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1

## INTRODUCTION

2 The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987)  
3 established water quality goals for the navigable (surface) waters of the United States. One of  
4 the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant  
5 Discharge Elimination System permit program (NPDES permits), which is administered by the  
6 U.S. Environmental Protection Agency (EPA). The EPA has delegated responsibility to  
7 administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48  
8 of the Revised Code of Washington (RCW), which defines the Department of Ecology's  
9 authority and obligations in administering the wastewater discharge permit program.

10  
11 The regulations adopted by the state include procedures for issuing general permits (Chapter  
12 173-226 of the Washington Administrative Code [WAC]), water quality criteria for surface and  
13 ground waters (Chapters 173-201A and 200 WAC), and sediment management standards  
14 (Chapter 173-204 WAC). These regulations require a permit to be issued before discharge of  
15 wastewater to waters of the state is allowed. The regulations also establish the basis for effluent  
16 limitations and other requirements, which are to be included in the proposed permit. One of the  
17 requirements (WAC 173-226-110) for issuing a general permit under the NPDES permit  
18 program is the preparation of a draft permit and an accompanying fact sheet. The regulations  
19 also require public notice of the draft permit for at least 30 days before the proposed permit is  
20 issued (WAC 173-226-130). The fact sheet and draft permit are available for review (see  
21 Appendix A – Public Involvement of the fact sheet for more detail on the Public Notice  
22 procedures).

23  
24 After the public comment period has closed, Ecology will summarize the substantive comments  
25 and prepare a response to each comment. The summary and response to comments will become  
26 part of the file on the permit. Parties submitting comments will receive a copy of Ecology's  
27 response. Comments and the resulting changes to the proposed permit will be summarized in an  
28 appendix to this fact sheet, Appendix C – Response to Comments.

1 **BACKGROUND INFORMATION**

2 **HISTORY**

3 In July 2013, Ecology announced a preliminary determination to develop a general permit for the  
4 partial deconstruction of vessels over water. Discharges associated with vessel deconstruction are  
5 currently not permitted outside of facilities with either individual NPDES permits (shipyards) or  
6 coverage under the Boatyard general NPDES permit.

7 Ecology periodically responds to reports of vessels being deconstructed outside of permitted  
8 facilities, very often resulting in unpermitted discharge of pollutants. Examples range from metal  
9 cutting on superstructures of floating vessels to complete deconstruction of vessels on the  
10 shoreline between high and low tide cycles. The most costly example is the deconstruction of the  
11 Davey Crockett on the lower Columbia River. More information is available here:  
12 <http://www.ecy.wa.gov/programs/spills/incidents/DavyCrockett/DavyCrockett.html>.

13 Ecology held a public meeting to discuss the proposed permit in Tacoma on August 29, 2013.  
14 Ecology then formed a technical advisory group (TAG) to assist with permit development in  
15 response to feedback from that initial meeting. The TAG included representatives from  
16 shipyards, salvage companies, marine consulting, an environmental organization, and the  
17 Washington State Department of Natural Resources (DNR).

18 The TAG met again on October 22, 2013 and November 14, 2013. Meeting materials and  
19 summaries are available from Ecology's website  
20 (<http://www.ecy.wa.gov/programs/wq/permits/vesseldeconstruction/index.html>). Ecology also  
21 received written comments from the Puget Sound Shipbuilders Association and a local Marine  
22 Chemist, both of which expressed significant health and safety concerns about issuance of a  
23 general permit for an activity traditionally confined to shipyards.

24  
25 *Ecology will insert more here prior to the formal draft*

26  
27 **DESCRIPTION OF THE INDUSTRY**

28 Vessel deconstruction is also commonly referred to as: ship breaking, ship recycling, and ship  
29 dismantling. In the United States, very limited vessel deconstruction is permitted outside of  
30 shipyards and boatyards. Applicable Standard Industrial Classifications (SIC) and North  
31 American Industry Classification System (NAICS) for shipyards and boatyards are:

32  
33 SIC No. 3731 (NAICS No. 336611) Ship Building and Repairing: "Establishments primarily  
34 engaged in building and repairing all types of ships, barges, and lighters, whether propelled  
35 by sail or motor power or towed by other craft. This industry also includes the conversion  
36 and alteration of ships." (Includes; Ship dismantling at shipyards)

37  
38 SIC No. 3732 (NAICS No. 336612) Boat Building and Repairing: "Establishments primarily  
39 engaged in building and repairing all types of boats."  
40

1 The applicable SIC and NAICS for vessel deconstruction over water are (EPA, February 1999):  
2  
3 SIC No. 4499 (NAICS No. 488390) Water Transportation Services, Not Elsewhere  
4 Classified (Includes; Ship dismantling at floating drydock)  
5

6 Despite the relative rarity of over water vessel deconstruction in the United States, the activity is  
7 addressed either directly or indirectly in several guidance documents from EPA.  
8

9 *Development Document for Proposed Effluent Limitations Guidelines and Standards for the*  
10 *Shipbuilding and Repair Point Source Category (EPA 440/1-79/76b) (December 1979)*  
11

12 *Profile of the Shipbuilding and Repair Industry: EPA Office of Compliance Sector Notebook*  
13 *(EPA/310-R-97-008) (November 1997)*  
14

15 *Multimedia Compliance Monitoring Investigation Protocol for the Ship Scrapping Industry*  
16 *(EPA-331/9-99-001) (February 1999)*  
17

18 *A Guide for Ship Scrappers: Tips for Regulatory Compliance (EPA 315-B-00-001) (Summer*  
19 *2000)*  
20

21 The EPA guidance for ship scrappers (EPA, 2000) is organized by processes necessary for  
22 successfully completing a major vessel deconstruction. The identified processes provide a  
23 summary description of the industry:  
24

- 25 • Asbestos Removal and Disposal
- 26 • Sampling, Removal and Disposal of Polychlorinated Biphenyls
- 27 • Bilge and Ballast Water Removal
- 28 • Oil and Fuel Removal and Disposal
- 29 • Paint Removal and Disposal
- 30 • Metal Cutting and Metal Recycling
- 31 • Removal and Disposal of Miscellaneous Ship Machinery

32 Deconstruction often begins with identification, removal, and disposal of solid waste, including  
33 dangerous and hazardous wastes that are accessible prior to deconstruction. The condition of the  
34 vessel drives what processes are necessary and the timing of those activities. As physical  
35 deconstruction of the vessel superstructure proceeds, new hazards and potential pollutants are  
36 exposed.  
37

38 The current dominant practice of vessel deconstruction in a drydock allows wastewater  
39 discharges to be captured and properly disposed of. Disposal may include: treatment and disposal  
40 on-site, pretreatment and discharge to sanitary sewer, or hauling to facilities specializing in  
41 processing the waste stream. This method of deconstruction allows the use of less source control  
42 BMPs during the process. The drydock collects waste materials until they can be properly  
43 disposed of. The principle water quality BMP is proper cleanup of the drydock prior to flooding.  
44

1 The proposed general permit authorizes deconstruction of vessels while afloat, outside of a  
2 drydock. In this scenario, many more source control BMPs must be utilized to prevent discharge  
3 of pollutants to surface water. The vessel may act as temporary control as many process  
4 wastewaters can be contained within the vessel bilge, collected, and properly disposed of.  
5 Stormwater, from rainfall on exposed portions of the vessel, is the primary wastewater  
6 anticipated for vessels deconstructed over water.

7  
8 Other common wastewater streams include water used for fire suppression during metal cutting,  
9 and water used for safety and health reasons during asbestos abatement and working with lead  
10 paint. The proposed permit does not authorize discharge of these wastewaters. They must be  
11 collected and properly disposed of offsite. In rare instances, these discharges may be considered  
12 for discharge to waters of the state on a case-by-case basis under the proposed condition S.5  
13 Non-routine discharges.

#### 14 *GENERAL PERMIT APPROACH*

15 A general permit to address discharges from vessel deconstruction activities over water is an  
16 appropriate permitting approach for the following reasons:

- 17 • A general permit is an efficient method to establish the essential regulatory requirements  
18 appropriate for a broad range of vessel deconstruction activities.
- 19 • A general permit allows Ecology to handle vessel deconstruction permit applications  
20 within the state of Washington more efficiently.
- 21 • A general permit is consistent with EPA's four-tier permitting strategy, the purpose of  
22 which is to use the flexibility provided by the Clean Water Act in designing a workable  
23 and reasonable permitting system.

24  
25 In addition, a critical benefit to a general permit for over water deconstruction is to provide a  
26 reasonable and timely option for vessels without the ability to safely move to a land-based  
27 NPDES permitted facility. Vessels identified for deconstruction are, by definition, very near the  
28 end of their life cycle. They are often in poor condition and in danger of sinking without  
29 consistent efforts to keep them afloat. By the time an individual permit is crafted for a vessel in  
30 this condition, it may have already sunk, or discharged fuels, oil, or other wastewater through a  
31 deteriorated hull. A sunken vessel deteriorates much more rapidly than a floating one, and the  
32 difficulty in deconstructing it, while preventing further pollution, increases dramatically.

33  
34 A general permit is designed to provide coverage for a group of related facilities or operations of  
35 a specific industry type or group of industries. It is appropriate when the discharge  
36 characteristics are sufficiently similar, and a standard set of permit requirements can effectively  
37 provide environmental protection and comply with water quality standards for discharges. In  
38 most cases, the proposed general permit will provide sufficient requirements for discharges from  
39 vessel deconstruction sites.

40  
41 This approach recognizes that there may be instances where the general permit is not appropriate  
42 for a specific deconstruction project. Ecology may require any discharger under the VDGP to  
43 apply for and obtain an individual permit or a more specific general permit if:

- 1 • It determines that the VDGP does not provide adequate assurance that water quality will
- 2 be protected, or
- 3 • The project has a reasonable potential to cause or contribute to a violation of water
- 4 quality standards.

5 *WASTEWATER CHARACTERIZATION*

6 Wastes generated during deconstruction activities include spent fuels and oils, spent abrasives,  
 7 spent solvent, paint chips, various cleaners and anti-corrosive compounds, scrap metal, slag,  
 8 welding rods, wood, plastic, resins, glass fibers, and miscellaneous trash. In addition, many older  
 9 vessels contain; asbestos fibers in insulation and fire shields, gaskets and packing,  
 10 polychlorinated biphenyls (PCBs) in caulking, gaskets, paints, electrical cable and various rubber  
 11 and plastic products, and lead in paint. If not properly controlled, these pollutants can enter the  
 12 wastewater stream. The proposed permit authorizes three potential wastewaters: stormwater,  
 13 drydock floodwater, and non-routine discharges.

14  
 15 **STORMWATER**

16  
 17 Due to the variability of vessels, deconstruction practices, and weather, it is not possible to  
 18 characterize stormwater associated with deconstruction activities in terms of the average rate or  
 19 frequency of discharges, or the average or estimated range in pounds per day of pollutants.

20  
 21 Existing permits for shipyards and boatyards, EPA guidance, and experience from in-place  
 22 vessel deconstruction emergency projects do provide information on likely pollutants  
 23 encountered in this activity. In addition, approximately 60 permittees of Ecology’s *Industrial*  
 24 *Stormwater General Permit (ISWGP)*  
 25 (<http://www.ecy.wa.gov/programs/wq/stormwater/industrial/index.html>) fall within the  
 26 applicable SIC 44XX category. This category is highly variable, and none of the permitted  
 27 facilities perform vessel deconstruction. However, given that similar activities occur, Ecology  
 28 also considered effluent characterization data from 30 facilities in this category, available in the  
 29 ISWGP Fact Sheet and summarized here:

Parameter	No. of Values	Min Conc.	Median Conc.	Max Conc.
Turbidity, in NTU	151	0.3	18.0	343
pH, in su	151	5.0	6.9	9.8
Total Copper, in µg/L	30	0.0	36.3	194
Total Lead, in µg/L	27	0.05	13	144
Total Zinc, in µg/L	145	0.7	244	4,000
Oil & Grease, in mg/L	92	0.0	5.0	561

31  
 32 Pollutants expected in the stormwater discharge from vessel deconstruction include oil and  
 33 grease, sediment (suspended solids and turbidity), pH, copper, lead, and zinc. These pollutants  
 34 are described below.

35

1 **A. Oil and Grease.** Oil, grease, and other petroleum products may contaminate stormwater if  
2 they are spilled or leaked. Oil and grease exhibit an oxygen demand. Oil may adhere to fish gills  
3 or coat and destroy algae or other plankton. Oil will also taint the flesh of fish and shellfish. The  
4 oil and grease parameter is comprised of thousands of organic compounds with varying physical  
5 and chemical properties. Although the oil and grease test does not include all the hydrocarbons  
6 that may result from petroleum contamination of stormwater, it will test for the common  
7 contaminants. This test, combined with the permit requirement to visually identify any oil sheen  
8 in stormwater discharges, should reveal any problem with petroleum contamination.  
9

10 **B. Sediment.** Deconstruction activity involves operations that disturb vessel surfaces that may  
11 have accumulated sediment for numerous years. Disturbed sediments exposed to precipitation  
12 may result in stormwater runoff contaminated with suspended sediment. Suspended sediment is  
13 commonly measured as total suspended solids (TSS) and/or turbidity:

- 14 1. The total suspended solids (TSS) laboratory method measures the quantity of material  
15 suspended in water. The measure of TSS in stormwater allows for an estimation of  
16 sediment transport, which can have significant effects in downstream receiving waters.
- 17 2. Turbidity, expressed in nephelometric turbidity units (NTU), is a measure of the ability of  
18 light to penetrate the water. Turbidity is a function of the quantity of suspended solids in  
19 water. The suspended solids may affect biological functions, such as the ability of  
20 submerged aquatic vegetation to receive light and the ability of fish gills to absorb  
21 dissolved oxygen.

