$1,340,585 and resulted in an increase of 184.10 tons of NOx and 226.29 tons of SO2 annually. *Id.* This constitutes a major modification.

3. Based on Information Provided By WEPCO to USEPA and Other Information Available to Sierra Club and MDEQ, PIPP Is A Modified Source.

The PSD program prevents the deterioration of air quality in areas that currently attain the National Ambient Air Quality Standards, by requiring that the construction of any new or modified sources of air pollution is only authorized after a careful evaluation and only when the new or modified pollution source is subject to stringent pollution control limits.[18] *Nat'l Parks Conservation Ass'n v. Tennessee Valley Auth.*, 480 F.3d 410, 412 (6th Cir. 2007). Because Congress anticipated that all sources in existence when it passed the 1977 Clean Air Act Amendments would "fac[e] retirement in 10-15 years," H.Rep. No. 94-1175 at 159 (1976); H.Rep. 95-294 (1977), reprinted in 1977 U.S.C.C.A.N. 1077, 1265, it provided a temporary reprieve by "grandfathering" existing sources. *United States v. S. Indiana Gas and Elec. Co.*, 2002 WL 31427523, *2 (S.D.Ind. 2002) ("When Congress enacted the Clean Air Act in 1970, and subsequently amended it in 1977, it determined that existing pollution sources would be 'grandfathered.'" In other words, existing sources would not be required to immediately install technology to comply with the CAA limitations on pollution emissions.). This reprieve was to be short lived, since Congress provided that sources in existence when the PSD program was enacted would be included

[18] Only the PSD program for attainment areas applies in this case. The Clean Air Act also contains a parallel regulatory scheme for areas where the air quality has not attained EPA's standards ("nonattainment"). 42 U.S.C. §§ 7501-7515. These two programs are referred to as "New Source Review," or "NSR."

with the program when they were modified. *Id.; Wis. Elec. Power Co., v. Reilly,* 893 F.2d 901, 909 (7th Cir. 1990) (hereinafter "*WEPCO*") ("But Congress did not permanently exempt existing plants from these [PSD] requirements; section 7411(a)(2) provides that existing plants that have been modified are subject to the Clean Air Act programs at issue here."); *Ala. Power Co. v. Costle,* 636 F.2d 323, 400 (D.C. Cir. 1980); *United States v. Murphy Oil U.S.A., Inc.,* 155 F.Supp.2d, 1117, 1137 (holding that Congress provided 'grandfather' provisions for facilities existing when the 1977 Amendments were passed, "but anticipated that they would incorporate the newly required controls as they underwent modifications or replacement.") (citing *WEPCO,* 893 F.2d at 909)

Therefore, for sources in existence when the PSD program was created, like the PIPP, the PSD program applies when the source undergoes any physical change. 42 U.S.C. §§ 7475(a)(1) (applying requirements to sources "on which construction is commenced"), 7479(2)(C) (defining "construction" to include modifications), 7411(a)(4) (defining modification as "any physical change..."); *S. Indiana Gas,* 2002 WL 31427523, *2 ("'modifications' of existing sources would be required to comply with the New Source Review programs. The CAA defines modification as "any physical change" that increases total emissions.") (internal citation omitted). Specifically, the PSD program applies to every "major modification," which is defined as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant...." 40 C.F.R. § 52.21 (b)(2)(i). In other words, a major emitting facility triggers PSD if it: (1) undergoes any physical change; and (2) the change

"results in" an increase in air pollution. *WEPCO*, 893 F.2d at 907; *Murphy Oil*, 155 F.Supp.2d at 1137.

