

FINDINGS OF FACT

1
2 1. That on September 14, 1973, the United States
3 Environmental Protection Agency ("EPA") promulgated both
4 primary and secondary National Ambient Air Quality Standards
5 ("NAAQS") for sulfur oxides (measured as sulfur dioxide,
6 "SO₂"). These standards were promulgated by EPA pursuant to
7 the federal Clean Air Act, 42 U.S.C. §§ 7401, et seq., as
8 amended by the Clean Air Act Amendments of 1990 ("federal
9 Act").

10 2. That primary NAAQS define levels of air quality which
11 are determined by EPA to be necessary, with an adequate margin
12 of safety, to protect the public health. Secondary NAAQS
13 define levels of air quality which are determined by EPA to be
14 necessary to protect the public welfare from any known or
15 anticipated adverse effects of a pollutant.

16 3. That the primary annual SO₂ NAAQS is 80 micrograms
17 per cubic meter (0.03 parts per million) of SO₂, annual
18 arithmetic mean (40 CFR § 50.4(a)). The primary 24-hour SO₂
19 NAAQS is 365 micrograms per cubic meter (0.14 ppm) of SO₂,
20 maximum 24-hour concentration, not to be exceeded more than
21 once per year (40 CFR § 50.4(b)).

22 4. That the secondary SO₂ NAAQS is 1300 micrograms per
23 cubic meter (0.5 ppm) of SO₂, maximum 3-hour concentration, not
24 to be exceeded more than once per year (40 CFR § 50.5).

25 5. That in August, 1980, the Board adopted Montana
26 Ambient Air Quality Standards ("MAAQS") for sulfur dioxide,
27 including: an annual standard of 0.02 ppm (annual average); a

1 24-hour standard of 0.10 ppm (24-hour average), not to be
2 exceeded more than once per year; and an hourly standard of 0.5
3 ppm (one-hour average), not to be exceeded more than 18 times
4 in any consecutive 12 months (ARM 16.8.820).

5 6. That in March, 1978, EPA designated the area of East
6 Helena, Montana, as nonattainment for SO₂ based on historical
7 ambient monitoring data showing violations of the primary 24-
8 hour SO₂ NAAQS. The EPA nonattainment designation encompassed
9 that portion of East Helena and vicinity located within a 0.67
10 kilometer radius centered on the sinter storage building at the
11 Asarco primary lead smelter ("East Helena facility").

12 7. That section 110 of the federal Act (42 U.S.C. §
13 7410), requires each state to submit an implementation plan for
14 the control of each air pollutant for which a national ambient
15 air quality standard has been promulgated. Since standards
16 have been promulgated for sulfur oxides, the State of Montana
17 is required to submit an implementation plan for sulfur dioxide
18 to EPA.

19 8. That on February 14, 1975, the Department and Asarco
20 stipulated to a final control plan for the control of sulfur
21 dioxide emissions from the East Helena facility, which was
22 approved by the Board on May 16, 1975. On September 19, 1975,
23 EPA approved a proposed SO₂ control strategy for the East
24 Helena facility that incorporated the final control plan
25 adopted by the Board. This control strategy was incorporated
26 into the Montana State Air Quality Control Implementation Plan
27 ("SIP").

1 9. That in April, 1979 the Department submitted a
2 revision to the SIP for the East Helena area, which was
3 designed to achieve compliance with the SO₂ NAAQS. EPA
4 proposed to approve this revision in July, 1983 (48 Fed. Reg.
5 30696), but final action was not taken pending litigation
6 concerning the federal stack height regulations.

7 10. That in November 1990, the federal Act was
8 significantly amended, and required that any SIP lacking full
9 approval be resubmitted under new guidelines contained in the
10 amended Act (42 U.S.C. § 7514(b)). The federal Act established
11 May 15, 1992, as the deadline to submit a sulfur dioxide
12 control plan for the East Helena area to EPA (42 U.S.C. §
13 7514), and requires that the new SIP provide for attainment of
14 the primary SO₂ NAAQS no later than November 15, 1995 (42
15 U.S.C. § 7514a(b)).

16 11. That the Department and Asarco have reevaluated the
17 ambient air quality impacts of the Asarco East Helena facility
18 utilizing established protocols, dispersion modeling
19 techniques, and detailed emission inventories approved by the
20 Department and EPA.

21 12. That using both the RTDM (Rough Terrain Dispersion
22 Model) and ISCST (Industrial Source Complex Simple Terrain)
23 models, and utilizing current allowable emissions from the
24 Asarco East Helena facility, modeling analyses predicts
25 violations of the primary SO₂ NAAQS (both annual and 24-hour
26 standards) in areas of elevated terrain outside of the area
27 formally designated as nonattainment by EPA in 1978.

