STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Permanent Rules Governing Abrasive Blasting of Lead Paint on Residential, Child Care, and School Buildings, Minn. Rules Parts 7005.6010 to 7005.6080.

REPORT OF THE ADMINISTRATIVE LAW JUDGE

The above-entitled matter came on for hearing before Administrative Law Judge Phyllis A. Reha on March 11, 1991, at 9:00 a.m. in the Board Room, Lower Level, 520 Lafayette Road North, St. Paul, Minnesota and continued on March 12, 1991 at that location. On March 13, 1991, the hearing concluded in the Conference Room of the Office of the Attorney General, 520 Lafayette Road North, St. Paul, Minnesota.

This Report is part of a rulemaking proceeding held pursuant to Minn. Stat. §§ 14.131 to 14.20, to hear public comment, to determine whether the Minnesota Pollution Control Agency (MPCA) has fulfilled all relevant substantive and procedural requirements of law applicable to the adoption of the rules, whether the proposed rules are needed and reasonable and whether or not modifications to the rules proposed by the MPCA after initial publication are impermissible substantial changes.

Ann M. Seha, Special Assistant Attorney General, Suite 200, 520 Lafayette Road, St. Paul, Minnesota 55155, appeared on behalf of the MPCA at each hearing. The MPCA's hearing panel consisted of Gordon Anderson, Planner in the Program Development Unit of the MPCA's Air Quality Division, and Guy John Seltz, Supervisor of the Program Development Unit.

Sixteen persons attended the first hearing. Fifteen persons signed the hearing register. As a result of the public interest and the need for every interested person to be allowed the opportunity to comment, the Administrative Law Judge recessed the hearing at the end of the day and continued the matter on two additional days. The location and time of the continued hearings were announced at each preceding hearing. All persons interested in attending the additional hearings had notice of the reconvened hearings. The hearings continued until all interested persons, groups or associations had an opportunity to be heard concerning the adoption of these rules.

Exhibits were received as documentary evidence during the hearings. The MPCA submitted exhibits during the hearing and made a slide presentation. Interested person Mr. Patrick L. Reagan, Minnesota Lead Coalition, submitted exhibits and used overhead projections. Tim Murphy of Geraghty, O'Loughin & Kenney, Attorneys at Law, representing a group on interested persons, submitted comments and used poster boards for demonstrative purposes at the

hearings. The slides were entered into the hearing record. Paper copies of the overhead transparencies were entered into the hearing record. The poster boards were not entered into the hearing record.

The record remained open for the submission of written comments for twenty calendar days following the date of the last hearing, to April 1, 1991. Pursuant to Minn. Stat. § 14.15, subd. 1 (1988), three business days were allowed for the filing of responsive comments. At the close of business on April 4, 1991, the rulemaking record closed for all purposes. The Administrative Law Judge received written comments from interested persons during the comment period. The MPCA submitted written comments responding to matters discussed at the hearings and making changes in the proposed rules.

The MPCA must wait at least five working days before the agency takes any final action on the rule(s); during that period, this Report must be made available to all interested persons upon request.

Pursuant to the provisions of Minn. Stat. § 14.15, subd. 3 and 4, this Report has been submitted to the Chief Administrative Law Judge for his approval. If the Chief Administrative Law Judge approves the adverse findings of this Report, he will advise the MPCA of actions which will correct the defects and the Agency may not adopt the rule until the Chief Administrative Law Judge determines that the defects have been corrected. However, in those instances where the Chief Administrative Law Judge identifies defects which relate to the issues of need or reasonableness, the MPCA may either adopt the Chief Administrative Law Judge's suggested actions to cure the defects or, in the alternative, if the Agency does not elect to adopt the suggested actions, it must submit the proposed rule to the Legislative Commission to Review Administrative Rules for the Commission's advice and comment.

If the MPCA elects to adopt the suggested actions of the Chief Administrative Law Judge and makes no other changes and the Chief Administrative Law Judge determines that the defects have been corrected, then the Agency may proceed to adopt the rule and submit it to the Revisor of Statutes for a review of the form. If the MPCA makes changes in the rule other than those suggested by the Administrative Law Judge and Chief Administrative Law Judge, then it shall submit the rule, with the complete hearing record, to the Chief Administrative Law Judge for a review of the changes before adopting it and submitting it to the Revisor of Statutes.

When the Agency files the rule with the Secretary of State, it shall give notice on the day of filing to all persons who requested that they be informed of the filing.

Based upon all the testimony, exhibits, and written comments, the Administrative Law Judge makes the following:

FINDINGS OF FACT

Procedural Requirements

1. On January 7, 1991, the MPCA filed the following documents with the Chief Administrative Law Judge:

(a) A copy of the proposed rules certified by the Revisor of Statutes;
(b) A copy of the MPCA's Authorizing Resolution;
(c) A copy of the MPCA's proposed Order for Hearing;
(d) The Notice of Hearing proposed to be issued; and,
(e) The Statement of Need and Reasonableness (SONAR).

2. On January 25, 1991, the MPCA mailed the Notice of Hearing to all persons and associations who had registered their names with the Board for the purpose of receiving such notice and all persons to whom the Agency gave discretionary notice.

3. On January 28, 1991, a Notice of Hearing and a copy of the proposed rules were published at 15 State Register 1665.

4. On March 5, 1991, the MPCA filed the following documents with the Administrative Law Judge:

(a) The Notice of Hearing as mailed;
(b) A photocopy of the pages of the State Register containing the Notice of Hearing and the proposed rules.
(c) a copy of the Notice of Solicitation of Outside Opinion together with all materials received in response to that notice.
(d) The Agency's certification that its mailing list was accurate and complete and the Affidavit of Mailing the Notice to all persons on the MPCA's mailing list;
(e) a copy of the petition requesting a public hearing; and,
(f) an Affidavit of Additional Discretionary Notice.

5. The MPCA did not file the documents listed in Finding 4 twenty-five days prior to the hearing, as required by Minn. Rule 1400.0600. No interested person inquired about any of the documents filed late by the MPCA. No commentator claimed to be prejudiced by this late filing. The MPCA's failure to strictly comply with Minn. Rule 1400.0600 does not constitute a jurisdictional defect in this rulemaking proceeding.

Nature of the Proposed Rules and Statutory Authority.

