On June 15, 2005, OSHA published a proposed rule to revise the general industry and construction standards for electric power generation, transmission, and distribution work and for electrical protective equipment. Public comments were received, a hearing was held, and the final posthearing briefs were due on July 14, 2006.

The proposed general industry and construction standards for electric power generation, transmission, and distribution work included revised minimum approach distance tables. Those tables limit how close an employee (or a conductive object he or she is contacting) may get to an energized circuit part. After the rulemaking record on the proposal closed, the technical committee responsible for developing the tables in the consensus standards on which the proposal was based discovered what in their view was an error in their calculation of minimum approach distances for certain voltages.

OSHA is reopening the record on this proposal to obtain comments related to the affected minimum approach distances. The record will remain open on this limited basis for 30 days.

The proposed requirements for electric power generation, transmission, and distribution work for general industry and construction would be contained in 29 CFR 1910.269 and 29 CFR part 1926, subpart V (§§ 1926.950 through 1926.968), respectively. Proposed § 1926.960(c)(1) would require employees to maintain minimum approach distances from exposed energized parts. The minimum approach distances are specified in proposed Tables V–2 through V–6. Existing § 1910.269(l)(2) and proposed Tables R–6 through R–10 contain equivalent requirements for general industry.

OSHA developed the minimum approach distance tables in the proposal using the following principles (see 70 FR 34862):

- ANSI/IEEE Standard 516–1987 was to be the electrical basis for approach distances: Table 4 (Alternating Current) and Table 5 (Direct Current) for voltages above 72.5 kV. Lower voltages were to be based on ANSI/IEEE Standard 4. The application of ANSI/IEEE Standard 516–1987 was inclusive of the formula used by that standard to derive electrical clearance distances.
- Altitude correction factors were to be in accordance with ANSI/IEEE Standard 516–1987, Table 1.
- The maximum design transient overvoltage data to be used in the development of the basic approach distance tables were:
  - 3.0 per unit for voltages of 362 kV and less
  - 2.4 per unit for 500 to 550 kV
  - 2.0 per unit for 765 to 800 kV
- All phase-to-phase values were to be calculated from the EPRI2 Transmission Line Reference Book for 115 to 138 kV.
- An inadvertent movement factor (ergonomic component) intended to account for errors in judging the approach distance was to be added to all basic electrical approach distances (electrical component) for all voltage ranges. A distance of 0.31 meters (1 foot) was to be added to all voltage ranges. An additional 0.3 meters (1 foot) was to be added to voltage ranges below 72.6 kV.
The voltage reduction allowance for controlled maximum transient overvoltage was to be such that the minimum allowable approach distance was not less than the given approach distance specified for the highest voltage of the given range.

The transient overvoltage tables were to be applied only at voltage ranges inclusive of 72.6 kV to 800 kV. All tables were to be established using the higher voltage of each separate voltage range.

\[ D = (C + a) \times pu \times V_{\text{max}} \]  

Equation (1)

Where:

- \( D \) = Electrical component of the minimum approach distance in air in feet
- \( C = 0.01 \) to take care of correction factors associated with the variation of gap sparkover with voltage
- \( a \) = A factor relating to the saturation of air at voltages of 345 kV or higher
- \( pu \) = Maximum anticipated transient overvoltage, in per unit (p.u.)
- \( V_{\text{max}} \) = Maximum rms system line-to-ground voltage in kilovolts—it should be the “actual” maximum, or the normal highest voltage for the range (for example, 10 percent above the nominal voltage).


For phase-to-phase exposures, the maximum phase-to-phase transient overvoltage must be used to calculate minimum approach distances from one phase to another. As noted in Appendix B to existing § 1910.269 and in Appendix B to proposed subpart V, the following equation is used in determining the phase-to-phase maximum transient overvoltage based on the per unit of the system nominal voltage phase-to-ground crest:

\[ pu_p = pu_g + 1.6 \]  

Equation (2)

Where:

- \( pu_p \) = p.u. phase-to-phase maximum transient overvoltage
- \( pu_g \) = p.u. phase-to-ground maximum transient overvoltage.

This value was to be used in Equation (1) to calculate the phase-to-phase minimum approach distance (MAD).

The technical committees responsible for ANSI/IEEE and the National Electrical Safety Code (NESC, ANSI C2) calculated minimum approach distances based on these equations. Because OSHA intended to use the same methodology, it relied on the technical committees’ calculations as they appeared in the two consensus standards and carried those distances into the proposed standard.

During the most recent revision cycle for ANSI/IEEE Standard 516, the IEEE technical committee responsible for revising that standard identified what in their view was an error in the calculations of phase-to-phase minimum approach distances for nominal voltages 230 kV and higher. At these voltages, the saturation factor, \( a \), which appears in Equation (1), varies depending upon the voltage. The value of \( a \) increases with increasing voltage. The NESC subcommittee originally calculated the phase-to-phase minimum approach distances using a value for the saturation factor, \( a \), corresponding to the phase-to-ground maximum transient overvoltage rather than the maximum phase-to-phase transient overvoltage. Because the MADs used in OSHA’s 2005 proposal were taken from the consensus standard, OSHA wants to obtain comments on whether changes are necessary to the tables as proposed.

