

POLLUTION CONTROL HEARINGS BOARD  
FOR THE STATE OF WASHINGTON

NATIONAL PARKS CONSERVATION )  
ASSOCIATION, )  
 ) PCHB NO.  
Appellant, )  
 )  
v. )  
 ) NOTICE OF APPEAL  
STATE OF WASHINGTON, DEPARTMENT OF )  
ECOLOGY and BP WEST COAST PRODUCTS, )  
LLC, )  
 )  
Respondents. )  
 )  
 )

**1. Identity of Appealing Parties and Representatives**

The appealing party is:

National Parks Conservation Association  
1200 5<sup>th</sup> Ave – suite 1118  
Seattle, WA 98101  
(206)903-1125

The representatives of the appealing party are:

Janette K. Brimmer  
Earthjustice  
705 2nd Avenue, Suite 203  
Seattle, WA 98104  
(206)343-7340  
jbrimmer@earthjustice.org

**2. Identification of Other Parties**

The respondent in this appeal is the Washington State Department of Ecology. The permittee is BP West Coast Products, LLC (Cherry Point refinery).

**3. Decision Under Appeal**

This is an appeal of Air Emission Prevention of Significant Deterioration Permit No. 16-

1 01, BP West Coast Products LLC, BP Cherry Point Refinery, issued by the Washington  
2 Department of Ecology on May 23, 2017 (the “Permit”). A copy of the Permit is attached.

3 **4. Short and Plain Statement Showing Grounds for Appeal**

4 The Permit is contrary to contrary to state and federal Clean Air Act requirements and  
5 regulations requiring BACT for nitrogen oxides, sulfur dioxides and greenhouse gases, and is  
6 arbitrary and capricious because it is not supported by the record before the Department of  
7 Ecology. The Permit is also contrary to law in that it failed to adequately respond to the finding  
8 of adverse effects by the National Park Service and failed provide required public notice and  
9 comment on the issue of adverse impacts to area National Parks as determined and found by the  
10 National Park Service.

11 **5. Statement of Facts and Preliminary Identification of Issues**

12 **A. The Project**

13 The Permit concerns installation of new coker heaters and new isolation valves and  
14 bypasses at the crude preheat system of the BP Cherry Point refinery near Ferndale, Washington  
15 (the “Project”). These changes will increase capacity of both the coking units and the crude  
16 preheat system, allowing an increase in production and throughput at almost all refinery  
17 processes. The new coker heaters and the attendant changes are to allow Cherry Point to process  
18 more crude by increasing production and processing a more diverse slate of crudes, likely  
19 including heavier crudes from Western Canada. BP estimates that the coker heater project will  
20 allow the refinery to process 4% more crude oil, just under 9,000 more barrels per day.

21 While the Project is described as replacement of the coker heaters, in fact, the Project  
22 includes many other changes and actions throughout the refinery, including revising the main  
23 fractionator overhead accumulator, installing a lean oil absorption system with a compressor in  
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1 the coker off gas system, and installing additional bypasses on four existing heat exchangers in  
2 the crude unit preheat system. Further, it appears additional changes are occurring to replace the  
3 boiler feedwater circulation pump for the coker heaters, and to change the main fractionator  
4 accumulator for additional sour water generation associated with online spalling capability (also  
5 related to the new coker heaters).

