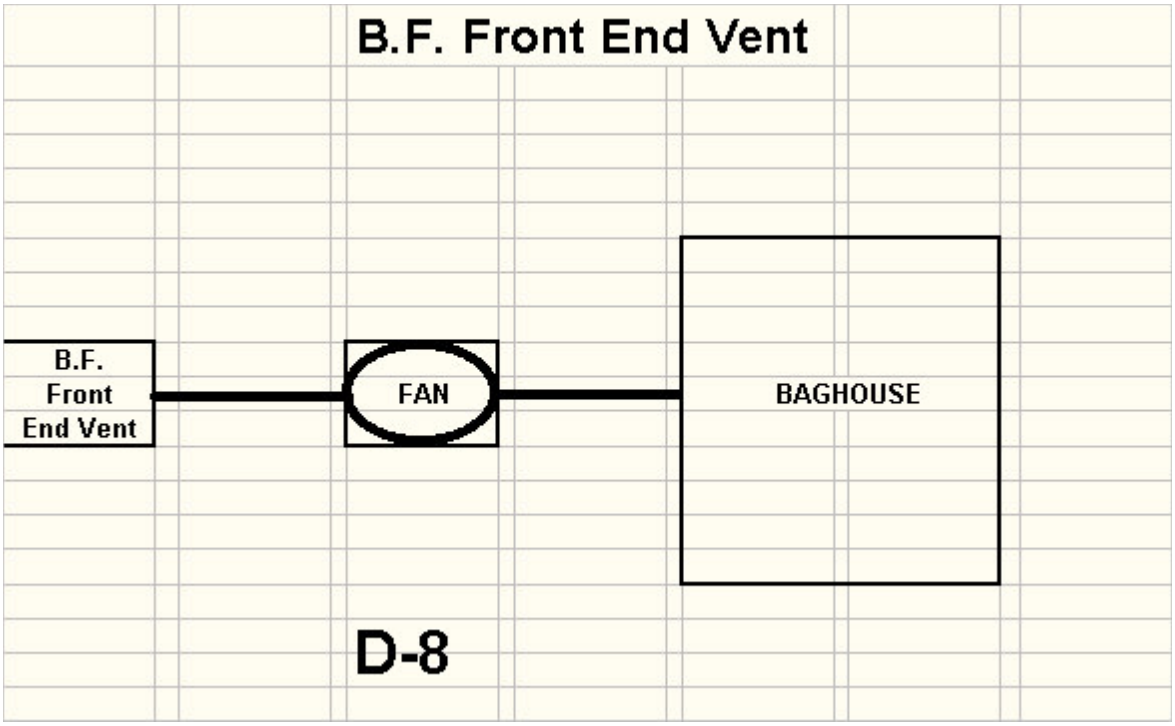

CV-10 & CV-11 VENT
CV-10
CV-10A
TO CV-11
CV-11
TO
CV-12
CV-9
TO
CV-12
FAN
BAGHOUSE
D-3


CV-13 & CV-14 VENT
CV-13 TO
CV-14
TRANSFER
PIONT
CV-14
BELT
VENT
FAN
BAGHOUSE
D-4

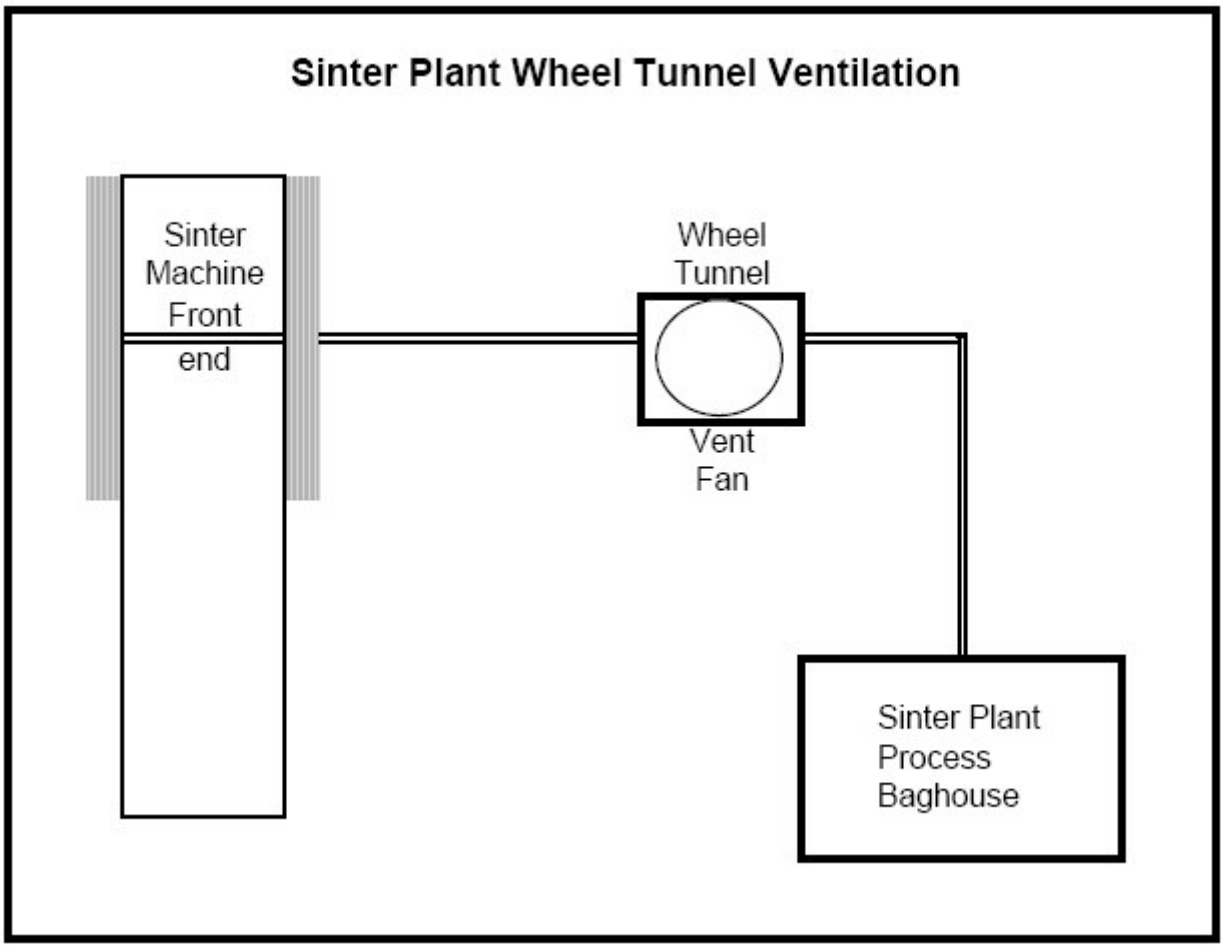

SCALE BELT VENT
Sinter Scale Belt North
Sinter Scale Belt South
Coke Scale Belt North
Coke Scale Belt South
CV-13 Belt Vent PIONT
FAN
BAGHOUSE
D-5


Crow's Nest Ventilation
CV-12
Head
Pully
Charge
Bin
North
Charge
Bin
South
FAN
BAGHOUSE
D-6