22 The surface water quality standards (Chapter 173-201A) establish turbidity standards. Table 200  
23 (1)(e) defines the turbidity standards for different aquatic use categories in fresh water. Table  
24 210 (1)(e) defines the turbidity standards for aquatic life in marine water. The most stringent  
25 criteria state that turbidity shall not exceed 5 NTU over background turbidity when the  
26 background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity  
27 when the background turbidity is more than 50 NTU .  
28

29 **C. pH.** Alkaline materials exposed during deconstruction may contaminate stormwater resulting  
30 in high pH (greater than pH 7). Acidic materials may also contaminate stormwater and result in  
31 low pH (less than pH 7).  
32

33 The surface water quality standard for pH is within the range of 6.5 to 8.5 (freshwater) or 7.0 to  
34 8.5 (marine water) with a human-caused variation within a range of less than 0.2 units for the  
35 aquatic use category with the most stringent pH standard. You can find the pH criteria in  
36 Chapter 173-201A WAC in Table 200 (1)(g) for fresh water and Table 210 (1)(f) for marine  
37 water.  
38

39 **D. Metals.** Copper, zinc, and lead exposed during deconstruction may contaminate stormwater.  
40 Spent paint disturbed during deconstruction may contain any of these metals. Lead is a common  
41 component of older paints. Zinc is often used as a sacrificial anode to prevent fouling. Copper  
42 from antifouling bottom paint and piping associated with on-board machinery is another  
43 potential source.  
44

1 The surface water quality standards for these toxic substances are found in Chapter 173-201A-  
2 240 WAC. Numeric criteria for each vary in fresh water based on hardness. As hardness  
3 increases, more metal moves from the dissolved phase to the less toxic particulate phase. A  
4 translator represents the fraction of a total metal present in dissolved form. This is further  
5 explained in footnotes to Table 240(3) of Chapter 173-201A-240.

#### 6 7 DRYDOCK FLOODWATER

8  
9 Ecology has many years of monitoring data on drydock floodwater from the discharge  
10 monitoring reports of shipyards with individual NPDES permits. Full implementation of BMPs  
11 is critical to ensure the drydock is sufficiently clean prior to flooding. With proper BMP  
12 implementation, the floodwater typically meets water quality standards for parameters measured.

#### 13 14 PROCESS WATER

15  
16 Asbestos, polychlorinated biphenyls (PCBs), and lead are potentially present in water used  
17 during the deconstruction process for lead or asbestos abatement, fire and dust suppression.  
18 Water collected in the bilge may contain other pollutants such as oil and grease and heavy  
19 metals. Ballast water may contain chromium and other pollutants. This water will typically  
20 require collection, transport, and disposal off-site at an appropriate facility permitted to handle  
21 the waste.

22  
23 Due to the high variability of potential pollutants in process, bilge, and ballast waters, discharge  
24 is permitted only on a case-by-case basis. Section S5. *Non-routine discharges*, requires an  
25 evaluation of alternatives to discharge, testing for suspected pollutants, and approval by Ecology  
26 prior to any discharge. Ecology expects this discharge to remain non-routine, however, we do  
27 anticipate cases where process water can be effectively treated on-site and discharged to surface  
28 waters in compliance with water quality standards.

29  
30 There may be holding tanks on board the vessel containing sewage, or gray water. These should  
31 be pumped and hauled to a Sewage Treatment Plant.

#### 32 *SEPA COMPLIANCE*

33 New facilities must demonstrate compliance with the State Environmental Policy Act (SEPA,  
34 Chapter 43.21C RCW) before Ecology can authorize permit coverage. A modification of permit  
35 coverage for physical alterations, modifications, or additions to the deconstruction site also  
36 requires SEPA compliance. Additional SEPA review may be necessary if the modification is  
37 outside of the scope of the initial SEPA evaluation.

#### 38 **PROPOSED PERMIT LIMITS**

39 Section 502(11) of the CWA defines “effluent limitation” as *any restriction on the quantity, rate, and*  
40 *concentration of chemical, physical, biological, and other constituents which are discharged from*  
41 *point sources into navigable waters, the waters of the contiguous zone, or the ocean, including*

1 *schedules of compliance*. Effluent limitations are among the permit conditions and limitations  
2 prescribed in NPDES permits issued under Section 402(a) of the Act, 33 U.S.C. §1342(a).

3  
4 Federal and state regulations require that discharges from existing facilities, at a minimum, meet  
5 technology-based effluent limitations reflecting, among other things, the technological capability  
6 of Permittees to control pollutants in their discharges that are economically achievable.  
7 Specifically, state laws (RCW 90.48.010, 90.52.040 and 90.54.020) require the use of “all  
8 known, available and reasonable methods of prevention, control and treatment” (AKART).

9  
10 Water quality-based effluent limits (WQBELs) are required by CWA Section 301(b)(1)(C) and,  
11 in Washington State, are based on compliance with the Surface Water Quality Standards  
12 (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality  
13 Standards (Chapter 173-204 WAC) or the National Toxics Rule (40 CFR 131.36). Ecology  
14 chooses the more stringent of these two limits (technology or water quality-based) for each of the  
15 parameters of concern when drafting NPDES permits. [CWA sections 301(a) and (b)].

16  
17 Effluent limits in NPDES permits may be expressed as numeric or non-numeric standards.  
18 Under EPA’s regulations, non-numeric effluent limits are authorized in lieu of numeric limits,  
19 where “[n]umeric effluent limitations are infeasible.” [40 CFR 122.44(k)(3).] Courts have  
20 recognized that there are circumstances when numeric effluent limits are infeasible and have  
21 held that EPA may issue permits with conditions (for example, BMPs) designed to reduce the  
22 level of effluent discharges to acceptable levels:

23  
24 *Natural Res. Def. Council, Inc. v. EPA*, 673 F.2d 400, 403 (D.C. Cir. 1982) (noting that  
25 "section 502(11) defines 'effluent limitation' as 'any restriction' on the amounts of  
26 pollutants discharged, not just a numerical restriction"; holding that section of CWA  
27 authorizing courts of appeals to review promulgation of "any effluent limitation or other  
28 limitation" did not confine the court's review to the EPA's establishment of numerical  
29 limitations on pollutant discharges, but instead authorized review of other limitations  
30 under the definition) (emphasis added).

31  
32 In *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977), the D.C.  
33 Circuit stressed that when numerical effluent limitations are infeasible, EPA may issue  
34 permits with conditions designed to reduce the level of effluent discharges to acceptable  
35 levels.

## 36 *TECHNOLOGY-BASED LIMITATIONS*

### 37 TYPES OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

38 Technology-based effluent limitations are in many cases established by EPA in regulations  
39 known as effluent limitations guidelines, or “ELGs.” EPA establishes these regulations for  
40 specific industry categories or subcategories after conducting an in-depth analysis of that  
41 industry.

1 The Act sets forth different standards for the effluent limitations based upon the type of pollutant  
2 or the type of industry involved.

3  
4 The CWA establishes two levels of pollution control for existing sources. In the first stage,  
5 existing sources that discharge pollutants directly to receiving waters were initially subject to  
6 effluent limitations based on the “best practicable control technology currently available” or  
7 “BPT.” 33 U.S.C. § 1314(b)(1)(B). BPT applies to all pollutants. In the second stage, existing  
8 sources that discharge conventional pollutants are subject to effluent limitations based on the  
9 “best conventional pollutant control technology,” or “BCT.” 33 U.S.C. §1314(b)(4)(A); see also  
10 40 C.F.R. §401.16 (list of conventional pollutants) while existing sources that discharge toxic  
11 pollutants or “nonconventional” pollutants (*i.e.*, pollutants that are neither “toxic” nor  
12 “conventional”) are subject to effluent limitations based on “best available technology  
13 economically achievable,” or “BAT.” 33 U.S.C. §1311(b)(2)(A); see also 40 C.F.R. §401.15 (list  
14 of toxic pollutants).

15  
16 The factors permit writers must consider in establishing the levels of these control technologies  
17 are specified in section 304(b) of the CWA and EPA’s regulations at 40 CFR §125.3.

18  
19 Permit writers must consider technology-based limitations (water quality-based effluent  
20 limitations may be more stringent) in all NPDES permits. 40 CFR §§122.44(a)(1) and 125.3.  
21 CWA sections 301(b)(1)(A) for (BPT); 301(b)(2)(A) for (BAT); and 301(b)(2)(E) for (BCT).  
22 Technology-based limits in this draft permit represent the BPT (for conventional, toxic, and non-  
23 conventional pollutants), BCT (for conventional pollutants), and BAT (for toxic pollutants and  
24 non-conventional) levels of control for the applicable pollutants.

25  
26 EPA has not issued effluent limit guidelines for the ship building and repair industry, which  
27 includes ship dismantling. However, EPA conducted an extensive study of the ship building and  
28 repair industry and issued the *Development Document for Proposed Effluent Limitations*  
29 *Guidelines and Standards for the Shipbuilding and Repair Point Source Category (EPA 440/1-*  
30 *79/76b)* (December 1979). EPA concluded, “This industry is such that numerical effluent  
31 limitations are impractical and difficult to apply in a manner which could be monitored;  
32 therefore, guidance is provided for controlling wastewater pollutant discharges which require  
33 that best management requirements be applied.” The report also identifies the following pollutant  
34 parameters as those which discharge or have the potential to be discharged to receiving waters  
35 from shipyards:

36  
37 Conventional pollutants: suspended and settleable solids, oil and grease, pH

38 Priority pollutant metals: chromium, copper, lead, and zinc; and other metals: tin

39  
40 When EPA has not promulgated effluent limitation guidelines for an industry, or if an operator is  
41 discharging a pollutant not covered by the effluent guideline, permit writers may base limitations  
42 on their best professional judgment (BPJ, sometimes also referred to as “best engineering  
43 judgment”) of the permit writer. 33 U.S.C. § 1342(a)(1); 40 CFR 125.3(c). See *Student Public*  
44 *Interest Group v. Fritzsche, Dodge & Olcott*, 759 F.2d 1131, 1134 (3d Cir. 1985); *American*  
45 *Petroleum Inst. v. EPA*, 787 F.2d 965, 971 (5th Cir. 1986). For this permit, Ecology based the  
46 technology-based limits on BPJ decision-making.

1    AUTHORITY TO INCLUDE NON-NUMERIC TECHNOLOGY-BASED LIMITS

2    Under EPA’s regulations, non-numeric effluent limits are authorized in lieu of numeric limits,  
3    where “[n]umeric effluent limitations are infeasible.” 40 CFR 122.44(k)(3). As far back as 1977,  
4    courts have recognized that there are circumstances when numeric effluent limitations are  
5    infeasible and have held that EPA may issue permits with conditions (e.g., Best Management  
6    Practices or “BMPs”) designed to reduce the level of effluent discharges to acceptable levels.  
7    Natural Res. Def. Council, Inc. v. Costle, 568 F.2d 1369 (D.C.Cir.1977).

8  
9    Through the Agency’s NPDES permit regulations, EPA interpreted the CWA to allow BMPs to  
10   take the place of numeric effluent limitations under certain circumstances. 40 C.F.R. §122.44(k),  
11   entitled “Establishing limitations, standards, and other permit conditions (applicable to State  
12   NPDES programs ...),” provides that permits may include BMPs to control or abate the discharge  
13   of pollutants when: (1) “[a]uthorized under section 402(p) of the CWA for the control of  
14   stormwater discharges”; or (2) “[n]umeric effluent limitations are infeasible.” 40 C.F.R. §  
15   122.44(k).

16  
17   As recently as 2006, The U.S. Court of Appeals for the Sixth Circuit has once again held that the  
18   CWA does not require the EPA to set numeric limits where such limits are infeasible. Citizens  
19   Coal Council v. United States Environmental Protection Agency, 447 F3d 879, 895-96 (6th Cir.  
20   2006). The Citizens Coal court cited to Waterkeeper Alliance, Inc. v. EPA, 399 F.3d 486, 502  
21   (2d Cir. 2005), stating “site-specific BMPs are effluent limitations under the CWA.” “In sum, the  
22   EPA’s inclusion of numeric and non-numeric limitations in the guideline for the coal remining  
23   subcategory was a reasonable exercise of its authority under the CWA.”

24  
25   Additionally, the Sixth Circuit cited to Natural Res. Def. Council, Inc. v. EPA, 673 F.2d 400,  
26   403 (D.C.Cir.1982) noting that “section 502(11) [of the CWA] defines ‘effluent limitation’ as  
27   ‘any restriction’ on the amounts of pollutants discharged, not just a numerical restriction.”  
28   EPA has substantial discretion to impose non-quantitative permit requirements pursuant to  
29   Section 402(a)(1)), especially when the use of numeric limits is infeasible. See *NRDC v. EPA*,  
30   822 F.2d 104, 122-24 (D.C. Cir. 1987) and 40 CFR 122.44(k)(3).