1 13. That the Department has filed with the Board a
2 Petition for Revision of the Montana State Air Quality Control
3 Implementation Plan, seeking a Board Order approving and
4 adopting a proposed control strategy for achieving and
5 maintaining the primary SO₂ NAAQS in the East Helena area.
6 Specifically, the Department proposed the following: that
7 Chapter 5 of the SIP be revised by completely deleting the
8 existing control strategy for the SO₂ NAAQS in the East Helena
9 area; and, that the proposed primary SO₂ NAAQS control strategy
10 for East Helena be adopted and incorporated into the SIP as a
11 new Chapter 25.

12 14. That since the filing of the Department's Petition,
13 the Department and Asarco have presented to the Board a
14 Stipulation which includes a proposed control strategy for
15 achieving and maintaining the primary SO₂ NAAQS in the East
16 Helena area (Exhibit A to the Stipulation, entitled "Emission
17 Limitations and Conditions - Asarco Incorporated").

18 15. That the control strategy attached to the Stipulation
19 as Exhibit A contains specific limitations, conditions and
20 requirements that are proposed to be applicable to the Asarco
21 East Helena facility. The control strategy proposed by the
22 Department and Asarco (Exhibit A to the Stipulation, entitled
23 "Emission Limitations and Conditions - Asarco Incorporated",
24 hereafter "East Helena control strategy"), including the
25 Stipulation, is attached to this Order as Appendix A and by
26 this reference is incorporated herein as part of this Order.

27 16. That using both the RTDM and ISCST models, and

1 utilizing the East Helena control strategy, compliance with
2 both the 24-hour and the annual SO₂ NAAQS is demonstrated. The
3 24-hour standard has proven to be more difficult to achieve in
4 the East Helena area, and has the most influence upon the
5 modeling and control strategy.

6 17. That the East Helena control strategy establishes a
7 fixed emission limitation for the acid plant stack, crushing
8 mill baghouse stack #1, crushing mill baghouse stack #2, and
9 concentrate storage and handling building, while performance
10 requirements (work practices) have been established for other
11 minor SO₂ sources. Emissions from the blast furnace stack and
12 the sinter plant stack are allowed to vary in accordance with
13 a series of equations that are based upon a dispersion modeling
14 analysis (Exhibit B to the Stipulation, entitled "Modeling
15 Analysis in Support of Compliance Demonstration for SO₂ Primary
16 NAAQS at East Helena, Montana"). Asarco agrees that it will
17 need to implement production and process controls which will
18 insure that the limitations are not exceeded on a daily or
19 annual basis.

20 18. That as part of the emission limitations and
21 conditions applicable to the Asarco East Helena facility, the
22 East Helena control strategy contains methods for determining
23 emission limits for the blast furnace and sinter plant stacks,
24 and the requirements by which all such emission limitations and
25 conditions are made quantifiable and enforceable by the
26 Department.

27 19. That the emission limitations and conditions and the

1 testing and reporting requirements contained in the East Helena
2 control strategy are intended to achieve and maintain
3 compliance with the primary SO₂ NAAQS.

4 20. That in order to demonstrate compliance with the
5 primary SO₂ NAAQS using the RTDM and ISCST models, the Asarco
6 East Helena facility must be subject to the emission
7 limitations and conditions set forth in the East Helena control
8 strategy.

9 21. That the Department and Asarco agree that, given
10 Finding No. 20, above, the Board may issue an appropriate Order
11 that adopts the limitations, conditions and requirements
12 contained in the East Helena control strategy (Exhibit A to the
13 Stipulation), and requires the same as enforceable measures
14 applicable to the Asarco East Helena facility pursuant to
15 Montana law.

16 22. That the East Helena control strategy does not
17 address compliance by the East Helena area with either the
18 federal secondary SO₂ NAAQS or the SO₂ MAAQS. Further action
19 by the Board in the future will be necessary to address
20 concerns regarding compliance with these requirements, and
21 additional controls and limitations may be necessary at the
22 Asarco East Helena facility.

23 23. That Asarco remains concerned with the reliability of
24 the RTDM model, does not in any way acknowledge the reliability
25 of the RTDM model, and entered into the submitted Stipulation
26 in the spirit of cooperation. Notwithstanding Asarco's
27 concerns with the RTDM model, the Department and Asarco agree

1 that the emission limitations, conditions and requirements set
2 forth in the East Helena control strategy shall remain in full
3 force and effect after adoption by the Board, unless expressly
4 modified or replaced by a subsequent Board Order.

