



Reply to: 2540 Water Quality

Date: August 24, 1983

Subject: Chemical Analysis of Soil Samples Collected from  
Champion's Thompson River Haul Road.

To: District Ranger, Plains/Thompson Falls RD

Based on a concern voiced by the District as to possible toxic chemicals in the road dust oil used on Champion's haul road along the Thompson River, we arranged for three road material samples to be analyzed by the State Water Quality Bureau. The State's Water Quality laboratory suggested a qualitative test, Total Organic Halogens, be performed to indicate whether further tests for specific constituents were needed. The results of this test are as follows:

<u>Sample No.</u>	<u>Sample Location (miles from Highway 200)</u>	<u>Total Organic Halogens (parts per billion as Chlorine)</u>
1	1.5	75.04
2	3.5	28.79
3	8	47.84

The tests revealed the presence of some form of chlorinate hydrocarbon at very low levels. I consulted with chemists in the Water Quality Bureau and they indicated that if these concentrations were of a specific compound such as PCB, the levels would warrant concern.

The EPA laboratory in Bozeman volunteered to analyze one sample for PCB at no cost. No PCB was detected. The EPA chemist suspected that the compounds detected in the qualitative analysis could be herbicide residues.

The laboratory tests performed did not detect toxic chemicals in the soil samples. Provided that dust oil is carefully applied to the road surface and that rain does not wash fresh oil into the river, normal road drainage should not impact water quality.

Copies of the lab reports are enclosed.

ARNE ROSQUIST  
Forest Hydrologist

Enclosure

cc:

- ✓ Spoon
- Dunlop
- Bob McKinsey, Champion Timberlands
- Roger Claridge, LHC Logging and Construction





UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

CR # 83W-0788

1. SAMPLE NO.  
2392

2. DATE COLLECTED  
5/20/83

3. REGION  
VIII

4. EPA REG. NO.  
N/A

5. ESTABLISHMENT NO.  
N/A

REPORT OF ANALYSIS

6. DESCRIPTION OF SAMPLE

Soil in a one quart Mason jar

7. NAME AND ADDRESS OF ESTABLISHMENT WHERE SAMPLE WAS COLLECTED (Include ZIP code)

Larry Brown  
Water Quality Bureau  
Helena, MT 59620

8. PRODUCT NAME

Soil

9. LOT OR CODE NUMBER(S)

N/A

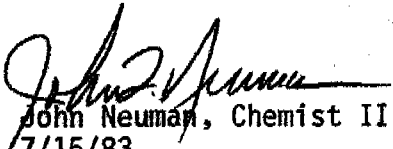
10. NAME AND ADDRESS OF PRODUCER (If different from 7 above)

N/A

11. RESULTS OF ANALYSIS

Method: EPA Method for Organochlorine Pesticides in Soil and Sediment with Further Partition, Florisil Column, and GPC Cleanup; GLC/Hall

	<u>Found-</u>	<u>Detection Limit</u>
PCB	None detected	1.0 ppm

Analyst:   
John Neuman, Chemist III  
7/15/83

  
Laszlo Torma, Chief

John Neuman

Laszlo Torma, Chief

Sec. 9(a) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136g) requires that if an analysis is made of any sample collected in connection with the enforcement of the Act, a copy of the results of such analysis must be furnished promptly to the owner, operator or agent in charge of the establishment where the sample was collected. This section of the Act is quoted on the reverse of this form.

The information contained in this report should not be used in the labeling, advertising, or other promotion of the product analyzed.

Additional information regarding results of analysis may be obtained from the individual listed below.

NAME AND TITLE OF EPA OFFICIAL

ADDRESS OF REGIONAL OFFICE (Include ZIP code)

PHONE NUMBER

DATE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

CR # 83W-0788

REPORT OF ANALYSIS

1. SAMPLE NO. 2392	2. DATE COLLECTED 5/20/83
3. REGION VIII	4. EPA REG. NO. N/A
5. ESTABLISHMENT NO. N/A	

6. DESCRIPTION OF SAMPLE  
**Soil in a one quart Mason jar**

7. NAME AND ADDRESS OF ESTABLISHMENT WHERE SAMPLE WAS COLLECTED (Include ZIP code)	8. PRODUCT NAME
Larry Brown Water Quality Bureau Helena, MT 59620	Soil
	9. LOT OR CODE NUMBER(S) N/A

10. NAME AND ADDRESS OF PRODUCER (If different from 7 above)  
N/A

11. RESULTS OF ANALYSIS

**Method:** EPA Method for Organochlorine Pesticides in Soil and Sediment with Further Partition, Florisil Column, and GPC Cleanup; GLC/Hall

	<u>Found-</u>	<u>Detection Limit</u>
PCB	None detected	1.0 ppm

**Analyst:** John Neuman, Chemist III  
7/15/83

Laszlo Torma, Chief

12. LABORATORY COMMENTS

2% recovery of 1260 fortified in 10 grams subsample of the sample was 70%. Fortification level was 3.7 ppm. Recovered level was 2.6 ppm.

