STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
AIR POLLUTION CONTROL COMMISSION

ALTERATION OF

STIPULATION FOR ENTRY OF CONSENT ORDER AND FINAL ORDER

APC No. 05-1979

AND RATIFICATION THEREOF

The Michigan Air Pollution Control Commission and the Consumers Power Company, both being parties to Consent Order No. 05-1979, dated June 25, 1979, regulating sulfur dioxide emissions from Units 1 and 2 of the J. H. Campbell Plant located in the Township of Port Sheldon, County of Ottawa, State of Michigan, hereby ratify and consent to the following alteration of such Consent Order:

The first paragraph is amdnded as follows:

This proceeding resulted from a request by Consumers Power Company (hereinafter "Company") to the Michigan Air Pollution Control Commission (hereinafter "Commission") for an extension of the time by which emissions of sulfur dioxide from UNITS 1 AND 2 OF its J. H. Campbell Plant (hereinafter "Campbell Plant"), located in the Township of Port Sheldon, County of Ottawa, State of Michigan, must be reduced to the levels prescribed in Tables 3 and 4 of Commission Rule 336.49 (1973 AACS 6660-6661). This request was made pursuant to Commission Rule 336.49 and Commission Rules 336.141-147. The Commission and the Company hereby agree to the termination of this proceeding by entry of this Final Order by consent.

Paragraph 5.A. is amended as follows:

A. SULFUR DIOXIDE EMISSION LIMITATIONS:

(1) Beginning on January 1, 1980 and continuing to January 1, 1985, fuel burned at the Campbell Plant shall not:

(a) On an annual average exceed 3.05 percent sulfur content by weight at 12,000 Btu/pound of coal.

(b) Result in sulfur dioxide emissions greater than ~~490~~ 414 tons on any calendar day. This emission limitation is the equivalent of burning coal which averages ~~3.82~~ 3.6 percent sulfur content by weight at 12,000 Btu/pound of coal and 650 megawatts net load for 24 hours.

(c) On a daily average result in emissions of sulfur dioxide greater than a rate of ~~7.9~~ 6.6 pounds per million Btu heat input.

(2) After January 1, 1985, emissions of sulfur dioxide from the Campbell Plant shall not exceed the levels prescribed in Tables 3 and 4 of Rule 336.49, unless an alternate date for compliance with the levels is established by the Commission.

Both the Company and the Commission agree to be bound by the terms of the Consent Order, as altered above, in the same manner as if such alteration had been made before the execution of the original consent order.

The Commission and the Company both acknowledge that a public hearing on this abatement program was held on December 18, 1979.

Approved:

CONSUMERS POWER COMPANY

Dated: January 18, 1980

Approved as to Form:

CONSUMERS POWER COMPANY

Dated: January 16, 1980

Approved as to Content:

Delbert Rector, Chief
AIR QUALITY DIVISION
DEPARTMENT OF NATURAL RESOURCES

Dated: January 31, 1980

Approved as to Form:

Stewart H. Freeman
Assistant Attorney General
DEPARTMENT OF ATTORNEY GENERAL

Dated: January 30, 1980

MICHIGAN AIR POLLUTION CONTROL COMMISSION

Maurice S. Reizen, M.D.. Chairman

Dated: 2/6/80

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
AIR POLLUTION CONTROL COMMISSION

In the matter of administrative proceedings involving CONSUMERS POWER COMPANY, a Michigan corporation, concerning sulfur dioxide emissions from fossil fuel burning operations at the J. H. Campbell Plant in the Township of Port Sheldon, County of Ottawa, State of Michigan.	APC No. 05-1979

STIPULATION FOR ENTRY OF CONSENT ORDER
AND
FINAL ORDER

This proceeding resulted from a request by Consumers Power Company (hereinafter "Company") to the Michigan Air Pollution Control Commission (hereinafter "Commission") for an extension of the time by which emissions of sulfur dioxide from its J. H. Campbell Plant (hereinafter "Campbell Plant"), located in the Township of Port Sheldon, County of Ottawa, State of Michigan, must be reduced to the levels prescribed in Tables 3 and 4 of Commission Rule 336.49 (1973 AACS 6660-6661). This request was made pursuant to Commission Rule 336.49 and Commission Rules 336.141-147. The Commission and the Company hereby agree to the termination of this proceeding by entry of this Final Order by consent.

The Company and the Commission stipulate and agree as follows:

1. The Company and the Commission stipulate that the termination of this matter by a Final Order to be entered as a Consent Order is proper and acceptable.

