

APA-1
11/96

TRANSMITTAL SHEET FOR
NOTICE OF INTENDED ACTION

Control 335 Department or Agency Environmental Management
Rule No. Appendix I
Rule Title: Greenhouse Gas Global Warming Potentials

 New X Amend Repeal Adopt by Reference

Would the absence of the proposed rule significantly harm or endanger the public health, welfare, or safety? NO

Is there a reasonable relationship between the state's police power and the protection of the public health, safety, or welfare? YES

Is there another, less restrictive method of regulation available that could adequately protect the public? NO

Does the proposed rule have the effect of directly or indirectly increasing the costs of any goods or services involved and, if so, to what degree? NO

Is the increase in cost, if any, more harmful to the public than the harm that might result from the absence of the proposed rule? NO

Are all facets of the rulemaking process designed solely for the purpose of, and so they have, as their primary effect, the protection of the public? YES

Does the proposed rule have an economic impact? NO

If the proposed rule has an economic impact, the proposed rule is required to be accompanied by a fiscal note prepared in accordance with subsection (f) of section 41-22-23, Code of Alabama 1975.

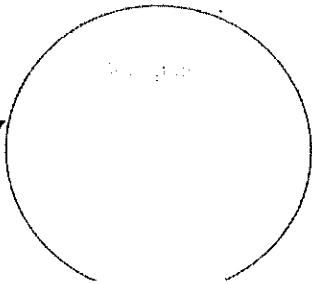
Certification of Authorized Official

I certify that the attached proposed rule has been proposed in full compliance with the requirements of Chapter 22, Title 41, Code of Alabama 1975, and that it conforms to all applicable filing requirements of the Administrative Procedure Division of the Legislative Reference Service.

Signature of certifying officer Marilyn Elliott

Date July 21, 2014

Date Filed



APA-2
11/96

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION**

NOTICE OF INTENDED ACTION

AGENCY NAME: Environmental Management

RULE NO. & TITLE: Appendix I (Amend)

INTENDED ACTION: Revise Division 3 of the ADEM Administrative Code with the amendment of Appendix I (Greenhouse Gas Global Warming Potentials).

SUBSTANCE OF PROPOSED ACTION:

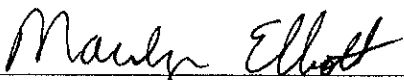
The Department proposes to make revisions to Division 3 of the Administrative Code. Appendix I is being proposed for amendment to be consistent with EPA's revisions to global warming potential values for certain greenhouse gases.

TIME, PLACE, MANNER OF PRESENTING VIEWS:

Comments may be submitted in writing or orally at a public hearing to be held at 10:00 a.m., September 10, 2014, in the ADEM Hearing Room, 1400 Coliseum Blvd., Montgomery, Alabama 36110.