The PSD program applies to every physical change, without limitation. *New York v. Envtl. Protection Agency*, 443 F.3d 880, 886 (D.C.Cir. 2006) (holding that Congress applied PSD to every physical change, not merely to "physical changes exceeding a certain magnitude." (citing *Ala. Power*, 636 F.2d at 400)). This includes even "the most trivial activities – the replacement of leaky pipes, for example..." *WEPCO*, 893 F.2d at 905, *id.* at 909 ("any physical change means precisely that."); *see also New York v. EPA*, 443 F.3d 880, 885-87 (D.C. Cir. 2006) (holding that Congress' use of the phrase "any physical change" was intended to apply to the broadest possible category of changes); *New York*, 413 F.3d at 40-42; *United States v. Cinergy Corp.*, 495 F.Supp.2d 892, 901 (S.D. Ind. 2007) ("The CAA defines the term 'modification' broadly as 'any physical change... which increases the amount of any air pollutant emitted...'" (*citing WEPCO*, 893 F.2d at 905; *Ala. Power Co.*, 636 F.2d at 400)). Because this definition, read literally, applies the PSD program to even the replacement of a screw during day-to-day maintenance at a pollution source, EPA adopted regulations which provide that "routine maintenance, repair, and replacement" ("RMRR") activities are exempt from the definition of modification. 40 C.F.R. §§ 51.165(a)(1)(v)(C), 51.166(b)(2)(iii), 52.21(b)(2)(iii); *Sierra Club v. Morgan*, Case No. 07-C-251-S, 2007 WL 3287850 *11 (W.D. Wis. Nov. 7, 2007); *see also* 57 Fed. Reg. 32313, 32316-19 (July 21, 1992) (explaining the need for the RMRR exemption to avoid PSD "encompass[ing] the most mundane activities at an industrial facility (even the repair or

replacement of a single leaky pipe, or a change in the way the pipe is utilized."); *WEPCO*, 893 F.2d 901, 905 (7th Cir. 1990) (noting that "the potential reach of these modification provisions is apparent: the most trivial activities- the replacement of leaky pipes, for example- may trigger the modification provisions..."). However, RMRR constitutes an agency's exception from a requirement prescribed by Congress, and, therefore, it can only apply to the very limited category of *de minimus* changes. *Alabama Power*, 636 F.2d at 400; *Ohio Edison*, 276 F.Supp.2d at 855; *In re Tennessee Valley Authority*, 9 E.A.D. at 392-93 (citing *O'Neil v. Barrow County Bd. of Comm'rs*, 980 F.2d 674 (11th Cir. 1993); *North Haven Bd. of Educ. v. Bell*, 456 U.S. 512 (1982)). In fact, because it has the potential to undermine Congress' intent that all sources eventually be subject to the PSD program and stringent pollution limits, the Seventh Circuit has warned that the RMRR exemption cannot be interpreted in such as way as to "open vistas of indefinite immunity from the provisions of ... PSD." *WEPCO*, 893 F.2d at 909; *see also Sierra Club*, 2007 WL 3287850, *11; *Ohio Edison*, 276 F.Supp.2d at 855; *In re TVA*, 9 E.A.D. at 410-11 (rejecting an interpretation of RMRR that would "constitute 'perpetual immunity' for existing plants, a result flatly rejected by Congress and the circuit courts in *Alabama Power* and *WEPCO*"). Beginning with the premise that RMRR must be narrowly construed to avoid an unlawful infringement on separations of powers through an agency exception to a statutory requirement, courts have identified three hallmarks of the RMRR exemption:

> First, the exemption applies to a *narrow range of activities*, in keeping with the EPA's limited authority to exempt activities from the CAA. Second, the exemption applies only to activities that are *routine for a generating unit*. The exemption

> does not turn on whether the activity is prevalent within the industry as a whole. Third, *no activity is categorically exempt.* The EPA examines each activity on a case-by-case basis, looking at the nature and extent, purpose, frequency, and cost of activity.

United States v. S. Indiana Gas and Elec. Co., 245 F.Supp. 2d 994, 1008 (S.D. Ind. 2003) (emphasis added) (hereinafter "SIEGCO"). None of the projects at PIPP set forth herein are routine. All were capital projects, costing hundreds of thousands to millions of dollars, and occurring once or twice in the lifetime of each boiler at the PIPP.

