

RETURN TO REGULATORY CENTRAL FILE
FROM 013

2-28-77

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION



BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
CONSUMERS POWER COMPANY
(Midland Plant, Units 1 and 2)

Docket Nos. 50-329
50-330

DOW'S FURTHER RESPONSES TO INTERROGATORIES

The Dow Chemical Company ("Dow") submits the following answers to interrogatories 1(a), (c), (e), (f), (h), (k); 6, 7, 8, 9, 10, 11, 12, 14, 15, and 16 of the NRC Staff as agreed to in the ASLB Hearing on February 11, 1977.

1. With reference to Dow's "Presentation to Michigan Air Pollution Control Commission" of January 18, 1977:

- a. Describe the operation and purpose of the Supplementary Control System (SCS).
- c. Explain in reasonable detail the basic agreement reached between Dow and the MAPCC Staff on January 13, 1977 on those issues which needed to be clarified in your present Consent Order. See page 4 of the Presentation.
- e. Will total elimination of coal as a fuel at the Michigan Division alleviate the need for the SCS? Explain.

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

~~8006060 655-7~~
8006060 693

f. What will be Dow's source of oil for the Michigan Division? Please identify suppliers, potential suppliers, quantities to be supplied, sulfur content, cost estimates (per barrel) and anticipated escalation rates.

h. Dow presently burns about 50% oil at the Michigan Division. See Chart 1 of the Presentation. If Dow were required to go to 100% oil by January 1, 1978, please identify Dow's source of oil as requested in Interrogatory 1(f) above. Provide the same information if Dow were required to go to 100% oil on January 1, 1979 or January 1, 1980.

k. Please relate the substance of any meetings with the MAPCC and/or its Staff and/or the Environmental Protection Agency occurring after January 21, 1977 to the NRC Staff on a continuing basis.

Answer

1. a. The Supplementary Control System (SCS) involves the reduction of SO₂ emissions during those periods when meteorological conditions are conducive to a build-up of ground level concentrations of SO₂ in excess of the federal ambient air quality standards. These emission reductions are accomplished by switching to lower sulfur fuel and/or reducing boiler loads. SCS operations combine weather forecasting, boiler load projections and real time air quality measurements in a computer model which calculates the resulting SO₂ concentrations. If necessary, model reruns are made with a reduced SO₂ emission configuration until a load pattern is determined that will maintain the ambient air quality standards.

c. The MAPCC Staff and Dow agreed that an SO₂ monitor reading average in excess of 0.14PPM for any 24-hour period would constitute a violation of the Consent Order. Further, both parties

agreed that one excursion at any one monitor would be a violation of the Consent Order. Staff had requested additional and more frequent data concerning the operation of the SCS, i.e., forecasted SO_2 values at selected points three times daily, additional meteorological data, and more detailed information concerning the operational status of Dow's boilers. Dow expressed concern that the Staff would use this information to try to tell Dow how to run the SCS. Dow wished to be assured that Staff was only requesting sufficient data to evaluate the SCS program. Staff felt that wording changes could be agreed upon that would satisfy Dow's concerns and meet the State's objectives.

e. Preliminary modeling results indicate that there are conditions that could result in a violation of the federal ambient air quality standard for SO_2 with the Michigan Division burning 100% oil even though use of this fuel meets all of the State emission regulations. These conditions are fairly rare, occurring less than ten times per year, and would be caused by downwash from the stacks. The MAPCC Staff and Dow are discussing ways to protect against such conditions. Some of the ways being discussed are a modified SCS and utilization of an oil with a lower sulfur content than required by State emission regulations.

f. The oil for the Midland plant will be supplied by Dow's Bay City refinery which is also a part of the Michigan Division and/or Dow's new crude oil refinery being built by the Oyster Creek Division in Freeport, Texas. These refineries will be in a position to supply the required reduced crude oil at a sulfur content not to exceed 0.8% by weight. The major source of crude oil to the refineries is expected to be Saudi Arabia. The estimated cost in 1980 will be \$2.88/ \bar{M} BTU's based on an 8% annual escalation.

h. As set forth in Dow's earlier Response to Interrogatories of the NRC Staff, particularly question 1(g), July 1, 1980 is

the earliest date estimated by Dow for the Michigan Division to be burning 100% oil. Dow, therefore, has not investigated sources to supply fuel oil prior to that date. As set forth in the answer to 1(f) above, however, Dow would expect its refineries to supply the Midland plant regardless of the conversion date, if sufficient time were available for obtaining crude oil and arranging the production schedule for the refineries.

k. On February 3, 1977, Dow representatives met with the MAPCC Staff to initiate negotiations on a new consent order. Staff was concerned over two areas:

- (1) FEA's role in Dow's plan to burn oil;
- (2) Midland air quality resulting from burning 100% oil.

Dow agreed to provide an appropriate legal opinion for item (1), and item (2) was evaluated through a series of air quality computer model runs, as set forth in the answer to (e) above. Some wording changes in the State's proposed Consent Order were also agreed upon. Further meetings will be called as soon as additional data is available.

On February 14, 1977, Dow attended a Conference with EPA to discuss the Notice of Violation issued by EPA on November 18, 1976. The positions taken by EPA and Dow at this Conference are set forth in the Statements attached hereto as Exhibits A and B.

Subsequent to the meeting, the EPA indicated they would take no further action on this matter until after the March meeting of the Michigan Air Pollution Control Commission.

6. State in reasonable detail Dow's evaluation of the reliability of the Midland Nuclear Unit as a steam and electric source vis-a-vis a fossil fueled facility.

Answer

A. Nuclear Steam. Even though the nuclear plant has two units, thus providing 100% backup for Dow's nuclear steam supply, simultaneous outages occasionally will occur, completely interrupting Dow's steam supply. Insufficient operating experience for large, mature, commercial nuclear steam supply systems (NSSS) exists to evaluate reliability. This is particularly true for the Babcock & Wilcox NSSS (Midland) design which has been in operation for about two years. Thus, it is too early to determine how much additional backup Dow should install to cover a complete loss of nuclear steam. However, an 85% NSSS availability during the 1980's appears to be achievable. This availability would result in Dow's steam supply being interrupted less than 10 days per year.

B. Nuclear Power. Dow will purchase all its power from the Consumers Power high voltage transmission grid and not from just the Midland nuclear plant. Since this grid is interconnected with Consumers' other power plants and adjacent utilities, interruptions in Dow's power supply should be minimal.

C. Coal Power Plant. Sufficient operating experience does not exist for evaluating the impact on coal fired power plant reliability of the SO₂ removal systems and high efficiency (+99% particulate removal) electrostatic precipitators that will be required to meet the air pollution regulations for new power plants. Thus, it is not yet possible to accurately estimate the loss of process steam and power in the 1980's due to power plant outages or determine the amount of backup facilities that should be installed.

7. State in reasonable detail Dow's evaluation of the financial ability of Consumers Power Company to complete construction of the Midland Nuclear Plant as currently scheduled.

Answer

It is Dow's opinion that Consumers Power will not be able to finance the Midland Nuclear Plant as currently scheduled. This opinion is based on the considerations which follow.

Consumers Power was a AAA-rated (Moody's ratings) utility until 1972 when it was downgraded to AA. In 1974, it was further downgraded, first to an A rating, and then to a BAA. This downgrading has affected its ability to borrow as well as the price it has to pay for these borrowings.

From 1968, the first year after the original contract was signed, through 1972, Consumers Power issued 30-year bonds on a regular basis at varying interest rates from a low of 6-5/8% to a high of 8-3/8%. These were the proper rates for a AAA-rated utility. During that same period, Dow, then rated A, issued 30-year debentures at rates varying from 6.7% to 8.9%. As is normal for a strong A-rated industrial company, Dow paid approximately the same interest rates as Consumers Power, given the timing of the issues.

In 1973, the first effect of Consumers Power's downgraded financial rating was seen when a 30-year issue was priced at 8-5/8%, a full 1% above rates for loans to Dow. In 1974, the effects became more apparent and in the 1974-1975 period, Consumers Power was not able to borrow 30-year money, but in four issues which range between 5 and 25 years in length, they paid interest rates ranging from 9-3/4% to 11-1/2%. These rates were 2% to 3% above the rates for loans to Dow. Since the last document Dow has is Consumers Power's 1975 Annual Report, we have stopped our analysis of the trend in Consumers Power's ability to borrow with that year.

In analyzing the deterioration of the ratings of Consumers Power, the thing that stands out is that during the last several years, the company has paid most of its earnings to the stockholders as dividends. For instance, for the five-year period of 1971 through 1975, Consumers Power had a net income of \$420,000,000, of which they paid their stockholders

some 83% or \$347,000,000 in dividends. Only some \$73,000,000 were retained for reinvestment. To Dow, this seems inconsistent with a large capital spending program. During the same period, for instance, Dow paid \$503,000,000 in dividends out of its total net earnings of \$1,818,000,000; less than a 28% dividend payout.

Since the Midland Nuclear Plant is scheduled to be completed five years from now, it is necessary to look at Consumers Power's financial requirements for the period 1977 through 1981. Using figures supplied by Consumers Power, it has currently spent over \$400,000,000 on the Midland Nuclear Plant which will cost a total of \$1,670,000,000. This means that it still has to spend about \$1,250,000,000 in five years, or an average of \$250,000,000 per year. In addition, Consumers Power has other capital requirements for projects outside of Midland.