6. The Minnesota Legislature, through Minn. Stat. § 144.878 (1990), required the MPCA to promulgate rules regulating abrasive blasting of leaded paint in residential areas and setting standards for lead in soil. In addition, the MPCA has general rulemaking authority to establish controls on air pollution of all sorts. Minn. Stat. § 116.07, subd. 4. Rulemaking proceedings to set a lead standard for soil have been conducted. In the Matter of Proposed Rules Governing Standards and Abatement Methods for Lead in Bare Soil on Playgrounds and Residential Property, OAH No. 3-2200-5005-1 (report issued December 28, 1990)(hereinafter "Soil Lead Report"). That rule has been adopted as Minn. Rule parts 4750.0010 to 4750.0050. 15 State Register 1847 (February 19, 1991). Minn. Stat. § 144.878 also requires the Department of Health (MDOH) to set standards for lead in household dust. The MDOH rule has been adopted, setting the highest permissible lead concentration at 300 parts per million (ppm) of household dust. Minn. Rule part 4761.0100 (originally promulgated as part 4750.0100, see, 15 State Register 2141). The only rulemaking remaining under Minn. Stat. § 144.878 is to set requirements

for abrasive blasting of leaded paint from residential property. Minn. Stat. § 144.878, subd. 2(c). The goal of these rulemakings is to protect the environment and the health of persons adversely affected by lead contamination. These proposed rules establish standards to be followed in performing abrasive blasting of lead painted structures. The MPCA is expressly required to promulgate rules on that subject by January 31, 1991. Minn. Stat. § 144.878, subd. 2(c). The Administrative Law Judge concludes that the MPCA has statutory authority to adopt these rules.

Small Business Considerations in Rulemaking.

7. Minn. Stat. § 14.115, subd. 2, provides that state agencies proposing rules affecting small businesses must consider methods for reducing adverse impact on those businesses. The businesses which conduct abrasive blasting are all small businesses. Pursuant to Minn. Stat. § 116.07, subd. 6, the MPCA is also required to give due consideration to the "establishment, maintenance, operation, and expansion of business, commerce ... and other economic factors and other material matters affecting the feasibility and practicality of any proposed action ...." The MPCA has complied with these statutory requirements. The MPCA estimated that the proposed rule will place additional costs on contractors who conduct abrasive blasting which will be passed on as higher bills to property owners. These costs vary depending upon the existing practices of the individual contractor. The largest single expense will be the capital costs of purchasing curtains and containment equipment by contractors who do not currently seal structures and use ground cover according to 1987 Staff recommendations. The MPCA estimated the capital expenses to be less than $1,000 for curtains and scaffolds. SONAR, at 51. The additional costs would change based on size of the job and the abrasive blasting method used. Id. For example, the total additional cost using a dry abrasive blasting process on a two story structure was estimated by MPCA as $267.00. SONAR, at 51. The total cost is estimated as being somewhat less by the MPCA if other abrasive blasting methods are used. These estimates were then compared to the costs incurred by persons suffering from lead poisoning and their families, together with the burdens placed on all of society by the effects of lead poisoning. The MPCA concluded that the additional costs are necessary and reasonable to reduce the impact of lead in the environment when compared to the significant costs of harm to physical health and impairment of mental development which will be avoided by the promulgation of the proposed rule. SONAR, at 54-55.

Counsel for the abrasive blasting contractors (hereinafter "the contractors")[1] disagreed with the MPCA's figures and urged the Administrative Law Judge to apply different calculations. The attorney for the contractors argued that the proposed rules would increase the cost of the average job by much more than what was estimated by the MPCA for a comparable two story structure. The contractors estimated an increased cost of $1,450 in addition to the existing cost of $1,300 (over a 100% increase).

1/ The contractors were represented in this rulemaking proceeding by Tim Murphy of Geraghty, O'Loughin & Kenney, Attorneys at Law. The contractors identified as being represented by Mr. Murphy are: Mike Roach, M.P. Roach Stucco; Tom Donnelly, Donnelly Stucco Company; Art Brisson, Brisson Stucco,

The contractors argue that their estimates are more accurate than the MPCA's estimates and, therefore, the MPCA has failed to comply with the statutory requirement that it consider impacts on small businesses and other economic considerations. This argument fails to consider that the MPCA did conduct a survey, applied its own expertise, and made a good faith effort to estimate the actual costs imposed by the proposed rules. Accordingly, they have met the statutory requirements. The methods of cost reduction that the MPCA is required to consider are set forth in the agency's Notice of Hearing and SONAR. SONAR, at 48. The MPCA has considered these methods for reducing the impact on small business and thus has complied with Minn. Stat. § 14.115, subd. 2. The MPCA has also complied with the requirements of Minn. Stat. § 116.07, subd. 6. The contractors' argument more appropriately goes to the need and reasonableness of the proposed rules rather than whether the agency has complied with these particular statutory requirements. Issues of need and reasonableness will be discussed in subsequent Findings of this Report. (See, Finding 29, below).

Fiscal Notice.

8. Minn. Stat. § 14.11, subd. 1, requires the preparation of a fiscal notice when the adoption of a rule will result in the expenditure of public funds in excess of $100,000 per year by local public bodies. The notice must include an estimate of the total cost to local public bodies for a two-year period. The only manner in which the proposed rules could require any expenditure of public funds is by applying them to the removal of leaded paint from public structures in residential neighborhoods. There is no indication that leaded paint is in widespread use on public buildings. Any abatement costs imposed by the rules will be minimal. The proposed rules will not require expenditures by local governmental units or school districts in excess of $100,000 in either of the two years immediately following adoption, and thus no notice is needed.

Impact on Agricultural Land.

