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Subject Analysis of Columbia River Mud

By N. R. Hoff

Tc H. Worthington

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May 23, 1944

1. Mr. Worthington
2. G. P. Kiddar
3. D. M. Smith
4. M. R. Hoff
5. Reading File
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Mr. Hood Worthington,
Civics Department, THX,
in Pont de Nemours & Company,
Wilmington, Delaware.

Re: Analysis of Columbia River Mud

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Dear Mr. Worthington:

Below is given our analysis of the Columbia River mud submitted by you to D. M. Smith.

Methods followed were those outlined in "Standard Methods for the Examination of Water and Sewage", 8th Ed. (A.P.H.A.)

Values in the first column give per cent on the oven dried (110°C) sample while the second column lists P. P. M. in the water on the basis of 17.0 grams of mud recovered from fifty gallons.

Constituent	Per cent	P.P.M. in Water
Silica as SiO_2	5.73	5.1
Iron as Fe_2O_3	1.25	1.1
Aluminum as Al_2O_3	0.22	.2
Calcium as Ca	22.24	19.9
Magnesium as Mg	5.35	4.8
Sodium as Na	2.09	1.9
Carbonate as CO_3	29.90	26.7
Chlorides as Cl	0.79	.7
Phosphate as PO_4	.06	.05
Nitrates as NO_3	<.05	—
Sulfide	.00	—
Sulfate as SO_4	16.25	14.5
Volatile matter at 600°C. (includes 0.2% caused by CO_3 decomposition)	16.10	14.4

Yours very truly,

M. D. WHITAKER, DIRECTOR
CLINTON LABORATORIES

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M. R. Hoff, Sr. Supv.
Analytical Division.

MASTER

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