Data supplied by Consumers Power to the Atomic Safety and Licensing Board in the present hearing also indicates that in this five-year period, Consumers Power has requirements for sinking funds and other repayments on long-term debt totalling some \$218,000,000, or about \$44,000,000 per year on the average. This means that just for the Midland Nuclear Project and long-term debt servicing Consumers Power requires \$300,000,000 per year.

With funds generated by depreciation running at about \$100,000,000 per year; a dividend policy of distributing most of its profits; and a downgraded credit rating, it is difficult to see where Consumers Power can raise the funds necessary to complete the Midland Nuclear Plant.

The Dow judgment is made strictly from published records; and, therefore, the information relied upon is necessarily scant. It is Dow's position, however, that its opinion is justified unless Consumers Power is granted extremely large rate increases and there is a complete turn-around in the dividend policy of that company. Past history would suggest that neither of these events is likely to occur. Some rate increases will undoubtedly be permitted, but in Dow's opinion, these will be at reasonable intervals and will not necessarily allow an increased return to Consumers

Power. Further, during the construction slowdown in 1974, caused by a lack of capital, the company did not reverse their dividend policy.

8. Has Dow undertaken any formal efforts in initiating a project to replace the existing steam facilities with fossil fired facilities? Explain. Please inform the NRC Staff on a continuing basis of any additional efforts or initiatives taken by Dow to replace the existing facilities.

Answer

No.

9. State in reasonable detail Dow's evaluation of the final capital cost for the Midland Nuclear Facility.

Answer

Dow has not performed an independent evaluation of the final capital cost of the Midland Nuclear Facility. Dow has relied upon Consumers Power for estimates of the final capital cost of the facility.

In September 1976, Dow requested from Black & Veatch, consulting engineers, information to assist Dow in making an evaluation of the capital cost of the Midland Nuclear Project, based on a scheduled completion date of 1982. Such information was provided by Black & Veatch on October 7, 1976, and has been given in discovery to all parties in this proceeding. Dow has not used this information to perform its own, independent evaluation of the final capital cost of the Midland Nuclear Facility. Such a study was never done.

The final capital cost of the Midland Nuclear Facility depends, in part, on the completion date of that facility. Mr. Temple and Mr. Orefice both have testified that they are not confident the Midland Nuclear Facility will be completed by the present estimated target commercial operation dates of 1981 and 1982. They further testified that they are not confident the Midland Nuclear Facility will be completed at a final cost

10. State in reasonable detail Dow's evaluation of the commercial operation date for both units of the Midland Nuclear Facility.

Answer

Dow has not performed any detailed evaluation of the commercial operation dates for both units of the Midland Nuclear Facility. Mr. Temple and Mr. Oreffice, however, have both testified on cross-examination that they are not confident that the units will be completed by their respective current projected target commercial operation dates of March 1981 for Unit No. 2 and March 1982 for Unit No. 1.

11. State in reasonable detail Dow's evaluation of fuel availability for both nuclear fuel and coal.

Answer

Dow has not made any recent studies or evaluations of the availability of nuclear fuel. Dow has relied upon Consumers Power for information about the availability of nuclear fuel.

Dow's evaluation of the availability of coal has been only in the context of its own needs for coal in the short term and long term for use in its manufacturing operations.

Bituminous, high sulfur coal is supplied to the Michigan Division of Dow Chemical U.S.A. under two contracts. Both of these contracts expire in 1981. One of these agreements, however, contains an option, which Dow may elect to exercise, to extend the life of that agreement for two additional one-year periods. Dow, therefore, will have sufficient coal supplies under contract to meet the needs of the Michigan Division through 1982, when it will either purchase its steam and power from Consumers Power or burn oil in its existing facilities.

To meet its long-term needs, Dow is engaged in purchasing coal reserves to meet the possible needs of all of its manufacturing divisions in the United States. Dow currently is involved in active negotiations to purchase large coal reserves (an amount in excess of 500,000,000 recoverable tons) of 3% sulfur bituminous coal. Should these negotiations be successfully concluded, Dow will have sufficient coal available to meet most of its foreseeable long-term needs.

12. State in reasonable detail Dow's evaluation of any potential adverse action by the Michigan Public Service Commission regarding electricity and steam sales to Dow from the Consumers Midland Nuclear Units.

Answer

It is Dow's position that the sale of electricity to Dow from Consumers Power's integrated system and the sale of steam to Dow from the Midland Nuclear Units are subject to the control and regulation, including the fixing and charging of rates, of the Michigan Public Service Commission.

Dow currently is purchasing electricity from Consumers Power under Rate F, auxiliary or stand-by service. Under the terms of the Agreement for Electric Service between Dow and Consumers Power, executed on January 30, 1974, Dow will continue to purchase electricity under that rate, subject to future revisions, amendments, supplements or substitutes as approved by the Michigan Public Service Commission. Since Dow is, and will continue, to purchase electricity at an established industrial rate, it does not expect to be singled out for any potential adverse action by the Michigan Public Service Commission as a result of the implementation of the Agreement for Electric Service.

The Contract for Steam Service between Dow and Consumers Power provides the basis for the price, terms and conditions of sale of steam sold to Dow from the Midland Nuclear Units. It is Dow's position that the method of determining the price is based on established cost of service principals and

reflects a fair and equitable division of capital, fuel, operating and other costs between the production of steam and the production of electricity. The Michigan Public Service Commission could assert jurisdiction over the sale of steam to Dow, and further assert that a different price, terms and conditions of sale should govern the sales of steam to Dow. It would be speculative to state whether or not such an assertion of jurisdiction would be adverse to steam sales to Dow.

14. If Dow were under no contractual obligation to purchase steam and electricity from the Midland Nuclear Facility, would Dow still choose to purchase steam and electricity from that facility under current economics and circumstances as perceived by Dow. Explain.

Answer

Dow requires a dependable supply of steam and electricity sufficient to supply the needs of its Midland plant. Currently, Dow obtains its steam and electricity from its own power plants, but these plants are antiquated and alternative sources must be obtained in the near future. In September 1976, Dow concluded, as part of the corporate review of the Midland Nuclear Project that, based upon the information then provided, the Midland Nuclear Plant retained an economic advantage over the alternatives considered. Dow's official position as a company remains unchanged. No person in Dow's employ has any authority or power to change this position. To date, Dow has not been advised of changes which it considers sufficient to require that it undertake a new analysis.

With regard to the hypothetical question as to what Dow would do if it were under no contractual obligation to purchase steam and electricity from the Midland Nuclear Facility, Dow's decision as to its future sources for steam and electricity would, as a matter of good business practice, depend on its cost-benefit analysis of the relative merits of the nuclear and other alternatives available, considering, inter alia, the relative costs, commitments and reliability involved in each alternative. That situation is not before Dow or the Board at this time; and, therefore, this hypothetical question cannot be answered.

15. If Dow were assured of a reliable source of steam and electricity from the Midland Nuclear Facility by the end of 1984, in what circumstances would Dow consider construction of its own fossil fuel generating facilities.

Answer

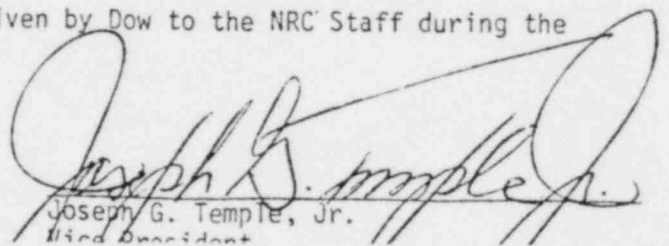
Section 11 of the Contract for Steam Service between Dow and Consumers Power provides that, upon retirement of Dow's existing fossil fuel generating facilities, Dow may generate and utilize in its Midland Plant an amount of steam not exceeding 1,000,000 lbs/hr. of steam at a pressure not exceeding nominal 175 psig from any facility owned and operated by Dow, as standby or auxiliary to the steam to be provided by Consumers Power. Dow has not yet decided what type of facilities it will install under this provision.

Given the assumptions set forth in this question, Dow presently has no plans to construct fossil fuel generating facilities at the Midland Plant other than those discussed above.

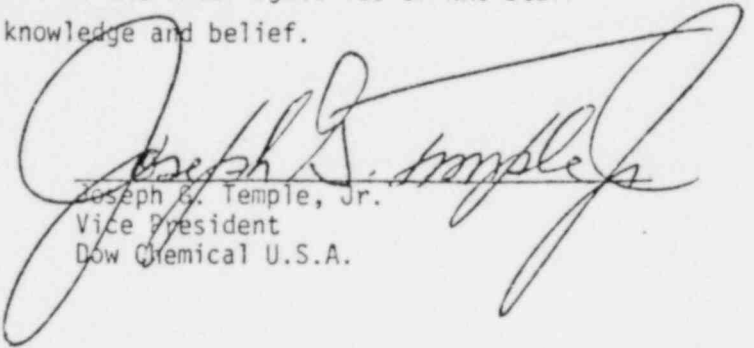
16. Please provide a copy of the formal bound report, Item 8, identified in the October 25, 1976, letter to The Dow Chemical Company from Black & Veatch, Consulting Engineers. Also, please provide any supplements to that report on a continuing basis.

