

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

NATIONAL PAINT & COATINGS)
ASSOCIATION, INC.)
1500 Rhode Island Avenue, N. W.)
Washington, D.C. 20005)

Plaintiff,)

v.)

CIVIL ACTION NO. _____

THE CITY OF CHICAGO MUNICIPAL)
CORPORATION, et al)

Defendant.)

AFFIDAVIT OF MR. E. P. PETERSON

City of West Caldwell :
: ss.
State of New Jersey :

I, E. P. PETERSON, being duly sworn according to law, upon my oath,
depose and say:

1. My name is E. P. Peterson. I am Assistant General Manager, Paint
Division, NL Industries, Inc. My office is at NL Paint Division Headquarters,
195 Clinton Road, West Caldwell, New Jersey 07006. The statements made in
this affidavit are based upon my personal knowledge and are made in support of
plaintiff's motion for a temporary restraining order and preliminary injunction in
the above litigation.

2. NL Industries currently formulates and manufactures approximately 25% of its interior and exterior coatings utilizing lead compounds. In the majority of cases, these formulations contain lead compounds to promote proper drying of the paint film. Generally, NL uses amounts of lead for this purpose in the range of from .07% to 1% by weight of the non-volatile content. For certain exterior products, however, lead pigments as well as lead driers may be used. In these instances the lead additives may exceed 1%. Most of the NL products that are formulated with lead additives are oleoresineous or oil based products. NL's interior latex, or water based products are formulated without the use of lead compounds. In any event these may contain trace amounts of lead since lead and other heavy metals may be introduced through raw materials used in their formulation. However, certain of NL's exterior latex products contain lead driers as a part of their formulation and thus contain lead in the range of from .07% to 1%.

3. In addition to lead, NL has utilized the heavy metal mercury in its paints. These compounds, in the form of phenylmercurial preservatives and fungicides, primarily perform the function of preventing gassing or fermentation of latex coatings while they remain in their containers, and of combating the growth of molds on the surfaces of exterior paints. Antimony, arsenic, cadmium and selenium are not intentionally added to NL coatings at the present time although antimony has previously been used in certain of NL's formulations.

As with lead compounds, these heavy metals may be introduced into coating products through the raw materials used in their formulations. Thus, though NL coatings do not currently contain additives of the heavy metals antimony, arsenic, cadmium or selenium individually or in total above .05% of the total weight of the contained solids or dried paint film, trace amounts of these heavy metals may be present.

4. The dollar sales value of NL coating products affected by the Chicago ordinance is estimated to be approximately \$380,000 annually. NL's own inventoried materials as well as those inventories of its 71 dealers located within the City of Chicago would be affected. Thus, the Municipal Code of Chicago which prohibits the sale or use of lead based coatings or toxic heavy metal based coatings in or upon any exposed surface of any dwelling or dwelling unit, etc. effective July 1, 1972 (78-17.2 and Chapter 100-29.3) impacts substantially not only on the current sales of NL Industries in the City of Chicago, but on the Company's current and future inventories in that area as well.

5. NL Industries is presently engaged in a reformulation program in an effort to discontinue and substitute for lead additives currently used in certain of its interior and exterior coatings. Despite an intensive research and development effort that has, since February of 1971, reduced from 45% to

25% the number of NL coatings utilizing lead, the Company cannot complete reformulating of its interior coatings by July 1, 1972. Therefore, in order to comply with the above cited sections of the Municipal Code of Chicago, NL is forced to discontinue the sale of eight product lines consisting of approximately 55 products, or units thereof that have not been reformulated to a no lead added basis by July 1, 1972.

6. Furthermore, under the effective date of the Chicago ordinance, NL has not had reasonable opportunity to test and evaluate its reformulated products. The reformulation of products that have in the past contained lead driers in the range of .07% to 1% presents substantial difficulties. Lead driers are unique. They have a synergistic effect in the action of drier combinations. They promote through drying with less shrinkage and they confer better adhesion. Another important facet of lead driers is that they prevent loss of dry during storage of the paint. No general substitutes for lead driers are known. As for driers in general, they are compounds of metals with organic acids and are water insoluble. It is a common practice in the coatings industry to use mixtures of driers derived from general metals. Driers are necessary in oleoresinous products as catalysts to provide practical drying time. Paints without driers may remain tacky for days, and weeks in some cases.

