SMITH & LOWNEY, P.L.L.C.
2317 EAST JOHN STREET
SEATTLE, WASHINGTON 98112
(206) 860-2883, FAX (206) 860-4187

May 22, 2013

Via Certified Mail - Return Receipt Requested
Lieutenant General Thomas P. Bostick
Commanding General & Chief of Engineers
U.S. Army Corps of Engineers
441 G Street N.W.
Washington, D.C. 20314-1000

Re: NOTICE OF INTENT TO SUE THE U.S. ARMY CORPS OF ENGINEERS AND LIEUTENANT GENERAL THOMAS P. BOSTICK UNDER THE CLEAN WATER ACT

Dear Lieutenant General Thomas P. Bostick:

This letter is to provide you with sixty days notice of Columbia Riverkeeper's ("Riverkeeper") intent to file a citizen suit against the United States Army Corps of Engineers and Lieutenant General Thomas P. Bostick in his official capacity as the Commanding General and Chief of Engineers of the United States Army Corps of Engineers (collectively, the "Corps") under section 505 of the Clean Water Act, 33 U.S.C. § 1365, for the violations described herein. The Clean Water Act prohibits any person from discharging any pollutant to waters of the United States except as authorized by a National Pollutant Discharge Elimination System ("NPDES") permit. Continuing to discharge a pollutant without securing an NPDES permit constitutes an ongoing violation of the Clean Water Act.

The Corps has and continues to violate section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a), by discharging pollutants to waters of the United States and the States of Washington and Oregon from the following Columbia River and Snake River dams and their associated structures and facilities: Bonneville Dam, The Dalles Dam, John Day Dam, McNary Dam, Ice Harbor Dam, Lower Monumental Dam, Little Goose Dam, and Lower Granite Dam (collectively, the "Dams").[1] Specifically, the Corps discharges oils (including transformer oil), greases, other lubricants, and cooling water from the Dams without the authorization of NPDES permits in violation of the Clean Water Act.[2]

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[1] The term "Dam(s)," as used herein, includes the Dam(s) and all associated structures and facilities, including turbines, powerhouses, transformers, spillways, navigation lock systems, fish passage facilities, and cranes. Pursuant to 40 C.F.R. § 135.3(a), the approximate locations of the Dams are identified in Appendices 1 – 8.

[2] As explained below, the Corps has obtained one NPDES permit for certain oil pollution discharges from one of the Dams. Specifically, the Corps is authorized by the Oregon

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The Corps has a history of both acute spills and chronic leaks of pollutants into the Columbia River and Snake River, in addition to continuous and regular pollutant discharges. For example, in 2011 and 2012 the Corps reported discharging over 1,500 gallons of PCB-laden transformer oil at the Ice Harbor Dam on the Snake River. That oil contained PCBs at levels 14,000,000% greater than state and federal chronic water quality standards. According to the U.S. Environmental Protection Agency ("EPA"), PCBs cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.[3] The Corps' discharge of oil pollution from Ice Harbor Dam is not an isolated problem. As this notice of intent to sue explains, the Corps has a history of discharging oil and other pollution from the Dams without NPDES permits.

This notice of intent to sue is part of Riverkeeper's effort to protect people who rely on the Columbia and Snake Rivers for uses including drinking water, food, and recreation. Riverkeeper's mission is to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean. The organization's strategy for protecting the Columbia River and its tributaries includes working in river communities and enforcing laws that protect public health, salmon, and other fish and wildlife.

I. Legal Background.

Oregon and Washington's rivers, and the use of rivers by people, fish, and wildlife, are protected by both federal and state law. In 1972, Congress passed the Clean Water Act to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The Clean Water Act is the cornerstone of surface water quality protection in the United States. In the forty years since its passage, the Act has dramatically increased the number of waterways that are once again safe for fishing and swimming. Despite the great progress in reducing water pollution, many of the Nation's waters still do not meet the water quality goals. In fact, the vast majority of rivers and streams in Washington and Oregon fail to meet basic state water quality standards for pollutants such as toxics and temperature.[4] These standards are designed to protect designated uses, including aquatic life, fishing, swimming, and drinking water.

The NPDES permitting scheme is the primary means by which discharges of pollutants are controlled. At a minimum, NPDES permits must include technology-based

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Department of Environmental Quality to discharge pollution from the oil water separator at Powerhouse 1 at the Bonneville Dam under NPDES Permit No. 102768, EPA Reference No. OR003435-5. The Corps has secured NPDES permits for certain sewage wastewater discharges; such discharges are not the subject of this notice letter. *See* NPDES Permit EPA Reference Nos. OR0022624, WA0026701, WA0022110, and WA0022101.

[3] U.S. EPA, *Basic Information: Polychlorinated Biphenols,* http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/about.htm.

