

BEFORE THE BOARD OF HEALTH AND ENVIRONMENTAL SCIENCES
OF THE STATE OF MONTANA

In the Matter of the Application)
of the Department of Health and)
Environmental Sciences for)
Revision of the Montana State Air)
Quality Control Implementation)
Plan Relating to Control of Sulfur)
Dioxide Emissions from the Lead)
Smelter Located at East Helena,)
Montana, owned and operated by)
Asarco Incorporated)

STIPULATION

The Department of Health and Environmental Sciences ("Department"), and Asarco Incorporated, ("Asarco"), hereby stipulate and agree to all the following Paragraph Nos. 1-30 inclusive, including the exhibits as referenced below, in regard to the above-captioned matter and present the same for consideration and adoption by the Board of Health and Environmental Sciences ("Board"):

A. BACKGROUND:

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

2. Primary NAAQS define levels of air quality which are

1 determined by EPA to be necessary, with an adequate margin of
2 safety, to protect the public health. Secondary NAAQS define
3 levels of air quality which are determined by EPA to be
4 necessary to protect the public welfare from any known or
5 anticipated adverse effects of a pollutant.

6 3. The primary annual SO₂ NAAQS is 80 micrograms per
7 cubic meter (0.03 parts per million) of SO₂, annual arithmetic
8 mean (40 CFR § 50.4(a)). The primary 24-hour SO₂ NAAQS is 365
9 micrograms per cubic meter (0.14 ppm) of SO₂, maximum 24-hour
10 concentration, not to be exceeded more than once per year (40
11 CFR § 50.4(b)).

12 4. The secondary SO₂ NAAQS is 1300 micrograms per cubic
13 meter (0.5 ppm) of SO₂, maximum 3-hour concentration, not to be
14 exceeded more than once per year (40 CFR § 50.5).

15 5. In August, 1980, the Board adopted Montana Ambient
16 Air Quality Standards ("MAAQS") for sulfur dioxide, including:
17 an annual standard of 0.02 ppm (annual average); a 24-hour
18 standard of 0.10 ppm (24-hour average), not to be exceeded more
19 than once per year; and an hourly standard of 0.5 ppm (one-hour
20 average), not to be exceeded more than 18 times in any
21 consecutive 12 months (ARM 16.8.820).

22 6. This Stipulation (and associated proposed control
23 strategy) does not address compliance by the East Helena area
24 with either the federal secondary SO₂ NAAQS or the SO₂ MAAQS.
25 The parties recognize that further action by the Board in the
26 future will be necessary to address concerns regarding
27 compliance by the East Helena area with these requirements, and

1 that additional controls and limitations may be necessary at
2 the Asarco East Helena facility.

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

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

17 9. Pursuant to section 110 of the federal Act, any
18 limitations, conditions and other requirements that are
19 contained in a control strategy designed to achieve and
20 maintain compliance with the NAAQS must be enforceable by the
21 Department.

22 10. The Clean Air Act of Montana is found generally at
23 Title 75, Chapter 2, MCA. Pursuant to § 75-2-112(c), MCA, the
24 Department is charged with the responsibility to "prepare and
25 develop a comprehensive plan for the prevention, abatement, and
26 control of air pollution in this state".

27 11. Pursuant to § 75-2-111, MCA, the Board is authorized

1 to issue orders necessary to effectuate the purposes of Title
2 75, Chapter 2, MCA. Section 75-2-203, MCA, authorizes the
3 Board to establish such limitations on the levels,
4 concentrations, or quantities of emissions of various
5 pollutants from any source as may be necessary to prevent,
6 abate, or control air pollution.

7 12. On February 14, 1975, the Department and Asarco
8 stipulated to a final control plan for the control of sulfur
9 dioxide emissions from the East Helena facility, which was
10 approved by the Board on May 16, 1975. On September 19, 1975,
11 EPA approved a proposed SO₂ control strategy for the East
12 Helena facility that incorporated the final control plan
13 adopted by the Board. This control strategy was incorporated
14 into the Montana State Air Quality Control Implementation Plan
15 ("SIP").

