



88-e14

Segment No. 18-37-01
WA-37-1012

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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TO: Russ Taylor *aj D.N.*
FROM: Art Johnson *aj* and Dale Norton
SUBJECT: Re-survey for Aldrin in Spring/Snipes Creek
DATE: January 19, 1988

Attached are the results of chlorinated pesticides/PCBs analysis of stream bed sediments in Spring/Snipes Creek and the Yakima River above their confluence. This analysis was done to follow up on our finding of a high aldrin concentration (1065 µg/Kg, dry) at the mouth of Spring/Snipes Creek in 1985 (Johnson et al. 1986).

The sediments were collected October 12, 1987. Sample collection, handling and analysis were identical to the 1985 survey. The following samples were analyzed.

<u>Sample No.</u>	<u>Location</u>
8350	Yakima River off left bank approximately 0.2 miles above the Prosser STP outfall
8351	Yakima River off left bank below Prosser STP outfall at Highway 82 bridge
8352	Mouth of Spring/Snipes Creek
8353	Mouth of Spring/Snipes Creek (replicate sample)
8354	Duplicate analysis of 8352
8355	Spring Creek approximately 50 feet above confluence with Snipes Creek
8356	Snipes Creek approximately 600 feet above confluence with Spring Creek

Neither aldrin nor its metabolite dieldrin were detected in any of the samples (5 µg/Kg detection limit). DDE was present in all samples (8-80 µg/Kg); lesser amounts of DDD (25 µg/Kg) and (DDT 8 µg/Kg) were detected in the sample from the Yakima River above the Prosser STP. No other chlorinated pesticides or PCBs were detected. Results from our 1985 survey (also attached) indicate these findings are not unusual for the Yakima drainage.

Based on these results it appears there is no aldrin contamination problem in Spring/Snipes Creek.

AJ/DN:jms
Attachments

Reference: Johnson, A., D. Norton, and B. Yake. 1986. Occurrence and significance of DDT compounds and other contaminants in fish, water, and sediment from the Yakima River Basin. Washington State Department of Ecology, 86-5. 89pp.