[4] *See* State of Washington 303(d) List, http://www.ecy.wa.gov/programs/wq/303d/index.html; State of Oregon 303(d) List, http://www.deq.state.or.us/wq/assessment/assessment.htm.

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effluent limitations, any more stringent limitations necessary to meet water quality standards, and monitoring and reporting requirements. *See* 33 U.S.C. §§ 1311, 1342, 1318. Every year, EPA and the states of Oregon and Washington issue hundreds of permits for pollution discharges into the Columbia and Snake Rivers. These include permits that regulate the discharge of toxic pollution, hot water, bacteria, and other pollutants. According to EPA, improvements to the quality of water in our rivers are directly linked to the implementation of the NPDES program and the control of pollutants discharged from both municipal and industrial point sources.[5]

II. The Heavy Toll of Pollution on the Columbia and Snake Rivers.

The Columbia and Snake Rivers are two of the West's great river systems. These rivers support rich fishing traditions, provide water for communities and agriculture, recreation opportunities, and power for hydroelectric dams. The rivers are also severely degraded by pollution. Toxic pollution threatens the health of people that eat local fish and jeopardizes the public's right to eat fish caught locally. Rising water temperatures also threaten the health of salmon and other aquatic life that rely on cool water for survival.

In 2006 EPA designated the Columbia River Basin, which includes the Snake River, a Critical Large Aquatic Ecosystem because toxic contamination and other pollution are so severe. In 2009 EPA released an in-depth report on toxic pollution in the Columbia, the *Columbia River Basin: State of River Report for Toxics*.[6] EPA's report concluded that harmful pollutants are moving up the food chain, impacting humans, fish, and wildlife. As the report explains, "[i]n 1992, an EPA national survey of contaminants in fish in the United States alerted EPA and others to a potential health threat to tribal and other people who eat fish from the Columbia River Basin." This survey prompted further study on the contaminated fish and the potential impacts on tribal members.

In particular, EPA funded four Columbia River tribes, through the Columbia River Intertribal Fish Commission ("CRITFC"), to study contaminant levels in fish caught at traditional fishing sites.[7] The study demonstrated the presence of 92 toxic chemicals in fish consumed by tribal members, resulting in a 50-fold increase in cancer risk among tribal members whose diets rely on river-caught fish. Contaminants found in these fish include PCBs, dioxins, furans, arsenic, mercury, and DDE, a toxic breakdown product of DDT.[8]

The CRITFC study is not alone in demonstrating the serious problem of toxic contamination. From 1989 to 1995, the Lower Columbia River Bi-State Water Quality Program ("Bi-State Program") generated substantial evidence demonstrating that water and

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[5] U.S. EPA, *Water Permitting 101* at 11, http://www.epa.gov/npdes/pubs/101pape.pdf.

[6] U.S. EPA, *Columbia River Basin State of River Report for Toxics* (hereafter *State of the River Report*) (January 2009), http://yosemite.epa.gov/r10/ecocomm.nsf/Columbia/SoRR/.

[7] *State of the River Report* at 4.

[8] *Id.* at 19.

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sediment in the Lower Columbia River and its tributaries have levels of toxic contaminants that are harmful to fish and wildlife.[9] The Bi-State Program concluded that:

- Dioxins and furans, metals, PCBs, PAHs, and pesticides impair the water sediment, and fish and wildlife;
- Arsenic, a human carcinogen, exceeded both EPA ambient water criteria for protection of human health and the EPA human health advisories for drinking water;
- Beneficial uses such as fishing, shellfishing, wildlife, and water sports are impaired;
- Many toxic contaminants are moving up the food chain and accumulating in the bodies of animals and humans that eat fish;
- People who eat fish from the lower Columbia over a long period of time are exposed to health risks from arsenic, PCBs, dioxins and furans, and DDT and its breakdown products.[10]

Other studies have confirmed and added to the overwhelming scientific evidence on toxic contamination in the Columbia River Basin.[11]

Pollution discharges from the Corps' Dams contribute to the pollution crisis on the Columbia and Snake Rivers. According to the National Oceanic & Atmospheric Administration's ("NOAA"):

> Spilled oil can harm living things because its chemical constituents are poisonous. This can affect organisms both from internal exposure to oil through ingestion or inhalation and from external exposure through skin and eye irritation. Oil can also smother some small species of fish or invertebrates and coat feathers and fur, reducing birds' and mammals' ability to maintain their body temperatures.[12]

The impacts of oil pollution are sobering. Yet the Corps discharges oil and other pollution from the Dams without the NPDES permit authorizations required by the Clean Water Act. In turn, the Corps fails to monitor and report pollution in a manner that enables the public to fully understand the extent and severity of the problem.

