ATTACHMENT A

THE
DOE RUN
COMPANY
Primary Smelting Division
ISO 9002:2000 Certified

Calvin R. Keller
Senior Environmental Engineer
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Mr. John Rustige
MODNR - APCP
1101 Riverside Drive
Jefferson City, MO 65102

July 1, 2007

RE: Projects required, A (20) Ventilation Study Work Plan

Mr. Rustige,

Included in this emailing is the work plan for a building ventilation study for the Sinter Plant, Blast Furnace and the Refinery.

Atachments A1, A3, and A5 list Sinter Plant, Blast Furnace and Refinery ventilation sources.

Attachments A2, A4 and A6 list Sinter Plant, Blast Furnace and Refinery building doorways that can be opened.

If you have any questions, please call me at 636-933-3143.

Sincerely,

Calvin R. Keller

Calvin R. Keller

881 Main Street, Herculaneum, MO 63048
Telephone: 636-933-3143
Fax: 636-933-3150

ATTACHMENT A

The DOE RUN Company – Herculaneum Smelter
Building Ventilation Study Work Plan
(for the Sinter Plant, Blast Furnace and Refinery buildings)

SINTER PLANT

Attachment A-1 lists ventilation sources from the sinter plant building as a combination flow diagram and working form for the study. The #3 baghouse control device and the acid plant control device would be the controls with some fluctuation in settings. For the most part, all baghouses are operated to their maximum differential pressure possible that the bag structures can maintain without damage.

Attachment A-2 lists the potential openings in the building if someone or some piece of equipment would be entering and exiting in the form of a location description and recording sheet. Recordings will be taken by using a total flow anemometer with measurements being taken at the center of the openings when ambient wind speeds are less than 5 mph.

BLAST FURNACE

Attachment A-3 lists ventilation sources from the blast furnace building as a combination flow diagram and working form for the study. The #5 baghouse and the #7 building baghouse would be the controls with some fluctuation in settings. In general, the #7 baghouse damper setting remains at a steady set point except for when maintenance functions are needing it reduced for a short period of time. As with the sinter plant, baghouses are operated to their maximum differential pressure possible that the bag structures can maintain without damage.

Attachment A-4 lists the potential openings in the building if someone or some piece of equipment would be entering and exiting in the form of a location description and recording sheet. Recordings will be taken by using a total flow anemometer with measurements being taken at the center of the openings when ambient wind speeds are less than 5 mph.

REFINERY

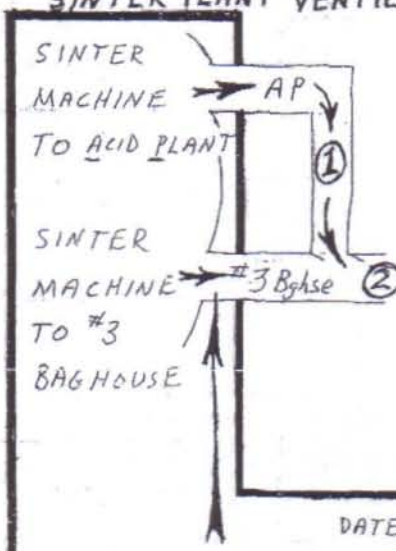
Attachment A-5 lists ventilation sources from the refinery building as a combination flow diagram and working form for the study. The #9 building baghouse would be the control with some possible fluctuation in settings. In general, the #9 baghouse damper setting remains at a steady set point except for when maintenance functions require it be reduced for a short period of time. The number 8 baghouse damper remains constant except for occasional periods of maintenance. As with the sinter plant and blast furnace, baghouses are operated to their maximum differential pressure possible that the bag structures can maintain without damage.

Attachment A-6 lists the potential openings in the building if someone or some piece of equipment would be entering and exiting in the form of a location description and recording sheet. Recordings will be taken by using a total flow anemometer with measurements being taken at the center of the openings when ambient wind speeds are less than 5 mph.

