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NCBC GULFPORT
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LETTER REGARDING TRANSMITTAL OF SOIL REMEDIATION SPECIFICATIONS DATA
NCBC GULFPORT MS
12/22/1987
IDAHO NATIONAL ENGINEERING LABORATORY

Idaho National Engineering Laboratory

December 22, 1987

Major T. L. Stoddart
HQ AFESC/RDUM
Building 1117
Tyndall AFB, FL 32403

AUGER SPEED DATA CEF-51-87

Dear Major Stoddart:

Please find attached auger speed data from the ENSCO MWP-2000 at the NCBC in Gulfport. The data was taken during operations from December 5, 1987 through December 20, 1987. Attachment 1 displays the data in tabular form by twelve-hour shifts. The average feedrate is the feedrate based on auger operating time, rather than the entire twelve-hour shift.

Soil moisture is also shown in an effort to establish a correlation to feedrate. The data is further presented in Attachments 2 & 3.

Attachment 2 shows the wide band of variations in feedrate (tons/hour) versus auger speed. As you can see, auger speed for a 5.3 ton/hour feedrate can vary from 5.58 to 11.77 revolutions per minute.

Attachment 3 is a plot of soil moisture to auger revolutions per ton of soil. The data indicates that auger speed to feedrate cannot be predicted from soil moisture and that other variables exist, such as clay content, gravel content, density, etc.

The ability to assign a specified auger setpoint for a given feedrate that will remain valid for any significant length of time does not appear possible with the present situation. One action that is being taken in an effort to reduce the effect of the variables is to install a stainless steel sheet to the auger hopper walls to reduce soil adhesion.

The present method of operation is to manually set the auger speed at a rate that optimizes production under the 5.3 ton per hour permit limit. The 5.3 ton per hour limit continues to initiate automatic feed shutoffs to protect the permit condition.

An alternative of continuing as described above is to determine an auger revolution to ton per hour relationship once per shift, and reset the auger speed shutoff at a value corresponding to 5.3 tons per hour.

This can be done, but it will not protect the permit condition better than the present situation because it could allow a greater than 5.3 ton per hour feed if it were the only protection availble.

Until soil variable effects can be predicted or eliminated, it is recommended that the present mode of operation be continued.

Very truly yours,

Carl Friedrich
Project Manager
Site Demonstration
Hazardous Waste Projects

csd

Attachments As Stated

cc: Major F. Thomas Lubozynski, USAF
R. Abramo, ENSCO
D. Price, ENSCO
D. Knudson, ENSCO
J. O. Zane, EG&G w/o att.