31    RATIONALE FOR NON-NUMERIC TECHNOLOGY-BASED EFFLUENT LIMITS

32    Numeric effluent limits are not always feasible for industrial stormwater discharges as such  
33    discharges pose challenges not presented by the vast majority of NPDES-regulated discharges.  
34    Stormwater discharges can be highly intermittent, they are usually characterized by very high  
35    flows occurring over relatively short time intervals, and they carry a variety of pollutants whose  
36    source, nature and extent varies. See 55 FR at 48,038; 53 FR at 49,443. This is in contrast to  
37    process wastewater discharges from a particular industrial or commercial facility where the  
38    effluent is more predictable and can be more effectively analyzed to develop numeric effluent  
39    limits.

40  
41    The variability of effluent and effectiveness of appropriate control measures makes setting  
42    uniform effluent limits for stormwater extremely difficult. There is a high level of variability  
43    among stormwater discharges, in terms of both flow rates and volumes and levels of pollutants,

1 since the volume and quality of stormwater discharges associated with deconstruction activity  
2 depend on a number of factors. These factors include:

- 3 • The nature of grinding, cutting, hazardous and dangerous waste removal, and other  
4 deconstruction activities occurring at the site.
- 5 • The nature of precipitation in relation to phases of deconstruction activity.
- 6 • Vessel-specific conditions including; the presence (or absence) of asbestos, oil and fuel,  
7 lead, polychlorinated biphenyls (PCBs) and other hazardous materials and dangerous  
8 wastes, vessel material (metal, fiberglass, wood, etc.), and the configuration of the vessel.  
9

10 Control measures for deconstruction stormwater discharges tend to focus on pollution prevention  
11 measures, called Best Management Practices (BMPs). In accordance with 40 CFR 122.44(k) and  
12 40 CFR 122.44 (s), this draft general permit includes requirements for the development and  
13 implementation of a Deconstruction and Site Management Plan (DSMP) to minimize or prevent  
14 the discharge of pollutants to waters of the state. These BMPs constitute Best Conventional  
15 Pollutant Control Technology (BCT) and Best Available Technology Economically Achievable  
16 (BAT) for stormwater discharges.

#### 17 RATIONALE FOR NUMERIC TECHNOLOGY-BASED EFFLUENT LIMITATIONS

18 Technology-based effluent limitations are in many cases established by EPA in regulations  
19 known as effluent limitations guidelines, or “ELGs.” EPA establishes these regulations for  
20 specific industry categories or subcategories after conducting an in-depth analysis of that  
21 industry. As mentioned above, EPA has not promulgated ELGs for the shipbuilding and repair  
22 (includes ship dismantling) industry. Their development document for the ELGs (EPA, 1979)  
23 recommended BMPs in lieu of numerical limitations, due to high variability among shipyards  
24 and difficulty in monitoring discharges.  
25

26 Ecology’s experience with existing shipyards is consistent with EPA’s findings although  
27 monitoring drydock floodwater for numerical limits has proven feasible. Experience with  
28 stormwater from over water deconstruction is extremely limited as this activity is expressly  
29 prohibited in many states.  
30

#### 31 *Stormwater*

32  
33 Stormwater discharges are likely to be highly variable based on the type of vessel, anticipated  
34 waste streams, phase of deconstruction (i.e. what portions of the vessel are exposed to  
35 stormwater), and rainfall. Ecology has very limited data available for stormwater runoff  
36 specifically from vessel deconstruction. Data from individually permitted shipyards provides  
37 some indication, however, only a small percentage of the work performed in shipyards is vessel  
38 deconstruction. More typical activities include vessel maintenance such as bottom scraping and  
39 painting, repairs, etc.  
40

41 In addition, the alternative to deconstruction of a vessel while floating is deconstruction in a  
42 drydock where stormwater, along with other process wastewaters can be captured, contained,  
43 and transported off-site for treatment and disposal. While this practice has not been

1 demonstrated, the vessel hull could serve a similar purpose to a drydock by capturing not only  
 2 process waters (e.g. fire control water, lead and asbestos abatement water) but also stormwater.  
 3

4 Given these alternatives to direct discharge of stormwater, Ecology has determined that AKART  
 5 for stormwater discharges from vessel deconstruction activities is compliance with the following  
 6 effluent limits for oil sheen, oil and grease, turbidity, and TSS (note: pH and metals are discussed  
 7 below in the water quality-based limit section):  
 8

Parameter	Units	Maximum Daily Effluent Limit		Basis for limit
		Fresh Water	Marine	
Oil Sheen	Yes/No	No visible sheen	No visible sheen	Ecology best professional judgment
Oil and Grease	mg/L	5	5	Ecology best professional judgment
Turbidity	NTU	25	25	Ecology best professional judgment
TSS	mg/L	30	30	Ecology best professional judgment

9  
 10 Oil Sheen / Oil and Grease: The proposed limits of *no visible oil sheen* and *oil and grease less*  
 11 *than 5 mg/L* are based on experience from drydock floodwater at shipyards with individual  
 12 NPDES permits. Further discussion of the basis for these limits is given in the next section on  
 13 drydock floodwater.  
 14

15 Turbidity and TSS: Both the *Industrial Stormwater (ISWGP) and Construction Stormwater*  
 16 *(CSWGP) General Permits* contain a turbidity benchmark of 25 NTU. Ecology staff  
 17 implementing those permits determined that a stormwater discharge of 25 NTU or less will  
 18 typically cause no water quality violation. Turbidity of water is related to the amount of  
 19 suspended and colloidal matter contained in the water. Increasing turbidity reduces the clarity  
 20 and penetration of light, negatively impacting aquatic organisms. In addition, many of the  
 21 pollutants that are found in stormwater are attached to the small particles that become suspended  
 22 in the stormwater, increasing their potential toxicity. High turbidity is a useful indicator of  
 23 stormwater contamination. Turbidity was chosen as a limited parameter in part because Chapter  
 24 172-201A WAC includes a turbidity standard. This provides a more direct basis for determining  
 25 compliance with water quality standards. Turbidity sampling can be conducted on-site if the  
 26 Permittee purchases a turbidity meter.  
 27

28 Ecology studies have demonstrated a poor statistical correlation between turbidity and total  
 29 suspended solids (TSS). Turbidity readings are somewhat dependent on particle size, shape, and  
 30 color. Conditions that tend to suspend larger particles can produce higher TSS values without  
 31 necessarily increasing turbidity. For these reasons, and given that Ecology has very limited data  
 32 on stormwater runoff from vessels being deconstructed, both turbidity and TSS are proposed for  
 33 monitoring and limits.  
 34

1 The 30 mg/L TSS limit proposed is based on best professional judgment that stormwater  
2 discharges with less than 30 mg/L TSS will not cause or contribute to a violation of sediment  
3 management standards. This limit is also consistent with the secondary treatment standards for  
4 domestic wastewater given in Chapter 173-221 WAC.

5  
6 Further discussion of the proposed limits for pH, copper, zinc, and lead are discussed below in  
7 *Consideration of Surface Water Quality-Based Limits for Numeric Criteria*.

#### 8 9 *Drydock Floodwater*

10  
11 Discharge monitoring reports of shipyards with individual NPDES permits consistently  
12 demonstrate that with proper BMP implementation, drydock floodwater typically meets water  
13 quality standards for parameters measured. Over 90 percent of all measurements collected from  
14 drydocks from different shipyards reported oil and grease less than 5 mg/L, no visible sheen  
15 observed, and turbidity less than 5 NTU over background.

16  
17 Based on this achieved level of control and best professional judgment, Ecology has determined  
18 that the effluent limits of: oil and grease less than 5 mg/L, no visible sheen, and turbidity less  
19 than 5 NTU above background turbidity represent AKART for drydock floodwater.

#### 20 21 *Non-Routine Discharges*

22  
23 As previously stated, vessel deconstruction scenarios are likely to be highly variable.  
24 Unanticipated situations may arise where the only feasible option for disposal of process  
25 wastewater is treatment and disposal to surface waters. Because Ecology cannot anticipate all  
26 possible wastewaters that may fall into this category, the proposed permit includes a section for  
27 non-routine discharges.

28  
29 EPA guidance documents, along with sampling and analysis of discharges associated with  
30 vessels deconstructed in-place (e.g. Dave Crockett, see:  
31 <http://www.ecy.wa.gov/programs/spills/incidents/DavyCrockett/DavyCrockett.html>) identified a  
32 number of parameters with the potential to be present in discharges associated with vessels  
33 undergoing deconstruction.

34  
35 The proposed permit requires monitoring of these potentially present parameters, and any other  
36 parameters Ecology requires, prior to approval of discharge. Permittees must provide at a  
37 minimum:

- 38
- 39 • The proposed discharge location
- 40 • The nature of the activity that will generate the discharge
- 41 • Any alternatives to the discharge, such as reuse, storage, or recycling of the water
- 42 • The total volume of water it expects to discharge
- 43 • The results of the chemical analysis of the water
- 44 • The date of the proposed discharge
- 45 • The expected rate of discharge, in gallons per minute
- 46

1 Ecology will use this information to either approve or deny a request to discharge. Ecology may  
2 also use the information to calculate site-specific water quality based limits required to assure  
3 compliance with water quality standards. The discharge cannot proceed until approved by  
4 Ecology.

## 5 SURFACE WATER QUALITY LIMITS

6 In order to protect existing water quality and preserve the designated beneficial uses of  
7 Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be  
8 conditioned such that the discharge will not cause a violation of established Surface Water  
9 Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A  
10 WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the  
11 state. Surface water quality-based effluent limitations may be based on an individual waste load  
12 allocation (WLA) or on a WLA developed during a basin-wide total maximum daily loading  
13 study (TMDL).

## 14 NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

15 "Numerical" water quality criteria are numerical values set forth in the State of Washington's  
16 Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the  
17 maximum levels of pollutants allowed in receiving waters to be protective of aquatic life.  
18 Numerical criteria set forth in the Water Quality Standards are used along with chemical and  
19 physical data for the wastewater and receiving water to derive the effluent limits in a discharge  
20 permit. When surface water quality-based limits are more stringent or potentially more stringent  
21 than technology-based limitations, they must be used in a discharge permit.

## 22 NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

23 The EPA has promulgated 91 numeric water quality criteria for the protection of human health  
24 that are applicable to Washington State (40 CFR 131.36). These criteria are designed to protect  
25 humans from cancer and other diseases, primarily from fish and shellfish consumption and  
26 drinking water from surface waters. Because most human health-based criteria are based on  
27 lifetime exposures, direct comparisons of receiving water criteria with pollutant concentrations in  
28 intermittent stormwater discharges may not be appropriate. This and the high variation in  
29 stormwater pollutant concentrations, both between storms and during a single storm make the  
30 application of human health criteria to stormwater particularly problematic.

## 31 NARRATIVE CRITERIA

32 In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit  
33 toxic, radioactive, or deleterious material concentrations below those which have the potential to  
34 adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair  
35 aesthetic values, or adversely affect human health. Narrative criteria protect the specific  
36 beneficial uses of all fresh water (WAC 173-201A-130) and marine water (WAC 173-201A-140)  
37 in the state of Washington.

1 ANTIDegradation

2 The purpose of Washington's Antidegradation Policy (WAC 173-201A-300-330; 2006) is to:

- 3 • Restore and maintain the highest possible quality of the surface waters of Washington.
- 4 • Describe situations under which water quality may be lowered from its current condition.
- 5 • Apply to human activities that are likely to have an impact on the water quality of surface
- 6 water.
- 7 • Ensure that all human activities likely to contribute to a lowering of water quality, at a
- 8 minimum, apply all known, available, and reasonable methods of prevention, control, and
- 9 treatment (AKART).
- 10 • Apply three Tiers of protection (described below) for surface waters of the state.

11  
12 Tier I ensures existing and designated uses are maintained and protected and applies to all waters  
13 and all sources of pollutions. Tier II ensures that waters of a higher quality than the criteria  
14 assigned are not degraded unless such lowering of water quality is necessary and in the  
15 overriding public interest. Tier II applies only to a specific list of polluting activities. Tier III  
16 prevents the degradation of waters formally listed as "outstanding resource waters," and applies  
17 to all sources of pollution.

18  
19 Ecology considered Tier I and Tier II in this permit and determined there are no discharges under  
20 this permit to "outstanding resource waters."

21  
22 Ecology always considers Tier I when it issues a permit. Applying both technology based permit  
23 limits and water quality-based limits to point source discharges meets Tier 1 requirements and  
24 the fact sheet describes how this permit meets those requirements.