Answer

Subsequent to the service of these interrogatories, a copy of the formal bound report, Item 8, identified in the October 25, 1976, letter to The Dow Chemical Company from Black & Veatch, Consulting Engineers, and a supplement to that report, were given by Dow to the NRC Staff during the ASLB hearings in Chicago.

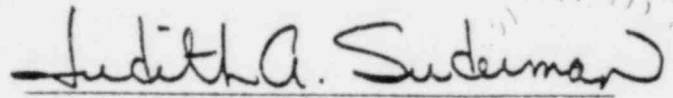

Joseph G. Temple, Jr.
Vice President

Joseph G. Temple, Jr., being duly sworn, deposes and says that the foregoing Further Responses to the Interrogatories of NRC Staff are true to the best of his knowledge and belief.


Joseph G. Temple, Jr.
Vice President
Dow Chemical U.S.A.

STATE OF MICHIGAN }
COUNTY OF MIDLAND } ss:

Subscribed and sworn to before me, a Notary Public, this 28th
day of February, 1977.



JUDITH A. SUDERMAN
Notary Public, Midland County, Michigan
My Commission Expires April 17, 1978



EXHIBIT A

RELATED CORRESPONDENCE

STATEMENT OF THE DOW CHEMICAL COMPANY

On May 17, 1974 The Dow Chemical Company (Dow) and the Air Pollution Control Commission for the State of Michigan (MAPCC) entered into a Stipulation for Entry of Consent Order and Final Order which authorized the use of a Supplemental Control System (SCS) at Dow's south side and west side power plants. The effect of this Final Order was to grant Dow a variance from then existing emission limitations of the Michigan Air Pollution Laws. In accordance with the Clean Air Act, a copy of this variance was transmitted to the United States Environmental Protection Agency (EPA) by the State of Michigan by letter dated June 13, 1974 for approval of the Variance as a revision to the Michigan State Implementation Plan (SIP). EPA acknowledged receipt of this Variance by letter dated July 10, 1974, and never requested any further data. EPA never thereafter notified Dow or to our knowledge, the State of Michigan, that it questioned the validity of the Variance in any way. The level of emissions claimed to be excessive under EPA's Notice of Violation dated November 18, 1976 are permitted by this Variance.

Dow proceeded with the implementation of the SCS at a cost of \$2.8 million for equipment modifications and installations. Formal operation of the system began on July 1, 1975 and since then it has cost Dow approximately \$17.8 million in premium fuel and operating costs to utilize the SCS. The operation of the SCS has been successful and significant reductions in fly ash and sulfur dioxide emissions have

~~2006060~~

~~657~~

been achieved in the Highland area. Although there were some early disagreements between the Staff of the MAPCC and Dow regarding events which occurred during December 1975 and January 1976, even the Staff has agreed that since February 1976 they are satisfied with Dow's operation of SCS and the results we have achieved.

At the time of these earlier events, the Staff of the MAPCC requested certain modifications in the then existing Variance. The MAPCC, in response to the Staff's request, issued an Order for a rehearing on whether the Variance should be modified as the Staff had requested. Since then, the Staff and Dow have engaged in serious negotiations and at the present time the parties have reached basic agreement on those issues which need to be clarified in our present Variance. The parties have further agreed to incorporate these changes in a new Variance which is being negotiated for continued operation of the Dow facilities after July 1, 1980.

In view of the results Dow has achieved with the operation of its SCS, we cannot understand the actions of the EPA in issuing the Notice of Violation which is the subject of this conference. Both Dow and the MAPCC proceeded in accordance with the provisions of the Clean Air Act and the Michigan Air Pollution Laws. Dow has proceeded in good faith to rely on the validity of its present Variance and has spent considerable sums of money meeting its obligations thereunder. The MAPCC has likewise recognized the validity of the Variance and has allowed Dow to operate its facilities in accordance with its terms.

The EPA, in issuing Dow the Notice of Violation, apparently claims that the Variance is invalid and that the MAPCC is derelict in meeting its obligations under the Federal and State air pollution laws. Dow believes that neither of these assertions is justified.

Dow further believes that the EPA should rescind the Notice of Violation and that Dow and the MAPCC should proceed with the negotiation of a new Variance which will meet the needs of both parties. When that Variance has been approved by the State, it will then be submitted to the EPA for approval as a revision to the Michigan SIP as required by the Clean Air Act.

In summary, EPA's Notice of Violation dated November 18, 1976 alleges that Dow has exceeded applicable emission limits of the State Implementation Plan. However, the Variance previously granted by the State and submitted to EPA authorizes these emission levels and thus they do not violate the State Implementation Plan. Dow intends to conclude the negotiation of a new Variance with the MAPCC shortly and the MAPCC can then submit the Variance to EPA, pursuant to the provision of the Clean Air Act.

RELATED CORRESPONDENCE

OPENING STATEMENT

IN THE MATTER OF

DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

AT

A CONFERENCE INVOLVING A 30-DAY NOTICE OF
VIOLATION ISSUED PURSUANT TO SECTION 113(a)(4)
OF THE CLEAN AIR ACT

U.S. ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICE V
CONFERENCE HELD AT
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
LANSING, MICHIGAN

FEBRUARY 14, 1977



CONFERENCE STATEMENT

THIS CONFERENCE IS BEING HELD PURSUANT TO A REQUEST FROM DOW CHEMICAL COMPANY UNDER SECTION 113(A)(4) OF THE CLEAN AIR ACT, AS AMENDED.

I AM MICHAEL G. SMITH, AN ATTORNEY IN THE AIR BRANCH, ENFORCEMENT DIVISION, REGION V, OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA), CHICAGO, ILLINOIS. I WILL ACT AS CHAIRMAN OF THIS CONFERENCE. AT THIS TIME, I SUGGEST THAT WE GO AROUND THE TABLE AND INTRODUCE OURSELVES.

IN ORDER TO HAVE A COMPLETE RECORD OF WHAT IS SAID HERE TODAY, A VERBATIM TRANSCRIPT IS BEING MADE. A COPY OF THE TRANSCRIPT WILL BE AVAILABLE FOR PUBLIC INSPECTION DURING REGULAR OFFICE HOURS AT THE REGIONAL OFFICE. ANYONE WISHING TO OBTAIN A PERSONAL COPY OF THE TRANSCRIPT SHOULD MAKE INDIVIDUAL ARRANGEMENTS WITH THE REPORTER.

IN ACCORDANCE WITH THE CLEAN AIR ACT AMENDMENTS OF 1970, THE ADMINISTRATOR OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ON APRIL 30, 1971, PUBLISHED IN THE FEDERAL REGISTER (36 F.R. 8187, 40 C.F.R. PART 50) NATIONAL AMBIENT AIR QUALITY STANDARDS: PRIMARY STANDARDS TO PROTECT THE PUBLIC HEALTH AND SECONDARY STANDARDS TO ASSURE PUBLIC WELFARE. TO ACHIEVE THESE CLEAN AIR OBJECTIVES, EACH STATE WAS REQUIRED TO ADOPT AND SUBMIT TO THE U.S. EPA FOR APPROVAL, AN IMPLEMENTATION PLAN WHICH CONTAINED PROCEDURES AND REGULATIONS FOR REDUCING EMISSIONS FROM SOURCES OF AIR POLLUTION WITHIN THE STATE; THE PLAN WAS TO BE DESIGNED TO ACHIEVE THE NATIONAL AMBIENT AIR QUALITY STANDARDS WITHIN ESTABLISHED TIME LIMITS, AND THEREAFTER TO MAINTAIN SUCH STANDARDS. IT WAS A FUNDAMENTAL POLICY DECISION OF THE 1970 AMENDMENTS TO DISCARD THE UNENFORCEABLE EFFORT TO REGULATE THROUGH AIR QUALITY STANDARDS ALONE, AS WAS THE APPROACH OF THE 1967 ACT, AND TO REQUIRE ENFORCEABLE EMISSION LIMITATIONS FOR EVERY POLLUTOR.

TO ASSIST THE STATES IN THE PREPARATION OF THESE IMPLEMENTATION PLANS, THE ADMINISTRATOR PROMULGATED ON AUGUST 14, 1971, (36 F.R. 15486, 40 C.F.R. PART 51) REGULATIONS SETTING FORTH REQUIREMENTS FOR THE PREPARATION, ADOPTION AND SUBMITTAL OF STATE IMPLEMENTATION PLANS. ADDITIONAL REGULATIONS WERE PROMULGATED ON DECEMBER 9, 1972 (37 F.R. 26310).

THE CLEAN AIR ACT PROVIDES THAT THE U.S. EPA APPROVAL OF A STATE'S

IMPLEMENTATION PLAN MAKES ALL THE REQUIREMENTS OF THAT PLAN, INCLUDING APPLICABLE REGULATIONS, ENFORCEABLE BY THE FEDERAL GOVERNMENT AS WELL AS BY THE STATE.