16 13. In April, 1979 the Department submitted a revision to
17 the SIP for the East Helena area, which was designed to achieve
18 compliance with the SO₂ NAAQS. EPA proposed to approve this
19 revision in July, 1983 (48 Fed. Reg. 30696), but final action
20 was not taken pending litigation concerning the federal stack
21 height regulations.

22 14. In November 1990, the federal Act was significantly
23 amended, and required that any SIP lacking full approval be
24 resubmitted under new guidelines contained in the amended Act
25 (42 U.S.C. § 7514(b)). Pursuant to section 192 of the federal
26 Act, as amended, the new SIP must provide for attainment of the
27 primary SO₂ NAAQS no later than November 15, 1995 (42 U.S.C. §

1 7514a(b)). Consequently, the Department and Asarco have
2 reevaluated the ambient air quality impacts of the Asarco East
3 Helena facility utilizing established protocols, dispersion
4 modeling techniques, and detailed emission inventories approved
5 by the Department and EPA.

6 15. As amended, the federal Act established May 15, 1992,
7 as the deadline to submit to EPA a sulfur dioxide control plan
8 for the East Helena area (42 U.S.C. § 7514). However, the
9 federal Act and implementing regulations allow EPA to extend
10 the deadline for submitting the control plan for the secondary
11 SO₂ NAAQS to three years. This extension may be granted if
12 "compelling evidence" is provided that achieving and
13 maintaining the secondary NAAQS requires significant additional
14 controls beyond those required for the primary NAAQS (42 U.S.C.
15 § 7410).

16 16. On August 5, 1993, the Department submitted a request
17 to EPA for the full three years to develop a plan for the East
18 Helena area that addresses the secondary SO₂ NAAQS. On October
19 7, 1993, EPA published its approval of this request (58 Fed.
20 Reg. 52237).

21 17. On February 25, 1994, the Department filed with the
22 Board a Petition for Revision of the Montana State Air Quality
23 Control Implementation Plan, seeking a Board Order in this
24 proceeding approving and adopting a proposed control strategy
25 for achieving and maintaining the primary SO₂ NAAQS in the East
26 Helena area. Specifically, the Department has proposed the
27 following: that Chapter 5 of the SIP be revised by completely

1 deleting the existing control strategy for the SO₂ NAAQS in the
2 East Helena area; that the proposed primary SO₂ NAAQS control
3 strategy for East Helena be adopted and incorporated into the
4 SIP as a new Chapter 25.

5 18. The Department and Asarco both understand and agree
6 that the emission limitations and conditions and the testing
7 and reporting requirements established by this Stipulation
8 (Exhibit A) are intended to achieve and maintain compliance
9 with the primary SO₂ NAAQS. Furthermore, both parties
10 understand and agree that additional or more stringent emission
11 limitations and conditions and testing and reporting
12 requirements may be necessary in the future to achieve the
13 secondary SO₂ NAAQS and SO₂ MAAQS.

14 19. Utilizing a dispersion modeling analysis, Asarco and
15 the Department have developed an emission control strategy that
16 achieves compliance with the primary SO₂ NAAQS. Using both the
17 RTDM (Rough Terrain Dispersion Model) and ISCST (Industrial
18 Source Complex Simple Terrain) models, and utilizing the
19 control strategy proposed by this Stipulation (Exhibit A), this
20 modeling analysis demonstrates compliance with both the 24-hour
21 and the annual SO₂ NAAQS. The 24-hour standard has proven to
22 be more difficult to achieve in the East Helena area, and has
23 the most influence upon the modeling and proposed control
24 strategy. As discussed further below, Asarco is concerned with
25 the reliability of the RTDM model, but nevertheless is entering
26 into this Stipulation in the spirit of cooperation.