The term "net emission increase" is defined as a math formula. 40 C.F.R. § 52.21(b)(3)(i) (1998).[19] Pre-change "actual" emissions are "[i]n general,... the average rate, in tons per year, at which the unit actually emitted the air contaminant during a 2-year period which precedes the particular date and which is representative of normal operations." 40 C.F.R. § 52.21(b)(21)(ii). Because PSD is intended to be a pre-construction program and its application must be determined before commencing a major modification, post-change emissions must be projected as a presumption of future emissions. 57 Fed. Reg. at 32,316-17; 45 Fed. Reg. 52,676, 52,677 (August 7, 1980) (explaining that determination of PSD applicability requires the source to "quantify the amount of the proposed emissions increase.") Post-change emissions for an electric utility steam generating unit, like PIPP, are determined in one of two ways:

1) Actual-to-Projected-Actual. Post-change emissions can be based on a projection of future emissions, called the "representative actual annual emissions," but *only* if the owner of the source conducts additional

[19] The EPA modified regulations defining emission increases in 2002. These regulatory changes occurred after the modifications to the PIPP. Therefore, the 1996 regulations are cited and relied upon here for changes occurring prior to 2002.

monitoring and "maintains and submits to the Administrator on an annual basis for a period of 5 years from the date the unit resumes regular operation... demonstrating that the physical or operational change did not result in an emissions increase." 40 C.F.R. §§ 52.21(b)(21)(v), (33).

2) Actual-to-potential. If a utility fails to undertake this recordkeeping and annual reporting, it must use an actual-to-potential test, comparing the emissions before the change to the source's post-change "potential to emit," as defined in 40 C.F.R. § 52.21(b)(4). The option to use a "representative actual annual emission" after the change is optional and conditioned on compliance with the monitoring and reporting requirements. 40 C.F.R. § 52.21(b)(21)(v) ("actual emissions... following the physical or operational change shall equal the representative actual emissions of the unit, *provided* the source owner or operator maintains and submits... information demonstrating that the physical or operational change did not result in an emissions increase." (emphasis added)); WEBSTER'S UNABRIDGED DICTIONARY 1556 (2nd Ed., 1998) ("provided" means "on the condition or understanding (that)"; BLACK'S LAW DICTIONARY 1240 (7th Ed.) (same); 72 Fed. Reg. 10447 ("In the 1992 regulation, EPA added a reporting provision... Under the reporting provision, sources that utilize the 'representative actual annual emissions' methodology to determine that they are not subject to NSR must maintain and submit sufficient records..."); *see also* Brief for Resp. Duke Energy Corp, *Envt'l Defense v. Duke Energy Corp.*, Case No. 05-848 (U.S.S.Ct., Sept. 15, 2006) (acknowledging, on behalf of the utility industry, that the "projected actual," or "representative actual" post-change emissions test is "an *optional* test for electric utilities, and the 1980 Rules [providing an actual-to-potential test] remained the default," and that the 1992 WEPCO Rule actual-to-projected-actual test "is available *only* to utilities that satisfy certain post-project reporting requirements..." (emphasis original)).

Because WEPCO failed to comply with the monitoring and reporting requirements precedent to use the actual-to-projected-actual test, the actual-to-potential test applies. Each of the projects below results in a significant increase under the actual-to-potential test. However, as set forth below, PIPP underwent several physical changes that resulted in significant net emission increases under both the actual-to-potential test and the actual-to-projected actual (representative actual) test.

According to WEPCO's statements, under oath pursuant to CAA § 114, the following projects (among others) were undertaken at PIPP:

- A project in 1987-1988 to replace and upgrade the coal handling system (cost: ~$2,049,541)
- July 1989 replacement of the forced draft fan on boiler 2 (cost: 655,858)
- October 1992 replacement of a reheat section on boiler 6 (cost: $296,672)
- March 1993 replacement of a reheat section on boiler 5 (cost: $256,422) and economizer tubes on boiler 4 (cost: $260,277)
- March 1994 replacement of superheater wrapper tubes on boiler 5 (cost $321,320) and boiler 6 ($330,292)
- March 1997 replacement of superheater tubes on boiler 4 (cost: $1,091,572)
- May 1998 replacement of reheat tubes on boiler 7 (cost: $1,340,585) and boiler 6 (cost: $1,319,450)
- October 1998 repair of generator winding on unit 1 (cost $1,704,021)
- January 1999 replacement of a waterwall in boiler 3 (cost: $545,075)
- June 1999 overhaul of the unit 3 turbine (cost: $1,666,652)
- September 2000 replacement of a waterwall on boiler 2 (cost: $459,376)
- March 1998 upgrade to the unit 1 high pressure turbine (cost: $5,524,076)
- August 1998 replacement/upgrade of boiler 1 economizer (cost: $447,787)
- January 1999 project to allow ash reburn (cost: $3,092,422)
- April/May 1999 partial rewind of unit 1 generator (cost $1,676,949) and replacement of the boiler 1 superheater (cost: $5,421,036)