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[9] Lower Columbia River Estuary Partnership. 2007. *Lower Columbia River and Estuary Ecosystem Monitoring: Water Quality and Salmon Sampling Report* at 1.

[10] *Id.* at 5 - 6.

[11] *Id.* at 6 (citing studies by USGS, the U.S. Army Corps of Engineers, DEQ, and others); *see generally* U.S. EPA, *State of the River Report.*

[12] NOAA, Office of Response and Restoration, *How Oil Effects Fish and Wildlife in Marine Environments,* http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/how-oil-harms-animals-and-plants-marine-environments.html.

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III. Unpermitted Pollutant Discharges Common to All of the Dams.

Section 301(a) of the Clean Water Act prohibits discharges of oils (including transformer oil), greases, lubricants, cooling water, and other pollutants to the Columbia and Snake Rivers from the Dams without NPDES permit authorization. 33 U.S.C. § 1311(a). Without NPDES permits, the Corps is failing to monitor, report, and reduce pollution discharges pursuant to the Clean Water Act and state and federal implementing rules.

The Dams utilize Kaplan turbines, which have variable pitch blades that can be adjusted to increase efficiency. The shaft and hubs of these turbines are filled with oil or another lubricant. This oil or lubricant leaks to surface waters from certain locations, including the turbine blade packing/seals, especially when the turbines are not properly maintained and/or operationally controlled. Available information indicates that the Corps has not properly maintained and/or operationally controlled the Kaplan turbines on the Dams in a manner to prevent or minimize discharges. Accordingly, based upon such information, the Corps is in violation of section 301(a) of the CWA by discharging oil or lubricant from each of the Kaplan turbines at the Dams each and every day for the past six years.

Wicket gates control the amount of water flowing through the turbines at the Dams. The wicket gate bearings are lubricated with grease or another lubricant. This grease or lubricant is continuously fed into the bearings and discharged into surface waters. The Corps is in violation of section 301(a) of the CWA by discharging grease or lubricant from the bearings at each of the turbine wicket gates at the Dams each and every day for the past six years.

The Dams discharge oils, greases, lubricants, and other pollutants collected from various sources through sumps, including powerhouse drainage sumps, un-watering sumps, spillway sumps, navigation lock sumps, and other systems. Of these pollutant discharges, only those from the oil water separator at Powerhouse 1 at the Bonneville Dam are authorized by a NPDES permit. The Corps is in violation of section 301(a) of the CWA by discharging pollutants from these various drainage and/or un-watering sumps and other systems at the Dams. These violations have occurred each and every time the Corps made these discharges in the past six years and continue to occur. Discharges from the oil water separator at Powerhouse 1 at the Bonneville Dam authorized by NPDES Permit No. 102768 are excluded from this assertion.

The Dams discharge cooling water, and the heat associated therewith, that has been used to cool a variety of Dam components and materials, including turbines, generators, transformers, and lubricating oils. The Corps is in violation of section 301(a) of the CWA by discharging cooling water, and the associated heat, from the Dams each and every day for the past six years.

The Corps appears to recognize that discharging oil, greases, lubricants, cooling water, and other pollution to the Columbia and Snake Rivers from a Dam requires a NPDES permit. For instance, the Corps discharges pollution from the oil water separator at Powerhouse 1 at the Bonneville Dam pursuant to an NPDES permit issued by the Oregon Department of

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Environmental Quality. The Corps has not, however, applied for or obtained any NPDES permits for other sources of pollution discharges at the Bonneville Dam, including oil discharged to the Columbia River from the oil water separator at Power House 2. In 2008 the Corps submitted an application to EPA for an NPDES permit for 31 unpermitted wastewater discharge points to the Columbia River from The Dalles Dam. EPA has not issued an NPDES permit, yet the Corps continues to discharge oils, greases, lubricants, cooling water and other pollution from The Dalles Dam. The Corps has neither applied for nor obtained NPDES permits for oils, greases, lubricants, cooling water, and other pollution discharges from John Day Dam, McNary Dam, Ice Harbor Dam, Lower Monumental Dam, Little Goose Dam, and Lower Granite Dam.

IV. Unpermitted Pollutant Discharges Specific to Each Dam.

A. The Bonneville Dam.

Appendix 1 to this letter is a table that provides information regarding spill and similar incidents reported at the Bonneville Dam since May 22, 2007.[13] The Corps has violated section 301(a) of the CWA by discharging pollutants at the Bonneville Dam as described in Appendix 1 to this letter.

B. The Dalles Dam.

Appendix 2 to this letter is a table that provides information regarding spill and similar incidents reported at The Dalles Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at The Dalles Dam as described in Appendix 2 to this letter.