FINAL DATE FOR COMMENT AND COMPLETION OF NOTICE: September 12, 2014

CONTACT PERSON AT AGENCY: Chris Howard (334) 271-7878



Lance R. Lefleur
Director

APPENDIX I

Greenhouse Gas Global Warming Potentials

| Name | CAS No. | Chemical formula | Global warming potential (100 yr.) |
|---------------------------------------|-------------|---|------------------------------------|
| Carbon dioxide | 124-38-9 | CO ₂ | 1 |
| Methane | 74-82-8 | CH ₄ | 2425 |
| Nitrous oxide | 10024-97-2 | N ₂ O | 310298 |
| HFC-23 | 75-46-7 | CHF ₃ | 11,70014,800 |
| HFC-32 | 75-10-5 | CH ₂ F ₂ | 650675 |
| HFC-41 | 593-53-3 | CH ₃ F | 15092 |
| HFC-125 | 354-33-6 | C ₂ HF ₅ | 2,8003,500 |
| HFC-134 | 359-35-3 | C ₂ H ₂ F ₄ | 1,0001,100 |
| HFC-134a | 811-97-2 | CH ₂ FCF ₃ | 1,3001,430 |
| HFC-143 | 430-66-0 | C ₂ H ₃ F ₃ | 300353 |
| HFC-143a | 420-46-2 | C ₂ H ₃ F ₃ | 3,8004,470 |
| HFC-152 | 624-72-6 | CH ₂ FCH ₂ F | 53 |
| HFC-152a | 75-37-6 | CH ₃ CHF ₂ | 140124 |
| HFC-161 | 353-36-6 | CH ₃ CH ₂ F | 12 |
| HFC-227ea | 431-89-0 | C ₃ HF ₇ | 2,9003,220 |
| HFC-236cb | 677-56-5 | CH ₂ FCF ₂ CF ₃ | 1,340 |
| HFC-236ea | 431-63-0 | CHF ₂ CHFCF ₃ | 1,370 |
| HFC-236fa | 690-39-1 | C ₃ H ₂ F ₆ | 6,3009,810 |
| HFC-245ca | 679-86-7 | C ₃ H ₃ F ₅ | 560693 |
| HFC-245fa | 460-73-1 | CHF ₂ CH ₂ CF ₃ | 1,030 |
| HFC-365mfc | 406-58-6 | CH ₃ CF ₂ CH ₂ CF ₃ | 794 |
| HFC-43-10mee | 138495-42-8 | CF ₃ CFHCFHCF ₂ CF ₃ | 1,3001,640 |
| Sulfur hexafluoride | 2551-62-4 | SF ₆ | 23,90022,800 |
| Trifluoromethyl sulphur pentafluoride | 373-80-8 | SF ₅ CF ₃ | 17,700 |
| Nitrogen trifluoride | 7783-54-2 | NF ₃ | 17,200 |
| PFC-14 (Perfluoromethane) | 75-73-0 | CF ₄ | 6,5007,390 |

Appendix I

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|-----------------------------------|-----------------|--|-------------|
| PFC-116 (Perfluoroethane) | 76-16-4 | C ₂ F ₆ | 9,20012,200 |
| PFC-218 (Perfluoropropane) | 76-19-7 | C ₃ F ₈ | 7,0008,830 |
| Perfluorocyclopropane | 931-91-9 | C-C ₃ F ₆ | 17,340 |
| PFC-3-1-10 (Perfluorobutane) | 355-25-9 | C ₄ F ₁₀ | 7,0008,860 |
| Perfluorocyclobutane | 115-25-3 | C-C ₄ F ₈ | 8,70010,300 |
| PFC-4-1-12 (Perfluoropentane) | 678-26-2 | C ₅ F ₁₂ | 7,5009,160 |
| PFC-5-1-14 (Perfluorohexane) | 355-42-0 | C ₆ F ₁₄ | 7,4009,300 |
| PFC-9-1-18 | 306-94-5 | C ₁₀ F ₁₈ | 7,500 |
| HCFE-235da2 (Isoflurane) | 26675- 46-7 | CHF ₂ OCHClCF ₃ | 350 |
| HFE-43-10pccc (H-Galden 1040x) | E1730133 | CHF ₂ OCF ₂ OC ₂ F ₄ OCHF ₂ | 1,870 |
| HFE-125 | 3822-68- 2 | CHF ₂ OCF ₃ | 14,900 |
| HFE-134 | 1691-17- 4 | CHF ₂ OCHF ₂ | 6,320 |
| HFE-143a | 421-14-7 | CH ₃ OCF ₃ | 756 |
| HFE-227ea | 2356-62- 9 | CF ₃ CHFOCF ₃ | 1,540 |
| HFE-236ca12 (HG-10) | 78522- 47-1 | CHF ₂ OCF ₂ OCHF ₂ | 2,800 |
| HFE-236ea2 (Desflurane) | 57041- 67-5 | CHF ₂ OCHF ₂ CF ₃ | 989 |
| HFE-236fa | 20193- 67-3 | CF ₃ CH ₂ OCF ₃ | 487 |
| HFE-245cb2 | 22410- 44-2 | CH ₃ OCF ₂ CF ₃ | 708 |
| HFE-245fa1 | 84011- 15-4 | CHF ₂ CH ₂ OCF ₃ | 286 |
| HFE-245fa2 | 1885-48- 9 | CHF ₂ OCH ₂ CF ₃ | 659 |
| HFE-254cb2 | 425-88-7 | CH ₃ OCF ₂ CHF ₂ | 359 |
| HFE-263fb2 | 460-43-5 | CF ₃ CH ₂ OCH ₃ | 11 |
| HFE-329mcc2 | 67490- 36-2 | CF ₃ CF ₂ OCF ₂ CHF ₂ | 919 |
| HFE-338mcf2 | 156053- 88-2 | CF ₃ CF ₂ OCH ₂ CF ₃ | 552 |

