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STATE OF WASHINGTON  
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

BNSF RAILWAY COMPANY,

Defendant.

NO. 07-2-33672-9 SEA

THIRD AMENDMENT TO  
CONSENT DECREE RE: BNSF  
FORMER MAINTENANCE AND  
FUELING FACILITY, SKYKOMISH,  
WASHINGTON

Pursuant to Section XV of the CONSENT DECREE RE: BNSF FORMER MAINTENANCE AND FUELING FACILITY, SKYKOMISH, WASHINGTON, entered by this Court on October 19, 2007, Plaintiff, State of Washington, Department of Ecology (Ecology), and Defendant BNSF Railway Company, hereby stipulate to amend the Consent Decree as follows:

1) The paragraph titled "Sediment - Former Maloney Creek Zone" of Section 3.4, the paragraph titled "Soil" of Section 3.4, all of Section 3.5.1, all of Section 3.5.2, and all of Section 4.1.5 of Exhibit B (Cleanup Action Plan) to the Consent Decree are replaced by the revised portions of Section 3.4, plus the revised Sections 3.5.1, 3.5.2, and 4.1.5, in attached Exhibit 1 (Amendments to Exhibit B, Cleanup Action Plan);

2) The following requirements are added to Exhibit D (List of Required Permits) and E (Applicable Substantive Requirements) of the Consent Decree:

1 a) Exhibit D (List of Required Permits) now includes the following additional  
2 permit requirement: Permit for the dredge and fill of FMC-E as upland pursuant to Section  
3 404 of the Clean Water Act, 33 U.S.C. § 1344 (which may be incorporated in a USCOE  
4 Nationwide 38 permit).

5 b) Exhibit E (Applicable Substantive Requirements) now includes additional  
6 requirements for the restoration of FMC-E as upland. Pursuant to Section 401 of the Clean  
7 Water Act, 33 U.S.C. § 1341, Ecology certified the Nationwide 38 permit required for this  
8 work "subject to conditions" in a MTCA order or decree, and accordingly the following  
9 conditions shall apply:

10 i) Mitigation Bank: BNSF shall pay the Skykomish Habitat LLC  
11 Mitigation Bank (SHMB) for compensatory mitigation for the loss of 0.95 acres for Former  
12 Maloney Creek – East (FMC-E) and long-term temporal impacts to Former Maloney Creek –  
13 West (FMC-W) wetland. This mitigation obligation is in accordance with the "*Interagency  
14 Review Team for Washington State Guidance Paper – Using Credits from Wetland Mitigation  
15 Banks: Guidance to Applicants on Submittal Contents for Bank Use Plans*" approved by the  
16 U.S. Army Corp of Engineers (USACE) and the Washington Department of Ecology. Based  
17 on the Interagency Guidance Paper analysis and the SHMB recommended credit ratio of  
18 1.2:1, the 0.95 acre FMC-E wetland loss would be mitigated by purchase of 1.14 SHMB  
19 credits, and the FMC-W temporal impacts would be mitigated by purchase of 0.432 SHBM  
20 credits, for a total of 1.58 credits. Documentation of the purchase of the credits shall be  
21 provided to Ecology and the Corps of Engineers prior to any wetland disturbance.

22 ii) Storm Water Treatment and Storage Pond: BNSF shall construct a  
23 storm water pond to off-set the loss of water conditioning functions provided by FMC-E,  
24 designed in accordance with the Stormwater Management Manual for Western Washington  
25 (revised 2005). This water will be conveyed via pipeline through the FMC-E area to FMC-W  
26

1 or directly to Maloney Creek. Upland restoration work will be completed in 2010, subject to  
2 schedule extension to 2011 as provided in Section XVI.

3                   iii) Maloney Creek Habitat Restoration/Sediment Control Project:  
4 BNSF shall pay Eight Hundred Thousand Dollars (\$800,000) within thirty (30) days of the  
5 effective date of the Third Amendment to the Consent Decree to the Town of Skykomish to  
6 proceed with a Habitat Restoration project within the Maloney Creek watershed. BNSF shall,  
7 at no cost to the Town, provide the Town with clean soil disposal services for the Habitat  
8 Restoration project so long as the soil can be used by BNSF as clean fill during restoration of  
9 remedial activities.

10                   iv) Conditions for implementation:

11 In-water work shall occur in Former Maloney Creek between July 1 and October 1 of any year  
12 in which work is being conducted, unless prior approval is obtained from Ecology to work  
outside of this period.