ATTACHMENT #1
CEF-51-87
December 22, 1987

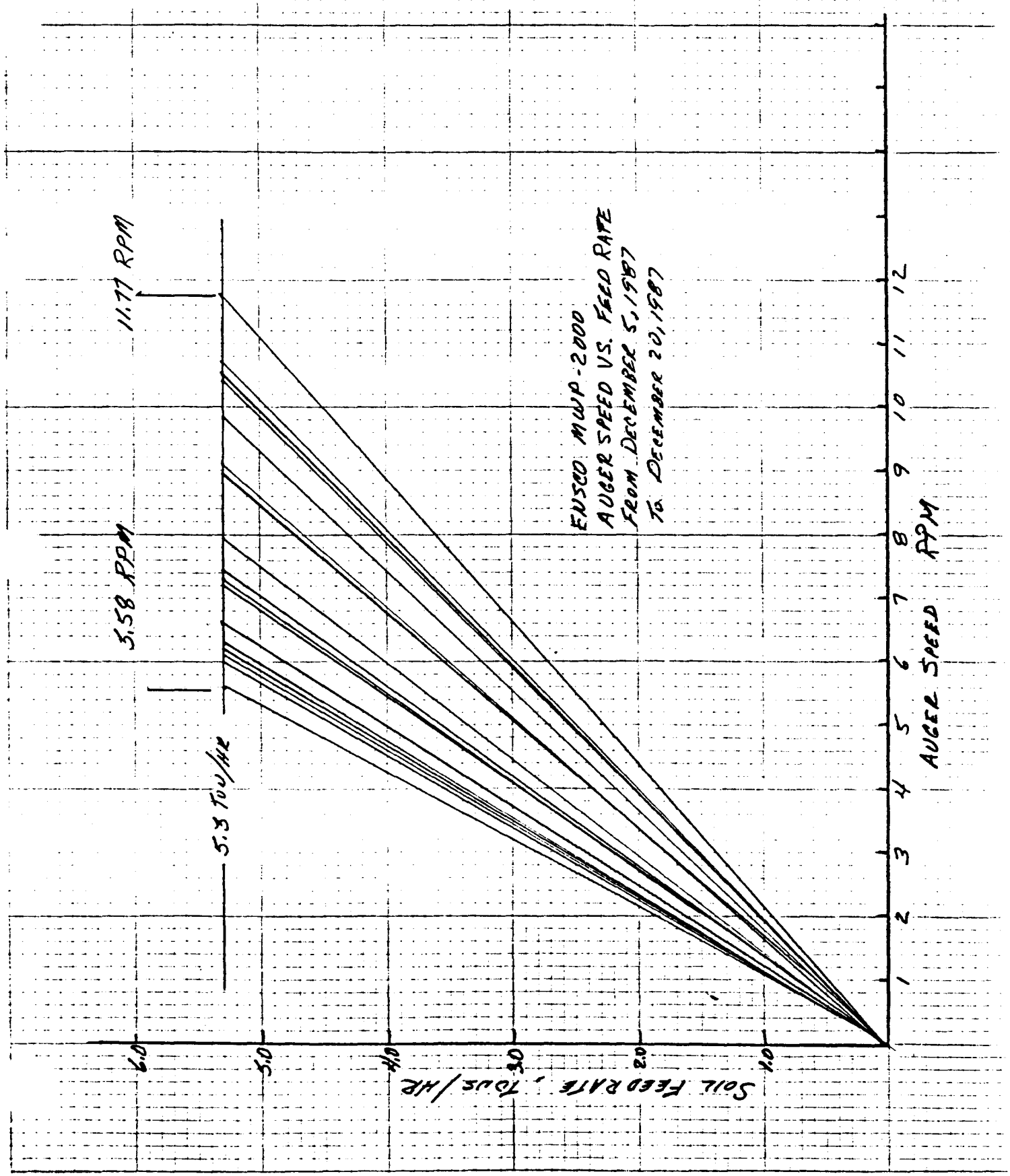
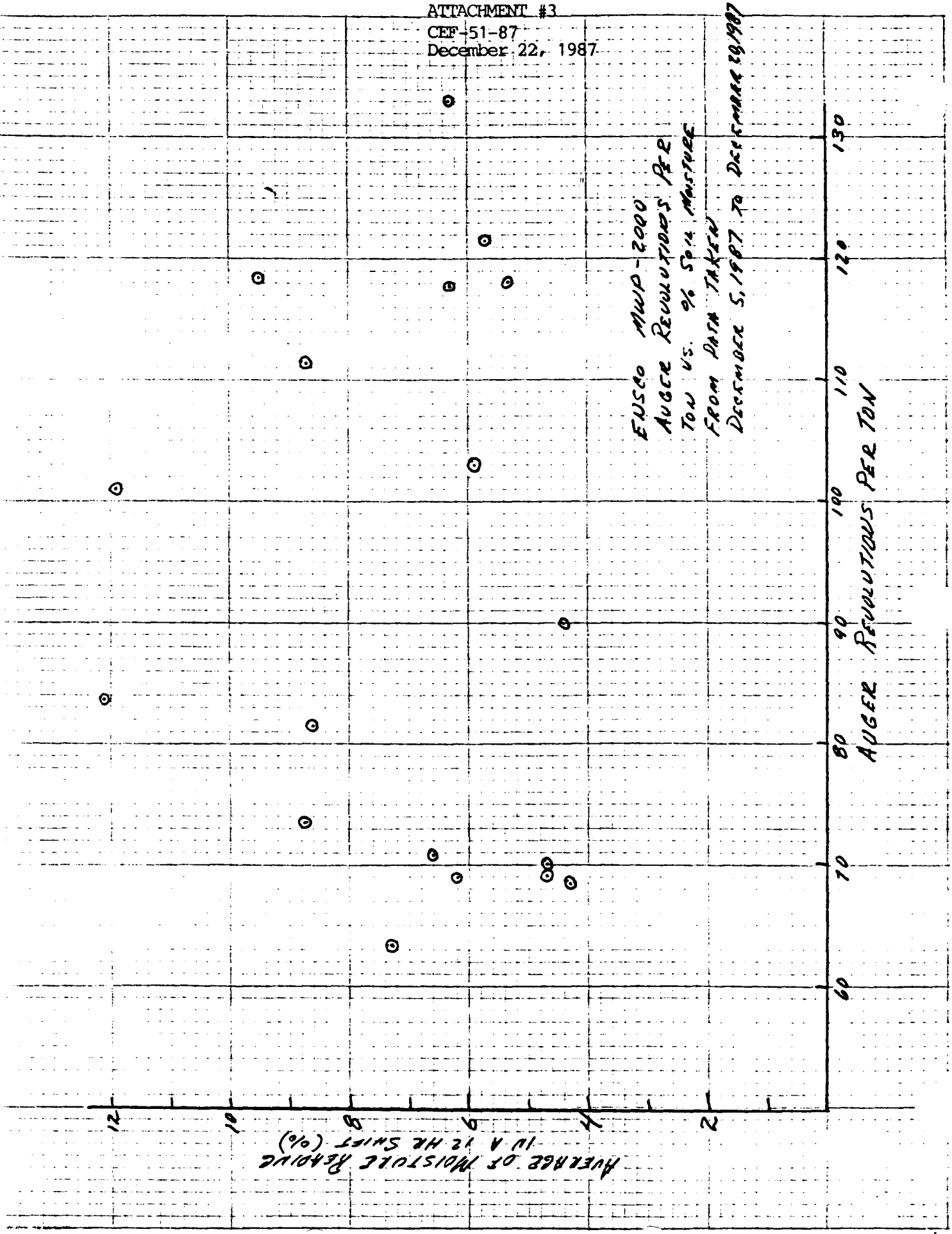
ENSCO MWP-2000 FEEDRATE DATA