9. Minn. Stat. § 14.11, subd. 2 (1988), imposes additional statutory requirements when rules are proposed that have a "direct and substantial

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Inc.; Rosckes Sandblasting; Gary Hogren, American Sandblasting; Bill Vokovan, Marco Sandblasting; Memford Peteson, Peteson Stucco; Steven Donnely, Steven Donnely Stucco; Jim Vaughn, Keith Eliot, Terry Maldaus and Homer Evans, Tamarac Material; Robert Peteson, Stucco One; Larry Erickson, Metro Sandblasting; Cliff Brangruth, Master Sandblasting; Erub Zimmerman, Zimmerman Antique Stucco; Glenn Bender, Bender Stucco; John Garrin, JMG Contracting; Nick Wojdowirz, Scandia Stucco; John Shoker, Foley Stucco; Bruce Neal, Sandblasting Service; Dan Solberg, Palmer Solberg, Inc.; Kathy Lingofelt, North Central Supply; David Kalene, of Calono Drywall & Paint; Mike Garland, Garland Drywall; Jerome Lardan, Lardan Drywall and Plastering; Albert Kastner, Kastner & Sons; Steve Mulcady, Mulcady Drywall; Stan Dralos, Minnetonka Paint and Decorating. Because those of the contractors who testified at the hearing did so as part of Mr. Murphy's presentation, individual testimony from these contractors will only be referred to by transcript citation.

adverse impact on agricultural land in this state." The statutory requirements referred to are found in Minn. Stat. §§ 17.80 to 17.84. The rules are explicitly limited to residential areas. The proposed rules will have no substantial adverse impact on agricultural land within the meaning of Minn. Stat. § 14.11, subd. 2 (1988).

Economic Impact.

10. Minn. Stat. § 116.07. subd. 6 (1988) requires the MPCA, in a rulemaking context, to consider the impact which economic factors may have on the feasibility and practicability of the proposed rules. In its SONAR, the MPCA has undertaken an analysis of increased costs to abrasive blasters arising from the implementation of the proposed rules. In the analysis the MPCA has considered both anticipated costs and benefits of the proposed rules. See, Finding 7, above.

Patrick L. Reagan of the Minnesota Lead Coalition (MLC) introduced evidence of the costs actually incurred by the states of Massachusetts and Maryland in caring for lead-poisoned children. MLC Comments, Exhibit 3, at 6-8. In Massachusetts, the cost per affected child was estimated to be $2,400 per year. Id. at 7. In one year, the state of Maryland expended $3,476,171 on screening, medical treatment, and special education for lead poisoned children. Id. at 8. Those figures are only for costs actually incurred, and do not include "lost opportunity" costs resulting from the potential earnings of persons not realized due to the long-term effects of lead poisoning.

MLC produced an estimate of the costs incurred by the state of Minnesota resulting from elevated blood-lead (BPb) levels. The direct cost (medical, special education, etc.) was estimated at between 3.3 and 5.1 million dollars. MLC Comments, Exhibit 3, at 13. MLC estimated the cost of lost earnings at 8 million dollars. Id.

Based on its cost-benefit analysis the MPCA has determined that the proposed rules will provide substantial public benefits while having only a negligible economic impact on the affected sectors. See, Finding 7, above. Modifications to the proposed rules advanced by the MPCA and discussed in subsequent Findings of this Report ensure that the cost of compliance will be significantly below the contractors' estimate. Even if the contractors' assertion that the cost of an average abrasive blasting job will double is correct, the contractors have not rebutted the MLC's showing that the overall costs incurred through the introduction of lead into the environment exceed the increased costs imposed by these proposed rules. The MPCA has adequately considered the economic feasibility and practicability of implementation of the proposed rules as required by Minn. Stat. § 116.07, subd. 6.

Proposed Rule 7005.0010 - Applicability.

11. This proposed rule part establishes a perimeter of 100 feet around the abrasive blasting of any property, within which any residential structure, day care facility, school building, or playground triggers applicability of these rules. The MPCA has stated that the 100 foot distance is needed and reasonable because lead particles have been detected up to that distance away from uncontained abrasive blasting sites. SONAR, at 18. The MPCA identified the specific structures which trigger the proposed rule requirements by

concluding that lead harms children more severely than adults. SONAR, at 10-11; Tr. I, at 22-25. The triggering locations are places at which children are likely to be for substantial periods of time. Applying the proposed rules only within the 100 foot perimeter is found to be needed and reasonable.

The contractors made several general arguments against the proposed rules. They disputed the health impact of abrasively-removed leaded paint. The contractors challenged the validity of any studies performed by the MPCA. Each of these arguments will be discussed individually in the following Findings of this Report.

Health Effect of Lead.

12. The contractors maintain that adverse health effects from lead have not been shown by qualified experts. They emphasized that none of the persons who testified were medical doctors or held doctorates in science. Tr. I, at 155-56. The MPCA did not introduce direct evidence in the SONAR to demonstrate how leaded paint, abrasively blasted from surfaces in residential areas, causes harmful effects to the health of individuals.

In setting the 300 part per million (ppm) standard for lead in soil, the MPCA applied a biokinetic analysis to determine what level of soil lead would provide an appropriate degree of protection for the public health. Soil Lead Rules, at 9. That biokinetic analysis was prepared by the Society for Environment, Geology, and Health (SEGH). The decision to set a soil lead standard arose from a finding by the Legislature that adverse health effects occur at varying BPb levels. Minn. Stat. § 144.874, subds. 1-5. This finding removes the obligation from the MPCA to show that negative effects arise from lead.

While the MPCA does not carry the burden to show that lead is harmful, (that determination is made by statute, see, Minn. Stat. § 144.874) the agency introduced one study, conducted by the National Health Protection Program in New Zealand (hereinafter "the New Zealand study") which showed that BPb rises in residents of a house after lead paint is removed from its surface by sandblasting . In addition, MLC made a presentation on the effect of lead on children. That presentation includes evidence from various scientific studies showing that demonstrable harm ranges from death at BPb in excess of 100 micrograms per deciliter (ug/dl) to developmental harm (inhibition of amino acid development necessary for the natural synthesis of heme, a red blood cell component, and possible deficits in intelligence quotients) that occurs at 10 ug/dl. MLC Comments, Exhibit 12; Tr. I, at 68. The agency may rely upon the information submitted by interested persons to support its proposed rules. Minn. Stat. § 14.14, subd. 2. The MPCA has shown that lead causes harmful health effects, and that sandblasting causes an increase in BPb.

Adequacy of Studies.

13. The MPCA examined six houses in one study to determine the effects of abrasive blasting. Three additional houses were examined by the MPCA in a follow-up study to determine how some of the containment methods proposed in these rules would limit the spread of lead contaminant. The MPCA did not take blood samples to determine the effects of abrasive blasting on BPb. Portions of the worksites visited were photographed and presented at the rulemaking

proceeding as slides. The New Zealand study and a study conducted by the United States Environmental Protection Agency ("Spittler study") were introduced into the rulemaking record as further support for the proposed rules.