25  
26 Tier II requirements for general permits are given in 173-201A-320(6) as follows:

- 27 *(a) Individual activities covered under these general permits or programs will not require a*
- 28 *Tier II analysis.*
- 29 *(b) The department will describe in writing how the general permit or control program meets*
- 30 *the antidegradation requirements of this section.*
- 31 *(c) The department recognizes that many water quality protection programs and their*
- 32 *associated control technologies are in a continual state of improvement and development. As*
- 33 *a result, information regarding the existence, effectiveness, or costs of control practices for*
- 34 *reducing pollution and meeting the water quality standards may be incomplete. In these*
- 35 *instances, the antidegradation requirements of this section can be considered met for general*
- 36 *permits and programs that have a formal process to select, develop, adopt, and refine control*
- 37 *practices for protecting water quality and meeting the intent of this section. This adaptive*
- 38 *process must:*
- 39 *(i) Ensure that information is developed and used expeditiously to revise permit or program*
- 40 *requirements;*
- 41 *(ii) Review and refine management and control programs in cycles not to exceed five years*
- 42 *or the period of permit reissuance; and*
- 43 *(iii) Include a plan that describes how information will be obtained and used to ensure full*
- 44 *compliance with this chapter. The plan must be developed and documented in advance of*
- 45 *permit or program approval under this section.*

1 (7) All authorizations under this section must still comply with the provisions of Tier I (WAC  
2 173-201A-310).

3  
4 This fact sheet describes how the permit and control program meets the antidegradation  
5 requirement.

## 6 CRITICAL CONDITIONS

7 Surface water quality-based limits are derived for the water body's critical condition, which  
8 represents the receiving water and waste discharge condition with the highest potential for  
9 adverse impact on the aquatic biota, human health, and existing or characteristic water body  
10 uses. The factors include the flow and background level of toxic substances in the receiving  
11 water and the flow and concentration of toxic substances in the discharge. The inherent  
12 variability of storm events and stormwater discharges add complexity to defining critical  
13 conditions. Storm events are naturally occurring and affect the characteristics of both the  
14 stormwater discharge and the receiving water body. They vary in intensity and duration; they  
15 can be isolated events or part of storm event pattern. All these factors affect flows and water  
16 quality.

17 Acute conditions are changes in the physical, chemical, or biological environment which are  
18 expected or demonstrated to result in injury or death to an organism as a result of short-term  
19 exposure to the substance or detrimental environmental condition. The acute criteria for metals  
20 are one-hour concentrations not to be exceeded more than once every three years. The most  
21 likely critical stormwater conditions for acute toxicity would be a high intensity short duration  
22 storm event.

23 Chronic conditions are changes in the physical, chemical, or biological environment which are  
24 expected or demonstrated to result in injury or death to an organism as a result of repeated or  
25 constant exposure over an extended period of time to a substance or detrimental environmental  
26 condition. The chronic criteria for metals are four-day averages not to be exceeded more than  
27 once every three years. Chronic exposure requires storm events that result in stormwater  
28 discharge over a four-day period.

## 29 MIXING ZONES

30 The Water Quality Standards allow Ecology to authorize mixing zones around a point of  
31 discharge in establishing surface water quality-based effluent limits. Ecology may authorize  
32 both "acute" and "chronic" mixing zones for pollutants that can have a toxic effect on the aquatic  
33 environment near the point of discharge. The concentration of pollutants at the boundary of  
34 these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones  
35 can only be authorized for discharges that are receiving AKART and in accordance with other  
36 mixing zone requirements of WAC 173-201A-400.

37  
38 No mixing zones are authorized in this permit. Since a general permit must apply to a number of  
39 different sites, precise mixing zones and the resultant dilution are not applicable to facilities  
40 covered under a general permit.

1 Any discharger may request a mixing zone through an application for an individual permit in  
2 accordance with WAC 173-220-040 or WAC 173-216-070.

### 3 DESCRIPTION OF THE RECEIVING WATER

4 The draft general permit applies to sites statewide that discharge to many different receiving  
5 waters. The discharge will enter waters assigned designated uses intended to protect aquatic life  
6 and human health.

7  
8 Vessels likely to utilize the methods of deconstruction authorized in this permit are located on  
9 the Puget Sound and Columbia River. These are larger vessels, unable to safely reach shipyards  
10 permitted to perform this work. The potential impact from stormwater, drydock discharges, and  
11 non-routine discharges can be significant. Ecology anticipates that the diligent implementation  
12 and maintenance of BMPs identified in the Permittee's DSMP, and compliance with applicable  
13 effluent limits, will result in stormwater discharges that do not cause or contribute to violations  
14 of the state's Surface Water Quality Standards (Chapter 173-201A WAC).

### 15 SURFACE WATER QUALITY CRITERIA

16 WACs 173-201A-200 through -260 define applicable surface water quality criteria for aquatic  
17 biota. These criteria were established to protect existing and potential uses of the surface waters  
18 of the state. Consideration was also given to both the natural water quality and its limitations.  
19 The surface water quality criteria are an important component of the state's Surface Water  
20 Quality Standards (Chapter 173-201A WAC).

21 Application of the surface water quality criteria to a discharge requires site-specific analysis of  
22 the discharge and the receiving water. Such analysis is not possible in a statewide general  
23 permit. However, the criteria influenced calculation of the effluent limits for turbidity, TSS, pH,  
24 copper, zinc, and lead. In addition, WAC 127-201A-030(5)(viii) requires that aesthetic values  
25 not be impaired by the presence of materials or their effects, excluding those of natural origin,  
26 which offend the sense of sight, smell, touch, or taste. The "no visible sheen" and 5 mg/L oil and  
27 grease effluent limitations for stormwater and drydock floodwater are established to protect this  
28 water quality criteria.

### 29 CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC 30 CRITERIA

31 40 CFR Part 122.44 requires the permit to contain effluent limits to control all pollutants or  
32 pollutant parameters which are, or may be, discharged at a level which will cause, have the  
33 reasonable potential to cause, or contribute to an excursion above any water quality standard.  
34

35 Ecology has determined that stormwater discharges may cause a violation of surface water  
36 quality standards for oil sheen, oil and grease, turbidity, TSS, pH, copper, zinc, and lead.  
37 Ecology based this determination on best professional judgment. Therefore, the draft permit  
38 includes water quality-based effluent limits (WQBELs) to control discharges as necessary to  
39 meet applicable water quality standards. The provisions of S3 Compliance with Standards, some  
40 provisions of S4 Discharge Limits and Sampling Requirements, and S6 Discharges to 303(d) or

1 TMDL Water Bodies constitute the WQBELs of this permit. These WQBELs supplement the  
2 permit's technology-based effluent limits in, S3.B (AKART), S4.D Prohibited Discharges, S5  
3 Non-routine discharges, and S8 Deconstruction and Site Management.

4  
5 The following is a list of the permit's WQBELs:

- 6 • Condition S3.A prohibits discharges that cause or contribute to violations of Surface  
7 Water Quality Standards (Chapter 173-201A WAC), Ground Water Quality Standards  
8 (Chapter 173-200 WAC), and Sediment Management Standards (Chapter 173-204  
9 WAC), and human health-based criteria in the National Toxics Rule (40 CFR 131.36).
- 10 • Condition S4 imposes effluent limits for pH, copper, zinc, and lead, conditionally  
11 authorizes certain discharges, and prohibits others, to prevent violation of the state  
12 surface and ground water quality standards, and sediment management standards.
- 13 • Condition S6.A.3.a requires discharges from deconstruction sites that discharge to  
14 303(d)-listed waterbodies to comply with water quality-based numeric effluent limits.
- 15 • Condition S6.A.3.b requires facilities to comply with TMDLs, including any applicable  
16 wasteload allocations.

17  
18 The rationale for water quality-based effluent limitations in the draft permit is discussed below.

19  
20 *Condition S3. Compliance with Standards*

21  
22 Condition S3 prohibits discharges that cause or contribute to violations of Surface Water Quality  
23 Standards (Chapter 173-201A WAC), Ground Water Quality Standards (Chapter 173-200  
24 WAC), and Sediment Management Standards (Chapter 173-204 WAC), and human health-based  
25 criteria in the National Toxics Rule (40 CFR 131.36).

26  
27 Each Permittee is required to control its discharge as necessary to meet applicable water quality  
28 standards. Ecology expects that compliance with the other conditions in this permit (e.g., the  
29 technology-based limits, Deconstruction and Site Management Plan (DSMP), monitoring,  
30 corrective actions, etc.) will result in discharges that are controlled as necessary to meet  
31 applicable water quality standards.

32  
33 In addition, if the Permittee becomes aware, or Ecology determines, that the discharge causes or  
34 contributes to a water quality standards exceedance, corrective actions and Ecology non-  
35 compliance notification is required. In addition, at any time Ecology may require additional  
36 monitoring or an individual permit, if information suggests that the discharge is not controlled as  
37 necessary to meet applicable water quality standards.

38  
39 *Condition S4. Discharge Limits and Sampling Requirements*

40  
41 Authorized Discharges – Discharges conditionally authorized by the proposed permit include 1)  
42 stormwater discharges from deconstruction activities; 2) stormwater discharges from  
43 deconstruction support activities; 3) drydock floodwater; and 4) allowable non-stormwater  
44 discharges, including discharges from emergency fire-fighting activities, potable water,  
45 uncontaminated air conditioning or compressor condensate, and non-routine discharges.

1 Stormwater Discharges – The proposed water quality-based limits for stormwater discharges  
 2 include pH, copper, zinc, and lead. Ecology has very limited data on the quality of stormwater  
 3 discharges downstream of the proposed technology-based limits (DSMP, etc.). Some data is  
 4 available for BMPs used to comply with individual shipyard permits. However, the entire suite  
 5 of BMPs proposed is unique to this permit and untested. In addition, the quality of stormwater is  
 6 expected to vary significantly based on the type of vessel being deconstructed. The proposed  
 7 effluent limits are accordingly conservative. They require the permittee to demonstrate that the  
 8 discharge is not violating applicable criteria at the point of discharge to waters of the state.  
 9

Parameter	Units	Maximum Daily Effluent Limit		Basis for limit
		Fresh Water	Marine	
pH	Standard Units	Must be between 6.5 and 8.5	Must be between 7.0 and 8.5	State water quality standards
Copper, Total	µg/L	To be determined (TBD) <sup>1</sup>	5.8	State water quality standards
Zinc, Total	µg/L	TBD <sup>1</sup>	95	State water quality standards
Lead, Total	µg/L	TBD <sup>1</sup>	14	State water quality standards

<sup>1</sup> Ecology will assign a site-specific effluent limitation at the time of permit coverage.

10  
 11 pH: The proposed limits for stormwater discharges in S4 correspond to the water quality  
 12 criterion applied to many water bodies: fresh water – pH shall be in the range of 6.5 to 8.5, with  
 13 a human-caused variation within the above range of less than 0.5 units (Chapter 173-201A-  
 14 200(1)(g) WAC), marine water – pH must be within the range of 7.0 to 8.5 with a human-caused  
 15 variation within the above range of less than 0.5 units (Chapter 173-201A-210(1)(f) WAC).  
 16

17 Metals: Copper, zinc, and lead exposed during deconstruction may contaminate stormwater.  
 18 Ecology evaluated the “benchmarks with corrective actions” approach to limiting these  
 19 parameters as used in the ISWGP and CSWGP. Some key differences in the industrial activity  
 20 being permitted lead to the proposed water-quality based permit limits.  
 21

22 First, technical advisory group members repeatedly expressed that safety and health regulations,  
 23 and the practical hazards of vessel deconstruction, are paramount in planning and execution. This  
 24 necessitates a carefully planned and controlled process. The DSMP can be incorporated into this  
 25 process to a greater degree than a typical construction site or industrial facility. While adaptive  
 26 management is an essential part of the process, proper planning should avoid discharges in  
 27 excess of the proposed limits.  
 28

29 Second, unlike construction and industrial facilities where pollutants may be attenuated  
 30 downstream of the site, discharges are directly to the receiving water. Third, options for source  
 31 control, i.e. preventing exposure of rainfall to pollutants, are more feasible with a smaller site  
 32 that will be typical of vessel deconstruction. Fourth, project duration is expected to be generally  
 33 shorter than most construction sites. Permittees should have more opportunities to plan and

1 schedule to avoid exposure of rainfall to pollutants. Lastly, more options to capture and treat  
 2 stormwater prior to discharge or disposal off-site are expected given the smaller area subject to  
 3 rainfall, and the configuration of most vessels where the hull serves to collect water in the bilge  
 4 if it is not diverted first by the deck.