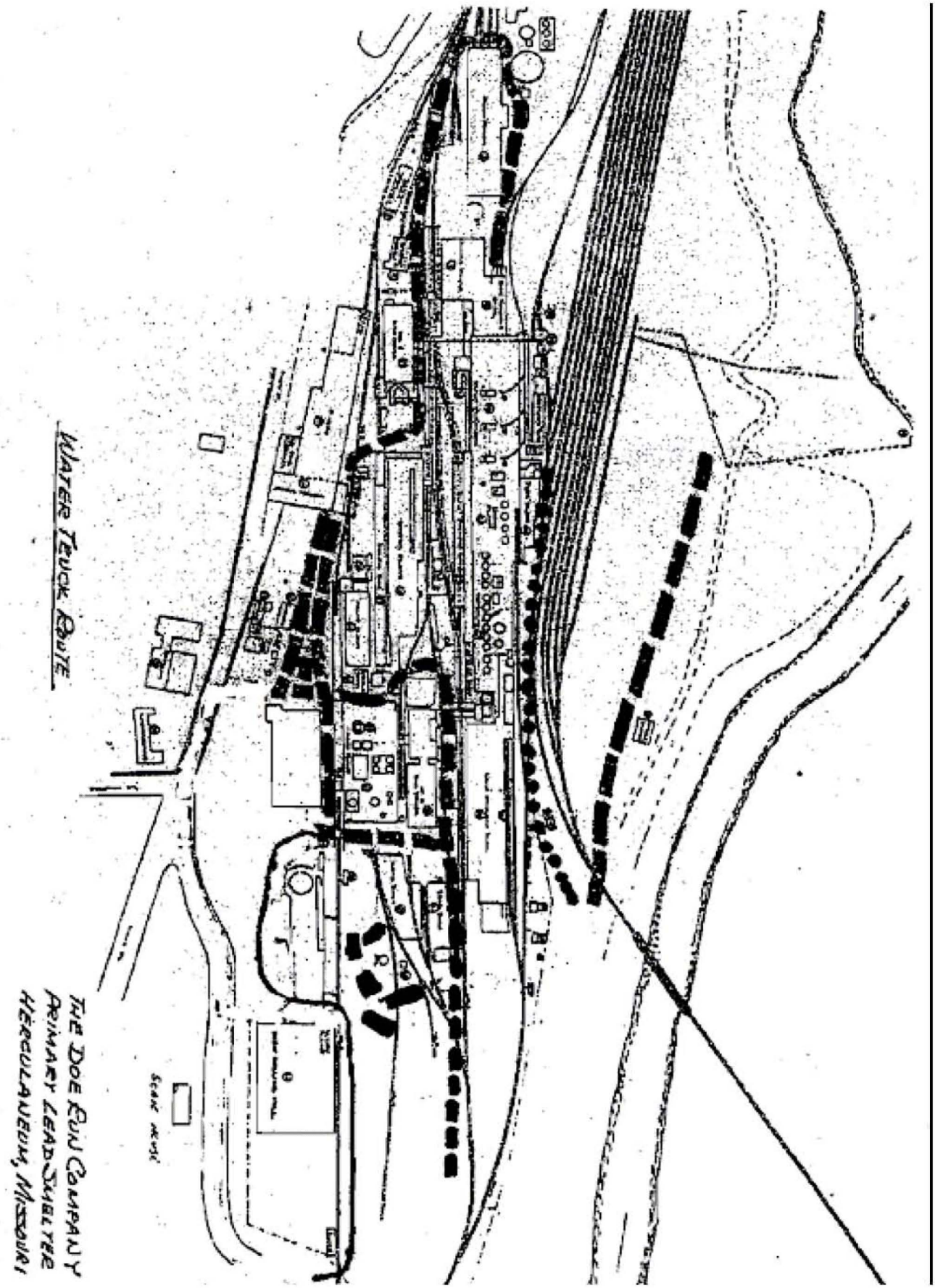

"D" Kettle Fluxing Vent
"D" Kettle
Flux
Cover
FAN
BAGHOUSE
D-7


B.F. Front End Vent
B.F. Front End Vent
FAN
BAGHOUSE
D-8

