UNITED STATES OF AMERICA
BEFORE THE ENVIRONMENTAL PROTECTION AGENCY

Supplement to the Petition to EPA Administrator Carol Browner for Objections Under the Clean Air Act and Complaint of Discrimination under Title VI of the Civil Rights Act

In re: Significant Revision No.1000547)
to Air Quality Control Permit)
No. M191365P1-99 for Arizona Portland)
Cement Company,)
Issued by the Arizona Department)
of Environmental Quality)
)

With regard to the above noted petition and complaint the petitioners wish to submit supplemental information as follows:

1. An affidavit regarding the technical issues in this matter has been prepared by Patrick O'Malley of Carpenter Environmental Associates. This affidavit is attached as **Appendix 1** to be part of the record of this Petition and Complaint.

2. The State of Arizona Air Pollution Control Hearing Board is in the process of scheduling of hearings related to this matter. The state level board appeal of the petitioners was originally subjected to motions to dismiss filed by both the Arizona Department of Environmental Quality and the Arizona Portland Cement Company. However, these motions to dismiss have been withdrawn. The proceeding is subject to continuing development of a hearing process, as demonstrated by the Notice of Open Meeting of the Arizona Air Pollution Control Board of November 18, 1998, which is attached as **Appendix Two** of this Supplement to the Petition and Complaint.

Respectfully Submitted,

Sanford Lewis, Attorney
December 2, 1998

PO Box 79225
Waverley, MA 02179
617 489-3686
ON BEHALF OF THE PETITIONERS

NOTICE OF SERVICE

The accompanying supplement to the petition and complaint to EPA Administrator Carol Browner in regard to Arizona Portland Cement was sent via first class mail to the following individuals.

Sanford Lewis
December 2, 1998

Service List

Carol Browner
Administrator
USEPA
401 M Street, SW
Washington DC 20460
certified mail: Z514 683 089

Russell F. Rhoades, Director
Arizona Department of Environmental Quality
3033 North Central Ave.
Phoenix, AZ 85012

David N. Bittel, Plant Manager
Arizona Portland Cement
PO Box 338
Rillito, AZ 85654

Matt Haber
USEPA Region IX
75 Hawthorne St.
San Francisco, CA 94105-3901

Matthew P. Millea
Robbins, Foreman & Bouma, P.C.
649 North Fourth Ave.
Phoenix, AZ 85003

Appendix 1 to Supplement to Petition/ Complaint Regarding Arizona Portland Cement
December 2, 1998

Affidavit of Patrick O'Malley

Background

1. I, Patrick O'Malley, hereby state that I am employed by Carpenter Environmental Associates, Inc. (CEA), 70 Hilltop Rd. Ramsey, NJ 07446. Our phone number is (201) 818-4844. My title is Principal Scientist. I have a Bachelor's degree in chemistry and a Master's degree in geophysical sciences. I have over seventeen years of experience in the environmental field. I manage air permitting projects and have provided technical and regulatory evaluations of many draft air permits. I have been acknowledged as an expert in air permitting matters by the West Virginia Air Quality Board and have provided testimony before that Board.

2. I have served as the lead consultant to the United Paperworkers International Union to research technical issues related to the significant revision No. 1000457 to Air Quality Control Permit No. M191365P1-99 issued to Arizona Portland Cement Company.

3. I have reviewed the air permit revision, permit application and supporting material for the Arizona Portland Cement Co. (APCC) facility in Rillito, Arizona. All worked performed by CEA staff relative to the APCC facility was prepared under my supervision.