2. The Commission and the Company acknowledge that certain sulfur dioxide emission limits set forth in Tables 3 and 4 of Rule 336.49, Administrative Code, 1973 AACS, became effective on July 1, 1975, and July 1, 1978, and that subrules (1) and (2) of Rule 336.49 allow extensions of the dates for compliance with these limits.

3. The Commission and the Company also acknowledge that Administrative Code Rules 336.141 through 336.147, which became effective January 14, 1978, provide a method whereby an applicant may receive an extension of the compliance date for R 336.49 past January 1, 1980. Further, it is the finding of the Commission that the Campbell Plant does qualify for an extension (subject to the requirements set forth in this Order) until January 1, 1985, according to the provisions of the aforementioned Rules 336.141 through 336.147.

4. It is the express finding of the Commission from evidence submitted by the Company and by the Staff of the Commission that:

(a) The Company has made a reasonable effort to comply with the requirements of performance contracts previously executed with the Commission and with orders issued by the Commission.

(b) Fuel burning at the Campbell Plant, if conducted in conformance with the provisions of this Order, will not interfere with the attainment or maintenance of the national ambient air quality standards for any pollutant (40 CFR Part 50 (1977)).

(c) Compliance by the Campbell Plant with the emission limitations of Commission Rule 336.49 prior to January 1, 1985, is unreasonable because the cost of such compliance is unreasonably disproportionate to the benefits to be obtained thereby.

(d) Emissions from the Campbell Plant are discharged through a stack that is of adequate design and construction to provide satisfactory dispersion of pollutants and prevent downwash conditions.

5. The Commission and the Company hereby agree to the following program and time schedule for the control of sulfur dioxide emissions from the Campbell Plant:

A. SULFUR DIOXIDE EMISSION LIMITATIONS:

(1) Beginning on January 1, 1980 and continuing to January 1, 1985, fuel burned at the Campbell Plant shall not:

(a) On an annual average exceed 3.05 percent sulfur content by weight at 12,000 Btu/pound of coal.

(b) Result in sulfur dioxide emissions greater than 490 tons on any calendar day. This emission limitation is the equivalent of burning coal which averages 3.82 percent sulfur content by weight at 12,000 Btu/pound of coal and 650 megawatts net load for 24 hours.

(c) On a daily average result in emissions of sulfur dioxide greater than a rate of 7.0 pounds per million Btu heat input.

(2) After January 1, 1985, emissions of sulfur dioxide from the Campbell Plant shall not exceed the levels prescribed in Tables 3 and 4 of Rule 336.49, unless an alternate date for compliance with the levels is established by the Commission.

B. SULFUR DIOXIDE CONTROL PROGRAM:

(1) By January 1, 1980, the Company shall submit to the Commission an acceptable control strategy which shall provide for compliance with Section A(2) of this Order.

(2) If the Company elects to burn low sulfur coal as the method of control, the Company shall by January 1, 1981, and by each January 1 for the following three (3) years:

(a) Notify the Commission that it has under contract or contract option the low sulfur coal necessary to meet the requirements of Section A(2) of this Order; or

(b) Notify the Commission, with acceptable explanation, that adequate quantities of low sulfur coal are available for acquisition for use in the Campbell Plant by January 1, 1985.

(3) If low sulfur coal is chosen as the method of control, the Company shall notify the Commission of the signing of any contracts for such coal within thirty (30) days of their signing.

(4) If the Company elects a control strategy other than low sulfur coal burning, a report on the method of control (including increments of progress) shall be provided to the Commission by January 1, 1980. If a control strategy other than low sulfur coal burning is submitted, it is the intent of the Company and the Commission to incorporate the elements of the control strategy into either a new or amended order.

(5) By January 1, 1981, and by each January 1 for the following three (3) years, the Company shall submit to the Commission a report of the Company's progress toward complying with the order. Any developments which would preclude compliance with any provision of this Order shall be immediately reported in writing to the Commission.

C. MONITORING AND DATA REPORTING:

(1) The Company shall operate two (2) ambient sulfur dioxide monitors around the Campbell Plant in such manner and at such locations as reasonably specified by the Chief of the Air Quality Division of the Department of Natural Resources (hereinafter "Staff"). To measure the air quality impact of the Campbell Plant under lake breeze fumigation conditions, the Company shall operate an additional six (6) ambient sulfur dioxide monitors at such locations around the Campbell Plant as reasonably specified by the Staff.

(2) The Company shall perform a weekly sulfur analysis of fuel burned in the Campbell Plant in accordance with the procedures specified in Appendix A.

(3) The Company shall by January 1, 1980, install and place in operation stack gas emission monitor(s) for measuring sulfur dioxide that meets the performance specifications of Appendix B of 40 CFR Part 60 (1977).