27 20. The proposed control strategy contained in Exhibit A

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

15 21. The Department and Asarco agree that in order to
16 demonstrate compliance with the primary SO₂ NAAQS using the
17 RTDM and ISCST models, the East Helena facility must be subject
18 to the emission limitations and conditions set forth in Exhibit
19 A. Exhibit A to this Stipulation contains emission limitations
20 and conditions applicable to the Asarco East Helena facility,
21 methods for determining emission limits for the blast furnace
22 and sinter plant stacks, and the requirements by which all such
23 emission limitations and conditions are made quantifiable and
24 enforceable by the Department. The parties acknowledge that
25 Asarco remains concerned with the reliability of the RTDM
26 model, and has entered into this Stipulation in the spirit of
27 cooperation. As noted in Paragraph No. 24, below, by entering

1 into this Stipulation Asarco does not in any way acknowledge
2 the reliability of the RTDM model. The parties are developing
3 data to model air quality using the CTDMPLUS model, and it is
4 possible that the results of this model may differ from the
5 RTDM results. As a result of the use of the CTDMPLUS model, it
6 is possible that the emissions limitations, conditions and
7 requirements for the Asarco East Helena facility, as set forth
8 in Exhibit A to this Stipulation, may be modified by a
9 subsequent Board Order. Notwithstanding Asarco's concerns with
10 the RTDM model and the subsequent evaluation and use of the
11 CTDMPLUS model, the parties agree that the emission
12 limitations, conditions and requirements set forth in Exhibit
13 A to this Stipulation shall remain in full force and effect
14 after adoption by the Board, unless expressly modified or
15 replaced by a subsequent Board Order.

16

17 B. BINDING EFFECT

18 22. The parties to this Stipulation agree that any such
19 emission limitations and conditions and associated testing and
20 reporting requirements placed on Asarco must be enforceable by
21 both the Department and EPA. To this end, the parties have
22 negotiated specific limitations, conditions and requirements
23 that are to be applicable to Asarco, which are contained in
24 Exhibit A to this Stipulation (entitled "Emission Limitations
25 and Conditions - Asarco Incorporated") which is attached hereto
26 and by this reference is incorporated herein in its entirety as
27 part of this document.

1 23. The parties understand and agree that this
2 Stipulation may be either renegotiated and made enforceable
3 through an associated Board Order, or superseded by a
4 subsequent Order of the Board upon notice of hearing. This may
5 occur for a number of reasons, including, but not limited to,
6 the following: an EPA determination that the submitted plan is
7 incomplete; an EPA disapproval, either partial or complete, of
8 the submitted plan; additional or more stringent emission
9 limitations and conditions and testing and reporting
10 requirements are necessary in the future to achieve and
11 maintain the secondary SO₂ NAAQS or SO₂ MAAQS; or, the CTDMPLUS
12 model produces valid results that indicate the emission
13 limitations, conditions and requirements set forth in Exhibit
14 A are either more stringent than necessary or inadequate to
15 demonstrate compliance with the primary SO₂ NAAQS.

16 24. As previously noted, Asarco remains concerned with
17 the reliability of the RTDM model, and has entered into this
18 Stipulation in the spirit of cooperation. By entering into
19 this Stipulation, Asarco does not in any way acknowledge the
20 reliability of the RTDM model. Nothing in this Stipulation,
21 including Exhibit A, shall affect or limit Asarco's ability to
22 later petition the Board to modify this Stipulation and Exhibit
23 A, or to obtain judicial review of the Board's action or
24 failure to act respecting such a petition. Asarco may later
25 petition the Board to modify the emission limitations,
26 conditions and requirements set forth herein and demonstrate,
27 if it can, that such limitations, conditions and requirements

1 are not supported by valid scientific evidence and are more
2 stringent than necessary to demonstrate compliance with
3 applicable ambient air quality standards. However, nothing in
4 this paragraph shall be construed to provide Asarco with
5 administrative or judicial remedies that are not otherwise
6 provided by law. In addition, nothing in this paragraph shall
7 be construed as impairing in any manner the finality or
8 enforceability of the Board Order approving this Stipulation.

9 25. The parties to this Stipulation agree that upon
10 finding the limitations, conditions and requirements contained
11 in Exhibit A to this Stipulation to be necessary for the East
12 Helena non-attainment area to achieve and maintain the primary
13 SO₂ NAAQS, the Board has jurisdiction to issue an appropriate
14 Order that adopts such limitations, conditions and requirements
15 as enforceable measures applicable to the Asarco East Helena
16 facility pursuant to Montana law.

17 26. The limitations, conditions and requirements
18 contained in Exhibit A to this Stipulation are consistent with
19 the provisions of the Montana Clean Air Act, Title 75, Chapter
20 2, MCA, and rules promulgated pursuant to the Act.