Emission Projections

4. As part of its RIMOD III permit revision, APCC has included in its draft permit voluntary caps for CO of 99 tons per year (tpy) and NO_x of 39 tpy. By staying below these caps, APCC would be below the federal New Source Review (NSR) significance levels for these pollutants. The significance levels are 100 tpy for CO and 40 tpy for NO_x. The increase in these pollutants will come from two sources, additional blasting due to increased mining activities in its quarry and additional clinker production. According to the permit application, the additional blasting will result in increases of 45.66 tpy of CO emissions and 11.58 tpy of NO_x emissions. Therefore, additional clinker production must be limited so that CO emissions from Kilns 1-4 must be less than 53.34 tpy and NO_x emissions from Kilns 1-4 must be less than 27.42 tpy in order to remain under the permitted levels. APCC projects that after the completion of RIMOD III, Kilns 1-3 will produce 492,750 tons of clinker per year, and Kiln 4 will produce 1,807,250 tons of clinker per year.

5. The ability of APCC to remain below the NSR significance levels will depend on the ability of the facility to attain the emission factors used to calculate the CO and NO_x emissions from Kilns 1-4. We have utilized three different sets of emission factors to determine if APCC will in fact stay below these levels. These were 5th Edition AP-42 emission factors for Portland Cement Manufacture, published by the EPA; projected emission factors for Kilns 1-4 at the APCC facility included in the Responsiveness Summary, published by the State of Arizona; and historical emission factors for Kilns 1-3 which were included in the calculations methodology section of the APCC permit application. Historical emission factors were not provided for Kiln 4, so in this case the projected emission factors for Kiln 4 were used. However, we modified APCC's projected emission factors for Kiln 4. At its Mojave facility, APCC reported that the NO_x

emission factor for a kiln similar to Kiln 4 was 4.1 to 4.5 pounds per ton of clinker produced. APCC used a projected emission factor for Kiln 4 of 4.1, the low end of the range, to calculate NO_x emissions. However, we used an emission factor of 4.3 because it is reasonable to use the average value instead of the low value in the range listed for the Mojave facility kiln.

6. Regardless of the emission factors used, it appears that the APCC facility will remain below the NSR significance level for CO. Using AP-42 emission factors, the projected CO emissions would be over 1600 tons per year less than the 1996-1997 average emissions for Kilns 1-4, a decrease. Using the projected emission factors for Kilns 1-4, CO emissions would be almost 380 tons per year less than the 1996-1997 average emissions. Therefore, it does not appear that the RIMOD III permit revision would lead to an increase in CO emissions.

7. This is not the case for NO_x emissions. In every case analyzed, the increased NO_x emissions from Kilns 1-4 was above the allowable 27.42 tpy listed in the permit application. In the worst case, using historical emission factors for Kilns 1-3 and projected emission factors for Kiln 4, NO_x emissions would increase by nearly 1,880 tpy. In the best case, using projected emission factors for Kilns 1-4, NO_x emissions would increase by 148 tpy. The only instance in which NO_x emissions would not increase above 27.42 tpy from Kilns 1-4 is if an emission factor of 4.1 is used for Kiln 4. APCC has not demonstrated that this emission factor would be representative of emissions from Kiln 4. APCC reports that its test data indicated that the emission factor for the Mojave facility is between 4.1 and 4.5. APCC offers no justification that the use of the low end of the range for the Mojave kiln is warranted to calculate emissions from Kiln 4. Furthermore, an emission factor of 4.1 is lower than the emission factor published by EPA in AP-42 (which is 4.2).

8. According to the Introduction to the 5th edition of AP-42, data from source-specific emissions tests or continuous emission monitors are usually preferred for estimating a source's emissions because those data provide the best representation of the tested source's emissions. However, these results are applicable only to the conditions existing at the time of the testing or monitoring. The emission factors listed by APCC in its permit application of 5.6 pounds of NO_x per ton of clinker for Kilns 1-3 and 4.1 pounds of NO_x per ton of clinker for Kiln 4 are based on source-specific testing performed not at the Rillito facility but at Mojave, California. Unless the kilns at the Rillito site operate under identical conditions to those of the kilns at the Mojave facility, it cannot be assumed that identical emission factors will be achieved.