C. The John Day Dam.

Appendix 3 to this letter is a table that provides information regarding spill and similar incidents reported at the John Day Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at the John Day Dam as described in Appendix 3 to this letter.

D. The McNary Dam.

Appendix 4 to this letter is a table that provides information regarding spill and similar incidents reported at the McNary Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at the McNary Dam as described in Appendix 4 to this letter.

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[13] Appendices 1 – 8 detail specific reports of pollution at the Dams. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by the Dams.

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E. Ice Harbor Dam.

Appendix 5 to this letter is a table that provides information regarding spill and similar incidents reported at the Ice Harbor Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at the Ice Harbor Dam as described in Appendix 5 to this letter.

F. Lower Monumental Dam.

Appendix 6 to this letter is a table that provides information regarding spill and similar incidents reported at the Lower Monumental Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at the Lower Monumental Dam as described in Appendix 6 to this letter.

G. Little Goose Dam.

Appendix 7 to this letter is a table that provides information regarding spill and similar incidents reported at the Little Goose Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at the Little Goose Dam as described in Appendix 7 to this letter.

H. Lower Granite Dam.

Appendix 8 to this letter is a table that provides information regarding spill and similar incidents reported at the Lower Granite Dam since May 22, 2007. The Corps has violated section 301(a) of the CWA by discharging pollutants at the Lower Granite Dam as described in Appendix 8 to this letter.

V. Party Giving Notice of Intent to Sue.

The full name, address, and telephone number of the party giving notice is:

Columbia Riverkeeper
111 Third St.
Hood River, OR 97031
(541) 387-3030

VI. Attorneys Representing Riverkeeper.

The attorneys representing Riverkeeper in this matter are:

Brian A. Knutsen, Knoll Lowney, and Marc Zemel
Smith & Lowney, PLLC
2317 East John Street
Seattle, WA 98112
(206) 860-2883

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Lauren Goldberg, Staff Attorney
Columbia Riverkeeper
111 Third St.
Hood River, OR 97031
(541) 965-0985

VII. Conclusion.

The violations described herein reflect those indicated by the information currently available to Riverkeeper. Riverkeeper intends to sue for all violations, including those yet to be uncovered and those committed after the date of this notice of intent to sue.

Riverkeeper intends to seek injunctive relief to prevent further violations under sections 505(a) and (d) of the CWA, 33 U.S.C. § 1365(a) and (d), and such other relief as is permitted by law. Columbia Riverkeeper further intends to seek recovery of its litigation expenses as authorized by section 505(d) of the CWA, 33 U.S.C. § 1365(d).

Riverkeeper believes that this notice of intent to sue sufficiently states grounds for filing suit. Riverkeeper intends to file one or more citizen suits against the United States Army Corps of Engineers and Lieutenant General Thomas P. Bostick in his official capacity as the Commanding General and Chief of Engineers of the United States Army Corps of Engineers under section 505(a) of the CWA, 33 U.S.C. § 1365(a), for violations at the expiration of the sixty-day notice period or shortly thereafter.

Riverkeeper is willing to discuss effective remedies for the violations addressed in this letter and appropriate settlement terms during the sixty-day notice period. Such discussions should be initiated within ten days of receipt of this letter if there is an interest in attempting to resolve this matter in the absence of litigation. Riverkeeper does not intend to delay the filing of one or more complaints if discussions are continuing when the notice period ends. Please direct all correspondence to Brian A. Knutsen at (971) 373-8692 or briank@igc.org.

Very truly yours,

SMITH & LOWNEY, PLLC

By: Brian A. Knutsen

c: Bob Perciasepe, Acting Administrator, EPA
Dennis McLerran, Regional Administrator, Region 10, EPA
Eric H. Holder, Jr., Attorney General of the United States
Maia D. Bellon, Director, Washington Department of Ecology
Dick Pedersen, Director, Oregon Department of Environmental Quality
Lauren Goldberg, Columbia Riverkeeper Staff Attorney