| | | | |
|--|------------------------------------|--|--------|
| HFE-338pcc13 (HG-01) | 188690- 78-0 | $\text{CHF}_2\text{OCF}_2\text{CF}_2\text{OCHF}_2$ | 1,500 |
| HFE-347mcc3 | 28523- 86-6 | $\text{CH}_3\text{OCF}_2\text{CF}_2\text{CF}_3$ | 575 |
| HFE-347mcf2 | E1730135 | $\text{CF}_3\text{CF}_2\text{OCH}_2\text{CHF}_2$ | 374 |
| HFE-347pcf2 | 406-78-0 | $\text{CHF}_2\text{CF}_2\text{OCH}_2\text{CF}_3$ | 580 |
| HFE-356mcc3 | 382-34-3 | $\text{CH}_3\text{OCF}_2\text{CHFCF}_3$ | 101 |
| HFE-356pcc3 | 160620- 20-2 | $\text{CH}_3\text{OCF}_2\text{CF}_2\text{CHF}_2$ | 110 |
| HFE-356pcf2 | E1730137 | $\text{CHF}_2\text{CH}_2\text{OCF}_2\text{CHF}_2$ | 265 |
| HFE-356pcf3 | 35042- 99-0 | $\text{CHF}_2\text{OCH}_2\text{CF}_2\text{CHF}_2$ | 502 |
| HFE-365mcf3 | 378-16-5 | $\text{CF}_3\text{CF}_2\text{CH}_2\text{OCH}_3$ | 11 |
| HFE-374pc2 | 512-51-6 | $\text{CH}_3\text{CH}_2\text{OCF}_2\text{CHF}_2$ | 557 |
| HFE-449sl (HFE-7100) Chemical blend | 163702- 07-6 163702- 08-7 | $\text{C}_4\text{F}_9\text{OCH}_3$ $(\text{CF}_3)_2\text{CFCF}_2\text{OCH}_3$ | 297 |
| HFE-569sf2 (HFE-7200) Chemical blend | 163702- 05-4 163702- 06-5 | $\text{C}_4\text{F}_9\text{OC}_2\text{H}_5$ $(\text{CF}_3)_2\text{CFCF}_2\text{OC}_2\text{H}_5$ | 59 |
| Sevoflurane | 28523- 86-6 | $\text{CH}_2\text{FOCH}(\text{CF}_3)_2$ | 345 |
| HFE-356mm1 | 13171- 18-1 | $(\text{CF}_3)_2\text{CHOCH}_3$ | 27 |
| HFE-338mmz1 | 26103- 08-2 | $\text{CHF}_2\text{OCH}(\text{CF}_3)_2$ | 380 |
| (Octafluorotetramethy- lene)hydroxymethyl group | NA | $\text{X}-(\text{CF}_2)_4\text{CH}(\text{OH})-\text{X}$ | 73 |
| HFE-347mmy1 | 22052- 84-2 | $\text{CH}_3\text{OCF}(\text{CF}_3)_2$ | 343 |
| Bis(trifluoromethyl)- methanol | 920-66-1 | $(\text{CF}_3)_2\text{CHOH}$ | 195 |
| 2,2,3,3,3- pentafluoropropanol | 422-05-9 | $\text{CF}_3\text{CF}_2\text{CH}_2\text{OH}$ | 42 |
| PFPME (HT-70) | NA | $\text{CF}_3\text{OCF}(\text{CF}_3)\text{CF}_2\text{OCF}_2\text{OCF}_3$ | 10,300 |