THE REGULATIONS THAT WERE CITED IN THE 30-DAY NOTICE OF VIOLATION, R335.41, R335.44 AND R335.49 (COPIES OF WHICH ARE SUBMITTED FOR THE RECORD AS ATTACHMENT 1) WERE APPROVED WITH CERTAIN EXCEPTIONS BY THE ADMINISTRATOR OF U.S. EPA IN THE FEDERAL REGISTER ON MAY 31, 1972. THIS APPROVAL AND THE APPROPRIATE EXCEPTIONS, APPEARING AT 40 C.F.R. SECTIONS 52.172, et seq., ARE SUBMITTED FOR THE RECORD AS ATTACHMENT 2. THIS REGULATION WAS IMMEDIATELY EFFECTIVE AND ANY SOURCE NOT MEETING THAT REGULATION ON THAT DATE, OR ON SUBSEQUENTLY SCHEDULED DATES SET OUT IN THE REGULATION, WAS IN VIOLATION OF THE MICHIGAN STATE IMPLEMENTATION PLAN.

THE ADMINISTRATOR OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA), IS CHARGED, BY LAW, WITH SPECIFIC RESPONSIBILITIES IN THE FIELD OF AIR POLLUTION CONTROL. SECTION 113(a)(1) OF THE CLEAN AIR ACT, AS AMENDED, PROVIDES THAT "WHENEVER, ON THE BASIS OF INFORMATION AVAILABLE TO HIM, THE ADMINISTRATOR FINDS THAT ANY PERSON IS IN VIOLATION OF ANY REQUIREMENT OF AN APPLICABLE IMPLEMENTATION PLAN, THE ADMINISTRATOR SHALL NOTIFY THE PERSON IN VIOLATION OF THE PLAN AND THE STATE IN WHICH THE PLAN APPLIES OF SUCH FINDING. IF SUCH VIOLATION EXTENDS BEYOND THE 30TH DAY AFTER THE DATE OF THE ADMINISTRATOR'S NOTIFICATION, THE ADMINISTRATOR MAY ISSUE AN ORDER REQUIRING SUCH PERSON TO COMPLY WITH THE REQUIREMENT OF SUCH PLAN OR HE MAY BRING A CIVIL ACTION IN ACCORDANCE WITH SUBSECTION (b)".

ANY ORDER THAT U.S. EPA DOES ISSUE MUST, ACCORDING TO SECTION 113(a)(4), "STATE WITH REASONABLE SPECIFICITY THE NATURE OF THE VIOLATION, SPECIFY A TIME FOR COMPLIANCE WHICH THE ADMINISTRATOR DETERMINES IS REASONABLE, TAKING INTO ACCOUNT THE SERIOUSNESS OF THE VIOLATION AND ANY GOOD FAITH EFFORTS TO COMPLY WITH APPLICABLE REQUIREMENTS."

SECTION 113(a)(4) PROVIDES, IN PART, THAT "AN ORDER ISSUED UNDER THIS SUBSECTION SHALL NOT TAKE EFFECT UNTIL THE PERSON TO WHOM IT IS ISSUED HAS HAD AN OPPORTUNITY TO CONFER WITH THE ADMINISTRATOR CONCERNING THE ALLEGED VIOLATION."

ON NOVEMBER 18, 1976, MR. JAMES O. McDONALD, DIRECTOR, ENFORCEMENT DIVISION, U.S. EPA, SENT A NOTICE OF VIOLATION PURSUANT TO SECTION 113(a)(1) OF THE CLEAN AIR ACT, AS AMENDED, TO MR. JOSEPH TEMPLE, THEN GENERAL MANAGER OF DOW CHEMICAL COMPANY'S MIDLAND DIVISION, WITH A COPY TO THE STATE OF MICHIGAN. IN THIS NOTIFICATION LETTER, WHICH I SUBMIT FOR THE RECORD AS ATTACHMENT 3, U.S. EPA NOTIFIED THE COMPANY THAT EMISSIONS FROM ITS MIDLAND FACILITIES WERE FOUND TO BE IN VIOLATION OF THE MICHIGAN STATE IMPLEMENTATION PLAN SET OUT AT 40 C.F.R. PART 52, SUBPART X, SPECIFICALLY REGULATIONS R336.41, R336.44 and R336.49.

BY LETTER DATED NOVEMBER 22, 1976, MR. LOUIS W. PRIBILA, COUNSEL FOR THE COMPANY, REQUESTED A CONFERENCE TO DISCUSS THE NOTICE OF VIOLATION AND RELATED MATTERS. THE STATE OF MICHIGAN OFFERED THE USE OF THIS FACILITY IN THE INTEREST OF CONVENIENCE FOR ALL PARTIES, AND SO THAT CITIZENS OF THE STATE OF MICHIGAN MAY ATTEND THE CONFERENCE.

ON JUNE 13, 1974, MR. LEE E. JAGER, CHIEF OF THE AIR POLLUTION CONTROL DIVISION OF THE MICHIGAN DEPARTMENT OF NATURAL RESOURCES, TRANSMITTED TO THE U.S. EPA REGIONAL ADMINISTRATOR A COMPLIANCE SCHEDULE WHICH HAD BEEN FINALIZED BETWEEN THE MICHIGAN AIR POLLUTION CONTROL COMMISSION AND THE DOW MIDLAND DIVISION. THIS SCHEDULE PURPORTED TO ALLOW DOW TO EXCEED THE EMISSION LIMITATIONS SET OUT IN REGULATION R336.49 BEYOND THE DATE WHICH THE MICHIGAN IMPLEMENTATION PLAN REQUIRES FINAL COMPLIANCE: JULY 1, 1975. THIS COMPLIANCE SCHEDULE WAS NOT APPROVED, IT COULD NOT BE APPROVED, BY U.S. EPA. HOWEVER, U.S. EPA FAILED TO OFFICIALLY NOTIFY THE STATE AND THE COMPANY, AT THAT TIME, THAT THE SCHEDULE WAS UNAPPROVABLE. IN VIEW OF THE MISUNDERSTANDING WHICH HAS EXISTED IN THE PAST, U.S. EPA IS NOT DEMANDING REDRESS FOR THE VIOLATIONS WHICH HAVE OCCURRED TO DATE. U.S. EPA IS CONCERNED THAT VIOLATIONS BE PREVENTED IN THE FUTURE. THAT IS THE PURPOSE OF THIS PROCEEDING.

IN TERMS OF CONFERENCE PROCEDURES TO BE FOLLOWED TODAY, MR. BILL BEYER WILL SET FORTH THE SPECIFICS OF THE FINDING OF VIOLATION. FOLLOWING MR. BEYER'S PRESENTATION, REPRESENTATIVES OF THE COMPANY WILL BE GIVEN AN OPPORTUNITY TO PRESENT INFORMATION BEARING ON THE FINDINGS OF VIOLATION, ON THE NATURE OF THE VIOLATIONS, ON ANY EFFORTS THEY HAVE TAKEN TO ACHIEVE

COMPLIANCE, AND ON THE STEPS THEY PROPOSE TO TAKE. THE STATE OF MICHIGAN AND THE CITIZENS PRESENT WILL ALSO BE GIVEN AN OPPORTUNITY TO PARTICIPATE IN TURN. I WOULD REQUEST THAT THE COMPANY, AND THEN THE STATE MAKE AN OPENING STATEMENT FOLLOWED BY DISCUSSION. CITIZEN COMMENTS WILL BE APPRECIATED AFTER SUCH DISCUSSION.

THE MOST MEANINGFUL PART OF TODAY'S CONFERENCE WILL BE THAT PART WHICH CENTERS ON THE SPECIFIC ACTIONS THAT THE COMPANY CAN TAKE BY DATES CERTAIN TO BRING ITSELF INTO COMPLIANCE WITH THE MICHIGAN STATE IMPLEMENTATION PLAN. ACCEPTABLE PROPOSALS THAT THE COMPANY ADVANCES IN THIS RESPECT TODAY WILL HELP THE U.S. EPA IN DETERMINING WHAT ACTION IT SHOULD TAKE TO BEST INSURE THAT THIS SOURCE OF AIR POLLUTION WHICH IS NOT IN COMPLIANCE WITH THE CITED APPLICABLE IMPLEMENTATION PLAN IS BROUGHT INTO COMPLIANCE IN THE MOST EXPEDITIOUS MANNER POSSIBLE.

THIS IS AN INFORMAL CONFERENCE. THERE ARE NO HARD-AND-FAST PROCEDURES; THIS IS NOT AN ADJUDICATORY HEARING. THE CONFERENCE IS INTENTIONALLY DESIGNED TO ENCOURAGE THE MOST FREE EXCHANGE POSSIBLE AMONG THOSE PRESENT IN AN ATTEMPT TO ACCOMPLISH AS MUCH TODAY AS WE CAN TOWARD POLLUTION ABATEMENT. ANY INFORMATION PRESENTED AT TODAY'S CONFERENCE WILL BE CONSIDERED ALONG WITH ANY OTHER AVAILABLE INFORMATION PRIOR TO FURTHER EPA ACTION.

I WOULD LIKE TO CALL UPON MR. BILL BEYER, WHO WILL DISCUSS THE FINDINGS OF VIOLATION.