5  
 6 The surface water quality standards for these toxic substances are found in Chapter 173-201A-  
 7 240 WAC. Numeric criteria for copper, lead, and zinc vary in fresh water based on hardness. As  
 8 hardness increases, more metal moves from the dissolved phase to the less toxic particulate  
 9 phase. A translator represents the fraction of a total metal present in dissolved form. This is  
 10 further explained in footnotes to Table 240(3) of Chapter 173-201A-240. The factors used in  
 11 calculating the marine limits are shown in the following table.  
 12

**Effluent Limits Calculations**

<b>Facility</b>		<b>Dilution Factors:</b>	
<b>Water Body Type</b>	Marine	<b>Acute</b>	<b>Chronic</b>
		Aquatic Life	1 1
		Human Health Carcinogenic	1
		Human Health Non-Carcinogenic	1

Pollutant, CAS No. & NPDES Application Ref. No.	Effluent Data	Copper - 744058 6M Hardness dependent	Lead - 7439921 7M Dependent on hardness	Zinc - 7440666 13M hardness dependent	Dilution Factors					
					0.6	0.6	0.6	0.6	0.6	0.6
	Coeff of Variation (Cv)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Receiving Water Data	90th Percentile Conc., ug/L	0	0	0	0	0				
	Geo Mean, ug/L	0	0	0	0	0				
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	4.8	210	90						
	Chronic ug/L	3.1	8.1	81						
	WQ Criteria for Protection of Human Health, ug/L	-	-	-						
	Metal Criteria Acute	0.83	0.951	0.946						
	Translator, decimal Chronic	0.83	0.951	0.946						
	Carcinogen?	N	N	N						

Aquatic Life Limit Calculation		Copper	Lead	Zinc	Dilution Factors					
		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
# of Compliance Samples Expected per month		4	4	4						
LTA Coeff. Var. (CV), decimal		0.6	0.6	0.6						
Permit Limit Coeff. Var. (CV), decimal		0.6	0.6	0.6						
Waste Load Allocations, ug/L	Acute	4.8	210	90						
	Chronic	3.1	8.1	81						
Long Term Averages, ug/L	Acute	1.5412	67.427	28.897						
	Chronic	1.635	4.2722	42.722						
Limiting LTA, ug/L		1.5412	4.2722	28.897						
Metal Translator or 1?		0.83	0.95	0.95						
<b>Average Monthly Limit (AML), ug/L</b>		<b>2.9</b>	<b>7.0</b>	<b>47.4</b>						
<b>Maximum Daily Limit (MDL), ug/L</b>		<b>5.8</b>	<b>14.0</b>	<b>95.1</b>						

References: WAC 173-201A, Technical Support Document for Water Quality-based Toxics Control, US EPA, March 1991, EPA/505/2-90-001, pages 56/99

13  
14

1 Ecology will use this same method to calculate fresh water limits. We will use hardness data  
2 from the receiving water and the metal translators shown above. We will include applicable  
3 limits in each vessel's permit coverage letter.

4  
5 Prohibited Discharges – Ecology has developed a list which will help ensure compliance with the  
6 state AKART requirements in Chapter 90.48 RCW, and prevent violations of the state surface  
7 and ground water quality standards, and sediment management standards. The following  
8 discharges are prohibited:

- 9 a. Hydroblast or pressure wash wastewater
- 10 b. Hydraulic fluid
- 11 c. Oily wastes
- 12 d. Grey water
- 13 e. Ship sanitary wastes
- 14 f. Solvents
- 15 g. Industrial stormwater or process water from piers and docks
- 16 h. Non-contact cooling water
- 17 i. Dangerous wastes as defined in Chapter 173-303 WAC
- 18 j. Water used to prevent fires, or water used for cooling when torches are in use for cutting,  
19 unless authorized under Special Condition S5.

20  
21 Further discussion of the discharge limits in S4 for oil sheen, oil and grease, turbidity, and TSS is  
22 above in *Rationale for Numeric Technology-Based Effluent Limitation*. When these numeric  
23 effluent limits in S4 are required as a condition of S6, they are considered water-quality based  
24 effluent limits.

#### 25 26 *Condition S6 Discharges to 303(d)-Listed Waters*

27  
28 Ecology cannot allow a new discharge to a listed waterbody (issuance of permit is prohibited) if  
29 the discharge will cause or contribute to a violation of water quality standards. Ecology may  
30 allow a new discharge if it meets the applicable water quality criteria. The applicable federal  
31 regulation is 122.4(i) Sec. 122.4 Prohibitions. *No permit may be issued: i) To a new source or a*  
32 *new discharger, if the discharge from its construction or operation will cause or contribute to*  
33 *the violation of water quality standards...*

34  
35 The draft VDGP establishes water quality-based numeric effluent limits for deconstruction sites  
36 in S4. These limits will also apply to any discharges to certain waters that are listed as impaired  
37 under Section 303(d) of the Clean Water Act.

38  
39 All references and permit requirements associated with Section 303(d) of the Clean Water Act  
40 pertain to the most current EPA-approved 303(d) listing of impaired waters that exists when a  
41 complete application for coverage is submitted to Ecology. Ecology has determined that  
42 deconstruction sites without adequate controls have the potential to cause or contribute to  
43 violations of water quality standards in waterbodies that are 303(d) listed for the following  
44 parameters, and must comply with the numeric effluent limit(s) in S4 of the permit.

- 45 • Oil Sheen

- 1 • Oil and Grease
- 2 • Turbidity
- 3 • Fine sediment
- 4 • pH
- 5 • Copper
- 6 • Zinc
- 7 • Lead

8  
9 The technical basis for 303(d)-related effluent limits for the above parameters is describe above  
10 under Condition S4. In addition, any 303(d) listed parameters found in anticipated waste streams  
11 identified in the permit application must comply with S6.A.1 by detailing the procedures that  
12 will be taken to prevent exposure of pollutants to stormwater in the DSMP.

13  
14 Condition S6.A.3.b is intended to implement the requirements of 40 CFR 122.44(d)(1)(vii)(B),  
15 which requires that water quality-based effluent limits “are consistent with the assumptions and  
16 requirements of any available wasteload allocation for the discharge ... .” Because WLAs for  
17 discharges may be specified in many different formats, Ecology plans to ensure that these  
18 requirements are properly interpreted and communicated to the Permittee in a way that can be  
19 implemented. Ecology will notify Permittees subject to numeric effluent limitations or waste  
20 load allocations related to a TMDL in the permit coverage letter.

21  
22 Ecology plans to implement a permit application review process to identify discharges to  
23 impaired waters with an approved or established Total Maximum Daily Load (TMDL). Where  
24 an operator indicates on its application for coverage form that the discharge is to one of these  
25 waters, Ecology will review the applicable TMDL to determine whether the TMDL includes  
26 requirements that apply to the individual discharger (permit applicant). Ecology will determine  
27 whether any more stringent requirements are necessary to comply with the WLA, whether  
28 compliance with the existing permit limits is sufficient, or, alternatively, whether an individual  
29 permit application is necessary. If Ecology determines that additional requirements are  
30 necessary, Ecology will incorporate the final limits as site-specific terms to the facilities general  
31 permit coverage.

32 *SEDIMENT QUALITY*

33 Ecology has promulgated Sediment Management Standards (Chapter 173-204 WAC) to protect  
34 aquatic biota and human health. These standards state that Ecology may require Permittees to  
35 evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-  
36 204-400). The permit requires BMPs to limit contamination of stormwater. Source control  
37 BMPs can reduce or eliminate contamination of stormwater and help comply with the sediment  
38 management standards. However, if Ecology determines that BMPs are ineffective in protecting  
39 sediment quality, Ecology may require the Permittee to implement additional measures to assure  
40 compliance with the sediment standards or to apply for an individual permit.

1 *GROUND WATER QUALITY LIMITATIONS*

2 Ecology has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect  
3 beneficial uses of ground water. Permits issued by Ecology prohibit violations of those  
4 standards (WAC 173-200-100). The permit requires BMPs to limit contamination of  
5 stormwater. Source control BMPs can eliminate/minimize the potential contamination of  
6 stormwater and protect ground water quality. However, if Ecology determines that BMPs are  
7 ineffective in protecting ground water quality, Ecology may require the Permittee to implement  
8 additional measures to protect ground water quality or to apply for an individual permit.

9 **DESCRIPTION OF SPECIAL CONDITIONS**

10 This section follows the structure of the draft Vessel Deconstruction General Permit (VDGP),  
11 but does not restate language used in the permit. The information presented below is intended to  
12 help the public understand the intent and basis of the draft permit.

13 **S1. PERMIT COVERAGE**

14 A. Permit Area. The proposed VDGP is a statewide permit. It provides permit coverage for  
15 discharges of stormwater associated with deconstruction activity, drydock floodwater within  
16 Washington, except for federal land, tribal land and certain tribal waters.

17  
18 B. This proposed VDGP identifies deconstruction activities required to seek permit coverage.  
19 “Deconstruction activity” is defined as dismantling of a vessel so that no part is left intact or  
20 undisturbed to the extent that it can be reconstructed or readily identified as an existing portion  
21 of the original hull or superstructure. The vessel is reduced such that it has no value except for its  
22 basic material content.

23  
24 C. Limits on Coverage. This section identifies the types of discharges that are not authorized by  
25 the permit. These include discharges from:

- 26 1. Projects that are federally owned or operated or located on tribal land, or discharge to  
27 tribal waters with EPA approved water quality standards.  
28 2. Sites covered under an existing individual NPDES permit.  
29 3. Sites with discharges where an applicable TMDL requirement specifically precluded or  
30 prohibits discharges from deconstruction activity.

31  
32 Coverage for Significant Contributors of Pollutants – The Federal Clean Water Act at Section  
33 402(p)(2)(E) of the Clean Water Act and Chapter 90.48 RCW authorize Ecology to require  
34 permit coverage for any unpermitted deconstruction site which Ecology determines to be a  
35 significant contributor of pollutants to surface or ground waters of the state or may reasonably be  
36 expected to cause a violation of a water quality standard.

37  
38 Coverage for Discharges to Ground Water – In addition to the authority to issue NPDES permits,  
39 Ecology also has authority under state law to issue State Waste Discharge permits for discharges

1 to state surface waters, ground waters and municipal sewer systems. The draft permit is issued  
2 under this authority.

3  
4 This draft permit regulates operations which have a discharge to the ground only if they also  
5 have a discharge to surface water, a municipal storm drain, or a privately owned storm drain  
6 which discharges to surface water. Stormwater discharges to ground water will be regulated as  
7 part of permit coverage for all sites under this permit. The Permittee must also comply with any  
8 applicable requirements for discharges to ground under the Underground Injection Control  
9 Program (UIC) regulations, Chapter 173-218 WAC. However, this draft permit does not  
10 regulate deconstruction activities which discharge only to groundwater.

11  
12 Ecology considered the relationship of the proposed permit to the Vessel General Permit (VGP)  
13 issued by EPA ([http://cfpub.epa.gov/npdes/home.cfm?program\\_id=350](http://cfpub.epa.gov/npdes/home.cfm?program_id=350)). The VGP does not  
14 apply to any vessel when it is operating in a capacity other than as a means of transportation.  
15 Deconstruction activity as defined in the proposed permit precludes use of the vessel as a means  
16 of transportation, preventing any overlap of coverage for the two permits.

## 17 S2. APPLICATION REQUIREMENTS

18 A. Permit Application. In accordance with WAC 173-226-200, operators of deconstruction  
19 activities must submit a complete permit application to obtain coverage under the proposed  
20 vessel deconstruction general permit. Applicants must submit all of the information listed in  
21 Condition S2 as part of the application for permit coverage. Applicants must submit the Notice  
22 of Intent (NOI) at least 60 days before discharging and on or before the date of the first public  
23 notice.

24  
25 Ecology will respond to the permit applicant in writing. If the NOI is incomplete, public  
26 comments have been received, or more information is needed Ecology will notify the applicant  
27 in writing and identify the issues that must be resolved before a decision on permit coverage can  
28 be reached.

29 If Ecology approves the application, permit coverage under the general permit will begin on the  
30 31<sup>st</sup> day after approval. The permit coverage letter will identify any applicable effluent limits or  
31 permit conditions not already identified in the permit. For example, Ecology will calculate  
32 freshwater effluent limits for stormwater discharges to fresh water for the following parameters:  
33 copper, lead, and zinc. Receiving water conditions (e.g. hardness) must be known for calculation  
34 of these limits.

35 In accordance with WAC 173-226-200, the permit application must contain a certification that  
36 the public notice requirements of WAC 173-226-130(5) have been met. The permit application  
37 cannot be submitted to Ecology before the date of the second public notice, and not later than  
38 seven calendar days after the date of the second public notice. The 30-day public comment  
39 period required by WAC 173-226-130(4) begins on the publication date of the second public  
40 notice.

41  
42 Permittees may request that Ecology transfer current coverage under this permit to one or more  
43 new operators by submitting a Transfer of Coverage Form in accordance with Condition G9.  
44 Transfers do not require public notice.

1  
2 B. Public Notice. To streamline the permitting process, applicants must satisfy the public notice  
3 requirements of WAC [173-226-130](#)(5) prior to submitting the permit application form to  
4 Ecology. Applicants must publish the public notices one time each week for two consecutive  
5 weeks, with seven days between publication dates. The public notice is required to be placed in  
6 a single newspaper which has general circulation in the county in which the deconstruction is to  
7 take place. The 30-day public comment period required by WAC 173-226-130(4) begins on the  
8 publication date of the second public notice. Because state law requires a 30-day public  
9 comment period before permit coverage, Ecology will not grant permit coverage sooner than 31  
10 days after the date of the last public notice.

11  
12 A copy of the permit, permit coverage letter, and DSMP must be retained on-site or within  
13 reasonable access to the site. These documents must be made available to Ecology upon request.

### 14 S3. COMPLIANCE WITH STANDARDS

15 Condition S3 of the permit is covered in this fact sheet under Consideration of Surface Water  
16 Quality-Based Limits for Numeric Criteria, above.