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APPENDIX 1

BONNEVILLE DAM

Latitude: 45°38'39" N
Longitude: 121°56'26" W

The following table summarizes pollution discharges from Bonneville Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by the Bonneville Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
March 12, 2013	Mobile 634 Synthetic Oil	Corps maintenance crews were lowering a Fish Screen into a Unit Head Gate Slot when they noticed an oil sheen; "they realized they forgot to plug the flood gate vent."	Emergency Response Tracking System (ERTS) 639836; National Response Center (NRC) Report No. 1040833	3 tbsp.	
Feb. 4, 2013 to (at least) March 11, 2013	Oil	Power House 2 oil water separator; Corps engineers suspect that oil is emulsified and then passes through the oil water separator	NRC Report No. 1037516; ERTS 639086	Unknown; sheen observed on multiple days	Believed to be part of an ongoing problem with the oil water separator; no repairs or other fixes have been made
Nov. 14, 2012	Oil	Faulty relay in the automatic grease system for the wicket gates on half of the turbine bank on Bonneville Powerhouse 2	ERTS 637576	Unknown sheen	
Jan. 9, 2012	Hydraulic Oil	Seal blew on Powerhouse 2, Unit 12 wicket gate; excess oil made it into oil water separator, which discharged oil	ERTS 631395	7 tbs. to 1 gal; 2' x 6' sheen; 150 gal. lost to turbine pit, 50 made it to OWS	WA side; "Powerhouse 2 is discharging a non-recoverable small sheen every 2 to 3 minutes"
Sept. 13, 2011		Powerhouse 2 oil water separator	ERTS 629171	sheen	WA side; "slow leak of oily water from the oil water separator to the

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					Columbia River"
Aug. 29, 2011	Turbine Oil	Powerhouse 2 oil water separator	ERTS 628858	Apprx. 1 tsp., sheen appears every 15 minutes	WA side; Crew spotted sheen 4 or 5 times after initial notice; "There have been sheen issues in the past at this tailrace"
Aug. 2, 2011	Lube Oil	Gantry Crane at Powerhouse 1 blew lube connection between filter and motor	ERTS 628342	15 gal. (maybe only 4 drops in water)	OR side
Nov. 9, 2010	Lube Oil	Fore bay surrounding tube	ERTS 623397	< 5 gal.	OR side
Aug. 31, 2010	Turbine Oil	Powerhouse 2, Unit 17	ERTS 622074	8,000 gal. in OWS, sheen seen in river	
June 7, 2010	Hydraulic Oil	Navigation Lock #1 lower gate; serving old navigation locks	ERTS 620362	1.5 gal.	OR side
March 2, 2010	Hydraulic oil	Hydraulic line on crane between Bonneville 11 and spillway blew		2 – 4 quarts	
Feb. 16, 2010	oil	Bay 4 Powerhouse, dumpster leaked gear lube	ERTS 618150	15' x 20' sheen	OR side
Jan. 15, 2010	Oil	Powerhouse 2, stormdrain, possibly from crane	ERTS 617760	< 1 pint	WA side (Bonneville Powerhouse 2); cause unknown
Dec. 21, 2009	Oil	Contractor removing piping; either residual oil from piping or leak from saw	ERTS 617159	5' x 20' sheen	
Sept. 25, 2009	Grease / lube oil	Navigation Lock 2 / Gates 3 and 4	ERTS 615565	60' x 6' sheen	Gates have automated grease system to lube bearings
May 27, 2008	Motor oil	Spillway gate hoist bay 15 damaged, leaked	ERTS 606012	2' x 1.5' sheen	
Dec. 14, 2007	Oil	Bonneville 2 fish ladder, seal failed in pump in fish ladder system	ERTS 602704	< 1 gal.	WA side (Bonneville 2)
July 9, 2007	Governor Oil		NRC Report No. 841552	315 gal.	"potential release of 315 gal. of governor oil into the Columbia River. They have been putting in more oil than they would normally use in one of the hydraulic units, so they think they have a leak somewhere."

APPENDIX 2

THE DALLES DAM

Latitude: 45°36'51" N
Longitude: 121°08'03" W

The following table summarizes pollution discharges from The Dalles Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by The Dalles Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
Feb. 5, 2013	Hydraulic Oil	Downed unit due to annual overhaul was restarted and released oil into the river from Main Unit #8	NRC Report No. 1037655; ERTS 639123		
Dec. 6, 2012	Hydraulic Oil	Broken hydraulic line caused a discharge of approximately .5 pints of hydraulic fluid into the river	NRC Report No. 1032489; ERTS 638032	.5 pints	
Feb. 21, 2012	Hydraulic Oil	Sheen seen during startup of Main Unit 11	ERTS 632251	0.75 quart	
Dec. 14, 2011	Hydraulic Oil	Spill from Main Unit 10 of 2 quarts of hydraulic oil that went into the water of the Columbia River	NRC Report No. 998084	2 quarts	
May 25, 2010	Hydraulic Oil	Release of oil during startup of Main Unit 21	ERTS 620118		
Jan. 15, 2010	Hydraulic Oil	Release from Main Unit 20; equipment failure	ERTS 617585	< 1 gal.	
Dec. 23, 2009	Transformer Oil (w/ PCBs)	Out of use transformer left sitting on ground, cold weather snapped fitting	ERTS 617209; and others	1200 to 1500 gal. spilled to soil, unknown amount percolated to	Ecology Investigation