13 The Applicant shall not use Polyacrylamide on exposed or disturbed soil at the site.

14 The Applicant shall not use hay or straw on exposed or disturbed soil at the site if it has any  
15 opportunity to be washed into waters of the state.

16 If seeding is used at the site, the seed mix must contain native, annual, non-invasive plant  
species.

17 Construction stormwater, sediment, and erosion control best management practices (BMPs;  
18 e.g., filter fences, etc.) suitable to prevent exceedances of state water quality standards shall be  
in place before starting construction at the site.

19 Sediment and erosion control measures shall be inspected and maintained prior to and during  
20 project implementation.

21 All construction debris shall be properly disposed of on land so that it cannot enter a waterway  
or cause water quality degradation to state waters.

22 Machinery and equipment used during construction shall be serviced, fueled, and maintained  
23 upland, unless otherwise approved by Ecology, in order to prevent contamination to any  
surface water.

24 Wash water containing oils, grease, or other hazardous materials resulting from wash down of  
25 equipment or working areas shall be contained for proper disposal, and shall not be discharged  
into state waters or storm drains.

1 Clean Fill Criteria: Applicant shall ensure that fill (soil and rock) placed for the proposed  
2 project does not contain toxic materials in toxic amounts.

3 Work in or near the water that may affect fish migration, spawning, or rearing shall cease  
4 immediately upon a determination by Ecology that fisheries resources may be adversely  
5 affected.

6 Except as set forth above, all other provisions of the Consent Decree, as previously  
7 amended, remain in full force and effect, unchanged by this Third Amendment.

8 STATE OF WASHINGTON  
9 DEPARTMENT OF ECOLOGY

10 

11 James Pendowski  
12 Program Manager  
13 Toxics Cleanup Program  
14 (360) 407-7177

15 Date: 6/11/10

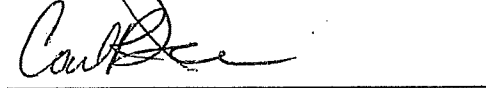
16 ROBERT M. MCKENNA,  
17 ATTORNEY GENERAL

18 

19 Kristie E. Carevich, WSBA No. 28018  
20 Assistant Attorney General  
21 (360) 586-6762

22 Date: June 11, 2010

23 BNSF RAILWAY COMPANY

24 

25 Carl Ice, Executive Vice President and  
26 Chief Operating Officer

Date: June 4, 2010

Approved as to Form



BNSF Law Department

ENTERED this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_  
JUDGE  
King County Superior Court

# EXHIBIT 1

THIRD AMENDMENT TO  
CONSENT DECREE RE: BNSF  
FORMER MAINTENANCE AND  
FUELING FACILITY, SKYKOMISH  
WASHINGTON

## **AMENDMENTS TO EXHIBIT B**

CLEANUP ACTION PLAN

## AMENDMENT TO CLEANUP ACTION PLAN

### 3.4 Cleanup Levels, Remediation Levels, and Points of Compliance

Cleanup levels have been established for petroleum for sediment, surface water, groundwater, soil, and air at the Site. The development of the cleanup levels is discussed in Chapter 5 of the *Feasibility Study* (RETEC 2005; see particularly Table 5-1). Figure 2 of this report summarizes the manner in which petroleum cleanup levels were developed and provides other information that was used to develop remediation levels, where appropriate. Petroleum cleanup levels and remediation levels are expressed as total petroleum hydrocarbons (TPH). The cleanup levels, remediation levels,<sup>4</sup> and their respective points of compliance are summarized below and on Table 1.

4. A remediation level defines a concentration of a hazardous substance in a particular medium above which a particular cleanup action component must be used. WAC 173-340-200. In practice, a remediation level is a contaminant concentration that is above a cleanup level. When contamination is above the remediation level, more aggressive cleanup actions are taken than for contamination between the remediation level and the cleanup level. For example, soil with contamination above a remediation level may be excavated whereas soil with contamination between the cleanup level and the remediation level may be managed on site.