The contractors objected to the methodology and conclusions of the MPCA's two studies. They maintain that inadequate controls and improper preparation render the studies worthless to show that the proposed rules are needed and reasonable. The contractors propose that no rule be adopted for a period of eighteen months. Tr. I, at 208. Instead, the contractors propose that the 18 months be used by a group composed of the MPCA, contractors, doctors, and scientists, to study the effects of abrasive removal of leaded paint. Upon the conclusion of the study, a rule could be adopted using the results of the study as the basis for the need and reasonableness of the rule.

The objections of the contractors went to the compatibility of the studies performed and the rigorousness with which those studies were conducted. The contractors rightly point out that abrasive blasting does not, by itself, cause high BPb. Rather, ingestion of lead leads to that condition. However, MLC showed that one route of ingestion is the lung, through breathing air contaminated with airborne lead particles. Further, the Spittler study and the MPCA studies showed that airborne lead particles can cause ground contamination. These facts are adequate to support regulating abrasive blasting to protect public health and the environment. Each study will be mentioned in the particular rule part which used a particular study as support.

Proposed Rule 7005.6020 - Definitions.

14. Proposed rule part 7005.6020 is composed of fifteen subparts, the first limits the scope of the definitions to the proposed rules, and the remaining fourteen subparts define terms used in the proposed rules. None of those subparts were objected to by any commentators. The MPCA did not propose any modifications to the proposed rule part. As with the remainder of the proposed rules, the Judge will discuss only those portions which received comment or otherwise require mention. Subpart 2 defines "abrasive blasting" and sets out a non-exclusive list of examples by using the phrase "includes but is not limited to." This phrase is not a definition and does not serve to clarify what does constitute abrasive blasting. The language of the subpart is vague because it does not give adequate notice of what types of removal methods are included in the definition. This constitutes a defect in the proposed rules. To cure this defect, the Administrative Law Judge suggests using the following language:

> Subpart 2. Abrasive blasting. "Abrasive blasting" means the use of air pressure and an abrasive grit to remove surface coatings. Among the techniques specifically identified as abrasive blasting are dry abrasive blasting, wet abrasive blasting, modified-wet abrasive blasting, and vacuum blasting.

The suggested language incorporates examples without establishing an open-ended list as the definition. Subpart 2, as modified, is needed and reasonable. The suggested language cures the vagueness defect identified in this Finding. The new language does not constitute a substantial change. The

remaining definitions were not objected to and have been shown to be needed and reasonable.

Proposed Rule 7005.6030 - Testing.

15. Proposed rule part 7005.6030 establishes the requirements for what must be tested, how the test is to be performed, and who must be notified. The only objection made to the testing requirement related to the cost of testing. The contractors maintained that taking paint samples, transporting them to a local laboratory, and interpreting the results of the test was unreasonably expensive. The MPCA responded that the sodium sulfide test, permitted under subpart 3(C), was intended to provide an on-site screening method to permit an inexpensive initial check. Tr. II, at 270-73.

The sodium sulfide test consists of placing the solution on a paint chip and watching for a color change in the solution. The test is regarded as easy and inexpensive, even though no specific cost estimate was placed in the record. Tr. I, at 178. If the paint registered positive under the sodium sulfide test, no additional testing would be required. Additional, more costly, testing applies only if the contractor obtains a negative result, meaning that the paint is not shown to contain lead in excess of the permitted standard. The reason for the additional testing is to cure the inherent inaccuracy of the sodium sulfide test. That test does not register lead content at 1% or below, whereas paint having a .5% lead concentration is defined as lead paint. Where the sodium sulfide test indicates lead paint, no further testing is required. Proposed rule part 7005.6030, subpart 5 permits a contractor to waive the testing if the project is treated as removing lead paint. No commentator introduced any evidence of a test which would meet the need of both accuracy and economy. The MPCA has shown proposed rule part 7005.6030 to be needed and reasonable to ensure that leaded paint is being properly removed.

Proposed Rule 7005.6040 - Notification.

16. The MPCA originally proposed that contractors notify every adult resident, property owner, and administrator within 50 feet of any residence, school building, child care facility, or playground at least five days prior to the date abrasive blasting would be taking place. Prior to the hearing, the MPCA modified that notice requirement to include that any building to be abrasively blasted situated within 100 feet of the named facilities triggered the notice requirement. A more comprehensive notice (including a copy of the notice to be circulated in the vicinity of the blasting job) is required to be sent to the MPCA. The change to proposed rule part 7005.6040 incorporates the same language used in the scope provision (proposed rule part 7005.6010). The modification does not constitute a substantial change.

Five Day Notice.

17. The contractors objected to the five day notice requirement and asserted that the present system was working adequately. At present, the contractor notifies residents bordering a blasting job. The blasting would occur sometime during the week following this notification. The day before the job is to begin, the contractor or the owner of the house to be abrasively blasted contacts those residents. Tr. I, at 183-84. The notice that the job is to begin may come as late as the night before the job starts. Tr. I, 184.

The last notice appears to be only to ensure that the neighbors' windows are closed. Tr. I, 184.

The MPCA maintains that more should be done than simply close windows. The notice to be given contains a number of specific methods to avoid infiltration of dust and lead particles and to prevent the contamination of objects frequently left in homeowners' yards. The contractors' assertion that one day is adequate notice of the start of a job does not take into account the time needed for the additional preventative steps recommended in the notice itself. Sealing and covering openings, removing toys and pet equipment, and covering equipment which cannot be moved may take more than one day, particularly if the homeowner does not have the needed protective materials on hand. Five days is adequate time to permit a neighboring resident to take preventative action. The five day notice requirement is found to be needed and reasonable.

Method of Notice.

18. The contractors argue that the notice requirement, as proposed, is vague and will place undue burdens on contractors conducting abrasive blasting. The rule could be read to mean that each adult within the 50 foot perimeter must actually receive the notice directly from the contractor. The contractors argue that this would require, at a minimum, notice by certified mail, so that proof will exist that the required notice had in fact been given to every adult. Reading the rule in this fashion, the contractors estimate that the research, preparation, and mailing time to comply with the notice requirement in this rule part would cost $350.00 for each job.

In their post-hearing comment, the contractors suggested that the rule be changed to require written notice only to the residents of the building to be abrasively blasted (with the notice only being posted in a common area if the building is a multi-family dwelling) and that the contractor use "reasonable efforts" to orally notify residents of buildings within 50 feet of the blasting job.