DOW CHEMICAL COMPANY
FEBRUARY 14, 1977, CONFERENCE
ENGINEERING STATEMENT

THE SPECIFIC MICHIGAN PLAN OF IMPLEMENTATION REGULATIONS CITED IN THE NOTICE OF VIOLATION ARE R336.41, WHICH LIMITS VISIBLE EMISSIONS FROM STATIONARY SOURCES; AND R336.44, WHICH RESTRICTS EMISSIONS OF PARTICULATE MATTER, AND R336.49, WHICH RESTRICTS EMISSIONS OF SULFUR DIOXIDE FROM POWER PLANTS.

THE SOUTH SIDE POWER PLANT AND THE WEST SIDE POWER PLANT AT THE DOW CHEMICAL COMPANY IN MIDLAND, MICHIGAN, WERE CITED FOR VIOLATIONS OF ALL THREE REGULATIONS; AND THE INCINERATORS WERE CITED FOR VIOLATIONS OF R336.41 ONLY. I WILL BRIEFLY REVIEW THE REGULATIONS AS THEY APPLY TO THESE OPERATIONS AND FOLLOW WITH A SUMMARY OF THE SPECIFICS RELATIVE TO THE VIOLATIONS CITED.

REGULATION R336.41, ALSO IDENTIFIED AS RULE 41, STATES THAT NO PERSON MAY EMIT TO THE ATMOSPHERE POLLUTANTS OF AN OPACITY OF 20% OR GREATER, EXCEPT FOR A PERIOD OF THESE MINUTES IN ANY HOUR DURING WHICH OPACITIES NO GREATER THAN 40% MAY BE EMITTED. NO MORE THAN THREE SUCH EXCEPTIONS ARE ALLOWED DURING ANY 24 HOUR PERIOD. TEST METHOD NO. 9 OF APPENDIX A TO THE U.S. EPA NEW SOURCE PERFORMANCE STANDARDS SERVES AS GUIDANCE, TO THE EXTENT THAT SMOKE READING DATA IS REDUCED TO SIX-MINUTE AVERAGES (24 READINGS TAKEN AT 15 SECOND INTERVALS), EACH SIX MINUTE AVERAGE OF 20% OR MORE BEING CONSIDERED AS SIX MINUTES OF VIOLATION. THE THREE MINUTES EXEMPTED BY THE REGULATION ARE DEDUCTED FROM THE TOTAL NUMBER OF MINUTES OF VIOLATION THUS ESTABLISHED.

REGULATION R336.44, ALSO IDENTIFIED AS RULE 44, STATES THAT NO PERSON MAY EMIT PARTICULATE MATTER IN EXCESS OF A RATE DETERMINED FROM REFERENCE TO TABLE 1 OF THE REGULATION. THIS TABLE, AND FIGURE 1 OF THE REGULATION WHICH IS ASSOCIATED WITH IT, ESTABLISH THE ALLOWABLE EMISSION RATE IN POUNDS OF PARTICULATE PER THOUSAND POUNDS OF STACK GAS FOR EACH BOILER, ON THE BASIS OF THE STEAM GENERATING CAPACITY OF THE BOILER.

REGULATION R336.49, ALSO IDENTIFIED AS RULE 49, STATES THAT IT IS UNLAWFUL FOR A PERSON TO BURN IN A POWER PLANT FUEL WHICH DOES NOT COMPLY WITH EITHER THE SULFUR CONTENT LIMITATION OF TABLE 3 OF THE REGULATION, OR WHICH WHEN BURNED RESULTS IN SULFUR DIOXIDE EMISSIONS EXCEEDING AN EQUIVALENT EMISSION RATE AS SHOWN IN TABLE 4 OF THE REGULATION.

THE FOLLOWING IS A SUMMARY OF THE SPECIFIC VIOLATIONS CITED IN THE NOTICE OF VIOLATIONS:

STACKS FOR BOILERS NUMBERS 14 AND 15 AT THE SOUTH SIDE POWER PLANT, AND FOR BOILER NUMBER 20 AT THE WEST SIDE POWER PLANT WERE OBSERVED FOR 30 MINUTES EACH ON JULY 6, 1976, AND ALL 6-MINUTE AVERAGES EXCEEDED THE MAXIMUM OPACITY OF 40% ALLOWED AS AN EXCEPTION BY R336.41. THE INCINERATOR STACK WAS ALSO OBSERVED ON THE SAME DATE FOR AN ELAPSED TIME OF 42 MINUTES, AND HERE, TOO, ALL SIX-MINUTE AVERAGES EXCEEDED THE 40% MAXIMUM.

WITH REFERENCE TO REGULATION R336.44, FOR CONTROL OF PARTICULATES, THE ESTIMATES OF SOUTH SIDE POWER PLANT EMISSIONS UTILIZED OPERATING DATA SUPPLIED BY THE COMPANY IN RESPONSE TO A REQUEST SENT BY REGION V UNDER THE AUTHORITY OF SECTION 114 OF THE CLEAN AIR ACT, AND EMISSION FACTORS FROM EPA PUBLICATION AP-42. CALCULATIONS SHOWED THAT ACTUAL EMISSIONS ARE 0.79 LB/M-LB OF STACK GAS FOR EACH OF BOILERS 14, 15, 16, AND 17 WHEN COAL FIRED. ALLOWED EMISSIONS FOR EACH OF THESE BOILERS ARE DETERMINED TO BE 0.21 LB/M-LB, OF STACK GAS, FROM FIGURE 1 OF THE REGULATION. USING THE SAME SOURCES OF INFORMATION AND DATA, BOILERS 13 AND 20 OF THE WEST SIDE POWER PLANT WERE ALSO FOUND TO BE EMITTING 0.79 LB/M-LB OF STACK GAS AGAINST ALLOWABLES OF 0.22 AND 0.21 LB/M-LB, RESPECTIVELY, WHILE BOILER NO. 19 IS EMITTING 1.01 LB/M-LB AGAINST AN ALLOWABLE OF 0.19 LB/M-LB. AGAIN, IT IS NOTED THAT THESE EMISSION LEVELS OCCUR ONLY WHEN THE BOILERS ARE COAL FIRED.

WITH REFERENCE TO REGULATION R336.49, FOR CONTROL OF SULFUR DIOXIDE, WHERE THE REGULATION APPLIES TO ENTIRE POWER PLANTS, RATHER THAN TO SINGLE BOILERS, CALCULATIONS USING THE SAME SOURCES OF INFORMATION AND DATA SHOW THAT THE SOUTH SIDE POWER PLANT IS EMITTING $12\frac{24}{2}$ LB SO₂ /HOUR AGAINST AN ALLOWED 5000 LB/HR. WITH BOILERS 14, 15, 16, AND 17 FIRING COAL, WHILE THE WEST SIDE POWER PLANT IS EMITTING 11304 LB/HR AGAINST AN ALLOWED 5105 LB/HR, WITH BOILERS 13, 19, AND 20 FIRING COAL.

ATTACHMENT I

MICHIGAN REGULATIONS

R336.41, R336.44, AND R336.49

PART 3. EMISSION LIMITATIONS AND PROHIBITIONS

R 336.41. Standards for density of emissions.

Rule 41. A person shall not cause or permit to be discharged into the atmosphere from a single source of emission, a visible air contaminant of a density darker than No. 10 of the Ringelmann chart or not more than 20% opacity except:

(a) A visible air contaminant of a density not darker than No. 2 of the Ringelmann chart or not more than 40% opacity may be emitted for not more than 3 minutes in any 60 minute period but this emission shall not be permitted on more than 3 occasions during any 24 hour period.

(b) Where the presence of uncombined water vapor is the only reason for failure of an emission to meet the requirements of this rule.

(c) Where specifically permitted by the commission in a case where compliance is not feasible and all other requirements of the commission's rules are being met.

R 336.42. Points of measuring density.

Rule 42. The density of an air contaminant emission shall be measured at the point of its emission, except when the point of emission cannot be readily observed, it may be measured at an observable point on the plume nearest the point of emission.

R 336.43. Grading visible emissions.

Rule 43. (1) Darkness of a visible emission of an air contaminant shall be graded by using the Ringelmann chart or by means of a device or technique which results in a measurement of equal or better accuracy.

(2) Opacity of a visible emission of an air contaminant shall be graded by observers trained by and certified by the air pollution control division, department of natural resources using a device or technique approved by and on file with the commission.

R 336.44. Emission of particulate matter.

Rule 44. It is unlawful for a person to cause or allow the emission of particulate matter from any source in excess of:

(a) The maximum allowable emission rate listed in Table 1.

(b) The maximum allowable emission rate listed by the commission on its own initiative or by application. A new listed value shall be based upon the control results achievable with the application of the best technically feasible, practical equipment available. This applies only to sources not assigned a specific emission limit in Table 1.

(c) The maximum allowable emission rate specified as a condition of a permit to install or a permit to operate.

(d) The maximum allowable emission rate specified in a voluntary agreement, performance contract, stipulation, or an order of the commission.

(e) The maximum allowable emission rate as determined by Table 2 for sources not covered in subdivisions (a) to (d).