9. Since APCC has not demonstrated that it can keep emissions to below the level needed to be classified as a synthetic minor, in my professional judgment the only technically justifiable action is that until APCC can demonstrate through source-specific testing or continuous emission monitoring what the actual emission factors will be for Kilns 1-3 and Kiln 4, its production of clinker would need to be limited. Clinker production should be limited to a level that would assure APCC remains below the NO_x emission cap of 39 tpy specified in its permit as determined by using 5th Edition AP-42 emission factors of 6.0 pounds of NO_x per ton of clinker for Kilns 1-3 and 4.2 pounds of NO_x per ton of clinker for Kiln 4.

10. Upon completion of the RIMOD III modifications, if APCC is allowed to increase its clinker productions to the levels indicated on its permit application, in my professional judgment it seems highly unlikely that the increase in NO_x emission will remain below 40 tpy, thus APCC would need to undergo a federal New Source Review to expand to the projected level. The alternative would be to legitimately be a synthetic minor and avoid New Source Review, by lowering projected increase in clinker production to a level that will not cause an increase in NO_x emissions above NSR thresholds.

11. In addition to the predicted increases in emissions of NO_x due to the RIMOD III modification, APCC provides an estimate of the increase in SO_2 emissions. APCC's increased emissions of SO_2 are based on historical data for emission factors from Kiln 4. The historical emission factors were multiplied by the projected increase in clinker production to determine the increase in SO_2 emissions. However, these historical emission factors are for Kiln 4 prior to the RIMOD III modifications. It is not apparent that these emission factors will remain the same after the modifications to Kiln 4 are complete. Until this is demonstrated, APCC should use EPA's AP-42 emission factors to predict the SO_2 emission increase. If the AP-42 emission factor of 1.1 lbs SO_2 per ton of clinker for a preheater/precalciner kiln is used, SO_2 emissions would increase by 685.4 tpy during Phase I, with an additional increase during Phase II of 302.5 tpy. This would be a total increase in SO_2 emissions of 987.9 tpy. This would be far in excess of the 40 tpy significant emission rate threshold that would trigger a new source review.

Dust Control on Unpaved Roads

12. Under RIMOD III, APCC will increase clinker production, mining activities, material handling activities, and have increased open storage. All of these activities will result in increased PM and PM10 emissions. To avoid increasing PM and PM10 above federal NSR significant emission levels, which are 25 tpy PM and 15 tpy PM10, APCC has proposed to improve dust control on unpaved roads at the Rillito site. In the emissions inventory included with the permit application, APCC indicates that current dust control measures have a control efficiency of 50 percent. During Phase I of RIMOD III, APCC makes an unsubstantiated claim that it will achieve 65 percent control efficiency, and by the end of Phase II it will achieve 80 percent control efficiency on most of its unpaved roads, and 85 percent efficiency on unpaved roads in the quarry. APCC has made no indication in the permit application how this increased efficiency will be achieved except to state that it will increase water application intensity on its roadways.

13. In their calculations methodology, APCC references *Control of Open Fugitive Dust Sources* (EPA-450/3-88-008), which states that a 50 percent control efficiency can be achieved by watering or use of chemical dust suppressants. It does not provide a reference or state any basis that would indicate that the higher dust control efficiency is achievable. It is not apparent that APCC will be able to meet the projected control efficiencies by using only water application on the unpaved roads. The 5th edition of AP-42 indicates it would be possible to achieve efficiencies greater than 50 percent by using a chemical dust suppressant, such as a petroleum resin, but it does not indicate that this could be achieved by water application alone.

14. The revised draft permit includes a provision that APCC must prepare a dust control plan for both Phase I and II. These plans would need to have been prepared before the permit was issued to allow effective government and public review of the viability of the permit, as the projected increase in dust control efficiency is the only measure that prevents an increase in PM and PM10 emissions. If APCC does not achieve its projected control efficiency, PM emissions could increase by over 425 tpy and PM10 emissions could increase by 280 tpy.