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				river; large sheen observed	
Nov. 14, 2007	Oil	Main Unit 5	ERTS 601983	1 gal.	"This spill is part of an ongoing, occasional event at the Dalles where the source is unknown."
Sept. 26, 2007	Turbine Oil	Drainage sump	ERTS 601058	1 gal.	
Sept. 21, 2007	Hydraulic Oil	Drainage sump discharge	ERTS 600892	0.5 gal.	"Part of an ongoing series of events being tracked in ERTS. Source is unknown, similar to Sept. 4 2007 event"
Aug. 23, 2007	Hydraulic Oil	Turbine	ERTS 600283		

APPENDIX 3

JOHN DAY DAM

Latitude: 45°42'59" N
Longitude: 120°41'37" W

The following table summarizes pollution discharges from the John Day Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database, as well as public records obtained by Riverkeeper. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by the John Day Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
April 9, 2013	Oil	Drainage pump released an unknown amount of an unknown oil to the Columbia River while starting up.	NRC Report No. 1043457	Unknown	
Oct. 27, 2012	Turbine Oil	Sheen discovered downstream of the dam; 30 gallons of turbine oil missing from Main Unit 3 (generating unit) from unknown causes	NRC Report No. 1028508; ERTS 637239	unknown	
Apr. 19, 2012	Hydraulic Oil	"28 gallons of hydraulic oil discharge from fish pump #3."	NRC Report No. 1009151	28 gallons	
Jan. 17, 2012	Turbine Oil	"Caller stated that an oil sheen was discovered in the main unit 3A gate slot possibly from STS gear slot."	NRC Report No. 100613	30 gallons	
Dec. 30, 2011	Oil	Unknown; ERTS report states that Corps determined this was distinct from oil leaks reported in ERTS 631027	ERTS 631210	800 ft. x 800 ft. sheen	
Dec. 19, 2011 – Dec. 30, 2011	Turbine Oil	Corps reported 12.5 gallons of turbine oil lost from Unit 1; sheen noted in tailrace of project	NRC Report No. 998524; ERTS 631027	Unknown	Sheen initially reported on Dec. 19, 2011; ERTS Report No. 631027 reports spill ongoing as of Dec. 30, 2011

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Oct. 11, 2011	DTE Mobile Heavy (turbine)	Release of 200 gallons of turbine oil to the Columbia River from Main Unit #6 generator due to mechanical failure; leak suspected from blade seal failure	Spill Prevention, Control and Countermeasure Plan (SPCC), Appx. E; ERTS 629710	200 gal.	Kaplan low oil alarm on MU (Main Unit) 6
Sept. 21, 2011	Transformer Oil	"Drain plug failure on cooler for T-3B. Electricians were draining the oil from the cooler when the plug failed."	SPCC Appx. E	3 gal.	Unclear if reached the river
Aug. 9, 2011	Oil	Unknown	SPCC Appx. E	< 1 cup	"minor spill in gate slot 16-A and 16-B."
July 17, 2011	Turbine Oil	"Oil cooler on MU #4 sprung a leak releasing ~25 gal. onto the turbine pit area."	SPCC Appx. E	25 gal.	Unclear if reached the river
July 11, 2011	Oil	Gate slot 7-C had a sheen due to faulty seal on fish screen gear box	SPCC Appx. E	< 1 pint	
June 3, 2011	Turbine Oil	"MU #15 the pumps used to remove gland water were not turned on causing the turbine pit to flood with water. The water displaced the oil in the governor reservoir."	SPCC Appx. E	~ 25 gal.	Unclear if reached the river
Jan. 27, 2011			SPCC Appx. E	< 1 pint	"sheen discovered in AWS discharge conduit near the butterfly valve."
Dec. 2, 2010	Turbine Oil	"MU #12 blade seals leaking into draft tube."	SPCC Appx. E	~100 gal.	Unclear if reached river
Oct. 12, 2010	Turbine Oil	"MU # 11 has a pump in turbine pit to pump out water seepage. The pump was not working, causing water to accumulate in the turbine plate displacing oil out of the turbine oil sump."	SPCC Appx. E	~75 gal.	Unclear if reached river
May 20, 2010	Turbine Oil	Turbine 12; cause unknown	ERTS 620026 and SPCC Appx. E	200 gal.	Low oil alarm sounded – 200 gal. missing from

					turbine since inspection 1 week prior; no sheen seen in river but sheen seen in turbine pit
Feb. 25, 2010	Hydraulic fluid	"spillway gate heater north oil line on bay 8 was put in operational mode. Oil leaked out of access/clean out point."	SPCC Appx. E	< 1 gal.	
Oct. 8, 2009	Turbine Oil	"MU #12 was put back into service after a 5-year overhaul. A small sheen developed upon startup but quickly dissipated.		< 1 cup	
Feb. 28, 2009	Motor Oil	Navigation Lock gate oil heater leak – equipment failure	ERTS 611364 and SPCC Appx. E	10 gal.	
Feb. 12, 2009	Turbine Oil	Start up of Main Unit 10 after being down for repairs	ERTS 611070 and SPCC Appx. E	1 gal.	
April 10, 2008	Unknown	"An oil sheen appeared in MU #10 gate slots. Maintenance concluded that it was left over oil residue from when Unit was taken out of service for its 6 year overhaul."	SPCC Appx. E	Unknown	
Aug. 20, 2007	Oil	"An oil sheen appeared in MU #9 gate slots. Assumption as that it was coming from the drive motor on the STS screen."	SPCC Appx. E	< 1 gal.	