In general the only devices that receive routine adjustment actions are the #3 baghouse, #5 baghouse and the acid plant control devices.

The DOE RUN Company - Herculaneum Smelter

SINTER PLANT VENTILATION



(1)

DATE	TIME	amps	Pitot (in. H_2O)	AP FLOW (acfm)
AP				

(2) #3 Baghouse/AP Outlet Trail to Main Stack

DATE	TIME	TOTAL (amps)	Pitot (in. H_2O)	combined acfm	− AP (acfm)	= #3 Baghouse (acfm)

DATE	TIME	Damper (% open)	amps	Pitot (in. H_2O)	FLOW (acfm)

VENTILATION BAGHOUSES TO MAIN STACK

BAGHOUSE	DATE	TIME	DAMPER % OPEN	ΔP (in. H_2O)	Pitot (in. H_2O)	FLOW (acfm)
MIX DRUM Baghouse						
CRUSHER Baghouse						
COOLER Baghouse						
Cage Paktor						
76" Smooth Rolls						
CV 22 Baghouse						

(3) VENTILATION Baghouses TO MAIN STACK

DATE	TIME	Pitot (H_2O)	FLOW (acfm)

	AMPS
#6 Bghse TO MAIN STACK	

A-2

SINTER PLANT DOORS INFLOW CHECK

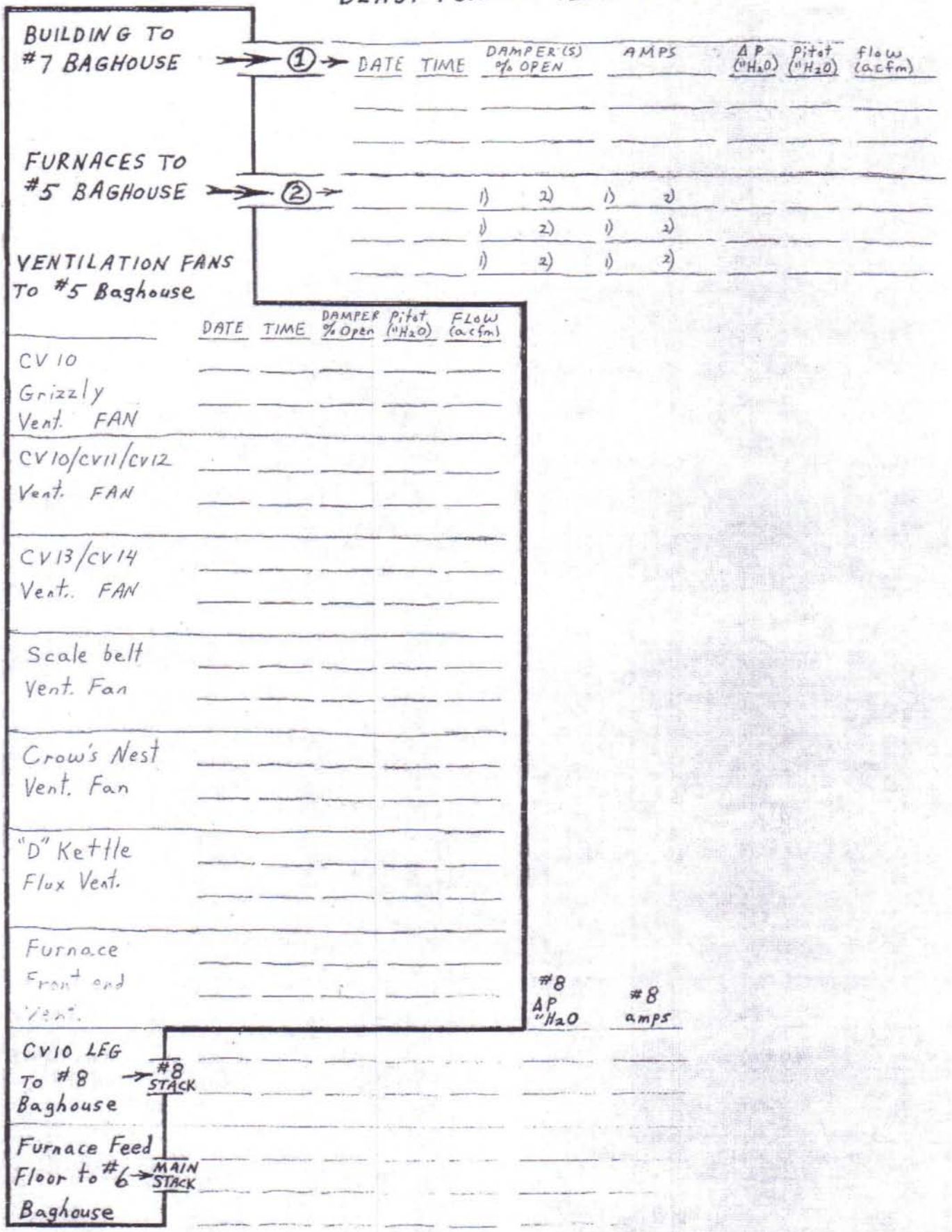
DATE : _____

	Time	WS mph (<5)	Flow (fpm)	Flow (fpm)	Flow (fpm)	
1 Man door on 4th floor west of Control Rm.						
2 Man door on 4th floor east of Control Rm						
3 Northwest Man door at ESP unit						
4 Southwest Man door at ESP unit						
5 South end Man door on 4th floor						
6 Southeast Man door 4th floor at Cooler bghse						
7 East Man door 2nd floor at Cooler bghse						
8 Northwest Man door to mix room						
9 Middle Man door to mix room 2nd floor						
10 Southwest Man door to mixing room						
11 Upsairs Man door on Mix room northeast side						
12 Mix room Northwest side #1 man door upstairs						
13 Mix room Northwest side #2 man door upstairs						
14 Mix Room East Middle Man door upstairs						
15 Mixing Room Northwest Man door #3 upstairs						
16 East mix room man door upstairs to RD-2						
17 Southwest man door upstairs in mixing room						
18 South mix room man door upstairs						
19 Man door South of top side of 76" Rolls						
20 South man door Bottom of mixing room						
21 Man door east of #5 bin in mix room to Sinter Plant						
22 Northwest man door @ bottom of mix room						
23 Northeast man door @ bottom of mixing room						
24 Main equipment door bottom floor North end						
25 #1 west man door from North on Bottom floor						
26 #3 west man door from North on Bottom floor						
27 East man door on bottom floor @ 12 fan						
28 #4 west side man door on bottom floor						
29 Equip. doors East side Bottom floor under FE-11						
30 Southeast man door @ Head of CV-37-B						
31 South equipment doors @ tail of CV-23						