15. The draft permit contains an equation to determine water application intensity for suppression of dust emissions. The equation relies on parameters for which only APCC can provide values, including average hourly daytime traffic and time between applications. Without this information it is not possible for me as an advisor to members of the public, nor for a government official, to evaluate if water application will be feasible as a means of dust suppression. Thus it would seem necessary for purposes of public and government review prior to permitting for APCC to prepare its dust control plans for both Phase I and II, using this equation, before the permit revision was issued. The plan would need to address all unpaved roads on the site, and include frequency of application, the expected traffic on each road, and the volume of water that must be used during each application. If it is found that water application is not a sufficient means of dust suppression, then APCC could be required to provide dust control plans for Phase I and II indicating what chemical dust suppressants would be used to achieve the needed dust control efficiency. Absent detailed dust control plans and complete review of such prior to permit issuance, there is no assurance that APCC can meet the dust control efficiencies claimed in its permit.

16. There are two instances in the calculations where APCC does not use the 5th edition of AP-42 to calculate emission factors for PM and PM10 emissions. The EPA periodically updates AP-42 to reflect new information, new technology, and additional testing data in an effort to improve the accuracy and increase the applicability of its emission factors. By using older editions of AP-42, the emission factors used by APCC may have resulted in inaccuracies in its emissions estimates.

17. Under section C.2.1.4. the equation used to calculate the emission factor is from the 4th edition of AP-42. This is not the most recent edition of AP-42, and there is no reason why

the most recent method should not be used. Section 13.2.5 of the 5th Edition of AP-42, Industrial Wind Erosion, is supposed to be used to determine particulate emissions from open storage areas. This section details a method to predict emissions from open storage piles and exposed areas using the wind speed profile for the facility and threshold friction velocities for the particle sizes expected in the open storage areas. To be consistent with current guidance, APCC should have calculated the PM emissions from its open storage areas using the 5th Edition of AP-42.

18. Section C.2.1.5., Haul Truck and Large Water Truck Traffic, also describes emissions calculations performed by methods other than those described in the 5th edition of AP-42. To be consistent with current guidance, APCC should have either repeated these calculations with emission factors from the most recent AP-42, or provided a reasonable explanation as to why a different emission factor was used.

Opacity

19. The draft permit revision contains language in the Fugitive Emissions section that would limit fugitive emissions from haul roads, storage piles, spillage, yard areas, and any other fugitives from process plant operations to the extent that they not exhibit greater than 40 percent opacity. In contrast, the Standards of Performance for Portland Cement Plants (40 CFR 60.62) for New Source Review requires that no owner or operator shall cause to be discharged to the atmosphere from any affected facility other than the kiln or clinker cooler any gases which exhibit 10 percent opacity or greater. State rules provide that for an existing portland cement plant, "No process source within any portland cement plant shall exceed 20 percent opacity." R18-2-705. Thus, whether handled as a new source or existing source, the opacity limits provided in the permit appear to contradict applicable law.

Modeling Methodology and Results for Gaseous and Kiln 4 Specific Emissions

20. For Phase I of the RIMOD III permit revision, APCC has assumed in developing its model that the only increase in species with Significant Emission Rates (CO, NO_x, SO_2, VOCs, fluorides, lead, and H_2SO_4 mist) will be limited to the existing Kiln 4 stack. APCC has assumed that there will be no increase in CO or NO_x emissions during Phase II. These assumptions are not warranted because they do not account for increased clinker production at the kilns. The clinker production for Kilns 1-3 is projected to increase from 329,729 tpy in 1997 to 492,750 tpy at the completion Phase I. Clinker production in Kiln 4 will increase from 1,257,250 tpy at the end of Phase I to 1,807,250 tpy at the completion of Phase II. APCC claims in its air impact analysis that changes in gaseous emissions will occur due only to increased emissions from Kiln 4 and from increased blasting at the quarry, and that CO and NO_x emissions will increase only during Phase I despite these increases in clinker production. Prior to APCC's demonstration that these claims can be achieved, it is not reasonable to make an assumption that an increase in production of over 160,000 tpy for Kilns 1-3 at the end of Phase I will not increase the emissions of species with Significant Emission Rates. Likewise, it is not reasonable to make an assumption that an increase in production of over 500,000 tpy for Kiln 4 between Phases I and II will not increase the emissions of CO and NO_x from the Rillito facility.

