Riverbed discharge diffuser head located on the upstream tip of D-Island.

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Department Of Health Sees *No Evil* in Radioactive Salmon Spawning Grounds

Contrary to recent official assurances, Washington State's Department of Health (WDOH) has found europium-152 and other radioactive waste contaminating the Hanford Reach National Monument. WDOH identified that radioactivity coming from the old Hanford nuclear facility in a sample of beach sand from Hanford's D-Island during a radiological study in 1995.

According to Norm Buske, a scientist studying Hanford's impact on the Columbia Riverbed, radioactivity in sediments leads to radioactivity in riverbed water, where salmon hatchlings live. That contamination might have profound consequences for wild salmon spawning in the Hanford Reach.

Earlier this year, WDOH harshly criticized an August 2002 report by Buske that identified Hanford radioactivity, including europium-152, in Hanford Reach salmon spawning grounds. WDOH assured the public, "It is unlikely than any Eu-152 remains in the Hanford Reach from that time [when Hanford reactors operated during the Cold War]." (See Ref. 1.)

Buske replies: "WDOH's criticism of my results, while their own data confirmed my findings, looks suspicously like Washington State is selling the salmon out to the Department of Energy," operator of Hanford Site and also the sole funder of WDOH's Division of Radiation Protection.

Along with europium-152, WDOH found cobalt-60, cesium-137, strontium-90, and plutonium 239 in its analysis of beach sand from D-island. These findings agree with Buske's results, published in August 2002 by the Government Accountability Project. The specific data comparison follows: (See back.)

Geiger counter readings on riverbed discharge diffuser head. Background is 60.

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WDOH radiological results of a total sand sample from downstream D-Island, September 1995 (units: picocuries per gram):

Co-60	Sr-90	Tc-99	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239	UTot
0.16	0.005	0.38	0.66	0.28	0.03	0.009	0.011	1.2

UTot = Total Uranium, only partly of Hanford origin.
See Ref. 2, below.

TRAC radiological results of a sieved-and-flotated sand sample #172914, from downstream D-Island, July 2001 (units: picocuries per gram):

Co-60	Sr-90	Tc-99	Cs-137	Eu-152	Eu-154	Pu-238	Pu-239	UNat
ND	ND	ND	0.10	0.38	ND	NA	NA	0.93

NA = No Analysis
ND = No Detection (below detection limit)
UNat = Natural Uranium
See Table 1, p.17, in "Hanford Radioactivity in Salmon Spawning Grounds."

Radionuclide		Produced by	Half-life in Years
Co-60	= Cobalt-60	neutron activation	5
Sr-90	= Strontium-90	nuclear fission	29
Tc-99	= Technetium-99	nuclear fission	213,000
Cs-137	= Cesium-137	nuclear fission	30
Eu-152	= Europium-152	neutron activation	13
Eu-154	= Europium-154	neutron activation	9
Pu-238	= Plutonium-238	neutron activation	88
Pu-239	= Plutonium-239	neutron activation	24,100

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Ref. 1. "Comments On Hanford Radioactivity In Salmon Spawning Grounds," ERS 02-506, Division of Radiation Protection, Olympia, WA 98504, May 24, 2002. Also at Appendix 3 in <www.radioactivist.org/U233zFIN.pdf>, with commentary.

Ref. 2 "Environmental Radiation Program 100-D Island Radiological Survey," Excerpt of Publication WDOH/ERS-96-1101. See <www.doh.wa.gov/ehp/rp/100-d.htm>, updated to 06/27/02.

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The RadioActivist Campaign (TRAC) is a non-profit, scientific project of the Tides Center of San Francisco. TRAC is based in Belfair, WA.

Close up of riverbed discharge diffuser head.