**Sediment – Skykomish River:** [No Change]

**Sediment – Former Maloney Creek Zone:** The cleanup level for petroleum in surface sediment (top 10 centimeters) and subsurface sediment (below 10 centimeters) for areas to be restored as wetland is 40.9 mg/kg as measured by the NWTPH Dx method (40.9 mg/kg NWTPH Dx). This concentration was determined via site-specific biological assessment. The cleanup levels and points of compliance for FMC areas restored as uplands will be in accordance with “Soil” cleanup levels and points of compliance discussed below. Dioxin/furan contamination is located within the area of petroleum release and will be fully removed with the required excavation. The point of compliance for sediment in FMC areas to be restored as wetland is within the creek channel as delineated by the wetland boundary as defined by wetland vegetation or by the OHWM. The cleanup level of 40.9 mg/kg NWTPH-Dx will be used as the performance monitoring standard when excavating sediment. Dioxin/furan removal will be confirmed based on existing sample data delineation. Dioxin/furan-contaminated sediment will need to be evaluated to determine proper disposal requirements. Bioassays will be used to evaluate whether the cleanup remains protective in the long-term. That is, bioassays will be used as the standard during confirmational monitoring to evaluate whether the cleanup remains protective of surface sediments. Bioassay tests to be performed for confirmational sampling are *Hyalella azteca*: 10-day mortality, *Chironomus tentans*: 20-day growth and mortality, and Microtox®: 15-minute reduction in bioluminescence (Ecology, 1995).

**Surface Water –** [No Change]

## Groundwater – [No Change]

**Soil** – The cleanup levels for soil are as follows: For petroleum, 22 mg/kg NWTPH-Dx; for arsenic, 20 mg/kg, for lead, 250 mg/kg, for total PCBs 0.65 mg/kg, and for dioxin/furan, 6.67 ng/kg Total Toxicity Equivalent Concentration. The cleanup level point of compliance for petroleum is throughout the Site since the cleanup level is based upon protection of groundwater. However, as described in §4.2, an empirical demonstration may be used to show the remediation level selected is protective of groundwater, sediment, and surface water, and therefore effective as the soil cleanup level at this Site. The remediation level selected for petroleum in soil is established at 3,400 mg/kg NWTPH Dx based on direct contact, air quality, and groundwater protection. The point of compliance for the remediation level of 3,400 mg/kg NWTPH-Dx is throughout the portion of the Site which is off BNSF's railyard facility property except within 25 feet south of the OHWM of the Skykomish River and within 25 feet of any area to be restored as wetland of the FMC Zone as delineated by wetland vegetation or the OHWM, where the cleanup level of 22 mg/kg NWTPH-Dx must be met to a depth of 4 feet. Below 4 feet and within 25 feet of the FMC Zone the petroleum soil remediation level of 3,400 mg/kg NWTPH-Dx applies. For any portion of FMC Zone to be restored as upland the petroleum soil remediation level of 3,400 mg/kg NWTPH-Dx applies. In the NEDZ, soil with petroleum concentrations exceeding a remediation level of 30,000 mg/kg NWTPH-Dx will be used to define soil that must be excavated.<sup>7</sup> Soil in the NEDZ with petroleum concentrations above the remediation level of 3,400 mg/kg NWTPH-Dx will be addressed using air sparging.

7. When petroleum concentrations in soil at the excavation limits are greater than 30,000 mg/kg NWTPH-Dx or free product is observed to be flowing into or accumulating in an excavation four or more hours after all recoverable free product has been removed using best available technology, more excavation will be required. Hydraulic control and containment will ensure that any free product remaining beyond the excavation limits will be treated or stay on BNSF property.

Free product and soil with high concentrations of petroleum will remain on BNSF's railyard facility property. Groundwater contamination resulting from free product and high soil concentrations will be managed with a robust and reliable active hydraulic control and containment system incorporating a redundant barrier system, groundwater pumping, and groundwater treatment. The redundant barrier system must be capable of detecting leaks of free product that may occur anywhere along the length of the barrier system. Limited soil excavation will be performed on BNSF's railyard facility property as well. Soil will be excavated in selected areas of free product; these excavations will be based on excavating a specified soil volume. A remediation level for petroleum in soil is established at 1,870 mg/kg NWTPH-Dx to protect soil biota. The point of compliance for the remediation level of 1,870 mg/kg is to a depth of 2 feet.<sup>8</sup> Soil within 2 feet of the surface exceeding a petroleum concentration of 1,870 mg/kg occurs only in the Railyard Zone. The specified point of compliance of a depth of 2 feet is appropriate for the soil in the railyard pursuant to WAC 173-340-7490(4). Soil within BNSF's railyard facility property will also be excavated as necessary to meet the requirements for the Former Maloney Creek Zone.