Source	Maximum Allowable Emission at Operating Conditions ^(a) (lbs. particulate per 100 lbs. dry)	
	Capacity Rating in Pound Steam Per Hr.	
A. Fuel Burning Equipment		
1. Pulverized coal (Includes cyclone furnaces)	0 - 1,000,000 over 1,000,000	See Figure 1 for maximum emission limit. Apply to commission for specific emission limit.
2. Other modes of firing coal (other than pulverized)	0 - 100,000 100,000 - 300,000 over 300,000	0.65 0.65 - 0.45 ^(b) Apply to commission for specific emission limit.
3. Wood (sawdust, shavings, logged, other) where heat input of wood fuel > 75% of total heat input All other combination fuel burning equipment which uses wood as 1 of the fuels		0.50 Apply to commission for specific emission limit.
B. Incinerators		
	Rating in lbs. Waste Per Hour	
1. Residential apartments, commercial and industrial ^(c)	0 - 100 over 100	0.65 0.30
2. Municipal	All	0.30
3. Pathological ^(d)		0.20
4. Manure drying or incineration ^(e)		0.20
C. Steel Manufacturing		
1. Open hearth furnaces		0.10
2. Basic oxygen furnaces		0.10
3. Electric furnaces		0.10
4. Sintering plants		0.20
5. Blast furnaces		0.15
6. Heating and reheating furnaces		0.30
D. Ferrous Cupola Operations		
	Total Plant Melt Rate in Tons/Hr.	
1. Production cupolas	0 - 10 10 - 20 over 20	0.40 0.25 0.15
2. Topping cupolas		0.40
3. Electric arc melting		0.10
4. Sand handling		0.10
E. Chemical and Mineral Kilns		
		0.20
F. Asphalt Paving Plants		
		0.30
G. Cement Manufacture		
(Up to 15,000 barrels per day kiln capacity)		
1. Kiln - wet or dry process		0.25
2. Clinker coolers		0.30
3. Grinding, crushing and other material handling		0.15
Note: A maximum allowable emission rating shall be applied for to the com- mission for all kiln installations which will result in a total plant kiln capacity in excess of 15,000 barrels of cement per day.		
Gas Flow Rate (SCFM)		
H. Iron Ore Pelletizing		
Gase kilns and traveling gates		
	Greater than 600,000 300,000 to 600,000 100,000 to 300,000 less than 100,000	Apply to commission for specific emission limit 0.10 0.15 0.20

Notes:

- Fuel burning and refuse incineration limitations shall be calculated to 50% excess air.
- Emission limitations for specific ratings are determined by linear interpolation between the ratings shown.
- These emission limits shall not apply to kilns which are used for drying and curing of solid fuel or other materials.
- Afterburner or appurtenance equipment is not allowed.
- Differentiation between kilns and gas-fired furnaces.
Cupolas used in a production facility are those used in a production facility and will vary in size only in relation to the capacity of the facility.
However, the cupolas in a refinery for the production of synthetic gas will be used at one time to produce the synthetic gas and at another time to produce the synthetic gas. This would be for a 2 to 4 hour period per day for any number of days per week.
Production facility cupolas will not be used to produce synthetic gas. This would be for a 2 to 4 hour period per day for any number of days per week.

TABLE 2.
ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr		Lb/Hr	Tons/Hr	
100	0.05	0.55	16,000	8.00	16.5
200	0.10	0.88	18,000	9.00	17.9
400	0.20	1.40	20,000	10.	19.2
600	0.30	1.80	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.78	60,000	30.	40.0
2,000	1.00	4.70	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.95	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 0.0001 P^{1.2}$ and extrapolation and interpolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation $E = 0.0001 P^{1.2}$, where E is rate of emission in lb/hr and P is process weight in tons/hr.
 Process weight = The total amount of all material introduced into an industrial operation, including solid fuels, but excluding liquid fuels and process fluids when these are used as fuels and are introduced for purposes of combustion.
 Process weight rate = For continuous or long-term operations: The total process weight for the entire period of operation or for a typical period, then divided by the number of hours of such period or portion thereof. For batch operations: The total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

FIGURE 1



STEAM CAPACITY ARE IN 1000 POUNDS OF STEAM PER HOUR

Note: It is noted that the maximum allowable emission rate for particulate is based on the steam capacity of the boiler and not on the actual fuel input. The actual fuel input may vary considerably from the steam capacity of the boiler.

exceeding an equivalent emission rate as shown in Table 4, unless the following conditions are met:

(a) The source of fuel burning is not subject to federal emission standards for new stationary sources.

(1) An installation permit, if required by part 2, was approved by the commission before August 17, 1971.

(c) The user furnishes evidence that the fuel burning does not create, or contribute to, an ambient level of sulfur dioxide in excess of the applicable ambient air quality standard. The evidence shall consist of air quality data or stack dispersion calculations, or both, satisfactory to the commission.

(d) The user is operating in compliance with a voluntary agreement, order, stipulation or variance from the commission.

(2) Notwithstanding the provisions of subrule (1), an exception from the limitation of Table 3 will not be permitted after January 1, 1970 unless specific authorization is granted by the commission.

(3) A person responsible for operation of a source which on the effective date of the 1973 amendment to this rule, or for any anticipated time in the future, is or will be using fuel with a sulfur content in excess of that allowed to be burned on July 1, 1973 as listed in Table 3, or which on such effective date or any anticipated time in the future is or will be emitting sulfur dioxide in excess of the equivalent emission for that fuel as shown in Table 4, shall submit to the commission a written program for compliance with this rule within 60 days after such effective date. This requirement does not apply to a source for which the commission has approved an exception to Table 3 under the provisions of subrule (1).

(4) The program required by subrule (3) shall include the method by which compliance will be achieved, a complete description of new equipment to be installed or modifications to existing equipment to be made and a timetable which specifies, as a minimum, the dates by which: (a) equipment will be ordered, (b) construction or modification of equipment will begin, (c) initial startup of equipment will begin and (d) emissions will be reduced to levels shown in Tables 3 and 4.

(5) The commission may allow any source which is required to submit a compliance program under subrule (3) an extension to the programmed compliance date if the following conditions are met:

(a) The source of fuel burning is not subject to federal emission standards for new stationary sources.

(b) An installation permit, if required by part 2, was approved by the commission before August 17, 1971.

(c) The user furnishes satisfactory evidence to the commission that the fuel burning does not create, or contribute to, an ambient level of sulfur dioxide in excess of the applicable ambient air quality standards.

(6) A person shall not cause or permit the burning of fuel in any fuel burning equipment that results in an average emission of sulfur dioxide for any calendar month at a rate greater than was emitted by that fuel burning equipment for the corresponding calendar month of the year 1970, unless otherwise authorized by the commission.

(7) The use of fuels having sulfur contents as set forth in this rule shall not allow degradation in the mass rate of particulate emission unless otherwise authorized by the commission. The commission may require source emission tests which may be performed by or under the supervision of the commission at the expense of the owners and may require the submission of reports to the commission both before and after changes are made in the sulfur content in fuel.

TABLE 3.

SULFUR IN FUEL LIMITATIONS FOR FUEL BURNING EQUIPMENT			
Plant Capacity ¹ (1000 Btu Steam Per Hour)	Maximum Sulfur Content in Fuel ²		
	Percent by Weight ³		
	July 1, 1973	July 1, 1975	
0-500	2.0	1.5	
Over 500	1.5	1.0	

TABLE 4. EQUIVALENT EMISSION RATES

Sulfur in Fuel ¹	Parts Per Million by Volume Corrected to 5% Excess Air		Pounds of Sulfur Dioxide Per Million Btu of Heat Input	
	Solid Fuel ²		Liquid Fuel ²	
	(12,000 Btu/lb)	(15,000 Btu/lb)	(12,000 Btu/lb)	(15,000 Btu/lb)
1.0	500	420	1.6	1.1
1.5	800	650	2.4	1.7
2.0	1100	910	3.2	2.2

(1) For the purpose of this rule, plant capacity is defined as the rated capacity of the boiler and not the rated capacity of the power plant as of August 17, 1971. A power plant is defined as a single structure designed to generate electricity, or both, and may include multiple boilers.

ATTACHMENT 2

ADMINISTRATOR'S APPROVAL, WITH EXCEPTIONS,

OF MICHIGAN STATE IMPLEMENTATION PLAN

40 C.F.R. §552.1172, et. seq.

§ 52.1172 Approvals.

With the exceptions set forth in this subpart, the Administrator approves Michigan's plan for the attainment and maintenance of the national standards.

§ 52.1173 [Reserved]

§ 52.1174 [Reserved]

§ 52.1175 Compliance schedules.

(a) The requirements of § 51.154a (2) of this chapter are not met since Rule 336.49 of the Michigan Air Pollution Control Commission provides for individual compliance schedules to be submitted to the State Agency by January 1, 1974. This would not be in time for substantial with the first scheduled report required by § 51.154a of this chapter.

(b) Federal compliance schedule.