The IEEE committee proposed a correction in a draft revised IEEE Standard 516 (Draft #9). Table 1 shows the difference between the minimum approach distances in that draft IEEE Standard 516 and those contained in proposed § 1910.269 Table R–6 and proposed Subpart V Table V–2 for voltages over 72.5 kV. A subsequent draft from the IEEE committee (Draft #10) dropped values for voltages with temporary overvoltages exceeding 1600 kV. Draft #10 leaves the determination of these values to “good engineering judgment.”

### Table 1—Comparison of Minimum Approach Distances

<table>
<thead>
<tr>
<th>Nominal voltage in kilovolts phase-to-phase</th>
<th>Distance (m)</th>
<th>Phase-to-ground exposure</th>
<th>Phase-to-phase exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>516¹</td>
<td>and V–2</td>
<td>516¹</td>
</tr>
<tr>
<td>72.6 to 121</td>
<td>1.01</td>
<td>0.95</td>
<td>1.36</td>
</tr>
<tr>
<td>138 to 145</td>
<td>1.15</td>
<td>1.09</td>
<td>1.57</td>
</tr>
<tr>
<td>161 to 169</td>
<td>1.29</td>
<td>1.22</td>
<td>1.85</td>
</tr>
<tr>
<td>230 to 242</td>
<td>1.71</td>
<td>1.59</td>
<td>2.91</td>
</tr>
<tr>
<td>345 to 362</td>
<td>2.72</td>
<td>2.59</td>
<td>5.13</td>
</tr>
<tr>
<td>500 to 550</td>
<td>3.54</td>
<td>3.42</td>
<td>6.89</td>
</tr>
</tbody>
</table>

3 This voltage is the maximum transient overvoltage.

4 ANSI/IEEE Standard 516–1987 did not contain distances for phase-to-phase exposures. The NESC subcommittee derived them by applying the IEEE equation to the phase-to-phase temporary overvoltages calculated using Equation (2).

5 This document is available for inspection and copying in the Docket Office at the address listed in the ADDRESSES section of this notice.

6 This document is also available for inspection and copying in the Docket Office at the address listed in the ADDRESSES section of this notice.
As can be seen from Table 1, the IEEE’s proposed approach from Draft #9 results in a substantial increase in MAD for phase-to-phase exposures at voltages of 230 kV and higher.

For purposes of the public’s consideration of the issues in this reopening notice, OSHA points out the following technical issues:

1. For voltages over 72.5 kV, the electrical component of the minimum approach distances in IEEE Standard 516 that would be more appropriate in OSHA’s proposal is based on testing of rod-to-rod gaps performed by 13 laboratories. This testing extends to approximately 1.6 MV. This voltage is sufficient to cover the maximum transient overvoltage for all phase-to-ground exposures. However, it does not extend to the maximum transient overvoltages for phase-to-phase exposures of voltages 362 kV and higher, as shown in Table 2.

### Table 2—Maximum Transient Overvoltages

<table>
<thead>
<tr>
<th>System voltage (in kV) ( V_{\text{max}} )</th>
<th>Maximum anticipated per-unit transient overvoltage ( pu )</th>
<th>Maximum transient overvoltage (in kV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase-to-ground exposure</td>
<td>Phase-to-phase exposure</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>362</td>
<td>3.0</td>
<td>1086</td>
</tr>
<tr>
<td>552</td>
<td>2.4</td>
<td>1325</td>
</tr>
<tr>
<td>800</td>
<td>2.0</td>
<td>2208</td>
</tr>
<tr>
<td>2.0</td>
<td></td>
<td>2890</td>
</tr>
</tbody>
</table>

Note: The maximum transient overvoltage for phase-to-ground exposure equals \( V_{\text{max}} \times pu \). The maximum overvoltage for phase-to-phase exposures equals \( V_{\text{max}} \times (pu + 1.6) \).

In Draft #9, the IEEE committee addressed this issue by extending the equations used for calculating the minimum air insulation distance beyond the highest voltage covered by the test data. Other approaches using the same criteria upon which the minimum approach distances are based could include: (1) Using available test data for conductor-to-conductor gaps and converting them to equivalent rod-to-rod values, and (2) commissioning further tests.

2. IEEE Drafts #9 and #10 also include other refinements of the method used to calculate minimum approach distances intended to make the calculations more precise and repeatable. For example, the saturation factor is now based on equations resulting from curve fitting the test data rather than from reading the value directly from a graph of these data.