### 17 S4. DISCHARGE LIMITS AND SAMPLING REQUIREMENTS

18 The discharge limits in S4 are described above in *Rationale for Numeric Technology-Based*  
19 *Effluent Limitations and Consideration of Technology-Based Limits for Numeric Criteria*. This  
20 section describes the sampling requirements.

21  
22 The monitoring approach outlined in S4 is consistent with the monitoring, recording, and  
23 reporting requirements of WAC 173-220-210 and 40 CFR 122.41 and includes consideration of  
24 the certainty, risk, and cost associated with monitoring stormwater, and the objectives of the  
25 permit. Certainty provides a level of confidence that the data are representative of the pollutants  
26 in the discharge. The risk is an assessment of the environmental impacts of pollutants. The  
27 monitoring cost considers all associated monitoring expenses, such as time to sample, expense of  
28 sampling and analysis, training and equipment requirements. The objectives define the purpose  
29 of the sampling.

30  
31 The monitoring frequency established in this permit are consistent with WAC 173-220-210(1)(b)  
32 and 40 CFR 122.48(b). Ecology set sampling frequencies to characterize the nature of the  
33 discharge reasonably. Other considerations included the cost of monitoring relative to the  
34 benefits obtained, and the environmental significance of the pollutants. The sampling frequency  
35 will yield data representative of discharge characteristics.

#### 36 *Stormwater Sampling*

37  
38  
39 Condition S4.A.2 requires sampling of all discharge locations once every calendar week while  
40 stormwater is being discharged. A primary factor influencing this frequency is the environmental  
41 significance of pollutants, combined with the expected variability of discharges as deconstruction  
42 exposes new areas of the vessel. Deconstruction activities are expected to be relatively short-

1 duration projects with the opportunity to limit exposure of work areas to rainfall via project  
2 phasing and source control.

3  
4 Condition S4.A.3 requires sampling at all points where stormwater associated with  
5 deconstruction activity is discharged. Ecology considered allowing representative outfalls to be  
6 selected, such as the *Industrial Stormwater General Permit* allows. This was rejected due to the  
7 variability expected and anticipated options for limiting discharges and/or capturing stormwater  
8 for transport and proper disposal off-site.

9  
10 *Drydock floodwater sampling*

11  
12 Condition S4.B, Table 4 requires sampling of drydock floodwater with each flooding of the  
13 drydock after the initial flooding to secure the vessel on the drydock. Ecology does not anticipate  
14 this discharge to occur frequently. In most cases, the vessel will be completely deconstructed and  
15 removed from the drydock. There will be no need to flood the drydock because there will be no  
16 vessel left to refloat. However, we have included this discharge as a possible discharge given the  
17 uncertainties associated with deconstruction. Ecology's experience with individual NPDES  
18 permitted shipyards demonstrates that these sampling requirements are practical and  
19 representative of the discharge.

20 S5. NON-ROUTINE DISCHARGES

21 Condition S5 of the permit is covered in this fact sheet under *Consideration of Technology-*  
22 *Based Limits for Numeric Criteria*, above.

23 S6. DISCHARGES TO 303(D) OR TMDL WATERBODIES

24 Condition S6 of the permit is covered in this fact sheet under *Consideration of Surface Water*  
25 *Quality-Based Limits for Numeric Criteria*, above.

26 S7. SITE INSPECTION REQUIREMENTS

27 Condition S7 of the permit requires visual monitoring (that is, site inspections and discharge  
28 observations) daily. The proposed VDGP requires enforceable adaptive management  
29 mechanisms including the evaluation, reporting, and documentation of remedial actions taken.  
30 Ecology established the frequency of site inspections based on three considerations. First, the  
31 nature of a deconstruction site is such that changes impacting discharges occur over short  
32 durations at the site. Second, rainfall and other natural or environmental forces may cause BMPs  
33 to fail. Finally, best professional judgment indicates that sites that are inspected regularly  
34 typically tend to cause fewer water quality violations. Site inspections provide timely feedback  
35 to the operator on the effectiveness of installed BMPs. Inspections provide information on when  
36 BMP repair and maintenance is necessary to improve the quality of stormwater discharged  
37 offsite, or when additional BMPs may be required. Ecology considers site inspections a  
38 requirement of AKART.

1 S8. DECONSTRUCTION AND SITE MANAGEMENT PLAN

2 In accordance with 40 CFR 122.44(k), the proposed general permit includes requirements for the  
3 development and implementation of a Deconstruction and Site Management Plan (DSMP)  
4 including BMPs to minimize or prevent the discharge of pollutants to waters of the state. BMPs  
5 constitute Best Conventional Pollutant Control Technology (BCT) and Best Available  
6 Technology Economically Achievable (BAT) for stormwater discharges. Ecology has  
7 determined that Permittees in full compliance with the Vessel Deconstruction General Permit  
8 meet the state AKART (all known and reasonable methods of prevention control and treatment)  
9 requirements in Chapter 90.48 RCW.

10

11 The objectives of the DSMP are to:

- 12 1. Implement BMPs to identify, reduce, eliminate and prevent stormwater and sediment  
13 contamination and water pollution from deconstruction activity.
- 14 2. Prevent violations of surface water quality, ground water quality, or sediment  
15 management standards.

16

17 Condition S.8 outlines specific requirements to prepare, implement, and modify the DSMP.  
18 Permittees must prepare and fully implement the DSMP, including narrative and drawings, in  
19 accordance with this permit. The DSMP must address all phases of the deconstruction project,  
20 beginning with initial deconstruction until the vessel is either completely deconstructed or  
21 transferred to a permitted facility. All BMPs used or planned for a project (or specific phase of a  
22 project) must be clearly referenced in the DSMP narrative and marked on the drawings.

23

24 The DSMP narrative must include documentation to explain and justify the pollution prevention  
25 decisions made for the project. Documentation must include:

- 26 1. Information about the vessel (size, type, historical uses, condition, etc.)
- 27 2. Anticipated waste streams (e.g. asbestos, oil and fuel, polychlorinated biphenyls (PCBs))
- 28 3. The 12 elements of a DSMP listed in S8.C.1-12 of the permit, including BMPs used to  
29 address each element.
- 30 4. Deconstruction phasing/sequence and BMP implementation schedule.
- 31 5. The actions to be taken if BMP performance goals are not achieved.
- 32 6. Applicable deconstruction plans prepared by a qualified marine professional.

33

34 Special condition S8.B.2 of the proposed permit contains an enforceable adaptive management  
35 mechanism to trigger DSMP modifications when problems are noted during site inspections.  
36 Specifically, Condition S9.B.2 requires the Permittee to modify the DSMP if, during inspections  
37 or investigations conducted by the permittee or the applicable local or state regulatory authority,  
38 the DSMP is determined to be, or would be, ineffective in eliminating or significantly  
39 minimizing pollutants in discharges from the site.

40

41 The development and implementation of the DSMP is one of the most important parts of a  
42 permit and is critical to the successful control of stormwater pollution. These plans are to be  
43 *living documents* that change during the actual deconstruction phases in order to meet the needs  
44 of changing site conditions. The DSMP must be modified as necessary to include additional or  
45 modified BMPs designed to correct the specific problems identified. These adaptive

1 management requirements are designed to result in permit compliance and prevent stormwater  
2 discharges that could cause a violation of state water quality standards. Revisions to the DSMP  
3 must be completed within one day following the inspection and must include an updated timeline  
4 for BMP implementation this timeframe. BMP revisions must be implemented on site in a  
5 timely manner.

6  
7 The DSMP must also be modified whenever there is a change in design, deconstruction,  
8 operation, or maintenance at the deconstruction site that has, or could have, a significant effect  
9 on the discharge of pollutants to waters of the state. This requirement is consistent with federal  
10 technology-based requirements for Best Conventional Pollutant Control Technology (BCT) and  
11 Best Available Technology Economically Achievable (BAT) and the state requirement for  
12 AKART (90.48.010 RCW, WAC 173-226-070(1)(d)).

13  
14 The proposed permit contains a narrative effluent limitation that requires the implementation of  
15 BMPs that are contained in the permit, or practices that are demonstrably equivalent to practices  
16 contained in the permit. If an applicant for coverage under the VDGP intends to use a BMP  
17 selected on the basis of Condition S3.C.2 (“demonstrably equivalent” BMPs), the applicant will  
18 notify Ecology of its selection as part of its NOI, which requires submittal of the DSMP. This is  
19 intended to ensure that BMPs will prevent violations of state water quality standards, and satisfy  
20 the state AKART requirements and the federal technology-based treatment requirements under  
21 40 CFR part 125.3.

22  
23 The Permittee must properly operate and maintain all BMPs. The DSMP must include operation  
24 and maintenance (O&M) practices for the proper management of the site. By operating and  
25 maintaining appropriate BMPs, the risk of water quality pollution is minimized and the ability of  
26 the Permittee to comply with this permit is improved.

27  
28 40 CFR 122.41(e) requires the Permittee to properly operate and maintain all facilities. The  
29 DSMP must contain adequate O&M procedures to ensure that BMPs are functioning properly to  
30 control discharges [40 CFR 122.44(k)]. Authority is also provided by RCW 90.48.080, RCW  
31 90.48.520, and WAC 173-216-110(1)(f).

32  
33 The DSMP includes 12 elements that the Permittee must implement unless site conditions render  
34 the element unnecessary and the exemption from that element is clearly justified in the DSMP  
35 narrative. The 12 elements are:

- 36 1. Control of large solid materials
- 37 2. Control and cleanup of grinding and cutting debris
- 38 3. BMPs for work below the waterline
- 39 4. BMPs for floats used for in-water vessel deconstruction
- 40 5. Oil, grease, solvents, and fuel spills prevention and containment
- 41 6. Contact between water and debris
- 42 7. Maintenance of hoses, soil chutes, and piping
- 43 8. Chemical storage
- 44 9. Recycling of spilled chemicals and rinse water
- 45 10. Oils, bilge, ballast, and dewatering water management
- 46 11. Metal cutting and welding materials management

1           12. Manage the project  
2

3       The technical rationale for each of these elements is derived from: EPA’s development document  
4       for ELGs (EPA, 1979), Ecology’s experience with existing NPDES permitted shipyards and in-  
5       place vessel deconstructions, and input from the technical advisory group formed after Ecology  
6       announced its preliminary determination to develop a general permit. Many of the elements are  
7       directly from one of these sources. Many others are modified to address the unique situation of  
8       deconstruction while the vessel is afloat.  
9

10       Education requirements in S8.E are informed by the extensive health and safety regulations in-  
11       place specific to vessel deconstruction (ship breaking). Both federal (29 CFR 1915) and state  
12       (Chapter 296-304 WAC) regulations speak directly to health and safety for this activity. The  
13       Occupational Safety and Health Administration (OSHA) has produced a guidance document  
14       specific to vessel deconstruction; *Safe Work Practices for Shipbreaking (OSHA 3375-02 2010)*.  
15

16       OSHA implements federal regulations and the Washington State Department of Labor and  
17       Industries (WA L&I) implements state regulations. The proposed permit requires documentation  
18       of compliance with applicable standards. Ecology feels that compliance with these standards is  
19       not only relevant to worker health and safety, but also to the potential for unauthorized  
20       discharges. Several of the standards address metal cutting, materials handling, and rigging that  
21       are essential for compliance with the 12 elements of the DSMP.

22       S9.     SOLID AND LIQUID WASTE DISPOSAL

23       This section is intended to ensure that handling and disposal of solid or liquid wastes do not  
24       result in a violation of applicable water quality regulations (40 CFR 122.44(k)(2), 40 CFR  
25       125.3(g), RCW 90.48.080, and WAC 173-216-110(1)(f)).  
26

27       Vessel deconstruction activities by their nature result in the generation of solid and liquid wastes.  
28       Many vessels will contain hazardous materials that may require specific procedures for  
29       identification, sampling, analysis, abatement, handling, storage, transport, and disposal.  
30       Housekeeping and other site management activities may also generate solid and liquid wastes  
31       such as cleanup of process areas and removal of spill materials. Proper disposal of solid and  
32       liquid waste materials is required.  
33

34       This proposed permit requires the permittee to develop a solid waste control plan to prevent solid  
35       waste from causing pollution of waters of the state. The permittee must submit the plan to  
36       Ecology with the permit application (RCW 90.48.080). You can obtain an Ecology guidance  
37       document, which describes how to develop a Solid Waste Control Plan, at:  
38       <http://www.ecy.wa.gov/pubs/0710024.pdf>  
39

40       Local jurisdictions may have other requirements that must be met. Permittees should check with  
41       the local jurisdiction for more information.

1 S10. REPORTING AND RECORDKEEPING REQUIREMENTS

2 The reporting and recordkeeping requirements of Special Conditions S10 are based on Ecology's  
3 authority to specify any appropriate reporting and recordkeeping requirements to prevent and  
4 control waste discharges. Reporting of monitoring results are specified in 40 CFR 122.44(i)(3  
5 and 4) and WAC 173-226-090(3). Discharge Monitoring Reports must be submitted to Ecology  
6 even if there was no discharge. Recordkeeping requirements in the draft permit are specified in  
7 40 CFR 122.41(j)(2) and WAC 173-220-210(2)(b). The requirements of Condition S10 will  
8 assure that Ecology records are maintained and demonstrate compliance with sampling  
9 requirements by the facility.