(1) Except as provided in paragraph (b) (2) of this section, the owner or operator of a stationary source subject to R 336.49 of the general rules of the Air Pollution Control Commission, Michigan Department of Public Health, shall comply with the final emission limitations in table 3 or 4 of such regulations on, or before, January 31, 1974. This paragraph shall apply to Detroit, Oakland, and St. Clair Counties of the Metropolitan Detroit-Port Huron Interstate Region (§ 51.37 of this chapter), the Michigan portion of the Metropolitan Toledo Interstate Region (§ 51.43 of this chapter) and the South Central Michigan Interstate Region (§ 51.85 of this chapter).

(2) Any owner or operator in compliance with the emission limitations in table 3 or 4 of R 336.49 of the general rules of the Air Pollution Control Commission, Michigan Department of Public Health, on the effective date of this paragraph shall certify such compliance to the Administrator no later than December 31, 1972.

(3) Any owner or operator achieving compliance with the emission limitations in table 3 or 4 of R 336.49 of the general rules of the Air Pollution Control Commission, Michigan Department of Public Health, after the effective date of this paragraph shall certify such compliance to the Administrator within 5 days of the date compliance is achieved.

(4) Any owner or operator of a stationary source subject to paragraph (b) (1) of this section may, no later than 120 days following the effective date of this paragraph, submit to the Administrator for approval a proposed compliance schedule that demonstrates compliance with the emission limitations in table 3 or 4 of R 336.49 as expeditiously as practicable but not later than the dates specified in R 336.49 (7).

(5) If the owner or operator chooses to comply with the provisions of R 336.49 (7), Table 3, the compliance schedule shall contain dates by which contracts will be awarded to obtain the appropriate fuel and dates by which this fuel will be burned exclusively.

(6) If the owner or operator chooses to comply with the provisions of R 336.49 (7), Table 4, the compliance schedule shall provide for periodic increments of progress toward compliance. The dates for achievement of such increments shall be specified. Instruments of progress shall include, but not be limited to: Submittal of the final control plan to the Administrator; listing of necessary contracts for construction or process change, or issuance of orders for the purchase of component parts to accomplish such construction or process modification; initiation of on-site construction or installation of emission control equipment or on-site construction or installation of end-use control equipment or process modification, and final compliance.

Any owner or operator who submits a compliance schedule pursuant to this paragraph shall, within 5 days after the deadline for each increment of progress, certify to the Administrator whether or not the required increment of the approved compliance schedule has been met.

(4) Any compliance schedule adopted by the State and approved by the Administrator shall satisfy the requirements of this paragraph for the selected source.

(c) The requirements of § 51.154a (2) of this chapter are not met since compliance schedules with adequate increments of progress have not been submitted for every source for which they are required.

(d) Federal compliance schedule.

(1) Except as provided in subparagraph (2) of this paragraph, the owner or operator of any stationary source subject to the following emission-limiting regulations in the Michigan Air Pollution Control plan shall comply with the applicable compliance schedule in subparagraph (2) of this paragraph: Air Pollution Control Commission, Department of Public Health, Michigan Rule 336.49.

(2) Compliance schedule. (i) The owner or operator of any boiler or furnace of more than 250 million Btu per hour heat input subject to Rule 336.49 and located in the Central Michigan Interstate AQCR, South Bend-Ekhart-Benton Harbor Interstate AQCR, or Upper Michigan Interstate AQCR (as defined in Part 81 of this title) shall notify the Administrator, no later than October 1, 1972, of his intent to utilize either low-sulfur fuel or stack gas demineralization to comply with the limitations effective July 1, 1973, in Table 3 or Table 4 of Rule 336.49.

(ii) Any owner or operator of a stationary source subject to subparagraph (2) (i) of this paragraph who elects to utilize low-sulfur fuel shall take the following actions with respect to the source no later than the dates specified:

(a) November 1, 1972—Submit to the Administrator a projection of the amount of fuel by type, that will be substantially adequate to enable compliance with Table 3 of Rule 336.49 on July 1, 1973, and for at least one year thereafter.

(b) December 31, 1972—Sign contracts with fuel suppliers for projected fuel requirements.

(c) January 31, 1973—Submit a statement as to whether boiler modifications will be required. If modifications will be required, submit plans for such modifications.

(d) March 15, 1974—Let contracts for necessary boiler modifications, if applicable.

(e) June 15, 1974—Initiate on-site modifications, if applicable.

(f) March 31, 1975—Complete on-site modifications, if applicable.

(g) July 1, 1975—Achieve final compliance with the applicable July 1, 1973, sulfur-in-fuel limitation listed in Table 3 of Rule 336.49.

(iii) Any owner or operator of a stationary source subject to subpart (2) (i) of this paragraph who elects to utilize stack gas demineralization shall take the following actions with respect to the source no later than the dates specified:

(a) November 1, 1972—Let necessary contracts for construction.

(b) March 1, 1973—Initiate on-site construction.

(c) March 31, 1975—Complete on-site construction.

(d) July 1, 1975—Achieve final compliance with the applicable July 1, 1973, emission limitation listed in Table 4 of Rule 336.49.

(c) If a performance test is necessary for a determination as to whether compliance has been achieved, such a test must be completed by July 1, 1973. Ten days prior to such a test, notice must be given to the Administrator to afford him the opportunity to have an observer present.

(iv) The owner or operator of any boiler or furnace of more than 250 million Btu per hour heat input subject to Rule 336.60 and located in the Central Michigan Iron State AGCIS, South Island-Tripart-Union Harbor Interstate AGCIS, or Upper Michigan Interstate AGCIS shall notify the Administrator, no later than January 31, 1973, of his intent to utilize either low-sulfur fuel or stack gas desulfurization to comply with the limitation effective July 1, 1973, in Table 3 or Table 4 of Rule 336.60.

(v) Any owner or operator of a stationary source subject to subparagraph (2)(iv) of this paragraph who elects to utilize low-sulfur fuel shall take the following actions with respect to the source no later than the dates specified:

(a) October 15, 1972—Submit to the Administrator a projection of the amount of fuel, by types, that will be substantially adequate to enable compliance with Table 3 of Rule 336.60 on July 1, 1973, and for at least one other operation.

(b) December 31, 1972—Sign contracts with fuel suppliers for projected fuel requirements.

(c) January 31, 1973—Submit the statement as to whether boiler modifications will be required. If modifications will be required, submit plans for such modifications.

(d) March 15, 1973—Let contracts for necessary boiler modifications, if applicable.

(e) June 15, 1973—Initiate onsite modifications, if applicable.

(f) March 31, 1973—Complete onsite modifications, if applicable.

(g) July 1, 1973—Achieve final compliance with the applicable July 1, 1973, sulfur-in-fuel limitation listed in Table 3 of Rule 336.60.

(vi) Any owner or operator of a stationary source subject to subparagraph (7)(iv) of this paragraph who elects to utilize stack gas desulfurization shall take the following actions with respect to the source no later than the dates specified:

(a) November 1, 1972—Let necessary contracts for construction.

(b) March 1, 1973—Initiate onsite construction.

(c) March 31, 1973—Complete onsite construction.

(d) July 1, 1973—Achieve final compliance with the applicable July 1, 1973, emission limitation listed in Table 4 of Rule 336.60.

(e) If a performance test is necessary for a determination as to whether compliance has been achieved, such a test must be completed by July 1, 1973. Ten days prior to such a test, notice must be given to the Administrator to afford him the opportunity to have an observer present.

(vi) Any owner or operator subject to a compliance schedule shall certify to the Administrator, within five days after the deadline for each increment of progress in that schedule, whether or not the increment has been met.

(3)(C) Subparagraphs (1) and (2) of this paragraph shall not apply to a source which is presently in compliance with Table 3 or Table 4 of Rule 336.60 and which has certified such compliance to the Administrator by October 1, 1972. The Administrator may request whatever supporting information he considers necessary for proper certification.

(4) Any compliance schedule adopted by the State and approved by the Administrator shall satisfy the requirements of this paragraph for the affected source.

(5) Any owner or operator subject to a compliance schedule in this paragraph may submit to the Administrator no later than October 1, 1972, a proposed alternative compliance schedule. If such compliance schedule may provide for final compliance after the final compliance date in the applicable compliance schedule of this paragraph, if promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

(6) Nothing in this paragraph shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in subparagraph (2) of this paragraph fails to satisfy the requirements of § 51.16 (b) and (c) of this chapter.

(c) The compliance schedules for the sources identified below are approved as meeting the requirements of § 51.6 and § 51.15 of this chapter. All regulations cited are air pollution control regulations of the State, unless otherwise noted.