6 BP projects a 22% increase in annual coker utilization as part of the Project, with  
7 proportional increases in coker off-gas production and coker unit intermediates. The Project will  
8 increase coker off-gas which will be used at the refinery. The increased amount of coker off-gas,  
9 which is high in sulfur content, added to the refinery fuel mix, will increase sulfur dioxide  
10 (“SO<sub>2</sub>”) emissions at heaters and processes at the refinery. BP also projects an 18% increase in  
11 annual calcined coke throughput after the coker heaters are replaced. In addition, BP projects  
12 increases a 1.4% increase in crude throughput as a result of the new coker heaters with the online  
13 cleaning capability and a 2.4% increase in crude processing due to the installation of new  
14 isolation valves on ten existing heat exchangers and installing new bypasses on four existing heat  
15 exchangers, which will allow for cleaning heat exchangers online. Overall, BP has projected a  
16 4% increase in crude processing as a result of the project, which will result in significantly more  
17 heavy crudes processed at the refinery and which will significantly increase pollutants emitted  
18 from the refinery including nitrogen oxides (“NO<sub>x</sub>”), SO<sub>2</sub>, and greenhouse gases (“GHGs”).  
19 Ecology has estimated that the Project will increase pollutants by 266 tons per year (“tpy”) for  
20 NO<sub>x</sub>, 221 tpy for SO<sub>2</sub>, and 1,097,792 tpy of GHG, among other pollutant increases.

## 21 **B. General Legal Background for Permitting Requirements**

22 Under the Clean Air Act and U.S. Environmental Protection Agency (“EPA”)  
23 regulations, any major modification to a major stationary source must obtain a pre-construction  
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1 Prevention of Significant Deterioration (“PSD”) permit. 42 U.S.C. §§ 7475, 7479; 40 C.F.R. §  
2 52.21(2); WAC 173-400-720.<sup>1</sup> In determining whether a proposed modification is “major,” the  
3 project proponent and regulating agency must determine whether the project will result in a  
4 significant emissions increase and, if so, whether it will also result in a significant net emissions  
5 increase. For any new emissions units like coker heaters, the increase in emissions is based on  
6 the heater’s Potential to emit—the *maximum* capacity to emit any air pollutant, based on the  
7 source’s physical design and operational limitations. 40 C.F.R. § 52.21(b)(4). *See, In re*  
8 *Peabody Western Coal Co.*, 12 E.A.D. 22 (Env’tl Appeals Bd. 2005) 2005 WL 428833 at \*7.

9 When a project will increase emissions from both new and existing emission units, the  
10 determination is based on the sum of the potential emissions increases from the new units and the  
11 projected actual emission increases for the existing units. 40 C.F.R. § 52.21(a)(iv)(f). Once it is  
12 determined that a modification is a major modification requiring a PSD permit, the project  
13 proponent and Ecology must determine and require Best Available Control Technology  
14 (“BACT”) for any emissions unit where a net emissions increase is projected as a result of a  
15 physical or operational change at the unit. 42 U.S.C. §§ 7475, 7479; 40 C.F.R. § 52.21(j)(3).

16 Additional requirements apply in situations where, as here, the source affects, or will  
17 affect, Class I areas such as designated national parks or wildernesses. Cherry Point refinery is  
18 within the airshed of North Cascades, Olympic, and Mount Rainier National Parks. These are  
19 Class I areas for which the Clean Air Act requires the greatest level of air quality protection.  
20 The Clean Air Act provides that Federal Land Managers, including the National Park Service,  
21 have an affirmative responsibility to manage Class I areas, to protect Air Quality Related Values  
22 (“AQRVs”), including visibility, and to consider, in consultation with the state and/or EPA,

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23 <sup>1</sup> Ecology has fully adopted and incorporated the requirements in 40 C.F.R. § 52.21 applicable  
24 here, through the adoption of its State Implementation Plan. *See* WAC 173-400-710 and -720.

1 whether a proposed major facility or modification will have an adverse impact on those values.  
2 42 U.S.C. § 7475(d)(2)(B). The Organic Act imposes a similar duty. 16 U.S.C. §1 and § 1-1a.