Exhibit CC. Each of these projects resulted in a significant net emission increase under the actual-to-potential test. An in-depth analysis of projects at units 3, 7 and 8 also shows increases under the actual-to-projected actual test. Fox Rpt. 71-103, attached at Exhibit

DD. Specifically, Sierra Club's expert reviewed the relevant documents and made the following conclusions, as documented in the attached declaration and report:

- The 1999 project to replace 75% of waterwall tubes on PIPP 3 was not RMRR and resulted in an increase of at least 42 tons of SO2 annually (Fox Rpt. 72-83).
- The replacement of high temperature and low temperature superheaters on PIPP 7 and 8 were not RMRR and resulted in increase of at least 51 tons of NOx and 94 tons of SO2 annual for Unit 7 and 47 tons of NOx and 90 tons of SO2 annually for SO2 (Fox Rpt. 84-103).[20]

For these reasons the PIPP has been modified since the major source baseline date and cannot be assumed to be in the baseline. The modeling for increment consumption must be redone and the PIPP must be modeled as consuming increment. The applicant, NMU, has not demonstrated that the proposed project at the Ripley plant complies with 40 C.F.R. § 52.21(k)(2) (maximum allowable increase) when PIPP is included as consuming increment. Unless and until the applicant makes such showing, no permit can issue.

X. THE SIGNIFICANT IMPACT LEVEL MUST BE REASSESSED WHEN ALL EMISSIONS ARE INCLUDED.

As noted above, the air modeling looked only at stack emissions from the boilers at the Ripley plant. It did not include fugitive emissions, cooling tower emissions, or emissions from material handling. Application at 63-64. Based on this truncated modeling, the NMU predicted no off-site impacts of PM/PM10 greater than the

[20] The emission increases were calculated for two separate reasons—increase in generation and increased utilization. The emissions set forth here are for the small of the two increases. Either basis for calculating the increase results in significant increases. Fox Rpt. 97, 101. The cumulative increase is even greater. Fox Rpt. 102.

Significant Impact Level in any Class II area. Application at 74-75. Because emissions from the fugitive sources and material handling sources will affect the SIL modeling, the modeling should be redone to include all sources. If, as is very likely based on the configuration of the sources, the emission rates, and the likely dispersion, the complete model shows Class II area impacts greater than the SIL, full modeling should be done.

XI. THE APPLICATION ILLEGALLY USES SIGNIFICANT IMPACT LEVELS TO AVOID ANALYSIS OF CLASS I IMPACTS.

The proposed boiler is relatively close to a Class I area. The NMU used Significant Impact Levels ("SILs") to determine whether analysis of impacts should be considered for both Class I and Class II areas. Application at 56, 70. However, there is no legal basis to truncate air impact analyses for Class I areas based on SILs.[21] The NMU has failed to demonstrate that the source will not cause an exceedance of increment, as required by 40 C.F.R. § 52.21(k). The permit cannot be issued.

Moreover, even for SO2, which modeled over the SO2 SIL, the application does not discuss or disclose the amount of increment consumption in the Class I area that is only 50 km away. This must be corrected and the public must be given an opportunity to review and submit comments on the analysis.

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[21] In a proposed rule, EPA considered promulgating significant impact levels to determine whether a source will contribute to a violation of a Class I increment. *See* 61 Fed. Reg. 38,249, 38,291-92 (July 23, 1996). However, this proposed regulation was never finalized and, therefore, there are no Class I SILs.