07/18/1983

13. SIGNATURE OF LAB SUPERVISOR Laszlo Torma, Chief	14. NAME OF LABORATORY Mt Dept of Ag	15. DATE 7/18/83
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TOX IN DISTILLED WATER EXTRACT OF SOIL SAMPLES

#1=33.116 #2=35.096 #3=36.886

SAMPLES EXTRACTED WITH 100 ML H2O THEN CENTRIFUGED THEN FILTERED THROUGH WATMAN GFC FILTER TO CLARIFY-FINAL SAMPLE SLIGHTLY TURBID

ANALYST-JOHN D HAWTHORNE

DATE-6/2/83

TOX STANDARD DATA:

Seq. #	Label	Vol. (ml)	Area	Conc. (ppb Cl)
1	200	5.00	2090.3	200.00
2	200	5.00	1920.1	200.00
3	200	5.00	1965.2	200.00
4	100	5.00	1062.2	100.00
5	100	5.00	946.2	100.00
6	100	5.00	991.5	100.00
7	00	5.00	51.5	0.00

TOX STANDARD STATISTICS:

Label	Reps.	Mean Area	Std.Dev.	Coeff.Var. (%)
200	3	1991.87	88.18	4.427
100	3	999.97	58.46	5.846
00	1	51.50	0.00	0.000

TOX REGRESSION:

Regression degree = 2

$$Y = (C0) + (C1) X^1 + (C2) X^2$$

WHERE:

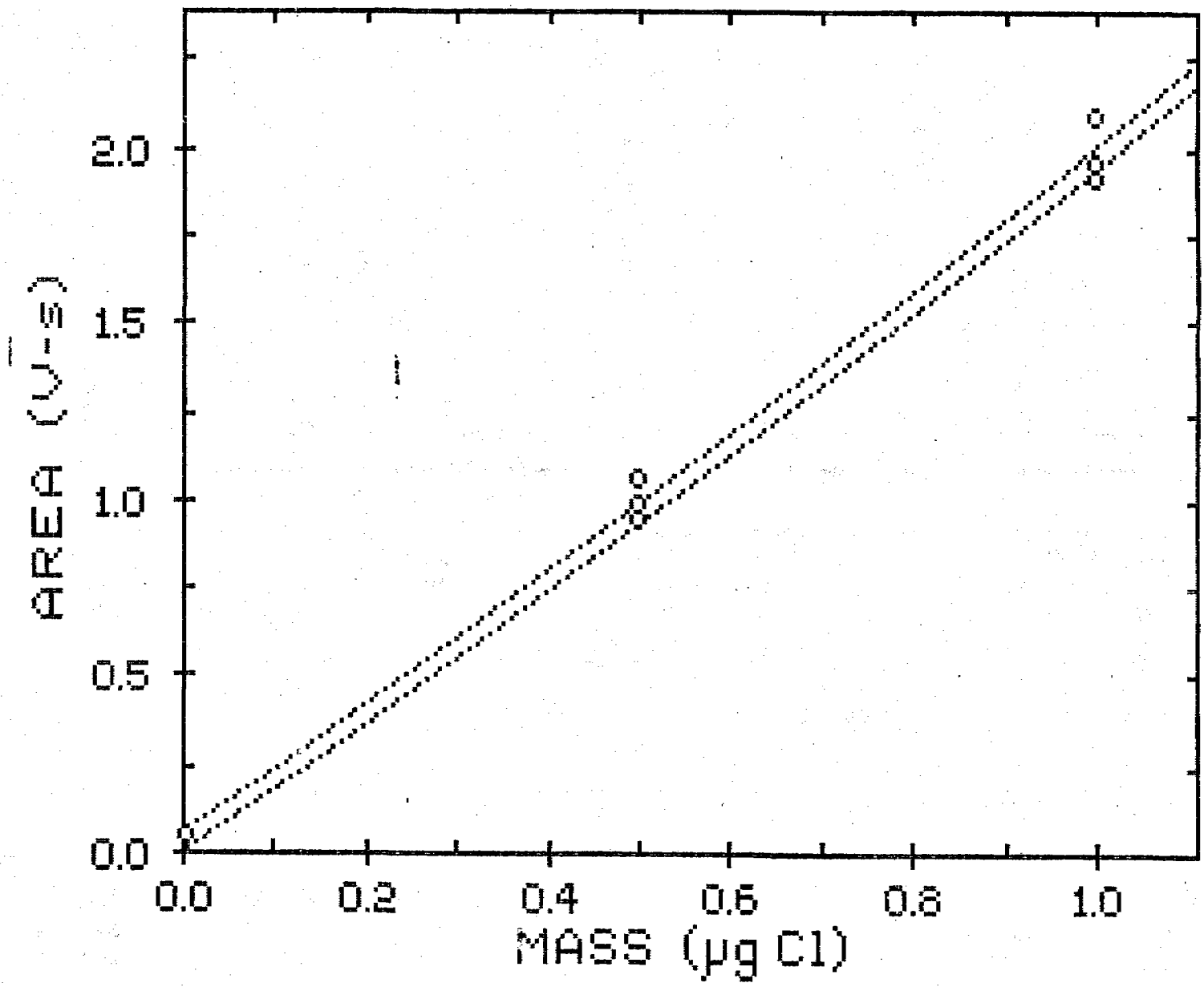
(X) represents PEAK AREA (mV-secs)