3 In analyzing impacts from the Project for potential adverse effects on AQRVs, EPA has  
4 made clear that “actual emissions” as defined in the PSD rules must be used to determine air  
5 quality impacts, not the “netting” procedures for determining PSD applicability. 67 Fed. Reg.  
6 80,186, 80,189, 80,191, and 80,196 (Dec. 31, 2002); 40 C.F.R. §§52.21(b)(16) and (21), (k), and  
7 (p). The determination of actual emissions from existing emissions units before the Project  
8 requires that a unit’s actual emissions be based on a consecutive 24-month period immediately  
9 preceding the change in question, unless a reviewing authority allows use of another time period  
10 upon a determination that the alternative time period is more representative. *Id.* at 80,192. The  
11 actual emissions with the project are the PTE/allowable emission increase over the averaging  
12 time being modeled (e.g., 24-hour averaging time for visibility impacts on Class I areas).

13 If the National Park Service determines and certifies that the modification will have an  
14 adverse impact on AQRVs, Ecology must consider the analysis and finding and if they agree,  
15 cannot issue the permit absent mitigation of the impact of the AQRV with enforceable permit  
16 requirements. *See* 40 C.F.R. § 52.21(p)(4). *See also*, WAC 173-400-117. If Ecology disagrees  
17 and chooses to nonetheless issue the permit, Ecology must explain its decision disregarding the  
18 National Park Service in detail and support the decision with record evidence. *Id.* at  
19 51.307(a)(3). *See also*, *In the Matter of Hadson Power 14*, 4 E.A.D. 258 (Env’t’l Appeals Bd.,  
20 1992). In addition, Ecology must provide the public with notice of the Park Service’s findings  
21 and recommendation, its disagreement, rationale and detail for the disagreement, and provide the  
22 public an opportunity to comment. As part of this overall process, Ecology is required to give its  
23 proposed decision and any information supporting it, to the National Park Service 60 days before  
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1 any public hearing in order to give the National Park Service adequate time to assess the decision  
2 and provide additional comment, modeling, findings, or other information.<sup>2</sup>

### 3 **C. The Permit and Preliminary Issues**

#### 4 **Adverse impacts to National Parks**

5 Ecology determined that the proposed changes to Cherry Point from the Project require a  
6 major modification PSD permit under the Clean Air Act as the proposed changes will  
7 significantly increase criteria pollutants across the board. On December 15, 2016, in compliance  
8 with their affirmative obligation to protect air quality related values at national parks, the  
9 National Park Service issued an adverse impact determination to Ecology notifying the agency  
10 that the BP Project would degrade the visibility at North Cascades and Olympic National Parks.  
11 NPS projected that the expansion will increase the number of poor visibility days from 54 to 70  
12 at Olympic and from 38 to 54 at North Cascades. NPS also found that the increased emissions  
13 would worsen the deposition of nitrogen at both parks, which would affect already nitrogen  
14 burdened, sensitive resources like lichen and herbaceous plant biodiversity. Under the Clean Air  
15 Act and Washington SIP, Ecology must not issue a PSD permit for which a Federal Land  
16 Manager has found an adverse impact on AQRVs, unless Ecology finds that the FLM's analysis  
17 does not demonstrate that the project will adversely impact AQRVs and unless Ecology explains  
18 its decision and provides public notice and comment on that decision. WAC §173-400-  
19 117(5)(c); 40 C.F.R. §52.21(p)(3) and (4); 42 U.S.C. §7475(d)(2)(C)(ii). While Ecology has  
20 rejected NPS' concerns and findings, Ecology has not explained its disagreement, has not based  
21 its disagreement on record evidence, and has not made the explanation or evidence available to  
22 the NPS and the public for comment. Rather, Ecology essentially rejected the NPS concerns in

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23 <sup>2</sup> Washington has incorporated the entirety of the federal requirements into Washington's State  
24 Implementation Plan ("SIP") through WAC 173-400-770(4)(a)(vi) and WAC 173-400-117.