21. One consequence of APCC's underestimate of emissions is underestimating the impacts predicted by the model. In modeling the impact of the RIMOD III permit revision on the Saguaro National Park (SNP), APCC chose to model an emission rate of 1.0 lb/hr of a particular pollutant from Kiln 4. (It appears that the model does not consider emissions from Kilns 1-3). It then took the maximum predicted 24-hour impact in the SNP and multiplied this value by the actual net emission increase from Kiln 4. Rather than determine the actual net emissions increase for CO and NO_x from Kiln 4, APCC used the voluntary caps of 99 tpy of CO and 39 tpy of NO_x to calculate net emissions increases of 12.18 lb/hr of CO and 6.26 lb/hr of NO_x. Using 6.26 lb/hr as the net emission increase for NO_x, as did APCC, results in a predicted maximum ambient 24-hour impact in the SNP of 0.4 ug/m^3. Our calculations indicate that the 39 tpy voluntary cap for NO_x will be exceeded if APCC increases their clinker production in Phase II over Phase I. If AP-42 emission factors are used to predict the increase in NO_x emissions at the end of Phase II, a production rate of 492,750 tpy for Kilns 1-3 and 1,807,250 tpy for Kiln 4 will result in an additional 156.3 tpy of NO_x emissions above the 1996-1997 average. This would equate to a net emissions increase of 35.68 lb/hr. Using APCC's methodology, this net emission increase would result in a maximum ambient 24-hour impact in the SNP of 1.17 ug/m^3. This exceeds the maximum ambient 24-hour impact of 1.0 ug/m^3 established in the air impact analysis. Consequently, to comply APCC would need to lower its projected production capacity to a level such that the net emission increase will not exceed the maximum ambient 24-hour impact for NO_x of 1.0 ug/m^3 in the SNP, until such time as it can demonstrate that the emissions cap of 39 tpy of NO_x is achievable.

22. In addition to the predicted impact in the SNP due to NO_x, APCC provides an estimate of the impact in the SNP due to SO_2. APCC's increased SO_2 emissions are based on historical data for emission factors. As noted above, the historical emission factors were multiplied by the projected increase in clinker production to determine the increase in SO_2 emissions. However, these historical emission factors are for Kiln 4 prior to the RIMOD III modifications. It is not apparent that these emission factors will remain the same after the modifications to Kiln 4 are complete. Until that is demonstrated, APCC would need to use EPA's AP-42 emission factors to predict the SO_2 emission increase. If the AP-42 emission factor of 1.1 lbs SO_2 per ton of clinker for a preheater/precalciner kiln is used, the Phase I maximum ambient 24-hour impact in the SNP would be 5.16 ug/m^3. The impact from Phase I to Phase II would be an additional 2.28 ug/m^3, for a total maximum ambient 24-hour impact in the SNP of 7.44 ug/m^3 SO_2 as a result of the RIMOD III modifications. This is in excess of the 1.0 ug/m^3 maximum ambient 24-hour impact established in the air impact analysis. Consequently, to remain in compliance for SO_2 APCC would need to lower its projected production capacity to a level such that the projected emission increase for SO_2 will not exceed the maximum ambient 24-hour impact of 1.0 ug/m^3, until it could demonstrate that it will in fact be able to achieve the historical emission factors for SO_2 from Kiln 4.