A-3

The DOE RUN Company - Herculaneum Smelter

BLAST FURNACE VENTILATION



A-4

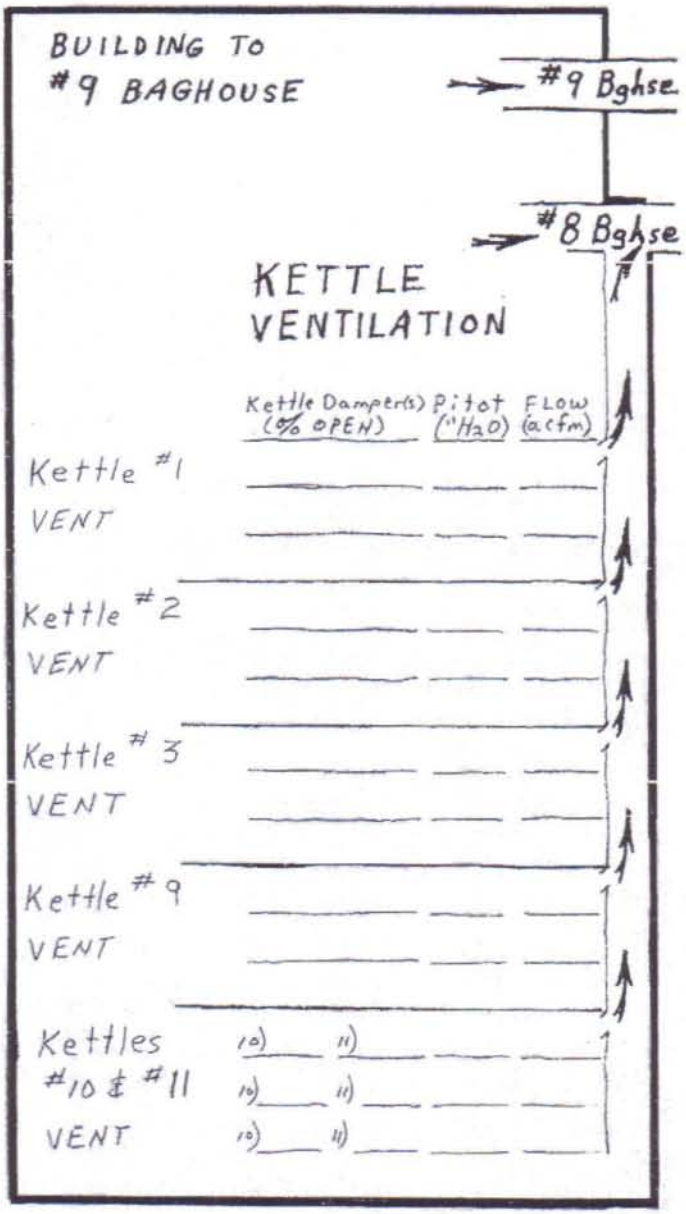
BLAST FURNACE DOORS INFLOW CHECK

DATE : _____

	Time	WS mph (<5)	Flow (fpm)	Flow (fpm)	Flow (fpm)	
1 Equipment Door North of CV10 Grizzly						
2 Equipment Door South side of office						
3 Equipment Door North end of slag track						
4 Man door East wall to slag track alley						
5 Man door North wall bottom floor, East side						
6 Equipment door North end center						
7 Man door North wall West of #6 door						
8 Equipment door North wall, West side						
9 Man door North end @ mixer rack level						
10 Man door West wall CV13 tail pulley area						
11 Man door South wall @ scale belt floor						
12 Service doors South wall scale belt floor						
13 Man door Northeast corner on crow's nest floor						
14 Man door West wall @ crow's nest floor						
15 Man door on South wall on crow's nest floor						
16 Man door South end of CV14 walkway						
17 Man door curtains on West @ #1 Fce feed floor						
18 Man door curtains on West wall to CV12 belt stairs						
19 Man door West wall from trestle area to balloon flue						
20 Man door curtains West wall to blower valves						
21 Man door curtains East side to CV10						
22 Man door curtains West side of CV10						
23 Man door North end to CV9 & sinter bins						
24 Man door curtains East side CV12 @ old feed floor						
25						
26						
27						
28						
29						
30						
31						

The DOE RUN Company - Herculaneum Smelter

REFINERY VENTILATION



DATE	TIME	DAMPER (% OPEN)	amps	ΔP ("H2O)	Pitot ("H2O)	FLOW (acfm)

A-6

REFINERY DOORS INFLOW CHECK

DATE : _____

	Time	WS mph (<5)	Flow (fpm)	Flow (fpm)	Flow (fpm)	
1 Equipment door, West wall near #9 kettle						
2 Man door West Wall Near #8 kettle						
3 Man door West Wall Near #1 kettle						
4 Man door West Wall near old stack area						
5 Man door East wall under #9 baghouse area						
6 Equipment curtains from stacker to dock area						
7						
8						
9						
10						
11						
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