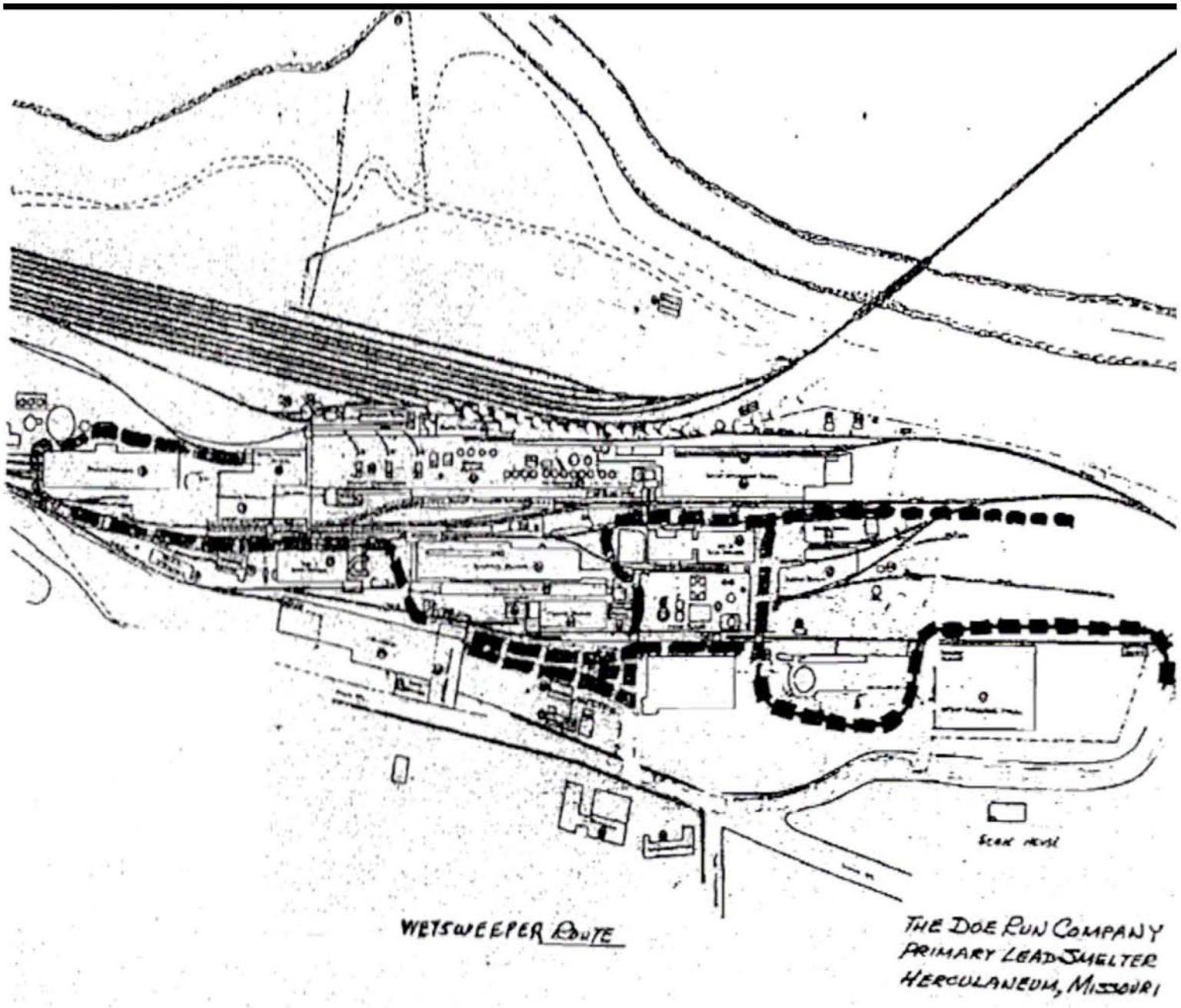
D-9


Sinter Plant Wheel Tunnel Ventilation
Sinter Machine Front end
Wheel Tunnel
Vent Fan
Sinter Plant Process Baghouse