10 S11. PERMIT FEES

11 RCW 90.48.465 requires Ecology to recover the cost of the water quality permit program.  
12 Wastewater fees are established through a rule development process that includes the input of an  
13 advisory committee. Any new fee proposal will provide public comment opportunity in  
14 amending the existing fee regulation (Chapter 173-224 WAC).

15  
16 Some facilities may qualify for and receive an extreme hardship fee reduction under the  
17 Wastewater Discharge Permit Fee Rule (Chapter 173-224 WAC). Extreme hardship applies only  
18 if the annual gross revenue of goods and services produced using the processes regulated under  
19 the permit is \$100,000 or less and the fee poses an extreme hardship to the business.

20 S12. NOTICE OF TERMINATION

21 Condition S12.A states that a site is eligible for termination when any of the following conditions  
22 have been met:

- 23 1. The vessel has been either completely deconstructed or moved to an NPDES permitted  
24 facility for final deconstruction, the Permittee has removed all temporary BMPs, and all  
25 discharges associated with deconstruction activity have been eliminated; or  
26 2. The vessel has been sold and/or transferred (per General Condition G9), and the  
27 Permittee no longer has operational control of the deconstruction activity.  
28

29 When permit coverage for the entire site is eligible for termination, the Permittee must submit a  
30 complete and accurate Notice of Termination (NOT) form to Ecology. The termination is  
31 effective on the date the NOT is received by Ecology, unless Ecology notifies the Permittee  
32 within 30 days that it has denied the termination request because the Permittee has not met at  
33 least one of the eligibility requirements in S12.1-2.

34 **GENERAL CONDITIONS**

35 General Conditions are based directly on state and federal law and regulations and have been  
36 standardized for all NPDES permits issued by the Ecology.  
37

38 Condition G1 requires discharges and activities authorized by the draft permit to be consistent  
39 with the terms and conditions of the permit in accordance with 40 CFR 122.41.  
40

1 Condition G2 requires responsible officials or their designated representatives to sign submittals  
2 to Ecology in accordance with 40 CFR 122.22, 40 CFR 122.22(d), WAC 173-220-210(3)(b), and  
3 WAC 173-220-040(5).  
4  
5 Condition G3 requires the Permittee to allow Ecology to access the facility and conduct  
6 inspections of the facility and records related to the permit in accordance with 40 CFR 122.41(i),  
7 RCW 90.48.090, and WAC 173-220-150(1)(e).  
8  
9 Condition G4 identifies conditions that may result in modifying or revoking the general permit in  
10 accordance with 40 CFR 122.62, 40 CFR 124.5, and WAC 173-226-230.  
11  
12 Condition G5 identifies conditions for revoking coverage under the general permit in accordance  
13 with 40 CFR 122.62, 40 CFR 124.5, WAC 173-226-240, WAC 173-220-150(1)(d), and WAC  
14 173-220-190.  
15  
16 Condition G6 requires the Permittee to notify Ecology when facility changes may require  
17 modification or revocation of permit coverage in accordance with 40 CFR 122.62(a), 40 CFR  
18 122.41(i), WAC 173-220-150(1)(b), and WAC 173-201A-060(5)(b).  
19  
20 Condition G7 prohibits the Permittee from using the permit as a basis for violating any laws,  
21 statutes or regulations in accordance with 40 CFR 122.5(c).  
22  
23 Condition G8 requires the Permittee to reapply for coverage 180 prior to the expiration date of  
24 this general permit in accordance with 40 CFR 122.21(d), 40 CFR 122.41(b), and WAC 183-  
25 220-180(2) (Note: This would only apply to sites with permit coverage near the time of permit  
26 expiration).  
27  
28 Condition G9 identifies the requirements for transfer of permit coverage in accordance with 40  
29 CFR 122.41(i)(3) and WAC 173-220-200. When an incomplete deconstruction project is sold  
30 from one operator to another, the new operator must obtain permit coverage, either through a  
31 transfer of permit coverage per Condition G9, or by applying for the permit per Condition S2.  
32  
33 Condition G10 prohibits the reintroduction of removed substances back into the effluent in  
34 accordance with 40 CFR 125.3(g), RCW 90.48.010, RCW 90.48.080, WAC 173-220-130, and  
35 WAC 173-201A-040.  
36  
37 Condition G11 requires Permittees to submit additional information or records to Ecology when  
38 necessary in accordance with 40 CFR 122.41(h).  
39  
40 Condition G12 incorporates all other requirements of 40 CFR 122.41 and 122.42 by reference.  
41  
42 Condition G13 notifies the Permittee that additional monitoring requirements may be established  
43 by Ecology in accordance with 40 CFR 122.41(h).  
44  
45 Condition G14 describes the penalties for violating permit conditions in accordance with 40 CFR  
46 122.41(a)(2).

1  
2 Condition G15 provides the regulatory context and definition of “Upset” in accordance with 40  
3 CFR 122.41(n).  
4  
5 Condition G16 specifies that the permit does not convey property rights in accordance with 40  
6 CFR 122.41(g).  
7  
8 Condition G17 requires the Permittee to comply with all conditions of the permit in accordance  
9 with 40 CFR 122.41(a).  
10  
11 Condition G18 requires the Permittee to comply with more stringent toxic effluent standards or  
12 prohibitions established under Section 307(a) of the Clean Water Act in accordance with 40 CFR  
13 122.41(a)(1), WAC 173-220-120(5), and WAC 173-201A-040.  
14  
15 Condition G19 describes the penalties associated with falsifying or tampering with monitoring  
16 devices or methods in accordance with 40 CFR 122.41(j)(5).  
17  
18 Condition G20 requires Permittees to report planned changes in accordance with 40 CFR  
19 122.41(l)(1).  
20  
21 Condition G21 requires Permittees to report any relevant information omitted from the permit  
22 application in accordance with 40 CFR 122.41(l)(8).  
23  
24 Condition G22 requires Permittees to report anticipated non-compliances in accordance with 40  
25 CFR 122.41(l)(2).  
26  
27 Condition G23 specifies that Permittees may request their general permit coverage be replaced  
28 by an individual permit in accordance with 40 CFR 122.62, 40 CFR 124.5, and WAC 173-220-  
29 040.  
30  
31 Condition G24 defines appeal options for the terms and conditions of the general permit and of  
32 coverage under the permit by an individual discharger in accordance with RCW 43.21B and  
33 WAC 173-226-190.  
34  
35 Condition G25 invokes severability of permit provisions in accordance with RCW 90.48.904.  
36  
37 Condition G26 prohibits bypass unless certain conditions exist in accordance with 40 CFR  
38 122.41(m).

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**PERMIT ISSUANCE PROCEDURES**

*PERMIT MODIFICATIONS*

Ecology may modify the VDGP to impose numerical limitations, if necessary to meet water quality standards for surface waters, sediment quality standards, or water quality standards for ground waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

Ecology may also modify this permit as a result of new or amended state or federal regulations.

*RECOMMENDATION FOR PERMIT ISSUANCE*

The draft 2014 VDGP meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. Ecology proposes that this proposed permit be issued for five (5) years.

**ECONOMIC IMPACT ANALYSIS**

In accordance with WAC 173-226-120, Ecology prepared an Economic Impact Analysis (EIA) for the revised permit. The analysis finds... UPDATE AFTER EIA

A copy of the EIA (Ecology Publication Number INSERT) may be obtained through the Publications Distribution at Ecology’s Headquarters office (360) 407-6000 or by downloading it from Ecology’s webpage: <http://www.ecy.wa.gov/pubs.shtm>.

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**REFERENCES FOR TEXT AND APPENDICES**

Environmental Protection Agency (EPA)  
2009. Development Document for Proposed Effluent Limitations Guidelines and Standards for the Shipbuilding and Repair Point Source Category (EPA 440/1-79/76b), December 1979  
2000. A Guide for Ship Scrappers: Tips for Regulatory Compliance (EPA 315-B-00-001), Summer 2000  
1999. Multimedia Compliance Monitoring Investigation Protocol for the Ship Scrapping Industry (EPA-331/9-99-001), February 1999  
1997. Profile of the Shipbuilding and Repair Industry: EPA Office of Compliance Sector Notebook (EPA/310-R-97-008), November 1997  
1992. National Toxics Rule, Federal Register, V. 57, No. 246, Tuesday, December 22, 1992  
1991. Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001

Occupational Safety and Health Administration (OSHA)  
2010. Safe Work Practices for Shipbreaking (OSHA 3375-02), 2010

Washington State Department of Ecology  
2011. Permit Writer’s Manual, Water Quality Program, Publication Number 92-109

1                                   **APPENDIX A - PUBLIC INVOLVEMENT INFORMATION**

2 Ecology will issue the Vessel Deconstruction General Permit for deconstruction activities as  
3 identified in Special Condition S1, Permit Coverage.

4  
5 Ecology publishes a Public Notice of Draft (PNOD) to inform the public that the draft permit and  
6 fact sheet are available for review and comment. Ecology will publish the PNOD on INSERT  
7 DATE, in the Washington State Register and on the Ecology web site (below). The PNOD  
8 informs the public that the draft permit and fact sheet are available for review and comment.  
9

10 Ecology will also mail or email the notice to those identified as interested parties, including the  
11 Vessel Deconstruction Technical Advisory Committee.

12  
13 Copies of the draft general permit, fact sheet, and related documents are available for inspection  
14 and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at  
15 Ecology’s regional offices listed below or may be obtained from Ecology’s website or by  
16 contacting Ecology by mail, phone, fax or email:

Internet:                   <http://www.ecy.wa.gov/programs/wq/permits/vesseldeconstruction/index.html>

Contact Ecology: Vincent McGowan  
Department of Ecology  
PO Box 47600  
Olympia, WA 98504-7600  
Telephone: (360) 407-6433  
FAX: (360) 407-6426  
E-Mail: vmcg461@ecy.wa.gov

17  
Southwest Regional Office  
Water Quality Program  
300 Desmond Drive  
Lacey, Washington  
Phone: (360) 407-6279

Central Regional Office  
Water Quality Program  
15 West Yakima Avenue, Suite 200  
Yakima, Washington  
Phone: (509) 457-7148

Northwest Regional Office  
Water Quality Program  
3190 - 160<sup>th</sup> Avenue SE  
Bellevue, Washington  
Phone: (425) 649-7201

Eastern Regional Office  
Water Quality Program  
N. 4601 Monroe, Suite 202  
Spokane, Washington  
Phone: (509) 456-6310

18  
19 Ecology will accept written comments on the draft Vessel Deconstruction General Permit, Fact  
20 Sheet, and related documents from INSERT DATE through INSERT DATE (midnight); written  
21 comments must be postmarked or e-mailed no later than midnight INSERT DATE. Comments  
22 should reference specific permit conditions or text or when possible, and may address the  
23 following topics:

- 1 • Technical issues.
- 2 • Accuracy and completeness of information.
- 3 • The scope of proposed coverage.
- 4 • Adequacy of environmental protection and permit conditions.
- 5 • Any other concern that would result from issuance of the draft permit.

6

7 No later than midnight on INSERT DATE, submit written comments to:

8

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15

Vincent McGowan  
Water Quality Program  
Department of Ecology  
PO Box 47600  
Olympia, WA 98504-7600  
vincent.mcgowan@ecy.wa.gov

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Ecology will also conduct a workshop and public hearing at the following location:

17

INSERT DATE (TIME) - INSERT LOCATION

18

19

INSERT ADDRESS

20

21

22

23

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Public notice regarding the hearing will be circulated at least thirty (30) days in advance of the hearings. Persons expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

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Further information may be obtained by contacting Vincent McGowan at Ecology, by phone at (360) 407-6433, by [vincent.mcgowan@ecy.wa.gov](mailto:vincent.mcgowan@ecy.wa.gov), or by writing to Ecology's Olympia address listed above.

## APPENDIX B - GLOSSARY

- 1
- 2 **303(d) Listed Waters** – Waters listed as Category 5 on Washington State’s Water Quality  
3 Assessment.
- 4 **40 CFR** – Title 40 of the Code of Federal Regulations, which is the codification of the general  
5 and permanent rules published in the Federal Register by the executive departments and  
6 agencies of the federal government.
- 7 **Acute Toxicity** – The lethal effect of a compound on an organism that occurs in a short period of  
8 time, usually 48 to 96 hours
- 9 **AKART** – An acronym for “all known, available, and reasonable methods of prevention,  
10 control, and treatment” AKART represents the most current methodology that can be  
11 reasonably required for preventing, controlling, or abating the pollutants and controlling  
12 pollution associated with a discharge.
- 13 **Antidegradation** – The antidegradation policy of the state of Washington as generally guided by  
14 Chapters [90.48](#) and [90.54](#) RCW is applicable to any person's new or increased activity.
- 15 **Beneficial Use** – Identified uses of waters of the state shall include uses for domestic water,  
16 irrigation, fish, shellfish, game, and other aquatic life, municipal, recreation, industrial water,  
17 generation of electric power, and navigation.
- 18 **Best Management Practices (BMPs)** – Schedules of activities, prohibitions of practices,  
19 maintenance procedures, and other physical, structural and/or managerial practices to prevent  
20 or reduce the pollution of waters of the State. BMPs include treatment systems, operating  
21 procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste  
22 disposal, or drainage from raw material storage.
- 23 **Benchmark** – An indicator value used to determine the effectiveness of best management  
24 practices on a site. Benchmarks are not water quality criteria or effluent limits but indicators  
25 of properly functioning practices.
- 26 **Bypass** – The intentional diversion of waste streams from any portion of a treatment facility.
- 27 **Calendar Week** – (same as *Week*) A period of seven consecutive days starting on Sunday
- 28 **Chronic Toxicity** – The effect of a compound on an organism over a relatively long time, often  
29 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction  
30 or growth rates, or other parameters to measure the toxic effects of a compound or  
31 combination of compounds.
- 32 **Clean Water Act (CWA)** – The Federal Water Pollution Control Act enacted by Public Law 92-  
33 500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.
- 34 **Combined Sewer** – A sewer which has been designed to serve as a sanitary sewer and a storm  
35 sewer, and into which inflow is allowed by local ordinance.