The MPCA has proposed a modification to this rule part in response to the contractors comments, but the language suggested in the previous paragraph was not adopted. With respect to who receives the notice, the new language reads:

> The contractor may mail or physically hand the notice required in item A of this subpart to the owner or administrator of a child care or school building, to one adult resident in a single-family structure, and to one adult resident of each unit of a multi-unit structure. The contractor may also place the notice required in item A of this subpart on or under the door of each single-family structure, or each unit in a multi-unit structure. (Emphasis added).

The MPCA intends this change to clarify what notice is required to be given to persons in the area of the blasting job. The MPCA wants the new language to offer options to contractors when notifying residents of single-family and multiple-family homes that are less restrictive than handing to each resident or mailing to each address. As the MPCA stated in its post-hearing comment:

> The Agency proposes to change the notification provisions to clarify the Agency's proposed rule in light of questions at the hearing. Tr. at 274-78. The Agency proposes to add language that would specifically allow written notice to be given by mail, by physically handing it to appropriate persons, and, for residential property, by placing the notice on or under the doors of each residence, or each unit in a multi-unit dwelling.

MPCA Memorandum in Response to Written Comments, at 5.

However, the new language is still vague as it is unclear whether placing the notice on or under the door is an appropriate substitute for mail or actual delivery, or is an additional obligation for the contractor. Furthermore, by using the term "may," the new language does not clearly require notice, which is not the MPCA's intent in promulgating this rule part. As written, the rule part is vague. The agency must clarify the language by removing the word "may" and clearly stating what notification methods are available to contractors. The following language is suggested by the Administrative Law Judge to cure the defects in this rule part:

> The contractor must mail or physically hand the notice required in item A of this subpart to the owner or administrator of a child care or school building. For residences, the contractor must mail, physically hand, or put on or under the door of each residence the notice required in item A to at least one adult resident of each single-family structure and one adult resident of each unit in a multiple-family structure.

This language clearly permits the practice of placing the notice on or under doors in lieu of the personal service or mailing of the notice, but only to residences, not child care or school facilities. The change is reasonable because it achieves the desired result, notifying owners, administrators and residents without imposing undue costs on contractors. The cost of providing notice by placing it on or under the door of each residence is less than either personal service or mailing. The requirement for mail or personal service on the owner or administrator of a school or child care facility is needed and reasonable, since those enterprises operate during business hours, are easily notified, and there is a great need to ensure that a responsible person in those facilities has actual notice of the blasting job. The suggested language cures the defect identified in this Finding. The modification does not constitute a substantial change because it lessens the burden on the regulated public while still accomplishing intended purpose of the notification requirements, that is, advising affected persons of how to prevent lead contamination in close proximity to an abrasive blasting job.

When Additional Notice is Required.

19. Another objection to this proposed rule part expressed by the contractors was the lack of procedure when the abrasive blasting cannot be performed on the date identified in the notice. Without some language in the rule referring to this situation, the contractor could be forced to re-notice the job, thereby requiring another five day period before work could be commenced. Additionally, the contractor is not advised by this rule part if the second notice must contain all the information provided in the original notice.

The MPCA responded to these comments by adding additional language to proposed rule part 7005.6040. The new language requires the contractor to initiate the blasting job within five days of the date specified in the notice. If the job has not begun by that date, the contractor must re-notice the job. The rule does not specify whether the five-day notice period is required on the re-noticing. Failure to specify whether or not the contractor must wait an additional five days before commencing the job constitutes a defect which must be corrected. The MPCA must state in the proposed rule part whether the contractor must wait five days after giving the second notice, or whether the job may commence sooner. Whatever option the MPCA chooses to clarify this rule part will not constitute a substantial change. This rule part is otherwise found to be needed and reasonable.

Subpart 2 - Contents of Notice to Residents, Administrator, and Owner.

20. Subpart 2 specifies the minimum content of the notice to be provided under subpart 1 of proposed rule part 7005.6040. Among the information provided by the notice are methods to seal windows of buildings bordering the blast job. Since the MPCA is changing the methods of sealing windows to include caulking (see Finding 22, below) the MPCA has added caulking to subpart 2. This change advises persons potentially affected by the blast job of ways to prevent dust and particle penetration. Subpart 2, as modified, is needed and reasonable. The modification does not constitute a substantial change.

Proposed Rule 7005.6050 - Containment.

21. Proposed rule part 7005.6050 consists of four subparts. Subpart 1 identifies when containment is required and permits a contractor to show that an alternative method of containment will work at least as well as the ones specified in the subparts 2, 3 and 4. If the contractor makes that showing, the alternative method may be used on a blasting job in place of the specified methods. No commentators objected to this subpart. Subpart 1 is needed and reasonable.

Subpart 2 - Sealing the Residential, Child Care, or School Building.

22. As originally proposed, Subpart 2 sets requirements for sealing both the building being abrasively blasted and the facing wall of any adjacent building, if the adjacent building stands within the ground cover requirement set in subpart 3. The MPCA based need for sealing both the house being abrasively blasted and the facing wall on the need to keep lead contaminant out of living areas, where it could be ingested by children. SONAR, at 34. The contractors agreed that the building being abrasively blasted required protection to prevent the entry of airborne contaminants. However, the contractors questioned the need for sealing the facing wall. They maintain that the only risk of contamination is to the wall being blasted since the pressure of the abrasive blasting is not directed towards the facing wall. So long as the windows and doors are closed and any air intakes are covered, the contractors maintain that there is no appreciable risk of contamination from drifting emissions.

The only data cited by the MPCA which measured the BPb of persons inside households in the vicinity of abrasive blasting is the New Zealand study. In that study, only the family in the residence which was abrasively blasted was

measured for BPb. Residents of neighboring buildings did not have their BPb tested as part of the study. The contractors criticized the New Zealand study on the grounds that there are different construction standards in house design, different standards of measurement for BPb, and no controls on the study. None of these arguments go to the essential issues posed by the rule. First, sealing windows on the house being abrasively blasted is presently being done by contractors. Tr. I, at 187. That practice is clearly needed and reasonable and does not rely upon the New Zealand study for support. Second, there has been no evidence introduced into the record that airborne contaminants can enter adjacent buildings except through open windows or air ducts.