APPENDIX 4

McNARY DAM

Latitude: 45°56'08" N
Longitude: 119°17'53" W

The following table summarizes pollution discharges from the McNary Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database, as well as public records obtained by Riverkeeper. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by the McNary Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
Sept. 18, 2012	Lube oil	"caller reported that a miter gate discharged a drop of miter oil."	NRC Report No. 1024819		
July 19, 2012	Unknown sheen	"the sump"	NRC Report No. 1018266		
Feb. 21, 2012	Either assembly/gear oil or turbine oil	Unit 1 started after a rebuild	ERTS 632248	10' x 10' sheen	
Nov. 23, 2011	Oil	Crane on dam dropped grease	ERTS 630571, U.S. Army Corps of Engineers After Action Report, and Spill Prevention, Control, and Countermeasure Plan (SPCC)	4 drops of grease	"McNary crew was removing gear boxes on crane #5…"; Crane used for trash collection and hangs over water
May 12, 2011	Turbine Oil	Cracked sight glass on unit # 6 that released oil to turbine pit and to a drainage sump. The drainage sump accessible from dam elevation 264 discharges into the tailrace of the Columbia River	U.S. Army Corps of Engineers After Action Report and SPCC	430 gal. lost from unit, < 10 gal. to river; sheen observed	
Dec. 21,	Gear grease	Grease was being	ERTS 624152,	2 drops	"during cleanup

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2010		cleaned off of gears during cleanup work due to a lock outage, and grease dropped	SPCC, and U.S. Army Corps of Engineeres After Action Report		of excess grease from upstream miter gate"; at Navlock
March 30, 2010	Grease	Dislodged piece of grease fell into river upstream of the upstream miter gate	SPCC		
Jan. 31, 2010	Unknown	Unknown	U.S. Army Corps of Engineers After Action Report	Unknown	Sporadic Oil sheens appeared in fore bay river side slots
Feb. 23, 2009	Unknown oil	Oil discharged while changing piping on drainage sump; oil sucked into sump when water in sump got low	ERTS 611216, U.S. Army Corps of Engineers After Action Report, and SPCC	< 1 gal.	"An oil/water separation system project is on the agenda for McNary and is a potential remedy for this problem."; sheen observed after discharge pump 4 was started, source of sheen is discharge sump

APPENDIX 5

ICE HARBOR DAM

Latitude: 46°14'58" N
Longitude: 118°52'47" W

The following table summarizes pollution discharges from Ice Harbor Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by Ice Harbor Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
April 2, 2013	Lube Oil/Motor Oil	"believed to be caused from fresh grease on the lock cables"	ERTS 640360	4 ft. x 4 ft. sheen	
March 29, 2013	Lube Oil/Motor Oil	Release of turbine oil during startup	ERTS 640280; NCR Report No. 1042442	1 gallon	
March 8, 2013	Oil	"Cleaning some seals and some residual oil from an old system got into the water."	NRC Report No. 1040474	1 gallon	
Nov. 17, 2012	Turbine Oil	"A turbine generator unit discharged turbine oil."	NRC Report No. 103931; ERTS 63736	100' x 100' sheen	
Oct. 25, 2012	Hydraulic Oil	Hydraulic oil discharged from turbine bay due to the main unit being down	NRC Report No. 1028316	1 cup	Call reported a sheen
June 7, 2012	Lubricating Oil	"unwatering pump" discharging residual oil in the pit"	NRC Report No. 1013872; ERTS 634361	1 gal.; sheen 30' x 30'	
March 13 – 14, 2012	Turbine oil	Discharge during maintenance – starting Unit 3 after transformer cooler repairs and 30 day shutdown	Various, including NRC Report No. 1005753	5 – 10 gal. (up to 40 gal.)	Unit 3 has a known leak of about 1 gal / day
Feb. 27, 2012	Transformer oil	Leak during transfer	Various including NRC Report No. 1004109	44 gal.	Generator Main Unit 3; or TW-2
Feb. 22, 2012	Oil	Inadvertent tripping of a breaker that supplies			