Applicability of the ISC3 Model

23. EPA recommends using a refined complex terrain model if a violation of a controlling increment is indicated by using any of the preferred screening techniques. As described above, APCC's model indicates exceedance of the maximum ambient 24-hour impact in the SNP for both SO_2 and NO_x. For this reason, APCC's air impact analysis would need to be based on a complex terrain model. The ISC3 model used by APCC defines complex terrain as terrain where the receptor elevation is above the release height of the source. The APCC permit application lists the ground elevation of the facility as 2,060 feet above mean sea level. The highest stack elevation is listed as 120 feet above ground for emission point H4-DC1. The surrounding terrain reaches elevations in excess of 2400 feet (approximately 1 mile from the source), and as high as 3400 feet at Panther Peak (approximately 4 miles from the source). This meets the ISC3 model's definition of complex terrain. The ISC Short Term Model (ISCST3) allows the user to specify complex terrain, as it incorporates the COMPLEX1 screening model. However, the modeling performed by APCC does not appear to account for complex terrain. This may introduce a serious flaw in the model results. As pointed out by EPA in Amendment #1 to Model Change Bulletin #1, using the ISC3 model in a way that was not intended can lead to underestimating the impacts due to pollutant sources.

24. According to the EPA amendment, when estimating air quality credits due to source shut down or emissions reductions, negative emissions could be entered into the model as part of the calculations. APCC's methodology for calculating emissions increases includes emissions reductions from several sources, including Kilns 1-3, improved dust control on unpaved roads, and additional paving of unpaved areas. EPA expressed serious reservations regarding the use of this approach with complex terrain screening techniques. Due to the inherent conservative nature of these screening techniques, excessive air quality credits may be estimated. Much of the contemporaneous net emissions increase estimates are based on emissions reductions. It is not stated in APCC's assumptions that any steps were taken to correct for this possible inaccuracy. This may result in the model underestimating the impacts due to the RIMOD III modifications because of overestimating air quality credits.

Meteorological Input Data

25. The APCC air impact analysis was conducted using one year of on-site measurements collected between January 1, 1989 and December 31, 1989. These measurements included 10-meter wind speed, wind direction, and temperature. Upper air measurements were collected from the National Weather Service (NWS) airport site in Tucson, AZ. It is not reasonable to assume that one year of meteorological data is sufficient to ensure that worst case conditions are represented in the model results. EPA recommends that five years of representative meteorological data should be used when estimating concentrations with an air quality model, with consecutive years from the most recent, readily available 5-year period preferred (40 CFR 51 Appendix W: Guideline on Air Quality Models). Failure to follow EPA's recommendation to use representative meteorological data necessarily compromises the utility of the model, and it is likely that the data used does not reflect worst case conditions for the Rillito, AZ site.

Signed this 27 day of October, 1998, at Ramsey, NJ.

Patrick G. O'Malley

Patrick O'Malley

Subscribed and sworn to (or affirmed) before me this 27th day of October, 1998 at Ramsey, NJ. My commission expires on 12/18/2002.

Heather A. Agnor

Notary Public

HEATHER A. AGNOR
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 12/18/2002

Appendix 2 to Supplement to Petition/ Complaint Regarding Arizona Portland Cement
December 2, 1998

AMENDED NOTICE OF OPEN MEETING
ARIZONA AIR POLLUTION CONTROL HEARING BOARD

Wednesday, November 18, 1998 - 2:30 pm.
15 South 15th Ave., Conference Room B, Basement Level
Phoenix, Arizona 85007

Pursuant to A.R.S. § 38-431.02, notice is hereby given that the Arizona Air Pollution Control Hearing Board will hold a meeting open to the public on the date and at the time and location stated above. One or more members may participate by telephone.

The Board may vote to go into executive session from time to time for the purpose of legal advice from the Board's attorney, pursuant to A.R.S. § 38-431.03.A.3. on any matter listed on the agenda.

AGENDA

A. In the matter of Appeal by United Paperworkers International Union and [redacted] In re Revision No. 1000547, Air Quality Control Permit No. M191366P1-98, Arizona Portland Cement Company, Docket No. 98-2

1. Oral argument, discussion, consideration and possible legal action on

a. Withdrawal of Motion to Dismiss filed by Arizona Portland Cement Company
b. Withdrawal of Motion to Dismiss filed by Arizona Department of Environmental Quality
c. Appellant's Cross Motion for determination that the permit revision is void