8. The direct contact cleanup level of soil in the vadose zone is 2130 mg/kg V/E. Such soils occur only in the Railyard Zone. Excavation of soil exceeding 1,870 mg/kg NWTPH-Dx will also be protective of direct contact in the Railyard Zone.

The cleanup level for soil for arsenic is 20 mg/kg; for lead is 250 mg/kg; for total PCBs is 0.65 mg/kg; and for dioxin/furan is 6.67 ng/kg Total Toxicity Equivalent Concentration. The cleanup level point of compliance for arsenic, lead, total PCBs, and dioxin/furan is throughout the Site to a depth of 15 feet below the ground surface. On the Railyard, arsenic and lead will be excavated to a depth of 2 feet; arsenic and lead contamination below 2 feet, if any, will be contained with two feet of clean soil backfill.

**Air** – [No Change]



### 3.5.1 Required Permits

Cleanup actions at the Site will require the following permits. These are listed in Exhibit D of the Consent Decree. They are:

- Permit for discharge of pollutants pursuant to Section 402 of the Clean Water Act, 33 U.S.C. § 1342. Ecology issued National Pollutant Discharge Elimination System Waste Discharge Permit No. WA-003212-3 on May 4, 2006 for the discharge of industrial storm water and de-watering water resulting from BNSF cleanup activities in Skykomish.
- Permit for the discharge of dredged, excavated or fill material to waters of United States pursuant to Section 404 of the Clean Water Act, 33 U.S.C. § 1344 (which may be incorporated in a U.S. Army Corps of Engineers (USCOE) Nationwide 38 permit).
- Water Quality Certification from the State of Washington pursuant to Section 401 of the Clean Water Act, 33 U.S.C. § 1341 (which may be incorporated in a USCOE Nationwide 38 permit).
- Permit for the dredge and fill of FMC-E as upland pursuant to Section 404 of the Clean Water Act, 33 U.S.C. § 1344 (which may be incorporated in a USCOE Nationwide 38 permit).

**Air** – [No Change]

### 3.5.2 Substantive Requirements

The applicable substantive requirements of the following exempt permits or approvals (as identified at the time of entry of this Decree) will be more particularly identified during each phase of the cleanup action:

- King County Special Use Permit for Septic Drainfield
- King County Special Use Permit for Levee Cleanup project
- Underground Injection Permit
- Hydraulic Project Application
- Water Discharge for Industrial Waste to Groundwater
- Water Quality Protection Requirements
- Town of Skykomish Requirements

In addition, specific conditions that apply via Ecology's Section 401 certification authority under the Clean Water Act, 33 U.S.C. § 1341, for the dredge and fill of FMC-E as upland shall be identified in Exhibit E to the Consent Decree.

BNSF has a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) are required for remedial actions to be conducted under the Consent Decree. BNSF is responsible for a yearly evaluation and identification of any such additional substantive requirements as part of fulfilling its obligation to develop and submit phased Engineering Design Reports (EDR) for each year's work (see §6.2 and Exhibit C of the Consent Decree)

#### 4.1.5 Former Maloney Creek (FMC) Zone

The FMC Zone includes the wetland along the former channel of Maloney Creek. The FMC Zone is comprised of east and west wetland areas bisected by the Old Cascade Highway. The FMC-East (FMC-E) wetland area is primarily on BNSF property along the southern boundary of the railyard. A culvert carries water downstream from FMC-E under the old Cascade Highway, behind the school bus barn and fire department, to FMC-West (FMC-W) wetland. FMC-W is not on BNSF property and is comprised of a number of privately-owned properties. The cleanup requirements for FMC-E and FMC-W are based on the restoration plans of the respective wetland areas. FMC-W will be restored as wetland. FMC-E may be restored as wetland or as upland. The decision to restore FMC-E as upland is a land use decision by BNSF and other private property owners and subject to access, plus permitting and substantive requirements that include wetland mitigation via a wetlands bank. FMC Zone cleanup is scheduled to occur during the "fish window" in 2010 but could be delayed to 2011 if permit applications or project documents filed by BNSF are not approved by local, state or federal agencies in time for the 2010 "fish window." Restoration of FMC-E as upland would provide additional, usable upland space and flood control that could benefit the community, consistent with the goals of the Community Based Cleanup (Section 6.1).