MICROFILM				
Source	Location	Regulation involved	Date schedule adopted	Final compliance date
ALPENA COUNTY				
National Gypsum Co. (Gypsum Cement Plant)	Alpena	336.11	Sept. 25, 1972	July 1, 1973
BENNET COUNTY				
Upper Michigan Power Co.	Benet	336.11	July 25, 1972	July 1, 1973
CHARLEVOIX COUNTY				
Fort Jackson Iron Works, Inc.	Fort Jackson	336.11	Sept. 14, 1972	July 1, 1973
Michigan Cement Co.	Charlevoix	336.11	Sept. 14, 1972	July 1, 1973
BROWN COUNTY				
Hemlock, Inc.	Harbor Beach	336.11	Nov. 16, 1972	July 1, 1973
EMMA COUNTY				
Extorted Steel	Emmett	336.11	Nov. 24, 1972	May 31, 1974
HAWTHORNE COUNTY				
The Cleveland Tube Iron Co. (Cleveland Tube Co.)	Hawthorne	336.11	Nov. 14, 1972	July 1, 1973
The Cleveland Tube Iron Co. (Cleveland Tube Co.)	Hawthorne	336.11	Nov. 14, 1972	July 1, 1973
HILLSDALE COUNTY				
New Chemical	Hillsdale	336.11	Dec. 2, 1972	July 1, 1973

ATTACHMENT 3

NOTICE OF VIOLATION ISSUED

NOVEMBER 10, 1976



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

NOV 16 1976

Mr. Joseph Temple, General Manager
Dow Chemical
Midland Division
2020 Dow Center
Midland, Michigan 48640

Re: Notice of Violation
Dow Chemical Company
Midland, Michigan

Dear Mr. Temple:

The enclosed Notice of Violation is issued this date pursuant to Section 113(a)(1) of the Clean Air Act, as amended [42 U.S.C. 1855(c-8(a)(1))] to notify you that the Administrator finds the Dow Chemical Company located at Midland, Michigan, is in violation of the applicable Michigan Implementation Plan.

Section 113(a) of the Act provides that if the violation continues beyond the 30th day after the date of the Notice of Violation, the Administrator of the U.S. Environmental Protection Agency (U.S. EPA) may issue an Order requiring compliance with the requirements of the implementation plan, or he may commence a civil action for appropriate relief. Section 113(c) provides for criminal penalties in certain cases and Section 306 (as implemented by Executive Order 11738 and 40 CFR 15) provides that facilities in noncompliance with the implementation plan cannot be used for Federal contracts, grants, or loans.

In accordance with Section 113(a)(4) of the Act, we are offering you an opportunity for a conference to discuss the violation which is the subject of this Notice. The conference will afford you an opportunity to present information bearing on the finding of violation, on the nature of the violation, on any efforts you have taken to achieve compliance, and on the steps you propose to take. This opportunity for a conference is in satisfaction of the requirements of Section 113(a)(4). You have a right to be represented by counsel.

-2-

The U.S. EPA attorney in this matter is Michael Smith. Please contact Mr. David Ullrich, Chief, Case Development Section, Air Enforcement Branch, Region V, or Mr. Smith at (312) 353-2002 to request a conference. Such a request should be made as soon as possible but in any event no later than ten (10) days after receipt of this Notice.

Very truly yours,

ORIGINAL SIGNED BY JAMES O. McDONALD

James O. McDonald, Director
Enforcement Division

Enclosure

cc: Mr. Lee E. Jager, Chief
Air Quality Division
Michigan Department of Natural Resources



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604



Certified Mail
Return Receipt Requested

NOV 18 1976

Mr. Lee E. Jager, Chief
Air Quality Division
Michigan Department of Natural Resources
P. O. Box 30028
Lansing, Michigan 48909

Dear Mr. Jager:

Enclosed is a copy of a Notice of Violation issued this date by the U.S. Environmental Protection Agency to the Dow Chemical Company for violation of Michigan Air Pollution Control Rules, part of a federally approved implementation plan. This Notice has been issued pursuant to Section 113(a) of the Clean Air Act, as amended, 42 U.S.C. Section 1857c-8, which provides in part:

Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of any requirement of an applicable implementation plan, the Administrator shall notify the person in violation of the plan and the State in which the plan applies of such finding...

Specifically, Dow Chemical Company, is in violation of the State's Particulate, Sulfur Dioxide and Opacity Rules R336.41, R336.44 and R336.49 and a compliance schedule has not been received for this source.

If the violation extends for more than 30 days after issuance of the Notice to this source, we will take appropriate further action in accordance with Section 113 of the Act. We, however, appreciate your Agency's ongoing effort to obtain compliance from this source. It is our hope that this Notice will substantially aid efforts to obtain a compliance schedule within this 30-day period, thereby, obviating the need for further Federal action.

Very truly yours,

James O. McDonald, Director
Enforcement Division

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:)

Dow Chemical Company)
Midland, Michigan)

Notice of Violation

Proceeding Pursuant to)
Section 113(a)(1) of the)
Clean Air Act, as Amended)
[42 U.S.C. Section 1857c-3(a)(1)])

EPA-5-77-A-13

STATUTORY AUTHORITY

This Notice of Violation is issued pursuant to Section 113(a)(1) of the Clean Air Act, as amended (42 U.S.C. Section 1857c-3(a)(1); hereinafter referred to as the "Act").

FINDINGS OF VIOLATION

The following findings are hereby made:

1. Michigan Air Pollution Rules R336.41, R336.44, and R336.49, dealing with the control of Particulate Matter and Sulfur Dioxide emissions, are part of the applicable implementation plan for the State of Michigan, and establish emission standards pertaining to the Dow Chemical Company facilities located at Midland, Michigan.
2. As indicated more specifically below, the South and West side power plants and the incinerators located at Dow Chemical Company, Midland Division are in violation of R336.41, R336.44, and R336.49.

The violations of the Michigan Rules are summarized below:

Source: South Side and West Side Power Plant

<u>Source</u>	<u>Pollutant</u>	<u>Rule</u>	<u>Calculated Emissions</u>	<u>Allowed Emissions</u>
South Side Power Plant				
Boiler #14	Particulate Matter	R336.44	0.79 LB/M-LB GAS	0.21 LB/M-LB GAS
Boiler #15	Particulate Matter	R336.44	0.79 LB/M-LB GAS	0.21 LB/M-LB GAS
Boiler #16	Particulate Matter	R336.44	0.79 LB/M-LB GAS	0.21 LB/M-LB GAS
Boiler #17	Particulate Matter	R336.44	0.79 LB/M-LB GAS	0.21 LB/M-LB GAS
West Side Power Plant				
Boiler #18	Particulate Matter	R336.44	0.79 LB/M-LB GAS	0.22 LB/M-LB GAS
Boiler #19	Particulate Matter	R336.44	1.01 LB/M-LB GAS	0.19 LB/M-LB GAS
Boiler #20	Particulate Matter	R336.44	0.79 LB/M-LB GAS	0.21 LB/M-LB GAS
South Side Power Plant	Sulfur Dioxide	R336.49	12724 LB/HR	5090 LB/HR
West Side Power Plant	Sulfur Dioxide	R336.49	11304 LB/HR	5103 LB/HR

Source: South Side and West Side Power Plants and Incinerators

Visible Emission Observations Summary

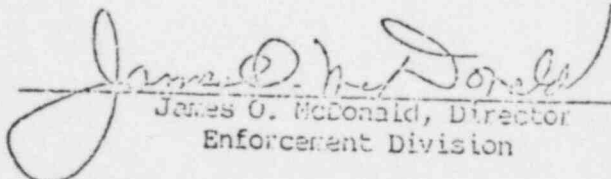
	<u>Date</u>	<u>Duration of Observations in Minutes</u>	<u>Duration of Violations in Minutes</u>
South Side Power Plant Boilers No. 14 & 15	7/6/76	30	30
West Side Power Plant Boiler No. 20	7/6/76	30	30
Incinerators	7/6/76	42	42

NOTICE OF VIOLATION

Notice is hereby given to the State of Michigan and to the Dow Chemical Company that the Administrator of the United States Environmental Protection Agency (U.S. EPA), by authority duly delegated to the undersigned, finds that the Boiler and Incinerator facilities described above are in violation of the applicable implementation plan as set forth in the Findings of Violation.

NOV 10 1976

Date _____


James O. McDonald, Director
Enforcement Division

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION



In the Matter of the Application of)
CONSUMERS POWER COMPANY)
(Midland Plant, Units 1 and 2))

Docket Nos. 50-329
50-330

CERTIFICATE OF SERVICE

I hereby certify that copies of the attached "Further Responses to Interrogatories" dated February 28, 1977, were served upon the individuals whose names appear on the attached service list by deposit in the United States mail, postage prepaid and properly addressed, on the 28th day of February, 1977.

Judith A. Suderman

Judith A. Suderman
The Dow Chemical Company
Legal Department
47 Building
Midland, Michigan 48640

February 28, 1977
Attachment: Service List

SERVICE LIST

Mr. C. R. Stephens
Chief, Docketing and Service Section
Office of the Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Richard K. Hoefling, Esquire
Counsel for NRC Staff
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Myron M. Cherry, Esquire
Suite 4501
One IBM Plaza
Chicago, Illinois 60611

David J. Rosso, Esquire
Isham, Lincoln & Beale
One First National Plaza
Suite 4200
Chicago, Illinois 60603

Frederic J. Coufal, Esquire, Chairman
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Emmeth A. Luebke, Member
Atomic Safety and Licensing Board Panel
Washington, D.C. 20555

Dr. J. Venn Leeds, Jr., Member
10807 Atwell
Houston, Texas 77096

Ms. Mary Sinclair
5711 Summerset Street
Midland, Michigan 48640

Mr. Steve Gadler, P.E.
2120 Carter Avenue
St. Paul, Minnesota 55108

Dr. Richard Timm
1038 Cascade Dr., N.W.
Salem, Oregon 97304