3. If the minimum approach distances are based on the minimum tool insulation distance, as is done in the NESC, there would be additional slight increases in MAD for all voltages of 72.6 kV and higher with both phase-to-ground and phase-to-phase exposures. In light of the IEEE committee’s draft revisions, OSHA is reopening the record on the electric power generation, transmission, and distribution standard to invite comments, evidence, and data on the limited question of whether the Agency should adopt minimum approach distances different from those proposed for voltages of 72.6 kV and higher. The Agency strives to adopt a final rule that is based on sound and up-to-date engineering, and scientific principles and is specifically inviting comments on the following questions:

   1. Should OSHA adopt MADs that are different from those proposed for voltages of 72.6 kV and higher and, if so, should it adopt the distances in Draft #9 or #10 of IEEE Standard 516?
   2. Are there methods other than those in Drafts #9 and #10 of IEEE Standard 516 that would be more appropriate in the calculation of MAD for maximum transient overvoltages beyond existing data for rod-to-rod gaps?
   3. Should MAD for voltages of 72.6 kV and higher be based on the minimum tool insulation distance as is the case in the 2007 NESC?

4. Should the final rule include separate minimum approach distance tables for air gaps and for tools as is done in Drafts #9 and #10 of IEEE Standard 516?

OSHA is reopening the record solely on issues related to minimum approach distances for voltages of 72.6 kV and higher. The record is not being reopened on any other issue.

### List of Subjects in 29 CFR Parts 1910 and 1926

- Electric power
- Fire prevention
- Hazardous substances
- Occupational safety and health
- Safety

### Authority and Signature

This document was prepared under the direction of Edwin G. Foulke, Jr., Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. It is issued pursuant to sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657),
ENVIROMENTAL PROTECTION AGENCY

40 CFR Part 52
Approval and Promulgation of Air Quality Implementation Plans; Wisconsin; Approval of Rule Clarifications

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve revisions to the Wisconsin State Implementation Plan (SIP) submitted by the Wisconsin Department of Natural Resources (WDNR) on March 28, 2008. The WDNR has submitted for approval revisions to incorporate Federal regulations into the Wisconsin Administrative Code, to clarify construction permit requirements under general permits, to revise portable source relocation requirements, and to amend rule language to streamline the minor revision permit process to allow construction permits to be issued concurrently with operation permits. EPA is approving these revisions because they are consistent with Federal regulations governing State permit programs.

DATES: Comments must be received on or before November 21, 2008.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R05–OAR–2008–0389, by one of the following methods:
1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: blakley.pamela@epa.gov.
3. Fax: (312) 886–5824.
5. Hand Delivery: Pamela Blakley, Chief, Air Permits Section, Air Programs Branch (AR–18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

Please see the direct final rule which is located in the Rules section of this Federal Register for detailed instructions on how to submit comments.

FOR FURTHER INFORMATION CONTACT: Susan Castellanos, Environmental Engineer, Air Permits Section, Air Programs Branch (AR–18J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–2654, castellanos.susan@epa.gov.

SUPPLEMENTARY INFORMATION: In the Final Rules section of this Federal Register, EPA is approving the State's SIP submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial submittal and anticipates no adverse comments. A detailed rationale for the approval is set forth in the direct final rule. If no adverse comments are received in response to this rule, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period. Any parties interested in commenting on this action should do so at this time. Please note that if EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment. For additional information, see the direct final rule which is located in the Rules section of this Federal Register.

Dated: August 21, 2008.

Lynn Buhl,
Regional Administrator, Region 5.

[FR Doc. E8–25040 Filed 10–21–08; 8:45 am]
BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52
Approval and Promulgation of Air Quality Implementation Plans; The Metropolitan Washington Nonattainment Area; Determination of Attainment of the Fine Particle Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to determine that the Metropolitan Washington, DC-MD-VA nonattainment area for the 1997 fine particle (PM2.5) National Ambient Air Quality Standard (NAAQS) has attained the 1997 PM2.5 NAAQS. This proposed determination is based upon quality assured, quality controlled, and certified ambient air monitoring data that show that the area has monitored attainment of the 1997 PM2.5 NAAQS since the 2004–2006 monitoring period, and continues to monitor attainment of the standard based on 2005–2007 data. In addition, quality controlled and quality assured monitoring data for 2008 that are available in the EPA Air Quality System (AQS) database, but not yet certified, show this area continues to attain the 1997 PM2.5 NAAQS. If this proposed determination is made final, the requirements for this area to submit an attainment demonstration and associated reasonably available measures, a reasonable further progress plan, contingency measures, and other planning State Implementation Plans (SIPs) related to attainment of the standard shall be suspended for so long as the area continues to attain the 1997 PM2.5 NAAQS.

DATES: Written comments must be received on or before November 21, 2008.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R03–OAR–2008–0736 by one of the following methods:
A. www.regulations.gov. Follow the online instructions for submitting comments.
B. E-mail: fernandez.cristina@epa.gov.
D. Hand Delivery: At the previously-listed EPA Region III address. Such