1 its response to comments issued with the final permit on May 23, 2017). Ecology did not  
2 provide any rational basis for rejecting the FLM's adverse impact determination, which the EPA  
3 Environmental Appeals Board has stated is a basic requirement for a permitting authority to  
4 justify a rejection of an adverse impact determination issued by a Federal Land Manager. *In the*  
5 *Matter of Hadson Power 14*, 4 E.A.D. 258 (Env't'l Appeals Bd., 1992).

6 Appellants also provided comments on the proposed PSD permit in December of 2016.  
7 Appellants joined the NPS in arguing for more stringent controls to protect AQRVs in Olympic  
8 and North Cascade National Parks, while also pointing out that Washington's SIP is legally  
9 flawed because it provided less protection than federal law and EPA requirements. Ecology has  
10 apparently rejected the National Park Service's finding of adverse impact to two National Parks  
11 from BP's Cherry Point emissions, but did so without providing the required rational basis and  
12 explanation for that rejection and did so without providing notice of the finding, the rational  
13 basis and the explanation to the public for review and comment. Ecology has also, in final  
14 response to comments, admitted that Washington's SIP is inconsistent with PSD rules and has  
15 stated that Washington will revise the SIP, which further bears on Ecology's failure to explain  
16 the basis for its disagreement, especially if Ecology's rejection of the National Park Service's  
17 finding is in some way based upon or influenced by its faulty SIP.

### 18 **BACT for NOx and SO2**

19 The Project will significantly increase NOx and SO2 pollutant emissions from the  
20 refinery. These pollutants impair the visibility in the National Parks and also contribute to many  
21 respiratory and other human health problems. Under the PSD requirements, BP and Ecology  
22 were required to analyze and require BACT emission limits for these pollutants, for all emission  
23 units affected by the Project. Ecology has failed to do so.

1 For NOx BACT at the new coker heaters, Ecology has rejected Selective Catalytic  
2 Reduction (“SCR”) technology and emission limits achievable with that technology. SCR  
3 technology has been required and installed at numerous refinery heaters in the United States.  
4 Ecology dismissed SCR as a NOx control option due to costs, but Ecology has not justified such  
5 rejection of SCR for the new coker heaters at BP Cherry Point, given that other similar sources  
6 have incurred similar costs to install SCR to meet Clean Air Act requirements. Ecology did not  
7 determine a range of cost effectiveness values for the other SCR installations, nor did Ecology  
8 demonstrate that circumstances exist that distinguish the BP coker heaters from other refinery  
9 heaters at which SCR was installed. In addition, BP did not provide adequate documentation to  
10 support its cost effectiveness analysis for SCR. Overall, Ecology failed to conduct a proper  
11 BACT analysis and reached a proper BACT decision for NOx, and therefore its NOx BACT  
12 determination is legally and factually flawed.

13 For SO2 BACT, Ecology’s determination of BACT emission limits is legally and  
14 factually flawed, and as a result, the Permit fails to require SO2 BACT for the coker heaters.  
15 First, Ecology failed to impose BACT emission limits reflective of the controls that BP has  
16 actually said it will undertake as part of the Project. BP states it will install a lean oil system  
17 with a compressor and that there is a business case for doing so (that is, it is a worthwhile  
18 investment for BP as part of the Project). Yet, Ecology eliminated that control option as not cost  
19 effective. Ecology’s BACT determination was thus arbitrary and capricious and contrary to BP’s  
20 own statements. At a minimum, the Permit must include the most stringent emission limits that  
21 can be achieved using the technology BP stated will be part of the refinery configuration.