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		an oil trailer – TW-2			
Sometime after June 2011 to Jan. 2012	Transformer oil (w/ PCBs)	Leaks in metal tubing	Email / press release	Estimated 1680 gal.	From T-1 transformer heat exchange
Nov. 10, 2010	"Oil"	Crack in turbine blades – Main Unit #4			
Oct. 19, 2010		Packing gland leaks at three blades – oil leaked at hub/blade interface requiring re-packing			
Nov. 2008	R&O 32	Tainter valve # 2 leaked due to cracked weld in flange		~ 5 gal.	
Oct. 17 - 18, 2008	DTE 30W turbine oil	Unit 1 turbine guide bearing was overfilled		< 5 gal.	
Nov. (28) 2007	Turbine oil	Unit 3 started up after sitting for 1 month		< 10 gal.	
Sept. 10, 2007	Turbine oil	Discharge when start up after being shut down for repairs			
Aug. 2007	R&O 32 hydraulic oil	Leak from intake gate hydraulic cylinder		sheen	

APPENDIX 6

LOWER MONUMENTAL DAM

Latitude: 46°33'46" N
Longitude: 118°32'18" W

The following table summarizes pollution discharges from Lower Monumental Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database, as well as public records obtained by Riverkeeper. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by the Lower Monumental Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
Aug. 9, 2012	Turbine Oil	"Oil entered the sump of Unit 2. This was caused by high water level in the unit. The sump pump pumped some of the oil into the river."	NRC Report No. 1020559; ERTS 635725	3 gallons	
Feb. 13, 2012	Unknown oil	Believed to be pump that had a leak	NRC Report No. 1002882		
March 25, 2010	Veg. Oil	"working on a crane which leaked 5 gallons of food grade vegetable oil onto ground. An unknown amount went into a storm drain which flowed into the snake river creating a sheen"	NRC Report No. 935101	5 gal.	
May 4, 2009	Hydraulic oil	Release of oil to river from startup of Unit 2	ERTS 612578		20 by 100 foot sheen observed
March 11, 2009	oil	Started Unit 1 after being shutdown since Dec.	Email in DOE files		
July 28, 2008	Hydraulic fluid	Oil released into river upon startup of Unit 1	ERTS 607295 and NRC Report No. 878702	1 pint	
Jan. 22, 2008	Hydraulic oil	"Hydraulic oil released from the generator unit 1 due to mechanical failure of a transfer onto ground and water"	NRC Report No. 860303	300 gal. total, 150 gal. to water	
Dec. 14, 2007	Hydraulic oil	Release from gate sill heater due to a piping leak	NRC Report No. 857409	1 gal.	

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APPENDIX 7

LITTLE GOOSE DAM

Latitude: 46°35'05" N
Longitude: 118°01'38" W

The following table summarizes pollution discharges from Little Goose Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by Little Goose Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
Feb. 19, 2013	Turbine Oil	Two 4 x 4 feet sheens believed to be from Unit 1	ERTS 639378; NRC Report No. 1038863	unknown	
Jan. 2, 2013	Turbine Oil	While filling the bearing housing an estimated quart of oil was forced out of the sump and then discharged to the river, causing a sheen	ERTS 638456; NRC Report No. 1034628	1 quart	
March 25, 2010	Diesel	Unknown	NRC Report No. 935069	5 gal.	"release of diesel oil from an unknown source coming out of the bottom of spill bay #2 due to an unknown cause.
Oct. 20 or 21, 2007	Lube / motor oil	Mechanical failure of Generator 6	ERTS 601516 and NRC Report No. 852245	"worst case" est. is 120 to 150 gal.	½ mile sheen
Sept. 26, 2007	Turbine Oil	Equipment failure on turbine seal	NRC Report No. 849957	1 quart	

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APPENDIX 8

LOWER GRANITE DAM

Latitude: 46°39'33" N
Longitude: 117°25'47" W

The following table summarizes pollution discharges from Lower Granite Dam reported in the Washington Department of Ecology's Emergency Response Tracking System and/or the U.S. Coast Guard's National Response Center database, as well as public records obtained by Riverkeeper. Riverkeeper does not concede that the amount of pollution reported is, in fact, the amount of pollution actually discharged by the Lower Granite Dam.

Reported Date	Reported Pollutant	Reported Cause	Source of Report	Reported Amount	Comments
Jan. 2, 2013	Turbine Oil	"lower guide bearing of the turbine unit."	NRC Report No. 1034628	1 quart	
Dec. 4, 2012	Oil	Source unknown	ERTS 637966	200' x 200' feet sheen	
March 13, 2011	Hydraulic fluid	"human error" – operator overfilled a bearing in a turbine	Email in Washington Department of Ecology files	80 to 90 gal.	

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