The MPCA has taken into consideration the comments of the contractors and proposed several modifications to subpart 2. The agency has proposed language that includes caulking as a sealant method and prohibits abrasive blasting if a window is open on the facing wall or within 50 feet on the adjoining walls. No one objected to the inclusion of caulking as a sealant method. Testimony at the hearing indicated that the contractors do not conduct abrasive blasting when windows are open on adjacent buildings. Tr. II, at 306. If a window were left open on an adjacent building, airborne contaminants could enter the living spaces of buildings. Neither the modification on caulking nor the prohibition against open windows constitute a substantial change.

The MPCA has also proposed to delete the original provision for sealing the facing wall and replace it with two alternatives. A contractor must either seal the facing wall or suspend curtains between the wall and the neighboring building if that building is within 20 feet of the wall being abrasively blasted under the new language proposed by the MPCA. The provision for sealing the windows of the facing wall also requires air conditioners and air intakes to be sealed. Just as open windows act as conduits for contaminants, so too are devices which draw outside air into living spaces. Since these devices operate to move air into the house, the MPCA may properly require that they be sealed when in close proximity to the wall being abrasively blasted. Sealing any air conditioners and air intakes on the facing wall or within 50 feet of that wall has been shown to be reasonable.

The sealing of windows or placing of curtains is intended to prevent contamination of the neighboring property by airborne emissions from the blasting job. The data contained in the Spitler study (Exhibit 15) and obtained in the MPCA studies (SONAR, Exhibit I) show that airborne contaminant travels away from the blasting site and is deposited on soil, walls, or any other unprotected object. This contaminant can increase the soil lead concentration to levels in excess of the 300 ppm standard adopted by the MPCA at distances up to 20 feet away from the blasting site. SONAR, Exhibit I, at C12. Although proposed rule 7005.6050 requires ground cover which would reach to the base of the foundation of the facing wall, the dust (containing lead) is capable of adhering to the wall and contaminating the foundation soil as weather acts upon the building. See, Tr. I, at 197-98. Curtains prevent much of the contaminant from travelling to the facing wall. Since that contaminant cannot reach the outside of the neighboring building, it also cannot penetrate that building. Preventing lead paint removal from spreading airborne contaminants which could enter a neighboring building or increase the lead contamination of soil to a level in violation of the newly adopted soil-lead standard is needed and reasonable.

While the sealing of windows will not prevent the contamination of neighboring soil, it will prevent any possibility of casual contamination by airborne contaminants of the living spaces in neighboring buildings. As the contractors have acknowledged, windows and doors are not air-tight. Tr. I, at 187. The contractors maintain that dust can enter around windows and doors only when that dust is under pressure. The MPCA has written the proposed rule modification to ensure that the affected public need not rely upon the contractors' assertion. Instead, the MPCA has taken the position that additional protection must be provided against airborne contamination inside the living spaces of buildings.

When an agency promulgates a health-related rule, it may have to "make judgments and draw conclusions from 'suspected, but not completely substantiated relationships between facts, from trends among facts, from theoretical projections from imperfect data, from probative preliminary data not yet certifiable as 'fact', and the like.'" Manufactured Housing Institute v. Pettersen, 347 N.W.2d 238, 244 (Minn. 1984). The MPCA has made a judgment in this rulemaking that abrasive blasting can cause interior contamination through dust containing lead seeping through the spaces surrounding closed windows on walls facing the blasting job. Such a judgment is permissible on the record created for this rulemaking. Since the Legislature has clearly expressed a concern over the effects of lead contaminant of both the air and household dust, sealing windows and doors on the facing wall to provide additional protection from airborne contaminants is needed and reasonable.

Based on the facts present in the record, the Administrative Law Judge urges the MPCA to consider requiring curtains when the neighboring structure is within 20 feet of the wall being abrasively blasted. While this suggestion removes the contractors' option to seal windows and doors on the facing wall, it will better contain the lead dust generated by abrasive removal of leaded paint. The curtain requirement would, by the contractors' estimate, be less expensive than entering onto neighboring property to seal openings. In addition, curtains ensure that a minimum of soil is contaminated by lead dust. This would aid in keeping soil within the 300 ppm standard set by the MPCA for bare soil in residential areas and generally protect the environment from contamination. As discussed above, requiring curtains has been found to be needed and reasonable. Neither the modification proposed by the MPCA nor the alteration suggested by the Administrative Law Judge constitutes a substantial change.

Subpart 3 - Ground Cover.

23. Proposed rule part 7005.6050, subpart 3 requires tarpaulins to be laid as closely as possible to the foundation of the wall being blasted and to extend to a minimum of 25 feet away from the wall. The tarpaulins must be weighted down and overlap each other 1.5 feet at the edges. When the abrasive blasting occurs above the first story, ten feet of coverage must be added for each story. The MPCA used the same data discussed in Finding 22 to arrive at the twenty-five foot standard. Further, some of the contractors presently use twenty-five feet of ground cover on their blasting jobs. Tr. I, at 187; Tr. II, at 306. Requiring a minimum of twenty-five feet of ground cover has been shown to be needed and reasonable to contain the lead particles generated in abrasive blasting. The overlap requirement is needed and reasonable to prevent the contamination of soil during the clean-up of spent abrasive, paint chips, and paint dust.

Subpart 4 - Additional Containment Required.

24. The basic containment requirements operate on the assumption that no unusual weather conditions are present. In the event that the dust rising from a blasting job travels beyond the ground cover, the MPCA has offered contractors several options to prevent contamination and continue the blasting job. The options are extending the ground cover to the furthest point of visible emissions, using a curtain, or using modified-wet abrasive blasting. Extending the ground cover appears to be an option presently used by contractors to reduce cleanup costs. Tr. II, at 306. None of the methods were criticized by any commentator. Subpart 4 of proposed rule part 7005.6050 is needed and reasonable to contain the contaminants produced by abrasive blasting.

Proposed Rule 7005.6060 - Cleanup.

25. This proposed rule part establishes the required steps a contractor must take to adequately remove contaminants from the jobsite. The contractors were concerned that the rule would require them to bring topsoil into compliance with the soil lead standard of 300 ppm. The MPCA staff indicated that the rule only requires the removal of spent abrasive, and that the proposed rule would not require compliance with the 300 ppm standard. Tr. III, at 344. The soil lead rules operate independently of the abrasive blasting rules. The responsible person is the owner of the residence, and removal of contaminated soil is only intended where a child or pregnant woman has an abnormally high BPb. Soil Lead Report, at 8. Requiring contractors to remove all visible debris at the end of each workday is needed and reasonable to prevent lead contamination.