5 24. That pursuant to section 110 of the federal Act, any
6 limitations, conditions and other requirements that are
7 contained in a control strategy designed to achieve and
8 maintain compliance with the NAAQS must be enforceable by both
9 the Department and EPA.

10 25. That the limitations, conditions and requirements
11 contained in the East Helena control strategy are consistent
12 with the provisions of the Montana Clean Air Act, Title 75,
13 Chapter 2, MCA, and rules promulgated pursuant to the Act.

14 26. That the East Helena control strategy, after adoption
15 and incorporation by Board Order, must be submitted to the
16 Environmental Protection Agency for review and approval as a
17 revision to the Montana State Air Quality Control
18 Implementation Plan, containing the control strategy for
19 attainment and maintenance of the primary SO₂ NAAQS in East
20 Helena.

21 27. That the Department and Asarco are proposing, except
22 as described below in Finding No. 28 relating to catalyst
23 screening, that the requirements contained in the East Helena
24 control strategy supersede the following: all requirements
25 contained in the existing provisions of the SIP relating to
26 sulfur dioxide in East Helena; any less stringent corresponding
27 requirements set forth in any existing air quality permit

1 currently issued to Asarco for the East Helena facility; and,
2 any less stringent corresponding requirements set forth in any
3 Order issued by the Board respecting sulfur dioxide emissions
4 from the East Helena facility that is not part of the existing
5 SIP.

6 28. That the Department and Asarco are proposing that the
7 East Helena control strategy be subject to the continuing
8 applicability of the Stipulated Findings of Fact, Conclusions
9 of Law and Order, dated April 15, 1982, and approved by the
10 Board on May 21, 1982, respecting the criteria and procedures
11 for maintenance of Asarco's acid plant catalyst beds (approved
12 by EPA on April 19, 1984, as published in the Federal Register
13 of May 1, 1984); provided, however, that the Board's prior
14 approval of such criteria and procedures in 1982, as described
15 above, shall terminate and no longer be effective after
16 November 15, 1995, and it shall be unlawful for Asarco to
17 employ such criteria and procedures for maintenance of the acid
18 plant catalyst beds after that date.

19 29. That the Department and Asarco are proposing that the
20 limitations, conditions and requirements contained in the East
21 Helena control strategy become effective immediately upon the
22 issuance of this Order, except as follows: the specified
23 emission monitoring requirements become effective on July 1,
24 1994; the reporting requirements apply only to emission
25 monitoring data gathered after July 1, 1994; and the emission
26 limitations and conditions, except as otherwise specifically
27 provided in PART I, Section 3, subsections (H), (I), and (K) of

1 the control strategy, become effective on September 1, 1994.
2 All current sulfur dioxide emission monitoring and reporting
3 requirements and emission limitations and conditions shall
4 remain in effect until these dates.

5 30. That the Department and Asarco agree that it would be
6 appropriate for the Board to issue an Order in this proceeding
7 that incorporates the terms of the Stipulation and adopts the
8 limitations, conditions and requirements contained in the East
9 Helena control strategy as enforceable measures applicable to
10 the Asarco East Helena facility.

11 31. That public notice of the Board hearing of March 18,
12 1994, concerning the issuance of an Order addressing the
13 matters herein was published in the following newspaper on or
14 before February 15, 1994: Independent Record

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16 CONCLUSIONS OF LAW

17 Based on the foregoing Findings of Fact, the Board hereby
18 enters the following Conclusions of Law:

19 1. The public has been provided with appropriate notice
20 and an opportunity to participate in this matter. Title 2,
21 Chapter 3 and 4, MCA. The public notice requirements set forth
22 in 40 CFR section 51.102 have been fulfilled.

23 2. The Department of Health and Environmental Sciences
24 is charged with the responsibility to "prepare and develop a
25 comprehensive plan for the prevention, abatement, and control
26 of air pollution in this state". Section 75-2-112(c), MCA.

27 3. Under Sections 75-2-101 et seq., MCA, the Montana

1 Board of Health and Environmental Sciences is required to
2 protect public health and welfare by limiting the levels and
3 concentrations of air pollutants within the State. This
4 responsibility includes the adoption of ambient standards
5 (Section 75-2-202, MCA) and emission standards (Section 75-2-
6 203, MCA), and the issuance of orders necessary to effectuate
7 the purposes of Title 75, Chapter 2, MCA (Section 75-2-111,
8 MCA).

9 4. The limitations, conditions and requirements
10 contained in the East Helena control strategy (Exhibit A to the
11 Stipulation) are consistent with the provisions of the Montana
12 Clean Air Act, Title 75, Chapter 2, MCA, and rules promulgated
13 pursuant to the Act.