XII. THERE IS NO INDICATION THAT NOTICE OF CLASS I IMPACTS WAS PROVIDED TO THE FEDERAL LAND MANAGER OR THE PUBLIC.

40 C.F.R. §§ 52.21(p) and 124.42 require notice to be given to the Federal Land Manger ("FLM") of an application and any preliminary determination for any source that could affected a Class I area. Although there is at least one nearby Class I area, there is no record that the FLM was given notice. Additionally, 40 C.F.R. § 52.21(q) provides that DEP "shall follow the procedures at 40 CFR 52.21(r) as in effect on June 19, 1979[.]" 40 CFR 52.21(r) as in effect on June 19, 1979 requires that MDEQ "notify the public . . . of . . . the degree of increment consumption that is expected from the source[.]" 43 Fed. Reg. 26388, 26409 (June 19, 1978). While the Public Notice for the draft permit identified that 66% of SO2 increment would be consumed, it neither specified which SO2 increment (Class II 24-hour, not annual or 3-hour), nor the amount of Class I increment that would be consumed. The amount of impact on increments is important to the public. The MDEQ must re-notice the permit, include the amount of increment consumption for all applicable increment standards, and take new public comment.

XIII. THE PERMIT MUST CONTAIN A REQUIREMENT THAT THE APPLICANT OBTAIN A NEW BACT AND MODELING ANALYSIS FOR ANY EMISSION SOURCE THAT DOES NOT COMMENCE CONSTRUCTION WITHIN 18 MONTHS.

The Draft Permit purports to require a new BACT determination and modeling analysis for any unit that does not commence construction within 18 months. See Draft Permit, General Provision 2. This requirement must clarify that a new BACT determination and modeling analysis must be obtained for any emission source that does not commence construction within 18 months. As written, the provision could be misinterpreted to require a new BACT and modeling analysis only for the main boiler units, rather than any emission source that does not commence construction within the requisite time period. Furthermore, the permit, itself, must expire if the source does not commence construction within 18 months.

XIV. THE APPLICATION ERRONEOUSLY LOOKS AT ONLY THE RIPLEY PLANT EMISSIONS TO DETERMINE MAJOR HAP SOURCE STATUS.

The Application concludes that NMU is not a major source of Hazardous Air Pollutants (HAPs) because "the maximum potential HAP emissions for NMU (new boiler plus existing boilers) will be 23.4 tons per year." Application at 18. In other words, the application looks only at the heating plant, and not the NMU campus as the "source." Clean Air Act § 112, 42 U.S.C. § 7412, applies not only to the heating plant, but also to the entire "group of stationary sources located within a continuous area and under common control." 42 U.S.C. § 7412(a)(1). The campus, as a whole, is the "source." NMU and

MDEQ must determine if the campus, as a whole, has the potential to emit more than 10 tons of a single HAP, or 25 tons of all HAPs, per year.

XV. THE APPLICATION INCORRECTLY STATES THAT CAM DOES NOT APPLY.

The Application argues that the Continuous Assurance Monitoring Rule (CAM) does not apply because CAM does not apply to NSPS limits. Application at 19. However, the permit limits in the draft permit are based on BACT, not NSPS. Therefore, the exception from the CAM rule in 40 C.F.R. § 64.2(b)(1)(i) does not apply. CAM is required for all emissions that will be controlled with a pollution control device and for which no continuous monitors are used.

XVI. FAILURE TO CONSULT RE: ENDANGERED SPECIES

PSD permits are actions subject to the section 7 endangered species act consultation requirements. We could not locate any information in the record indicating that EPA and MDEQ had satisfied EPA's ESA consultation obligations. Consultation must be conducted and its results made available to the public prior to the close of the comment period, particularly if the consultation involves consideration of endangered plant species. Any consultation must consider endangered species that may be impacted by the proposed source, as well as the areas impacted by the proposed fuel source.

CONCLUSION

For the foregoing reasons, Petitioner Sierra Club respectfully requests that the permit be denied until significant additional analyses and modifications are made, and the public has had another opportunity to review and comment on a revised draft permit. Thank you for considering these comments.

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