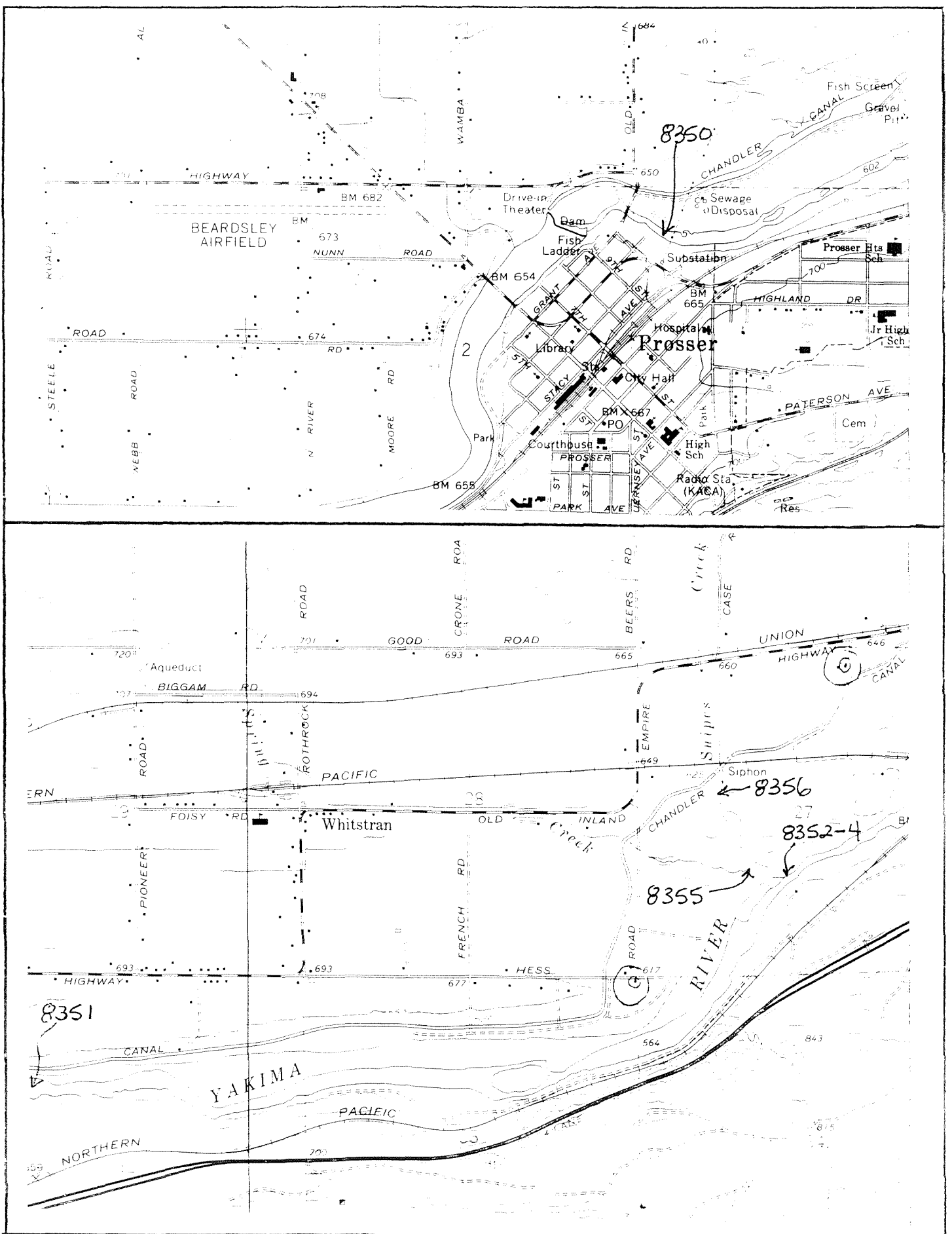


Figure 1: Station locations Spring/Snipes Creek October 12, 1987.

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EPA Region X Lab Management System
*** Lab Analysis Report ***

Transaction #: 01121421

(71) Pest/PCB - PP Scan

Proj Code : DOE-577A SPRING/SNIPES CREEK, PROSSER

PE # : 41652

Sample Id:	87428350	87428351	87428352	87428353	87428354
Matrix:	Sediment	Sediment	Sediment	Sediment	Sediment
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
% Slds:	68	28.7	68.0	67.0	65.5
QA Code:					
Date Extract:	871026	871026	871026	871026	871026
Date Analyzcd:	871124	871124	871124	871124	871124
1 Aldrin	5U	5U	5U	5U	5U
2 Chlordane	5U	5U	5U	5U	5U
3 Dieldrin	5U	5U	5U	5U	5U
4 DDT, 4,4'-	8	5U	5U	5U	5M
5 DDE, 4,4'-	80	27	8	10	13
6 DDD, 4,4'-	25	5U	5U	5U	5U
7 Endosulfan, alpha-	5U	5U	5U	5U	5U
8 Endosulfan, beta-	5U	5U	5U	5U	5U
9 Endosulfan sulfate	5U	5U	5U	5U	5U
10 Endrin	5U	5U	5U	5U	5U
11 Endrin aldehyde	5U	5U	5U	5U	5U
12 Heptachlor	5U	5U	5U	5U	5U
13 Heptachlor epoxide	5U	5U	5U	5U	5U
14 BHC, alpha-	5U	5U	5U	5U	5U
15 BHC, beta-	5U	5U	5U	5U	5U
16 BHC, gamma-	5U	5U	5U	5U	5U
17 BHC, delta-	5U	5U	5U	5U	5U
18 Toxaphene	150U	150U	150U	150U	150U
19 PCB - 1016	50U	50U	50U	50U	50U
20 PCB - 1221	50U	50U	50U	50U	50U
21 PCB - 1232	50U	50U	50U	50U	50U
22 PCB - 1242	50U	50U	50U	50U	50U
23 PCB - 1248	50U	50U	50U	50U	50U
24 PCB - 1254	50U	50U	50U	50U	50U
25 PCB - 1260	50U	50U	50U	50U	50U
26 Methoxychlor	50U	50U	50U	50U	50U
27 Hexachlorobenzene					
28 Hexachlorobutadiene					
29 DDE (I.S.) IntStd %RC					
30 Spike Tetrabrom IntStd %RC					
31 Spike Hexabromo IntStd %RC	134	122	150	143	125
Total Organic Carbon (% dry basis)	2.5	3.2	0.5	0.3	1.1

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EPA Region X Lab Management System