(Y) represents CONC (ppb Cl) x VOL (ml) or (ng Cl)

Constant (C0) = -30.8398 (not used)  
 Degree 1 coefficient (C1) = 0.55680  
 Degree 2 coefficient (C2) = -2.0789 E -5

Coefficient of Correlation = 0.996824

— 3 —



TOX SAMPLE DATA:

Regression degree = 2

Seq. #	Label	Vol. (ml)	Area	Conc. (ppb Cl)
1	SOIL #1	5.00	707.0	76.65
2	SOIL #1	5.00	676.4	73.42
3	SOIL #2	5.00	296.3	32.63
4	SOIL #2	5.00	225.9	24.94
5	SOIL #3	5.00	431.3	47.26
6	SOIL #3	5.00	442.2	48.43
7	HALF100	5.00	314.0	34.56
8	HALF100	5.00	359.9	39.54
9	50 STD	5.00	394.2	43.25

TOX SAMPLE STATISTICS:

Label	Reps.	Mean Conc. (ppb Cl)	Std. Dev.	Coeff. Var. (%)
SOIL #1	2	75.04	2.29	3.045
SOIL #2	2	28.79	5.44	18.881
SOIL #3	2	47.84	0.830	1.735
HALF100	2	37.05	3.52	9.510
50 STD	1	43.25	0.00	0.000

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John Hawthorne  
35 grams ~~100~~ →

#1 total org. hal. as Cl.  
25.04 ppb loamy

#2 29. ppb sandy

#3 48. ppb sandy



**FOR SUPPLIES,  
EQUIPMENT, OR SERVICES**

MAIL TO: (Purchasing Activity)

1 REQUISITIONING OFFICE

INSTRUCTIONS: Agencies must provide  
particulars in unshaded areas. See reverse.

2 RECEIVING OFFICE NO.	3 CONTRACT NUMBER	4 ORDER DATE	5 SF-37	6 UNIT CODE	7 FUND CODE	8 PURCHASE/DELIVERY ORDER NUMBER	9 SUB.	1A REQUISITION NO. (Document Control No.)	1B REQUISITION DATE
									4/14/83

CHECK ONE <input type="checkbox"/> Purchase Order <input type="checkbox"/> Delivery Order	10 TO: (Seller)	11 SHIP TO (Consignee and Destination)
		04/14/1983
		<input type="checkbox"/> INSIDE DELIVERY REQUESTED

12 LINE ITEM	13 ACT. CODE	14 DESCRIPTION	15 BUDGET OBJECT	16 ACC. LINE	17 QUANTITY	18 UNIT ISSUE	19 UNIT PRICE	20 AMOUNT
		LABORATORY ANALYSIS OF ROAD SURFACE SOIL OR "SLURRY" SAMPLES FOR THE PRESENCE OF TOTAL ORGANIC HALOGENS			3		30.00	90.-
		Sample #1 - Roadside Ditch 1.5 miles						
		#2 - Riverside of Road 3.5 miles						
		#3 - Riverside of Road 8 miles						
		collected 4/20/83 sent 4/24/83						
		For additional information, please contact:						
		TECHNICAL CONTACT	TELEPHONE NO.					

21 FOB POINT	22 DISCOUNT TERMS	25 Sub Total	27 TOTAL
		90.-	90.-

29 ACCOUNTING CLASSIFICATION	30 DISTRIBUTION	31 AMOUNT
A 5 B 10 C 5 D 3 E 1 4 1 2	340910	90.-

SOURCES OF SUPPLY: (If necessary, use attachment)	I certify that the above items are necessary for use in the public service.
MONTANA DEPT OF HEALTH AND ENV. SCIENCES WATER QUALITY BUREAU CHEMISTRY LABORATORY COGSWELL BLDG, HELENA, MT 59620	TITLE FOREST HYDROLOGIST SIGNATURE OF AUTHORIZED REPRESENTATIVE Clint Redquist Jr.