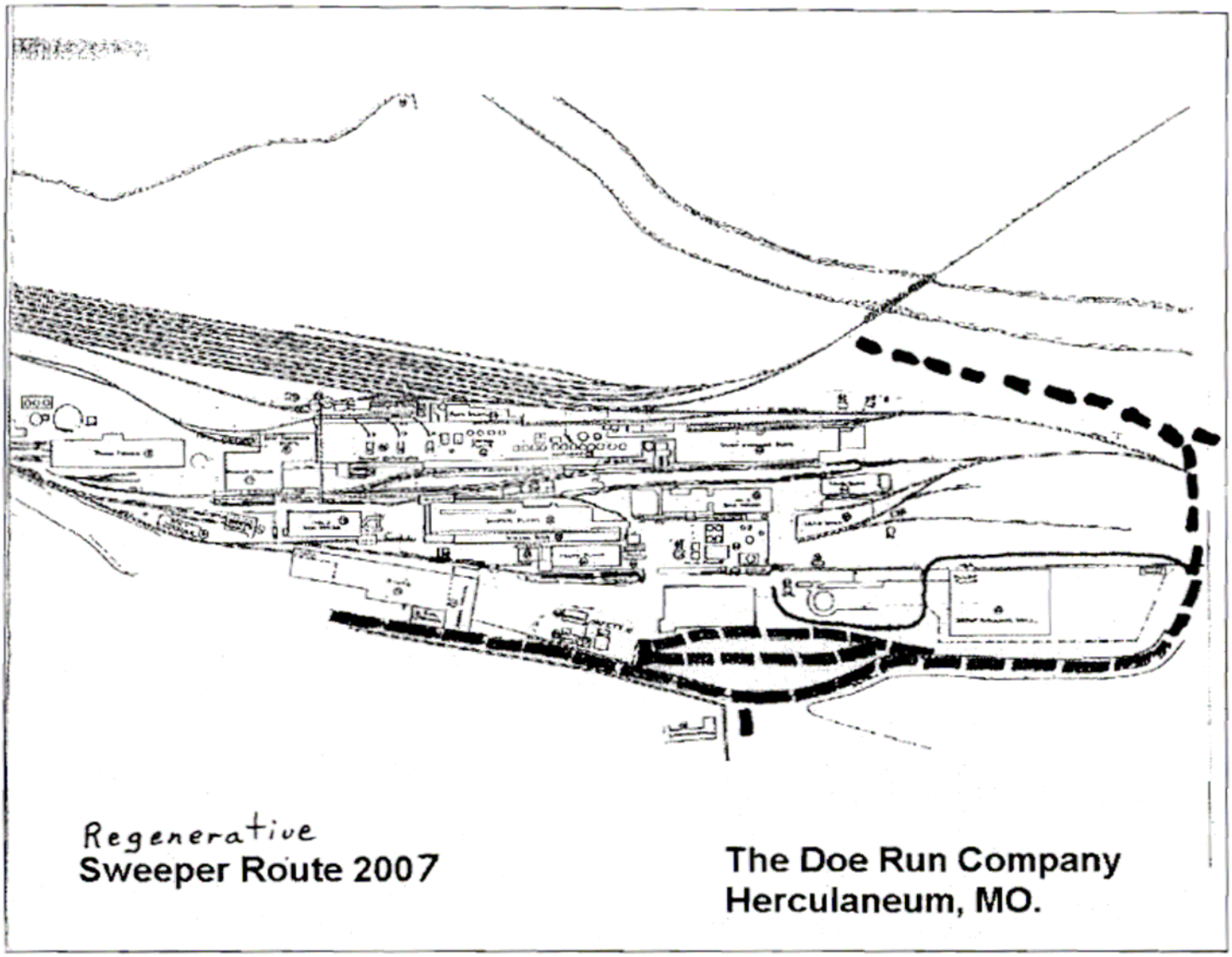
E-1

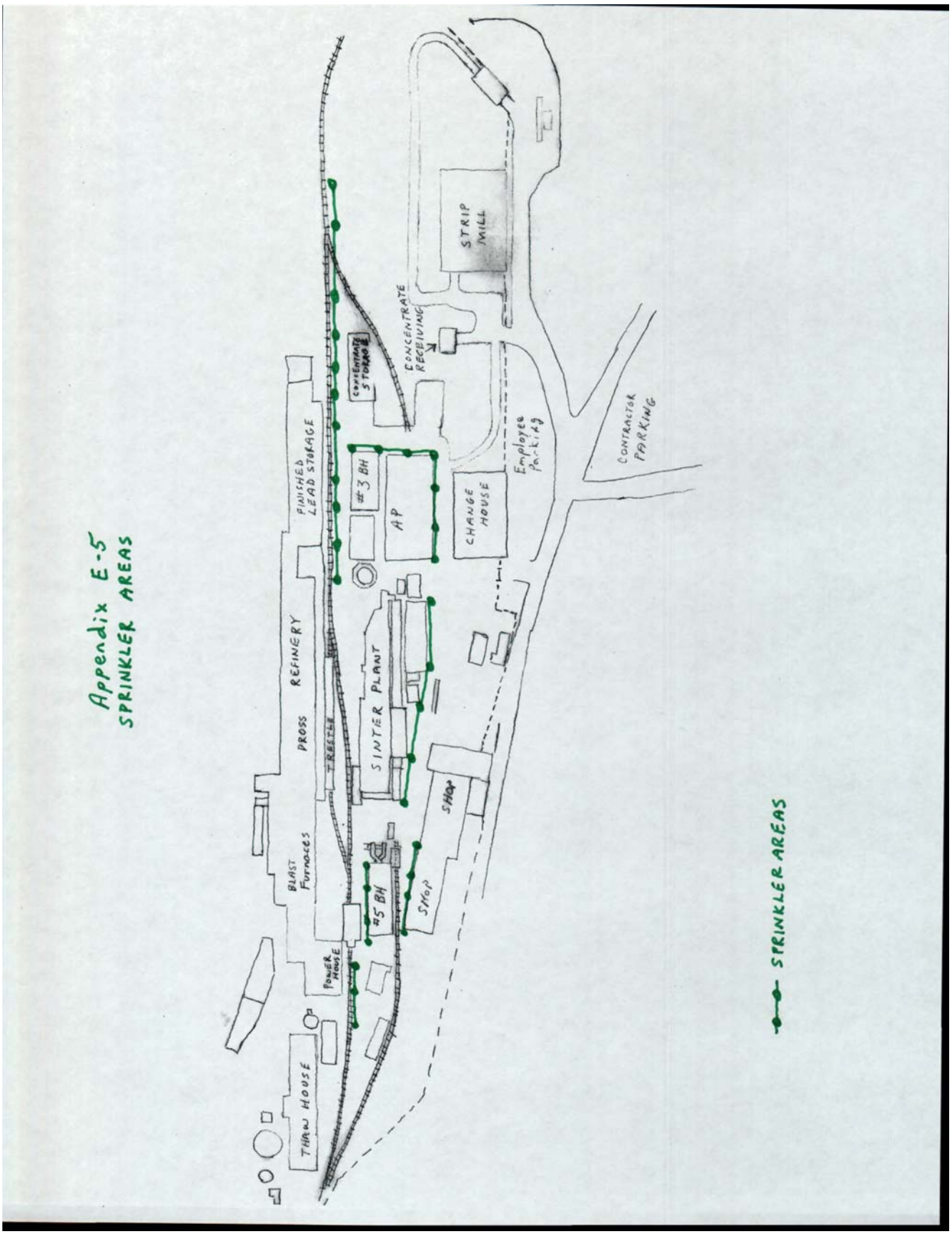

WATER TRUCK ROUTE
THE DOE RUN COMPANY
PRIMARY LEAD SMELTER
HERCULANEUM, MISSOURI

Appendix E-2


WETSWEEPER ROUTE
THE DOE RUN COMPANY
PRIMARY LEAD SMELTER
HERCULANEUM, MISSOURI

Appendix E-3


Regenerative
Sweeper Route 2007
The Doe Run Company
Herculaneum, MO.


Appendix E-5
SPRINKLER AREAS
THAW HOUSE
BLAST FURNACES
POWER HOUSE
#5 BH
SHOP
SHOP
TRESTLE
PROSS REFINERY
SINTER PLANT
FINISHED LEAD STORAGE
CONCENTRATE STORAGE
#3 BH
AP
CONCENTRATE RECEIVING
CHANGE HOUSE
STRIP MILL
Employee Parking
CONTRACTOR PARKING
SPRINKLER AREAS

Appendix E-4

Monthly Water truck and Wet Sweeper summary

Water Truck, Wet Sweeper and Regenerative air Sweeper Monthly Summary

Recorded activities: Regenerative air sweeping, in plant yard sweeping, water truck & slag route, piles treatment.

Environmental Crew For the Month of:_____Year_____

Day	Shft	Equipment Number				Group Leader	Remarks & pile treatments
1		1	2	3	4		
Hours	D						
Hours	E						
2		1	2	3	4		
Hours	D						
Hours	E						
3		1	2	3	4		
Hours	D						
Hours	E						
4		1	2	3	4		
Hours	D						
Hours	E						
5		1	2	3	4		
Hours	D						
Hours	E						
6		1	2	3	4		
Hours	D						