21 27. It is the intent of the parties that this Stipulation
22 and the attached Exhibit A, after adoption and incorporation by
23 Board Order, shall be submitted to the Environmental Protection
24 Agency for review and approval as a revision to the Montana
25 State Air Quality Control Implementation Plan, containing the
26 control strategy for attainment and maintenance of the primary
27 SO₂ NAAQS in East Helena. Consistent with this intent, and

1 except as described below in Paragraph No. 28 relating to
2 catalyst screening, the requirements contained in this
3 Stipulation and attached Exhibit A shall supersede all
4 requirements contained in the existing provisions of the SIP
5 relating to sulfur dioxide in East Helena. The obligations in
6 this Stipulation and Exhibit A supersede any less stringent
7 corresponding requirements set forth in any existing air
8 quality permit currently issued to Asarco for the East Helena
9 facility, or in any Order issued by the Board respecting sulfur
10 dioxide emissions from the East Helena facility that is not
11 part of the existing SIP.

12 28. The provisions of this Stipulation are subject to the
13 continuing applicability of the Stipulated Findings of Fact,
14 Conclusions of Law and Order, dated April 15, 1982, and
15 approved by the Board on May 21, 1982, respecting the criteria
16 and procedures for maintenance of Asarco's acid plant catalyst
17 beds, which criteria and procedures were approved by EPA on
18 April 19, 1984, as published in the Federal Register of May 1,
19 1984; provided, however, that the Board's prior approval of
20 such criteria and procedures in 1982, as described above, shall
21 no longer be effective after November 15, 1995, and it shall be
22 unlawful for Asarco to employ such criteria and procedures for
23 maintenance of the acid plant catalyst beds after that date.
24 As described above, Asarco is concerned with the reliability of
25 the RTDM model, and continues to evaluate and use the CTDMPLUS
26 model. Nothing in this paragraph shall be construed as in any
27 way limiting Asarco's ability to later petition the Board to

1 demonstrate that adherence to such criteria and procedures, or
2 a modified version thereof, will not result in a predicted
3 violation of the applicable SO₂ NAAQS, utilizing dispersion
4 models approved by the Montana Air Quality Bureau and the
5 United States Environmental Protection Agency. Nothing in this
6 paragraph shall be construed as in any manner allowing Asarco
7 to rely on an intermittent control system (ICS) as a part of
8 such petition and demonstration.

9 29. The parties agree that the limitations, conditions
10 and requirements contained in this Stipulation and Exhibit A
11 will become immediately effective upon the issuance of an Order
12 by the Board in this proceeding, except as follows: the
13 specified emission monitoring requirements will become
14 effective on July 1, 1994; the reporting requirements will
15 apply only to emission monitoring data gathered after July 1,
16 1994; and the emission limitations and conditions will, except
17 as otherwise specifically provided in PART I, Section 3,
18 subsections (H), (I), and (K) of Exhibit A to this Stipulation,
19 become effective on September 1, 1994. All current sulfur
20 dioxide emission monitoring and reporting requirements and
21 emission limitations and conditions shall remain in effect
22 until these dates. Nothing herein shall be construed as in any
23 way impairing or otherwise affecting the existing obligations
24 of Asarco to conduct ambient monitoring in the East Helena
25 area.

26 30. Accordingly, the parties to this Stipulation agree
27 that it would be consistent with the terms and intent of this

1 Stipulation for the Board to issue an Order imposing the terms
2 in this Stipulation and the limitations, conditions and
3 requirements contained in Exhibit A of this Stipulation, and
4 adopting the same as enforceable measures applicable to the
5 Asarco East Helena facility.

6
7 ASARCO, East Helena, MT

Montana Department of
Health and Environmental
Sciences

8
9 By *William O. Hurd*

By *Robert J. Robinson*
Robert J. Robinson
Director

10
11 By *William O. Hurd*
12 Attorney

By *Timothy R. Baker*
Timothy R. Baker
Attorney

13
14 Date *3/14/94*

Date *3/15/94*

15
16
17
18
19
20
21
22
23
24
25
26
27