(4) The Company shall demonstrate the adequacy of the stack gas sulfur dioxide monitor(s) in accordance with the procedures specified in Appendix B of 40 CFR Part 60 (1977).

(5) For each calendar day during which the stack gas sulfur dioxide monitor(s) has been inoperative for 12 consecutive hours, the Company shall conduct a daily analysis of the coal burned at the Campbell Plant according to the procedures specified in Appendix A. This daily analysis shall be discontinued only after the stack gas sulfur dioxide monitor(s) has operated acceptably for 12 consecutive hours during a calendar day.

(6) The Company shall report to the Staff sulfur dioxide emissions in terms of pounds of sulfur dioxide per million Btu heat input in accordance with the procedures specified in Appendix B of 40 CFR Part 60 (1977).

(7) The Company shall submit to the Staff data from the aforementioned ambient air quality monitors, stack gas monitor(s) and fuel sulfur analysis in such format and at such intervals as reasonably specified.

(8) During 1979 and at approximately 18-month intervals thereafter, the Company shall conduct periodic particulate emission tests for each unit of the Campbell Plant. The tests shall be conducted in accordance with Commission approved procedures.

(9) The monitoring and reporting requirements specified in or pursuant to subsections C(1) thorugh (8) shall be, upon request of the Company, reviewed by the Commission and modified if the Commission finds such modifications are justified.

D. LAKE BREEZE FUMIGATION STUDY: The Company shall conduct a lake breeze fumigation study to determine the effects of onshore wind flow upon ambient sulfur dioxide concentrations resulting from operation of the Campbell Plant. The study shall cover the period of April through September 1980, and shall be conducted in accordance with the scope description in Appendix B of this Order. A report of the preliminary results of the study shall be submitted to the Staff by April 1, 1981. A report of the final results of the study shall be submitted to the Staff by August 1, 1981.

6. The Commisison may modify or revoke this Order granting extension of the dates for compliance with Tables 3 and 4 if the Commission determines that:

(a) The reasons that provided the basis for making the findings stated in paragraph 4 of this order no longer exist.

(b) The Company has not adequately complied with the terms, conditions, and requirements of this Order, including but not limited to monitoring, reporting, and fuel specifications.

(c) The public health, safety, or welfare may be adversely affected by a further compliance extension.

(d) Reductions in the sulfur dioxide emissions from the Campbell Plant would allow location of a new source or modification of an exisitng source, and without the reduction the new source or modification of an existing source could not be permitted. However, such reductions shall not be greater than

that necessary to permit the location of the new source or the modification to the existing source, and such reductions shall not be more stringent than the requirements of Tables 3 and 4 of R 336.49.

(e) The original data submitted by the applicant on the application requesting an extension is materially inaccurate.

(f) Federal law or rules would prohibit or make unlawful further extension.

(g) The Company has demonstrated that a modification or revocation of the Order is justified. Agreement to and entry of this Order does not prejudice the right of the Company to petition the Commission for modification or revocation of the Order.

(h) The U.S. Environmental Protection Agency has disapproved this order as a revision to the Michigan State Implementation Plan. If the Company has appealed that disapproval, the Commission shall consider the merits of that appeal in determining whether to take action under this subsection.

7. The Chief of the Air Quality Division agrees that, after this Order is approved by the Commission, the Order (and all supporting information thereafter requested by the U.S. Environmental Protection Agency--EPA) shall be promptly transmitted to EPA for approval of the Order as a revision to the Michigan State Implementation Plan.

8. The Company and the Commission agree that after December 31, 1979, this Consent Order shall rescind and supersede Performance Contract No. 973-10 upon its approval by the U.S. Environmental Protection Agency as a revision to the Michigan State Implementation Plan.

9. The Commission and Staff do not regard this Order as a variance subject to the 12-month limitation specified in Section 22 of the Air Pollution Act, being MCLA 336.32. Approval of this Order is not a major state action for purposes of further environmental review pursuant to Executive Order 1974-4.

10. The Commission and the Company both acknowledge that a public hearing on this Order was held on May 15, 1979. The Commission, Staff and the Company consent to enforcement of this Order in the same manner and by the same procedures as for all final orders entered pursuant to Section 16 of 1972 PA 257, MCLA 336.26.

Approved:

CONSUMERS POWER COMPANY

Dated: June 5, 1979

APPROVED AS TO FORM
CONSUMERS POWER COMPANY
LEGAL DEPARTMENT

Approved as to Content:

Delbert Rector, Chief
AIR QUALITY DIVISION
DEPARTMENT OF NATURAL RESOURCES

Dated: June 22, 1979

Approved as to Form:

Assistant Attorney General
DEPARTMENT OF ATTORNEY GENERAL

Dated: June 21, 1979

FINAL ORDER

Having had opportunity to review the above stated Stipulation for Entry of Consent Order, the Commission accepts it and orders it entered in the record of this Commission.