14 5. Given Finding No. 20, above, a revision of the
15 Montana State Air Quality Control Implementation Plan is
16 necessary for the East Helena nonattainment area to achieve and
17 maintain the primary SO₂ NAAQS.

18 6. Upon finding the limitations, conditions and
19 requirements contained in the East Helena control strategy
20 (Exhibit A to the Stipulation) to be necessary for the East
21 Helena nonattainment area to achieve and maintain the primary
22 SO₂ NAAQS, the Board has jurisdiction to issue an appropriate
23 Order that adopts such limitations, conditions and requirements
24 and requires the same as enforceable measures applicable to the
25 Asarco East Helena facility pursuant to Montana law. Sections
26 75-2-111, -203, MCA.

27 7. All Findings of Fact are hereby incorporated and

1 restated herein as Conclusions of Law.

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ORDER

4 Based on the foregoing Findings of Fact and Conclusions of
5 Law, IT IS HEREBY ORDERED:

6 1. That the control strategy proposed by the Department
7 and Asarco in this proceeding (Exhibit A to the Stipulation,
8 entitled "Emission Limitations and Conditions - Asarco
9 Incorporated", hereafter "East Helena control strategy"),
10 including the Stipulation presented to the Board, is attached
11 to this Order as Appendix A, is adopted by the Board, and is
12 incorporated herein as part of this Order.

13 2. That consistent with this Order, Asarco Incorporated
14 implement the limitations, conditions and requirements
15 contained in the East Helena control strategy that are
16 applicable to its East Helena facility.

17 3. That except as described below in Order Paragraph No.
18 4 relating to catalyst screening, the requirements contained in
19 the East Helena control strategy supersede the following: all
20 requirements contained in the existing provisions of the SIP
21 relating to sulfur dioxide in East Helena; any less stringent
22 corresponding requirements set forth in any existing air
23 quality permit currently issued to Asarco for the East Helena
24 facility; and, any less stringent corresponding requirements
25 set forth in any Order issued by the Board respecting sulfur
26 dioxide emissions from the East Helena facility that is not
27 part of the existing SIP.

1 4. That except as described below in Order Paragraph No.
2 5, the East Helena control strategy is subject to the
3 continuing applicability of the Stipulated Findings of Fact,
4 Conclusions of Law and Order, dated April 15, 1982, and
5 approved by the Board on May 21, 1982, respecting the criteria
6 and procedures for maintenance of Asarco's acid plant catalyst
7 beds (approved by EPA on April 19, 1984, as published in the
8 Federal Register of May 1, 1984).

9 5. That the Board's 1982 approval of the criteria and
10 procedures for maintenance of Asarco's acid plant catalyst
11 beds, as described above in Order Paragraph No. 4, shall
12 terminate and no longer be effective after November 15, 1995,
13 and it shall be unlawful for Asarco to employ such criteria and
14 procedures for maintenance of the acid plant catalyst beds
15 after that date.

16 6. That the limitations, conditions and requirements
17 contained in the East Helena control strategy become effective
18 immediately upon the issuance of this Order, except as follows:
19 the specified emission monitoring requirements become effective
20 on July 1, 1994; the reporting requirements apply only to
21 emission monitoring data gathered after July 1, 1994; and the
22 emission limitations and conditions, except as otherwise
23 specifically provided in PART I, Section 3, subsections (H),
24 (I), and (K) of the control strategy, become effective on
25 September 1, 1994. All current sulfur dioxide emission
26 monitoring and reporting requirements and emission limitations
27 and conditions shall remain in effect until these dates.

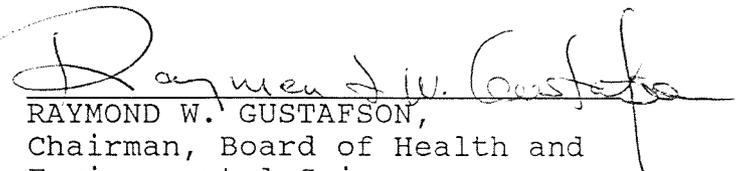
1 7. That this Order, including the attached Appendix A,
2 be submitted to the Governor of the State of Montana for
3 submittal to the U.S. Environmental Protection Agency for
4 review and approval as a revision to the Montana State Air
5 Quality Control Implementation Plan, containing the control
6 strategy for attainment and maintenance of the primary SO₂
7 NAAQS in East Helena.

8 8. That modifications of this Order shall only be by
9 initiation of the Board or by petition to the Board and the
10 issuance of a subsequent order revising this Order.

11 9. That a copy of this Order as executed by the Board be
12 provided to a representative of each party to this proceeding.

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DATED this 18 day of March, 1994.

By: 
RAYMOND W. GUSTAFSON,
Chairman, Board of Health and
Environmental Sciences