DATA PERIOD FROM DATE/TIME	TO DATE/TIME	AVERAGE FEEDRATE T/HR	TOTAL REV	TOTAL TON	AUGER REV/TON	RPM T/HR	SOIL MOIST. %
12/05/87 0600	2/05/87 1800	2.48	1834	29.01	63.22	5.58	7.3
12/05/87 1800	12/06/87 0600	4.16	2965	42.94	69.05	6.10	4.7
12/06/87 0600	12/06/87 1800	3.62	3402	41.73	81.52	7.20	8.6
12/06/87 1800	12/07/87 0600	2.88	3719	33.42	111.28	9.83	8.7
12/07/87 0927	12/07/87 1800	4.06	3651	31.01	117.74	10.40	6.3
12/12/87 1515	12/12/87 1800	4.90	920	10.22	90.02	7.95	4.4
12/12/87 1800	12/13/87 0600	4.53	3076	37.25	82.58	7.29	
12/13/87 0600	12/13/87 1800	4.94	2886	40.7	70.91	6.26	6.6
12/13/87 1800	12/14/87 0600	5.2	2666	39.13	68.13	6.02	6.2
12/15/87 1401	12/15/87 1800	4.46	2092	17.64	118.59	10.47	9.5
12/15/87 1800	12/16/87 0600	3.97	4758	39.14	121.56	10.74	5.7
12/16/87 0600	12/16/87 1800	4.31	4089	39.65	103.13	9.11	5.9
12/16/87 1800	12/17/87 0600	4.4	4746	40.03	118.56	10.47	5.3
12/17/87 0600	12/17/87 1800	4.51	1812	26.44	68.53	6.05	4.3
12/17/87 1800	12/18/87 0600	4.93	3193	45.47	70.22	6.20	4.7

ATTACHMENT #1 (CONT'D)
CEF-51-87
December 20, 1987

DATA PERIOD FROM DATE/TIME	TO DATE/TIME	AVERAGE FEEDRATE T/HR	TOTAL REV	TOTAL TON	AUGER REV/TON	RPM T/HR	SOIL MOIST. %
12/18/87 0800	12/18/87 1800	4.92	3188	43.32	73.59	6.50	8.7
12/18/87 1800	12/19/87 0600	3.96	4506	44.64	100.94	8.92	11.9
12/19/87 0600	12/19/87 1800	4.75	3859	46.03	83.84	7.41	12.1
12/19/87 1800	12/20/87 0600	2.98	4449	33.39	133.24	11.77	6.3

ATTACHMENT #2
CEF-51-87
December 22, 1987



ATTACHMENT #3
CEF-51-87
December 22, 1987