22 Second, Ecology has failed to evaluate and require SO2 BACT across the entirety of  
23 emission units at which SO2 emissions will increase as a result of the Project. BP and Ecology’s  
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1 statements and documents for the Project indicate that the new coker heaters will increase coker  
2 off-gas at the refinery. This off-gas produced as part of the Project is higher in sulfur (some of  
3 which may be attributable to the higher sulfur content of the new slate of crudes expected to be  
4 processed as a result of the Project). The increased coker off-gas will be mixed with other  
5 refinery gases and used as fuel in the various heaters and other processes using fuel at the  
6 facility. BP discloses that sulfur content in the fuel will increase up to 15% across refinery  
7 operations. Ecology did not assess or impose BACT on those units that will be affected by the  
8 sulfur and that will as a result have increased sulfur emissions from the new coker heater Project.  
9 This increase in sulfur content of refinery fuel gas due to the blending of higher quantities of  
10 coker off-gas is a change in the method of operation of each of the heaters and process units that  
11 utilize refinery fuel gas that will result in an increase in SO<sub>2</sub> emissions. The change in the sulfur  
12 content of refinery fuel gas is directly related to the physical changes at the coker units. SO<sub>2</sub>  
13 BACT is required for all affected units that will utilize the higher sulfur refinery fuel gas.

#### 14 **Greenhouse Gases**

15 GHG emissions will increase significantly as a result of the Project and they will increase  
16 at more points in the refinery than just the coker heaters. Ecology evaluated GHG BACT only  
17 for the coker heaters, and imposed a BACT limit reflective of the GHG emissions that would  
18 occur under planned operation of the coker heaters, assuming current feedstock. That BACT  
19 limit did not require reductions in emissions of GHGs at the refinery, from the coker heaters or  
20 anywhere else at the refinery where GHG increases would occur. Ecology failed to evaluate  
21 GHG BACT at all for the crude and vacuum unit heaters or the sulfur plant modifications, or  
22 other emission units or processes that are increasing emissions as a result of the Project and  
23 Ecology failed to analyze as BACT, additional feasible options for the control of GHGs.

1           **6. Relief Requested**

2           Appellant requests that the Pollution Control Hearings Board vacate and remand the  
3 Permit to Ecology, or order Ecology to rescind the Permit, and order Ecology to: 1) fully  
4 evaluate, consider and provide a rational basis for rejecting the FLM's finding that the major  
5 modification at BP Cherry Point would have an adverse impact on AQRVs and North Cascades  
6 and Olympic National Parks, and associated opportunity for the public for full review and  
7 comment; 2) require emissions limitations consistent with SCR technology as BACT for NOx  
8 emissions from the coker heaters at Cherry Point; 3) require BACT analyses and emission  
9 limitations for all emission units which will increase SO2 emissions as a result of the increased  
10 quantity of coker off-gas in the refinery fuel gas; 4) include SO2 BACT emission limits for the  
11 coker heaters in the Permit consistent with the most stringent emission limit that can be achieved  
12 with the planned plant configuration that includes a lean oil absorption system with a  
13 compressor; and 5) require a proper BACT analysis for GHG that includes all available options  
14 and impose GHG BACT for all emission units that are a part of or affected by the Project.

15           **7. Service.**

16           Copies of this Notice were sent to the respondents by certified mail on June 21, 2017.

17           Respectfully submitted this 21st day of June, 2017.

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*Attorneys for Appellant National Parks  
Conservation Association*

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) PCHB NO.

) DECLARATION OF SERVICE

I am a citizen of the United States and a resident of the State of Washington. I am over 18 years of age and not a party to this action. My business address is 705 Second Avenue, Suite 203, Seattle, Washington.

On June 21, 2017, I served a true and correct copy of the following documents on the parties listed below:

- 1. Notice of Appeal
- 2. Attachment 1-PSD Permit

Department of Ecology  
Appeals Processor  
300 Desmond Drive SE  
Lacey WA 98503

via certified U.S. Mail  
 via e-mail

BP West Coast Products LLC  
BP Cherry Point Refinery  
4519 Grandview Road  
Blaine, Washington 98230

via certified U.S. Mail  
 via e-mail

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I, Rachel Leigh, declare under penalty of perjury that the foregoing is true and correct.

Executed on this 21<sup>st</sup> day of June, 2017, at Seattle, Washington.



Rachel Leigh, Litigation Assistant