MICHIGAN AIR POLLUTION CONTROL COMMISSION

By: _____
Maurice S. Reizen, M.D.
Chairman

Dated: 6/25/79

APPENDIX A
FUEL ANALYSIS PROCEDURES

1. Weekly Fuel Analysis

   a. A minimum of three equally spaced grab samples of the coal burned at the Campbell Plant shall be taken each calendar day.

   b. A weekly composite coal sample shall be prepared for analysis from the grab samples according to Americal Society for Testing and Materials (ASTM) or equivalent procedures approved by the Chief of the Air Quality Division.

   c. The weekly composite coal sample shall be analyzed for sulfur and heat (Btu) content according to ASTM or equivalent procedures approved by the Chief of the Air Quality Division.

2. Daily Fuel Analysis

   a. In the event the stack gas sulfur dioxide monitor(s) has been inoperative for a period of 12 consecutive hours, a minimum of two equally spaced grab samples of the coal burned at the Campbell Plant shall be taken during each eight hour work shift. This sampling procedure shall continue until the monitor has operated acceptably for a period of 12 consecutive hours.

   b. A composite coal sample shall be prepared from the grab samples according to ASTM or equivalent methods for each calendar day that the daily fuel analysis is required.

c. The composite coal sample shall be analyzed for sulfur and heat (Btu) content according to ASTM or equivalent methods approved by the Chief of the Air Quality Division.

APPENDIX B
LAKE BREEZE FUMIGATION STUDY - SCOPE DESCRIPTION

The lake breeze fumigation study shall consist of five phases as follows:

I. Meteorological Data Collection - Data shall be collected with an on-site meteorological tower and an acoustic sounder. Descriptions of the data to be collected are included in Attachment I to this Appendix. This phase shall include meteorological data from June 1977 to September 1980.

II. Ambient Monitor Site Selection - The meteorological data collected in Phase I shall be used in conjunction with appropriate modeling studies to determine the location of the six ambient sulfur dioxide monitors required to measure maximum impact of the Campbell Plant during lake breeze fumigation conditions. The locations of the monitors shall be approved by the Air Quality Division.

III. Ambient Data Collection - Following the installation of the sulfur dioxide monitors, concurrent meteorological and ambient sulfur dioxide data shall be collected. Data collection shall begin, weather and equipment availability permitting, by April 1, 1980, and shall continue through September 30, 1980. Meteorological data shall consist of the data specified in Phase I above as well as the data obtained from an acoustic sounder located inland from the Campbell Plant site. Ambient sulfur dioxide data shall be obtained on a continuous basis from those sites identified in Phase II.

IV. Model Validation - The concurrent meteorological and ambient data collected in Phase III shall be used to validate the lake breeze fumigation model used in the site selection phase. If necessary, modifications based on this validation shall be made to the model to assure it is representative of lake breeze dispersion conditions existing in the vicinity of the Campbell Plant site.

V. Impact Assessment - The validated model shall be used in conjunction with the meteorological data of Phase III and any other pertinent information to determine the impact of the Campbell Plant on ambient sulfur dioxide levels during lake breeze fumigation conditions.

The Company shall review each phase of the above program with the staff of the Air Quality Division and advise the staff of the progress of the study. Hourly meteorological data collected during the study as well as the data summaries described in Attachment I shall be provided to the Air Quality Division.

ATTACHMENT 1 TO APPENDIX B
DATA DESCRIPTIONS

1. Meteorological Tower Data

   A. Wind direction and speed at heights of 10, 60 and 90 meters;

   B. Temperature and dew point temperature at 10 meters; and

   C. Differential temperature between the heights of 10 and 60 meters and between 10 and 90 meters.

2. Acoustic Sounder Data

   A. Mixing height

   B. Stability class

   C. Degree of turbulence

Data Summaries

1. The following summaries are made of the meteorological tower data on a quarterly basis:

   A. Wind frequency distribution at each height and among 16 wind direction sectors;

   B. Stability wind roses for each of the seven Pasquill stability categories; and

   C. Persistence of wind speed among 16 wind direction sectors.

2. The following summaries are made of acoustic sounder data on a quarterly basis:

   A. Hourly values of mixing height;

   B. Stability class (in a general classification scheme consisting of stable, unstable and neutral); and

   C. Degree of turbulence (qualitative as to weak, moderate, strong).