2. Consideration, discussion and possible legal action concerning:

a. Identification of possible prehearing motions of any parties and scheduling deadlines for filing, service, response and hearing of such motions

b. Rescheduling hearing on Notice of Appeal

c. Establishing date(s) certain by which written responses must be filed by nonpetitioning parties if different than provided in R18-3-104(E)

d. Clarification of procedural steps to be followed in the proceeding

e Clarification or limiting of legal or factual issues to be addressed in the hearing

f. Establishing procedures and dates for exchange of information

B. Discussion and possible legal action concerning an amendment to the Board's statutory authority concerning rule-making

Persons with a disability may request a reasonable accommodation such as a sign language interpreter, by contacting Katie Huebner, 602/207-4754, TDD 602/207-4829. Requests should be made as early as possible to allow time to arrange the accommodation.

Dated November 16, 1998.

Lavonne Watkins

Lavonne Watkins, Clerk of the Board

Monday, 9 November 1998

Cement plant permit challenged in Rillito

(image)

Benjie Sanders,
The Arizona Daily Star
(b) (6) - Privacy [redacted] says, ``The Portland Cement plant dumps on us"

Pollution violates civil rights, union says

By Keith Bagwell
The Arizona Daily Star

Arizona Portland Cement Co.'s Rillito plant has become the first target in Arizona of an environmental injustice complaint to federal officials.

The United Paperworkers International union - representing the plant's 120 workers - and Rillito resident (b) (6) - Privacy want the Environmental Protection Agency to nullify the state's new air pollution permit. They say it violates the Civil Rights Act.

The petition contends that technically, the permit fails to meet Clean Air Act standards.

The new permit would let Arizona Portland embark on a two-phase, 84 percent expansion of the 50-year-old Rillito plant's cement-production capacity.

``(The) facility expansion poses a disproportionate risk of harm to human health among people of color and low income living nearby," the petition states.

It alleges a violation of the Constitution, the Civil Rights Act, President Clinton's executive order on environmental justice and EPA rules.

Clinton's order requires the EPA to consider minority populations living near polluting facilities when issuing permits and other regulatory authorizations.

According to the petition, 128 of the 223 people living within a mile of the plant 17 miles north of downtown Tucson are minorities: Hispanic (24.7 percent), black (23.8 percent) or American Indian (9 percent). The

national percentage of minorities living near plants is 24.7 percent, it states.

``(Rillito) is also a predominantly low-income community of which approximately 75 percent are elderly and retired," the petition states.

The petition says ``extra care and attention to emission levels is critically important" for these ``sensitive" people.

The petition charges that many in Rillito were unaware of the public comment period and public hearing for the permit because of inadequate notice.

``We're doing this because we want to help our neighbors in Rillito," said Keith Romig, communications director at the union's Nashville, Tenn., headquarters.

Union members have worked without a contract since their three-year pact with Arizona Portland expired in September 1997.

(b) (6) - Privacy [redacted] a retiree, said he has lived in Rillito for nearly 50 years. ``This is a small, poor community with many migrant workers and older people," he said. ``The Portland Cement plant dumps on us."

Winter rains can leave ``cement on our cars and everything," he said. ``At times the dust and smoke is just thick."

(b) (6) - Privacy said many Rillito residents have skin or respiratory problems, and their dogs seem to often die of fatal tumors.

``I don't know if it's all the cement plant - we have a construction company crusher plant nearby, the freeway and crop-duster airplanes flying over us - but it surely contributes," he said.

Romig said the union is ``suspicious of the figures the company and its consultant used in the permit application. We believe the pollutant emissions would be worse than they show."

Stands by permit

An Arizona Department of Environmental Quality statement said it ``stands by its air permit issued to Arizona Portland Cement Co. The air permit (we) issued meets all legal requirements and protects public health."

Vaughn ``Skip" Corley of Phoenix, Arizona Portland executive vice president and general manager, said the company plans to spend $70 million to expand the plant's production capacity.

The company wants to complete the first $30 million expansion phase in late 1999, he said. The $40 million second phase will take about a year to complete, but its start will depend on the cement market, he said.