1 **Composite Sample** – A mixture of grab samples collected at the same sampling point at  
2 different times, formed either by continuous sampling or by mixing discrete samples. May  
3 be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected  
4 either as a constant sample volume at time intervals proportional to stream flow, or collected  
5 by increasing the volume of each aliquot as the flow increased while maintaining a constant  
6 time interval between the aliquots.

7 **Critical Condition** – The time during which the combination of receiving water and waste  
8 discharge conditions have the highest potential for causing toxicity in the receiving water  
9 environment. This situation usually occurs when the flow within a water body is low, thus,  
10 its ability to dilute effluent is reduced.

11 **Deconstruction Activity** means dismantling of a vessel so that no part is left intact or  
12 undisturbed or otherwise impacted, to the extent that it can be reconstructed or readily  
13 identified as an existing portion of the original hull or superstructure. The vessel is reduced  
14 such that it has no value except for its basic material content.

15 **Deconstruction and Site Management Plan** – A documented plan to implement measures to  
16 identify, prevent, and control the contamination of point source discharges of wastewater.

17 **Demonstrably Equivalent** means the implementation of BMPs or practices that are  
18 demonstrably equivalent to practices contained in the permit. If an applicant for coverage  
19 under the VDGP intends to use a BMP selected on the basis of Condition S3.C.2  
20 ("demonstrably equivalent" BMPs), the applicant will notify Ecology of its selection as part  
21 of its NOI, which requires submittal of the DSMP. This is intended to ensure that BMPs will  
22 prevent violations of state water quality standards, and satisfy the state AKART requirements  
23 and the federal technology-based treatment requirements under 40 CFR part 125.3.

24 **Department** – The Washington State Department of Ecology

25 **Designated Uses** – Those uses specified in this chapter for each water body or segment  
26 regardless of whether or not the uses are currently attained.

27 **Dewatering** – The act of pumping water from the vessel that has entered either from previous  
28 submergence of the vessel or damage to the hull allowing water to enter.

29 **Dilution Factor** – A measure of the amount of mixing of effluent and receiving water that  
30 occurs at the boundary of the mixing zone, expressed as the inverse of the percent effluent  
31 fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the  
32 receiving water 90%.

33 **Discharge** – The release of water from a site

34 **Discharger** – An owner or operator of any facility or activity subject to regulation under Chapter  
35 90.48 RCW or the Federal Clean Water Act.

36 **Director** – The Director of the Washington Department of Ecology or his/her authorized  
37 representative.

- 1 **Domestic Wastewater** means water carrying human wastes, including kitchen, bath, and laundry  
2 wastes from residences, buildings, industrial establishments, or other places, together with  
3 such ground water infiltration or surface waters as may be present.
- 4 **Drydock** means a floating structure that can be submerged to allow a vessel to enter and then  
5 floated to raise the vessel and the floor of the drydock out of the water.
- 6 **Ecology** – The Washington State Department of Ecology
- 7 **Equivalent BMPs** The operational, source control, treatment, or innovative BMPs which result  
8 in equal or better quality of stormwater discharge to surface water or to ground water than  
9 BMPs selected from this permit.
- 10 **Erosion** – The wearing away of the land surface by running water, wind, ice, or other geological  
11 agents, including such processes as gravitational creep.
- 12 **General Permit** – A permit which covers multiple dischargers of a point source category within  
13 a designated geographical area, in lieu of individual permits being issued to each discharger.
- 14 **Grab Sample** – A single sample or measurement taken at a specific time or over as short period  
15 of time as is feasible.
- 16 **Ground Water** – A saturated zone or stratum beneath the land surface or a surface water body.
- 17 **Impaired Waters (303(d) listed waters)** – Listed waters refers to the specific segment of a  
18 waterbody listed as not meeting water quality criteria by the State as required under Section  
19 303(d) of the Clean Water Act. The most current list of impaired waters is the applicable list.
- 20 **Jurisdiction** – A political unit such as a city, town or county; incorporated for local self-  
21 government
- 22 **Local Government** – Any county, city, or town having its own government for local affairs
- 23 **Mixing Zone** – An area that surrounds an effluent discharge within which water quality criteria  
24 may be exceeded. The area of the authorized mixing zone is specified in a facility's permit  
25 and follows procedures outlined in state regulations (Chapter 173-201A WAC).
- 26 **National Pollutant Discharge Elimination System (NPDES)** means the national program for  
27 issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits,  
28 and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and  
29 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the  
30 state from point sources.
- 31 **Notice of Intent (NOI)** means the application for, or a request for coverage under this General  
32 Permit pursuant to WAC 173-226-200.
- 33 **Notice of Termination (NOT)** means a request for termination of coverage under this general  
34 permit as specified by Special Condition S12 of this permit.
- 35 **Noncompliance** – The inability to comply with any of the terms and conditions of the permit  
36 which causes a threat to human health or the environment

1 **Operator** – Any party associated with a deconstruction project that meets either of the following  
2 two criteria:

- 3 1. The party has operational control over deconstruction plans and specifications, including  
4 the ability to make modifications to those plans and specifications; or
- 5 2. The party has day-to-day operational control of those activities at a project which are  
6 necessary to ensure compliance with a DSMP for the site or other permit conditions (e.g.,  
7 they are authorized to direct workers at a site to carry out activities required by the DSMP  
8 or comply with other permit conditions)

9 **Outfall** – The location where the site’s stormwater discharges to surface water or leaves the site.  
10 It also includes the location where stormwater is discharged to surface waterbodies within a  
11 site, but does not include discharges to on-site stormwater treatment/infiltration devices or  
12 stormwater conveyance systems.

13 **Permit** – An authorization, license, or equivalent control document issued by the director

14 **Permittee** – An individual or entity that receives notice of coverage under this general permit

15 **pH** – The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral. Large  
16 variations above or below this value are considered harmful to most aquatic life.

17 **Point Source** – Any discernible, confined, and discrete conveyance, including but not limited to,  
18 any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which  
19 pollutants are or may be discharged to surface waters of the state. This term does not include  
20 return flows from irrigated agriculture. (See Fact Sheet for further explanation.)

21 **Pollutant** means dredged spoil, solid waste, incinerator residue, filter backwash, sewage,  
22 garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological  
23 materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt,  
24 and industrial, municipal, and agricultural waste. This term does not include sewage from  
25 vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill  
26 material discharged in accordance with a permit issued under section 404 of the CWA.

27 **Pollution** – The contamination or other alteration of the physical, chemical, or biological  
28 properties of waters of the state; including change in temperature, taste, color, turbidity, or  
29 odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other  
30 substance into any waters of the State as will or is likely to create a nuisance or render such  
31 waters harmful, detrimental or injurious to the public health, safety or welfare; or to  
32 domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial  
33 uses; or to livestock, wild animals, birds, fish or other aquatic life.

34 **Qualified Marine Professional** – An industry recognized professional such as a naval architect,  
35 marine engineer, or a marine chemist with the knowledge and skills to assess conditions and  
36 activities that could impact water quality, and evaluate the effectiveness of best management  
37 practices required by this permit.  
38

39 **Receiving Water** – The waterbody at the point of discharge – If the discharge is to a stormwater  
40 conveyance system, either surface or subsurface, the receiving water is the waterbody that  
41 the stormwater conveyance system discharges to. Systems designed primarily for other

- 1 purposes such as for ground water drainage, redirecting stream natural flows, or for  
2 conveyance of irrigation water/return flows that coincidentally convey stormwater are  
3 considered the receiving water.
- 4 **Sanitary Sewer** – A sewer which is designed to convey domestic wastewater
- 5 **Sediment** – The fragmented material that originates from the weathering and erosion of rocks or  
6 unconsolidated deposits, and is transported by, suspended in, or deposited by water.
- 7 **Sedimentation** – The depositing or formation of sediment.
- 8 **SEPA (State Environmental Policy Act)** means the Washington State Law, RCW 43.21C.020,  
9 intended to prevent or eliminate damage to the environment.
- 10 **Severe Property Damage** – Substantial physical damage to property, damage to the treatment  
11 facilities which would cause them to become inoperable, or substantial and permanent loss of  
12 natural resources which can reasonably be expected to occur in the absence of a bypass.  
13 Severe property damage does not mean economic loss caused by delays in production.
- 14 **Significant Amount** – An amount of a pollutant in a discharge that is not amenable to available  
15 and reasonable methods of prevention or treatment; or an amount of a pollutant that has a  
16 reasonable potential to cause a violation of surface or ground water quality or sediment  
17 management standards.
- 18 **Significant Contributor of Pollutant(s)** – A facility determined by Ecology to be a contributor  
19 of a significant amount(s) of a pollutant(s) to waters of the state of Washington.
- 20 **Site** – The land or water area where any "facility or activity" is physically located or conducted
- 21 **Source Control BMPs** – The physical, structural or mechanical devices or facilities that are  
22 intended to prevent pollutants from entering stormwater. A few examples of source control  
23 BMPs are prompt removal of debris from drainage systems, maintenance of work areas,  
24 constructing roofs over storage and working areas, and collection and proper disposal of  
25 metal cutting and welding materials.
- 26 **Storm Sewer** – A sewer that is designed to carry stormwater, also called a storm drain or  
27 stormwater conveyance system
- 28 **Stormwater** – The portion of precipitation that does not naturally percolate into the ground or  
29 evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater  
30 drainage system into a defined surface water body, or a constructed infiltration facility.
- 31 **Stormwater Drainage System** – Constructed and natural features which function together as a  
32 system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate or divert stormwater.
- 33 **Surface Waters of the State** – Lakes, rivers, ponds, streams, inland waters, salt waters, and all  
34 other surface waters and water courses within the jurisdiction of the state of Washington
- 35 **Technology-based Effluent Limit** – A permit limit that is based on the ability of a treatment  
36 method to reduce the pollutant

- 1 **Total Daily Maximum Load (TMDL)** – A calculation of the maximum amount of a pollutant  
2 that a waterbody can receive and still meet State water quality standards, a TMDL is the sum  
3 of the allowable loads of a single pollutant from all contributing point and nonpoint sources
- 4 **Total Suspended Solids (TSS)** – An analytical laboratory measurement of the concentration of  
5 solids suspended in water.
- 6 **Treatment BMPs** – BMPs that are intended to remove pollutants from stormwater. Examples  
7 of treatment BMPs are oil/water separators, sand filters, and media filters.
- 8 **Turbidity** – The clarity of water expressed as nephelometric turbidity units (NTU) and measured  
9 with a calibrated turbidity meter (turbidimeter).
- 10 **Upset** – An exceptional incident in which there is unintentional and temporary noncompliance  
11 with technology-based permit effluent limitations because of factors beyond the reasonable  
12 control of the Permittee. An upset does not include noncompliance to the extent caused by  
13 operational error, improperly designed treatment facilities, lack of preventative maintenance,  
14 or careless or improper operation.
- 15 **USEPA** – United States Environmental Protection Agency
- 16 **Visual Inspection** – Direct visual observation and evaluation of BMPs, site conditions, and  
17 discharge water quality
- 18 **Wasteload Allocation (WLA)** – The portion of a receiving water's loading capacity that is  
19 allocated to one of its existing or future point sources of pollution. WLAs constitute a type  
20 of water quality based effluent limitation (40 CFR 130.2(h)).
- 21 **Water Quality** – The chemical, physical, and biological characteristics of water, usually with  
22 respect to its suitability for a particular purpose.
- 23 **Water Quality-based Effluent Limit** – A limit on the concentration of an effluent parameter  
24 that is intended to prevent the concentration of that parameter from exceeding its water  
25 quality criterion after it is discharged into receiving water
- 26 **Water quality standards** – The state of Washington's water quality standards for surface waters  
27 of the state, which are codified in chapter [173-201](#) WAC.
- 28 **Waters of the State** – Those waters as defined as "waters of the United States" in 40 CFR  
29 Subpart 122.2 within the geographic boundaries of Washington State and "waters of the  
30 state" as defined in Chapter 90.48 RCW which include lakes, rivers, ponds, streams, inland  
31 waters, underground waters, salt waters and all other surface waters and water courses within  
32 the jurisdiction of the state of Washington.

33

1

**APPENDIX C – RESPONSE TO COMMENTS**

2 *Reserved for Ecology's response to comments received on the public permit draft*