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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

JUN 19 1990

MEMORANDUM FOR: George Bidinger, Chief, Uranium Fuel Section, NMSS
FROM: D. J. Sreniawski, Nuclear Materials Safety Branch, Region III
SUBJECT: ABB-CE (HEMATITE FACILITY) ENVIRONMENTAL SAMPLING

This refers to the telephone discussion of June 12, 1990, between you and Merri Horn and William Axelson and me concerning the significance of soil sample activity from ABB-CE (Hematite facility). The samples were taken by NRC personnel on September 1 and 7, 1989 following the unplanned release of UF₆ (Report No. 70-36/89003(DRSS)).

- o The samples were analyzed by RESL and the results included in the routine inspection report (Report No. 70-0036/89004(DRSS)).
- o A review of the alpha spectroscopy data (attached) showed total U-238, U-235, plus U-234/233 activity in soil near the security fence (but outside the restricted area) to range from 3.7 to 95.8 pCi/gm. Based on these results, it was concluded during our discussion that a characterization by the licensee of the activity in soil at the Hematite facility is needed. In preparation for this site survey, Region III will arrange to obtain split samples of soil with the licensee and use the results of these samples to verify that the licensee's sampling, counting and analysis techniques are acceptable. The split sampling is to take place during the week of August 6, 1990.

Another issue discussed was the plans to have a criticality review of the blender equipment during the same inspection trip. We will coordinate these plans with your section in future correspondence.

D. J. Sreniawski

D. J. Sreniawski

Attachment: As stated

- cc w/attachment:
- C. E. Norelius, RIII
- B. S. Mallett, RIII
- G. M. France, III, RIII
- S. Soong, NMSS

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SAMPLES TAKEN BY THE NRC AND COMBUSTION ENGINEERING

Samples 1 thru 8 taken 9-1-89
Samples 1b thru 9b taken 9-7-89
All samples taken were soil and vegetation except
numbers 7 and 8 which were water and sediment.

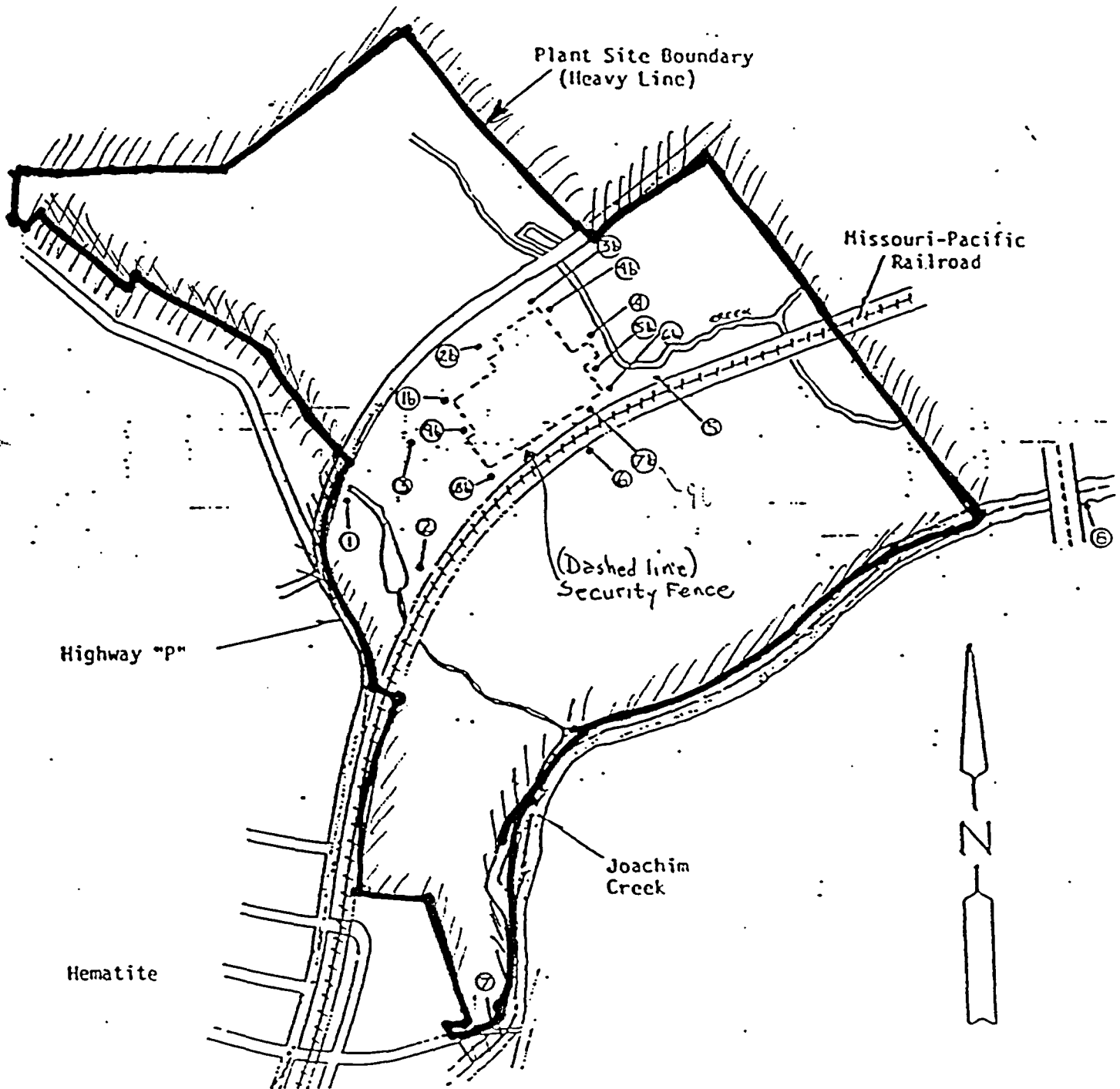
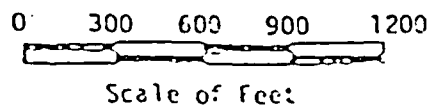


FIGURE 8



CE Hematite 09/01 and 07/90

<u>Sample No</u>	<u>Total pCi/gram - (Sample Description)</u> <u>(U-238; U-235; U-234/233)</u>	
1	7.4	Soil
2	3.7	Soil
3	6.8	Soil
4	7.8	Soil
5	6.2	Soil
6	7.8	Soil
*7	0.7	*Control Sludge
*8	0.3	*Soil/Sludge
1B	38.9	Soil
2B	9.2	Soil
3B	19.1	Soil
4B	27.1	Soil
5B	17.8	Soil
6B	6.5	Soil
7B	95.8	Soil
8B	38.5	Soil
9B	20.9	Soil
+10B	2.2	+Off-site Soil
+11B±	2.2	+Off-site Soil