The union in September filed a state appeal of the permit to the Arizona Air Pollution Hearing Board. The appeal contends permit terms fall short of state and Clean Air Act standards.

Opposing appeal

Arizona Portland asked the board to dismiss the appeal. The board is scheduled to hear the request today in Phoenix.

``We've done all that was needed to comply with the law and all the rules," Corley said. ``We spent two years on testing, (computer) modeling and so forth for the permit, and (Environmental Quality) granted it."

But Romig said data for the permit ``show the proposed plant expansion will increase pollutant emissions to levels just short of those which trigger greater scrutiny, federal oversight and more costly pollution controls."

``We want to ensure there is sufficient scrutiny so the company will do the job right," he said.

The union hired Massachusetts attorney Sanford Lewis to review the permit and its supporting data, and file the EPA petition.

Lewis said Arizona Portland and Environmental Quality ``did not use specific nitrogen oxide (emissions) data and used the most optimistic assumptions available without showing why they should apply."

Lewis said EPA guidelines and standard industry procedure use the middle point of an estimated range for nitrogen oxides and other pollutant emissions. Instead, the company used the low end of that range, Lewis said.

Nitrogen oxides are a cause of acid rain and combine with hydrocarbons in sunlight to form ozone pollution. The pollution could damage lung air sacs and make people more sensitive to allergies and more susceptible to

diseases.

Lewis said the low estimates of nitrogen oxide emissions used for the permit show the plant would emit 39 tons (78,000 pounds) of the substances a year.

That's a ton under the limit that would have required more pollution controls, more monitoring and increased EPA oversight, he said.

Lewis hired New Jersey-based Carpenter Environmental Associates Inc. to calculate the plant's nitrogen oxide emissions using a figure from the middle of the estimate range for cement kilns of the type in the Rillito plant.

The New Jersey firm found the Rillito plant's nitrogen oxide emissions would far exceed the level requiring a permit with more rigorous terms, he said.

The permit data err in a similar way with regard to estimated sulfur dioxide emissions, Lewis said. Sulfur dioxide is a lung irritant that can trigger asthma attacks.

The plant is in an area EPA designated as a concern for particulate pollution. Under its current size, Arizona Portland emits 776 tons (1.55 million pounds) a year of particulates - tiny particles of chemical substances, dust and soot.

Details omitted

Lewis said that in the permit, the company used faulty calculations and omitted details about how it would reduce particulate emissions.

``The permit views the plant and its limestone quarry as a single particulate source when they are four miles apart," he said. ``If one views them as separate sources, the plant must have the more rigorous permit."

Lewis said Arizona Portland vowed in the permit to pave and water roads and work areas to reduce particulate levels.

Much left unsaid

But the company does not say which areas would be paved and which watered, and does not say how much water would be used or on what schedule, Lewis said. ``It can't be enforced," he added.

The permit allows the plant to emit smoke thick enough to block 40 percent of light, he said. ``The state's own rules are 20 percent, and the federal standard is 10 percent," he said.

Environmental Quality ``fast-tracked" the permit process - giving neighbors too little notice, and violating its own rules requiring that EPA have at least 45 days to review permit data and terms, Lewis said.

Environmental Quality officials would not comment on the accusations.

EPA's regional office in San Francisco learned of the proposed permit from a newspaper reporter five days before the public hearing on it in Marana in July.

EPA officials then demanded to be sent the permit's supporting data and to have at least the 45 days to review it. Environmental Quality rebuffed the EPA, signing the permit on Aug. 7.

And it signed the permit despite a four-page Aug.'5 letter from Matt Haber, chief of EPA's Air Division permits office in San Francisco, advising changes and expressing concerns.

Experts satisfied

But Haber said in a recent interview that an Aug. 4 conference call with EPA and Environmental Quality experts satisfied his office's major objections.

``We were reasonably happy with the permit," he said. ``But there is an important caveat - with the petition, we now have to take a fresh look."

Haber said EPA's Washington, D.C., headquarters will study and respond to the union's petition.