Hours	E						
7		1	2	3	4		
Hours	D						
Hours	E						
8		1	2	3	4		
Hours	D						
Hours	E						
9		1	2	3	4		
Hours	D						
Hours	E						
10		1	2	3	4		
Hours	D						
Hours	E						
11		1	2	3	4		
Hours	D						
Hours	E						
12		1	2	3	4		
Hours	D						
Hours	E						
13		1	2	3	4		
Hours	D						
Hours	E						
14		1	2	3	4		
Hours	D						
Hours	E						
15		1	2	3	4		
Hours	D						
Hours	E						
16		1	2	3	4		
Hours	D						
Hours	E						

Day	Shft	Equipment Number				Group Leader	Remarks & pile treatments
17		1	2	3	4		
Hours	D						
Hours	E						
18		1	2	3	4		
Hours	D						
Hours	E						
19		1	2	3	4		
Hours	D						
Hours	E						
20		1	2	3	4		
Hours	D						
Hours	E						
21		1	2	3	4		
Hours	D						
Hours	E						
22		1	2	3	4		
Hours	D						
Hours	E						
23		1	2	3	4		
Hours	D						
Hours	E						
24		1	2	3	4		
Hours	D						
Hours	E						
25		1	2	3	4		
Hours	D						
Hours	E						
26		1	2	3	4		
Hours	D						
Hours	E						
27		1	2	3	4		
Hours	D						
Hours	E						
28		1	2	3	4		
Hours	D						
Hours	E						
29		1	2	3	4		
Hours	D						
Hours	E						
30		1	2	3	4		
Hours	D						
Hours	E						
31		1	2	3	4		
Hours	D						
Hours	E						

Equipment used

1 = Water Truck, **2** = Wet Sweeper

3 = Enviro Whirl, **4** = Regenerative Sweeper