The contractors also expressed concern that the proposed rules would require treating debris as hazardous waste. Their concern is unfounded. The hazardous waste rules (Minn. Rule Chapter 7045) apply whether or not these proposed rules are adopted. Any testing or disposal requirements concerning debris already apply to contractors independently of these rules.

Proposed Rule 7005.6070 - Restrictions.

26. Proposed rule part 7005.6070 sets out four basic restrictions on methods of operation in conducting blasting jobs: (1) contractors must not use wet abrasive blasting to remove leaded paint; (2) abrasive cannot be reused, unless the lead particles are removed; (3) contractors must stop operations if young children are in the immediate vicinity; and (4) the identity and telephone number of the contractor must be posted on the jobsite. The MPCA asserted that the volume of water used in wet abrasive blasting carries lead contaminants to the soil, rather than trapping the contaminants on the tarpaulins used as ground cover. Prohibiting the re-use of abrasive with lead particles is intended to decrease the amount of lead available during blasting. Ceasing blasting operations when young children are in the immediate vicinity protects the population most vulnerable to ingested lead by removing them from airborne contaminant. Identifying the contractor on a job will aid the MPCA in enforcing these rules. All of the restrictions in proposed rule 7005.6070 are needed and reasonable.

Proposed Rule 7005.6080 - Vacuum Blasting.

27. Vacuum blasting is a type of blasting which was not commented upon at the hearing. In proposed rule part 7005.6080, the MPCA explicitly exempts vacuum blasting from some of the other proposed rule parts if it meets certain criteria. The criteria are clearly intended to ensure that vacuum blasting generates a minimal amount of dust and loose debris. With the distribution of contaminant limited by the process, the other rules regarding abrasive blasting are more stringent than necessary. Since vacuum blasting does not create the problems of other abrasive blasting methods, reducing the containment requirements for that process is needed and reasonable.

Alternative Blasting Methods.

28. Gary Meyer, of Scandia Painting, proposed that abrasive blasting jobsites be totally enclosed to reduce the lead emissions from the jobsite to the lowest feasible level. His proposal is intended to cut the amount of lead available to contaminate the immediate area to less than 20% of the lead removed from each building. Mr. Meyer maintains that the MPCA's proposal allows at least that percentage of lead to contaminate the surrounding area. Tr. I, at 126. The MPCA responded that totally enclosing the jobsite would increase the air pressure within the containment area and force more lead contaminant into the living space of the building being abrasively blasted. Mr. Meyer suggested that pressurizing the building would balance the additional pressure of the containment area. The MPCA declined to adopt the total enclosure standard. In a rulemaking proceeding, an agency is not bound to accept the most restrictive option, so long as the option proposed is needed and reasonable. Since the containment proposed by the MPCA has been found to be needed and reasonable, declining to adopt the total enclosure suggestion is not a defect in the proposed rules.

Mr. Meyer also suggested that steel shot be required as the blasting medium in place of silica sand. The improvement to be obtained from this change is the elimination of a nonrecyclable blasting medium (silica sand) and an overall reduction in the amount of lead-contaminated material at the end of the blasting job. Silica sand can be used only once before it is considered spent. Tr. I, at 128. In addition, since the lead particles cannot be adequately removed, re-using the spent sand would increase the amount of lead at the jobsite (See, Finding 26, above). With steel shot, the lead particles can be removed and the shot reused. Tr. I, at 128. Although the steel shot can only be used for abrasive blasting after that use, the total waste generated is reduced. Id. This method is more expensive than sand abrasive. Id. As in the foregoing paragraph, the MPCA need not adopt the most stringent option. The use of silica sand has not been challenged by the MPCA and has been incorporated into these rules which have been found to be needed and reasonable. Declining to adopt the requirement that steel shot be used is not a defect in the proposed rule.

Costs Imposed by the Proposed Rules.

29. The contractors presented a detailed list of costs they estimated the proposed rules would impose upon each abrasive blasting job in Minnesota.

These estimated costs were broken down as follows:

Testing	$300.00
Notification	$350.00
Containment	$800.00
Clean-Up Labor Components	?
TOTAL	$1,450.00

Memorandum of Sandblasting and Stucco Contractors, at 10-13,

The $300 total for testing assumes a $250 charge from the laboratory for the test and $50 for one hour of contractor employee time for acquiring samples and personally delivering them to the testing facility. Id. at 11. The notification total assumes that research into local residents' names and ages, certified mail, and the potential for re-noticing the job are required. The contractors estimated that seven hours of employee time (at $50 per hour) would be required to accomplish the notification required under the proposed rule.

The estimate of the additional cost for containment is based on an estimate that six hours of employee time would be needed for sealing the facing walls on houses adjoining the blasting job. Id. at 12. The additional $500 is the estimate of costs contractors would pay in damages to neighboring houses when the sealing of windows or working with ladders damages a neighbor's property. The amount is calculated by the contractors as $300 (6 hours x $50 per hour) for sealing and $500 for property damage, totaling $800.

The contractors did not estimate the cost of clean-up in their comment. Rather, they speculated that removing three to four tons of spent abrasive would amount to substantial costs under either Minn. Rules Chapter 7035 or 7045. Id. at 13. As discussed at Finding 25, above, the disposal rules apply whether or not any reference is made to those chapters in this rulemaking. The contractors cannot rely upon existing obligations to show that costs will increase if the proposed rules are adopted.

The total cost of notification has been estimated by the contractors to provide both a very detailed record of the persons to whom notice must be given and documented proof of the notice process. The contractors justify this level of detail by asserting that, to be adequately protected from the MPCA's authority to impose fines for non-compliance, every step of the process must be documented. Tr. I, at 181. The MPCA's modification of the proposed rule to permit placing the notice under doors in residential housing clearly demonstrates that the MPCA did not contemplate that the contractors must document every detail of the notice process. Even if the area to be notified contains a large multi-unit residential building, the process of preparing a form notice and delivering it to all who require notice within the 100 foot area is not likely to exceed one hour. This would result in an increased cost of $50.00 (using the contractor's hourly estimate).