*** Lab Analysis Report ***

Transaction #: 01121421

(71) Pest/PCB - PP Scan

Proj Code : DOE-577A SPRING/SNIPES CREEK, PROSSER

PE # : 41652

Sample Id:	87428355	87428356
Matrix:	Sediment	Sediment
Units:	ug/kg	ug/kg
% Slds:	69.2	67.9
QA Code:		
Date Extract:	871026	871026
Date Analyzd:	871124	871124
1 Aldrin	5U	5U
2 Chlordane	5U	5U
3 Dieldrin	5U	5U
4 DDT, 4,4'-	5U	5U
5 DDE, 4,4'-	17	16
6 DDD, 4,4'-	5U	5U
7 Endosulfan, alpha-	5U	5U
8 Endosulfan, beta-	5U	5U
9 Endosulfan sulfate	5U	5U
10 Endrin	5U	5U
11 Endrin aldehyde	5U	5U
12 Heptachlor	5U	5U
13 Heptachlor epoxide	5U	5U
14 BHC, alpha-	5U	5U
15 BHC, beta-	5U	5U
16 BHC, gamma-	5U	5U
17 BHC, delta-	5U	5U
18 Toxaphene	150U	150U
19 PCB - 1016	50U	50U
20 PCB - 1221	50U	50U
21 PCB - 1232	50U	50U
22 PCB - 1242	50U	50U
23 PCB - 1248	50U	50U
24 PCB - 1254	50U	50U
25 PCB - 1260	50U	50U
26 Methoxychlor	50U	50U
27 Hexachlorobenzene		
28 Hexachlorobutadiene		
29 DDE (I.S.) IntStd %RC		
30 Spike Tetrabrom IntStd %RC		
31 Spike Hexabromo IntStd %RC	108	80

Total Organic Carbon
(90 dry basis)

0.1

0.3

Table 18. Concentrations of organochlorine pesticides, PCBs, and mercury in bed sediment samples collected by Ecology from the Yakima River and tributaries on September 24 and 25, 1985 (ug/Kg dry).

Sample Location	Sample Number	% Dry Wt.	% Total Org. Carb.	Grain Size				p,p'-DDE	p,p'-DDT	o,p'-DDT	p,p'-DDD	t-DDT	t-DDT TOC Corrected	Diel-drin	Endo-sul-fan	Al-drin	PCBs	Mercury
				Gravel (>2mm)	Sand (2mm-62um)	Silt (62um-4um)	Clay (<4um)											
Yakima R. @ Cle Elum Wilson Cr.	8129	75	0.6	0	97.91	1.00	1.09	0.1J	0.1u	0.1u	0.1u	0.1	17	0.1u	0.1u	0.1u	1.5u	28
	8130	71	0.9	0	80.06	16.78	3.76	4.9	2.2	0.66	1.0	8.8	980	2.6	0.1u	0.1u	1.5u	9
Yakima R. @ Rosa Dam Birchfield Drain	8131	48	3.1	0	38.02	58.73	3.25	17.4	27.3	3.8	16.9	65.4	2,100	8.2	0.1u	0.1u	1.5u	34
	8132	80	0.5	9.10	84.35	1.40	5.15	1.3	1.8	0.62	0.33	4.0	800	0.1u	0.1u	0.1u	1.5u	4u
Yakima R. @ Wapato Dam Granger Drain Marion Drain Sulphur Cr. " "	8133	46	2.3	0.08	46.13	49.89	3.90	65.7	11.1	2.1	15.4	94.3	4,100	2.4	4.1	0.1u	1.5u	32
	8134	75	0.3	0	87.61	2.50	9.89	10.5	19.3	1.2	3.6	34.6	12,000	0.7	0.1u	0.1u	1.5u	8
	8135	70	2.3	3.19	90.33	4.37	2.11	7.0	2.1	0.32	2.2	11.6	500	0.1u	0.1u	0.1u	1.5u	11
	8136	67	1.5	0	48.61	48.47	2.92	129	59.2	8.4	37	234	16,000	14.9	0.1u	0.1u	1.5u	19
" "	8137	87	0.4	0.77	86.35	11.21	1.67	33.2	50.2	1.6	6.7	91.7	23,000	3.1	0.1u	0.1u	1.5u	7
Yakima R. @ Prosser Dam " " " " Spring/Snipes Cr.t	8138	79	0.2	0	97.86	1.46	0.68	1.5	0.41	0.10	0.41	2.4	1,200	0.1J	0.1u	0.1u	1.5u	24
	8141	79	0.1	0	98.72	0.68	0.60	1.2	0.31	0.13	0.35	1.9	1,900	0.1u	0.1u	0.1u	1.5u	18
	8139	79	0.3	0.79	89.24	7.70	2.34	4.1	3.8	0.81	1.0	9.7	3,200	10.1	0.1u	1065	1.5u	4
Yakima R. @ Horn Rapids Dam	8140	64	1.0	0.01	52.44	44.31	3.24	30.1	3.4	0.71	5.3	39.5	4,000	1.7	0.1u	0.1u	1.5u	22

NOTE: See Table 5 Part A for detection limits of organochlorine pesticides analyzed for but not detected.

† = Isodrin also tentatively identified at an estimated concentration of 17 ug/Kg dry.

u = Not detected at detection limit shown.

J = Estimated concentration.

From: Johnson, A., D. Norton, and B. Yake. 1986. Occurrence and significance of DDT compounds and other contaminants in fish, water, and sediment from the Yakima River Basin. Washington State Department of Ecology. 86-5. 89pp.