For FMC-E & W areas restored as wetland, the cleanup requirements, which include buffer zones for sediment protection, are as follows:

- Sediment between the OHWM or wetland boundary, less than 4 feet from the bottom of the stream channel, and having petroleum concentrations exceeding 40.9 mg/kg NWTPH-Dx is to be excavated. Ecology has determined that dioxin/furan contamination, from unspecified sources, is located within the area of petroleum release and will be removed with the petroleum contamination removal and confirmation sampling requirements. Dioxin/furan-contaminated sediment removal will be confirmed via existing data, as excavation sample confirmation is not practical due to analytical time requirements. Dioxin/furan-contaminated sediment will need to be evaluated to determine proper disposal requirements.
- Sediment between the ordinary high watermark or wetland boundary, greater than 4 feet from the bottom of the stream channel, and having petroleum concentrations exceeding 3,400 mg/kg NWTPH-Dx is to be excavated.
- Soil within a 25-foot lateral buffer zone extending outward from the OHWM or wetland boundary, less than 4 feet from the bottom of the stream channel, and having petroleum concentrations exceeding 22 mg/kg NWTPH-Dx is to be excavated.

- Soil within a 25-foot lateral buffer zone extending outward from the OHWM or wetland boundary, greater than 4 feet from the bottom of the stream channel, and having petroleum concentrations exceeding 3,400 mg/kg NWTPH-Dx is to be excavated.

For upland restoration of FMC-E, the cleanup requirements are as follows:

- Petroleum-contaminated soil is to be excavated to the soil remediation level of 3,400 mg/kg NWTPH-Dx throughout the FMC-E zone. Ecology has determined that dioxin/furan contamination above the cleanup level from unspecified sources exists at depths up to 2-feet at the western end of the FMC-E stream channel approximately 20-feet from the culvert inlet to FMC-W. Dioxin/furan contamination does not exist above the cleanup level in samples approximately 100-feet from the culvert inlet. An FMC-E upland restoration remedy will include excavation of the upper 2-feet of soils within 100-feet of the culvert inlet and within the OHWM unless bioassay analyses are completed and results within site specific sediment cleanup screening level (CSL).
- In the case of FMC-E restoration as upland, the requirements for future compliance monitoring of the FMC Zone would then apply only to the FMC-West Zone which would be restored as wetland. The FMC-E area restored as upland would have compliance requirements in accordance with other upland areas.

Once confirmation has been obtained that the excavated areas have reached the required standards, the excavated creek areas and adjacent wetlands are to be backfilled and restored as appropriate habitat. This will include replacing excavated creek sediment and upland soils with appropriate clean material and replanting with appropriate vegetation. The restoration is to be consistent with the substantive requirements of the Town's Shoreline Management Program and regulations, and with other applicable laws and regulations such as Section 404 of the Federal Clean Water Act.

Compliance monitoring is to be conducted to ensure that excavations remove the sediment and soil to the concentrations specified. A confirmational monitoring plan will be developed and implemented to assess whether sediment remediation performs according to predictions or is becoming recontaminated over time by migration of contamination remaining on-site. As a contingency, should recontamination of sediments occur above the CSL, as determined by bioassay, BNSF will excavate the contaminated sediments, monitor the sediments to ensure they meet the site-specific sediment quality standards (SQS) within ten years of completion of the initial cleanup action, and will also employ, as necessary, treatment methods at or adjacent to Former Maloney Creek to reduce the petroleum concentrations in groundwater flowing to the creek so that sediments will continue to meet the SQS within this timeframe. If recontamination occurs at levels below the CSL but above the SQS, as determined by bioassay, then BNSF will employ, as necessary, treatment methods at or adjacent to Former Maloney Creek to reduce the petroleum concentrations in groundwater flowing to the creek to levels that allow sediments to naturally recover, and will monitor the natural recovery of the contaminated sediments, which

must meet the SQS within ten years of the completion of the initial cleanup. Ecology anticipates that reducing petroleum concentrations in groundwater will be accomplished using enhanced bioremediation techniques such as air sparging, and that this will be used as the contingency measure to prevent recontamination of sediment.

So long as the groundwater cleanup level of 208 µg/L and absence of sheen or free product is being met at its conditional point of compliance near the FMC Zone (for areas of FMC restored as wetland), petroleum-contaminated soil remaining after excavation will be considered sufficiently contained for the purposes of groundwater, sediment, and surface water protection. For areas of FMC restored as upland, the groundwater RL of 477 µg/L applies provided the property owners have agreed to a Conditional Point of Compliance.

No institutional controls will be needed within the FMC Zone.