The contractors estimate of $250 for testing costs comes from the cost for asbestos air-quality testing. Tr. I, at 179. The estimated cost to hand-deliver paint samples for testing arises from the contractor's perceived need to document a chain of custody for each sample. Tr. III , at 338. The only information on the cost of testing paint was provided by Gordon Anderson,

who stated that the cost for acid extraction testing (by the Minneapolis Health Department) is $14.00 or $26.50 (if performed by Braun Engineering). He also stated that x-ray fluorescence analysis done by Braun Engineering ranges in cost from $22.00 to $26.00. Tr II, at 271-72. The MPCA stated at the hearing that mailing the sample to the testing facility is adequate to meet the requirements of the proposed rules. Tr. II, at 272; Tr. III, at 349. The proposed rules do not require that laboratory which tests the sample to take the sample. Assuming that two samples are taken, the cost could reasonably come to $100.00 in meeting the collection, mailing, and testing requirements of the proposed rules. This amount would include one hour of employee time and two paint samples being tested for the presence of lead. Of course, this additional cost would only occur if the sodium sulfite test did not show the presence of lead.

The contractors' estimate of containment costs must be adjusted in light of the Findings in this Report. As discussed at Finding 23, above, some contractors are already using tarpaulins to a distance of 25 feet from the blasting job. Thus, for some contractors, there will be no additional cost (either in labor or equipment) from this rule provision. The sealing of windows and doors on facing walls is one of two alternatives under the rule as modified by the MPCA. See, Finding 22, above. The costs identified with sealing windows are higher than curtains, but those costs are no longer required. Since the lower costs are incurred when curtains are used by the contractors, that option is the appropriate basis for assessing the cost of these rules. Since the sealing of windows and doors is no longer at issue, the cost of potential liability for damage to neighboring property arising from that sealing is not a consideration. Although sealing air conditioners and ducts remains a requirement of the proposed rules, testimony at the hearing suggests that those practices are presently followed by contractors in some circumstances. Tr. II, at 308. The potential liability cost will not be significantly increased by the remaining requirements for sealing air conditioners and ducts. Reasonable cost estimates imposed by the containment rules for a one story structure with two neighboring houses within 20 feet of the blasting job are:

Taping and sealing (labor)	$ 50.00
Taping and sealing (materials)	$ 2.00
Curtains (materials)	$ 30.00
Curtains (labor)(MPCA formula at $50.00 per hour)	$150.00
TOTAL CONTAINMENT COST	$ 232.00

The foregoing estimate assumes wooden scaffolding and does not include capital expenditures (such as the cost of two curtains which can be used repeatedly). The foregoing cost estimate also assumes that air conditioners and air ducts are sealed in addition to placing the curtains between the blasting job and the facing wall. While that sealing is not strictly required by the proposed rule part, as modified, the Administrative Law Judge considers it to be a good practice and would encourage that sealing. The costs for higher structures increase at approximately $50.00 per story for the additional labor cost in building higher scaffolding. Of course, the major cost arises in the capital expense of metal scaffolding, but that is not required and, if chosen, is a one-time cost. The cost of metal scaffolding would be far less expensive than covering the liability costs incurred by sealing windows and doors on neighboring property.

The total cost reasonably imposed by the proposed rules for an average residential blasting job using curtains for containment breaks down as follows:

Testing	$100.00
Notification	$ 50.00
Containment	$232.00
Clean-Up Labor Components	-0-
TOTAL	$ 382.00

In estimating the costs imposed by the proposed rules, the Judge has taken the position that the most any particular task is likely to cost is the appropriate figure to use in the calculation. Thus, an hour is estimated for providing notice, where some blasting jobs will only require delivering notice to the immediate neighbors (four to six houses). The cost estimates do not take the approach that every action must be fully documented in the event of enforcement action by the MPCA. Any contractor who wishes to take extreme precautions is entitled to do so, but in assessing whether the proposed rules are reasonable, the Judge can only take into account that which is actually required by the proposed rules. The costs imposed by the proposed rules are not excessive, and do not render the proposed rules unreasonable.

Based upon the foregoing Findings of Fact, the Administrative Law Judge makes the following:

CONCLUSIONS

1. The Minnesota Pollution Control Agency (MPCA) gave proper notice of this rulemaking hearing.

2. The MPCA has substantially fulfilled the procedural requirements of Minn. Stat. §§ 14.14, subds. 1, 1a and 14.14, subd. 2, and all other procedural requirements of law or rule so as to allow it to adopt the proposed rules.

3. The MPCA has demonstrated its statutory authority to adopt the proposed rules, and has fulfilled all other substantive requirements of law or rule within the meaning of Minn. Stat. §§ 14.05, subd. 1, 14.15, subd. 3 and 14.50 (i) and (ii), except as noted in Findings 14, 18 and 19.

4. The MPCA has demonstrated the need for and reasonableness of the proposed rules by an affirmative presentation of facts in the record within the meaning of Minn. Stat. §§ 14.14, subd. 2 and 14.50 (iii).

5. The additions and amendments to the proposed rules which were suggested by the MPCA after publication of the proposed rules in the State Register do not result in rules which are substantially different from the proposed rules as published in the State Register within the meaning of Minn. Stat. § 14.15, subd. 3, and Minn. Rule 1400.1000, subp. 1 and 1400.1100.

6. The Administrative Law Judge has suggested action to correct the defects cited at Conclusion 3 as noted at Findings 14, 18 and 19.

7. Due to Conclusions 3 and 6, this Report has been submitted to the Chief Administrative Law Judge for his approval pursuant to Minn. Stat. § 14.15, subd. 3.

8. Any Findings which might properly be termed Conclusions and any Conclusions which might properly be termed Findings are hereby adopted as such.

9. A finding or conclusion of need and reasonableness in regard to any particular rule subsection does not preclude and should not discourage the MPCA from further modification of the proposed rules based upon an examination of the public comments, provided that no substantial change is made from the proposed rules as originally published, and provided that the rule finally adopted is based upon facts appearing in this rule hearing record.

Based upon the foregoing Conclusions, the Administrative Law Judge makes the following:

RECOMMENDATION

IT IS HEREBY RECOMMENDED that the proposed rules be adopted consistent with the Findings and Conclusions made above.

Dated this 3rd day of May, 1991.

Phyllis A. Reha

PHYLLIS A. REHA
Administrative Law Judge

Reported: Tape Recorded; Three Volume Transcript.