7. In reformulating to comply with a .06% lead level, no lead is added simply because there is no value of adding lead compounds to paint products at that trace amount level. For its new formulations NL is currently obtaining substitute materials for lead driers, such as zirconium compounds, from companies such as Tenneco Chemicals, Inc. and Cincinnati Milacron. These companies have stated that the efficacy of substitute driers can only be tested, in terms of durability on the shelf, by actual observation of these products to determine if they maintain their quality over a period of time, approximately six months to two years. For NL a more accurate and reasonable period if time is not less than one year, and more likely two years. Also, this period in which to develop a performance history does not run from the date of the initial work but from the date of the completion of the reformulation. It is not appropriate to conduct tests relating to the maintenance of drying during age of coating products until the products are ready to be marketed. In view of this, the Chicago Ordinance does not provide adequate time for NL to properly evaluate its reformulated products. Consequently, NL is required to market certain lines of its interior coatings in the City of Chicago without confidence that they will meet satisfactory performance standards. If any fail to perform satisfactorily NL will be forced to engage in a recall of those products. In addition to the substantial cost that may be involved in recalling inadequate products, NL could realistically endure various marketing difficulties such as loss of confidence in its products and impairment of dealer

relationships. In addition NL would have to reexamine its formulations and perhaps reformulate again, using another substitute for lead since its original substitutes had not proved adequate. To this end NL is proceeding to test substitutes for lead driers from more than one company, in an attempt to be prepared for failures of substitute driers used in products currently being marketed.

8. Apart from reformulation, NL Industries currently has exterior coating products, in its own inventories in its two warehouses that distribute products into the Chicago area and on its 71 dealers' shelves that must be relabeled to be brought into compliance with the Chicago ordinance. As a part of this procedure, each exterior product must be identified by batch and then a check made to establish whether the batch had exceeded the .06% lead level or the .05% standard for the other heavy metals. If this were the case, then a pressure sensitive "sticker" label would have to be applied either at NL's warehouses or at the site of its dealers. This, of course, involves an extensive effort on the part of NL personnel as well as its dealers in the handling of stocks and physical relabeling of products and cannot be completed by July 1, 1972.

Therefore, NL, for a period thereafter it takes to complete this process (estimated to be until September 1972), will be denied the opportunity to market certain of its products which are not relabeled, but which otherwise comply with the provisions of the Chicago ordinance.

9. NL Industries is required to initiate a dual inventory system in an effort to insure that non-complying coating products, either in regard to metallic content or labeling requirements, are not distributed in the City of Chicago after July 1, 1972. This necessitates increased and more careful control of, and handling of inventoried materials. Also additional warehouse space must be utilized and products specially identified as to whether they are complying or non-complying goods.

10. Even though lead additives are being discontinued in NL interior coatings for the City of Chicago, the only way the Company can insure compliance with the .06% lead level or the .05% heavy metal level, is by conducting stringent batch to batch analyses for lead and the certain other heavy metals. As earlier indicated, raw materials such as pigments, oils and resins and, in the case of latex paints, even water, contribute to the lead and other heavy metal content of a finished coating product, since

these materials invariably contain heavy metals in uncontrollable trace amounts. It is highly impractical to analyze each batch of raw materials for lead and other heavy metal content as they arrive from the manufacturer. Furthermore, human error, residues of lead incorporated in a product or other impurity factors could quite possibly contaminate a product which otherwise would contain no lead additives. Preliminary analysis of raw materials would not insure against contamination during the plant manufacturing process. To establish that such inadvertent contamination did not cause a particular batch of NL interior coatings to exceed the .06% or .05% levels, the Company would have to install, at the end of its production line, analytical equipment with the precision capability to test each batch of its products for trace amounts of heavy metals. NL does not now have nor will it be able to install and have operational by July 1, 1972 suitable analytical equipment to conduct batch testing for heavy metals in its plants that supply coating products to Chicago.

11. Based on its experience with analytical equipment designed to detect the presence of heavy metals, NL considers the atomic absorption method to be preferred, especially at the low levels mandated by the Chicago ordinance. This equipment, however, while an excellent research tool, is unsuitable for monitoring the heavy metal contents of day-to-day production

batches of paint. First, a high degree of skill and experience, together with a heavy investment in the analytical equipment and laboratory facilities are needed to even begin to conduct atomic absorption testing. NL has three plants that are producing paints that could be shipped into Chicago. One is in Chicago itself, another in Philadelphia, and a third is in Perth Amboy, New Jersey. To conduct batch testing for heavy metals by atomic absorption, two atomic absorption analytical devices would have to be placed in each plant, at an approximate cost of \$10,000 per unit. In addition, professional supervision of the work is necessary, and the laboratory technicians involved in the sample preparation and analysis must be highly trained. For example, NL estimates that one professional chemist and at least five trained technicians would be necessary in each of its plants in order to secure analysis at a rate that would not result in a complete shut down of plant operations. Even with the best of conditions, the analyses are time consuming as a result of the care needed in sample preparation, especially when the concentrations of heavy metals under consideration are as low as .06% lead and a total of .05% for the other named heavy metals.

From data at our disposal and our own experience, NL estimates that it takes approximately 3-1/2 hours, per sample, for the extensive sample preparation and analysis by atomic absorption. To analyze and report on the hundreds of formulations NL manufactures would take many months, even restricting the number of analytical methods to only atomic absorption and only testing for lead. To test for the five other heavy metals restricted by the Chicago ordinance would take a great deal more time.

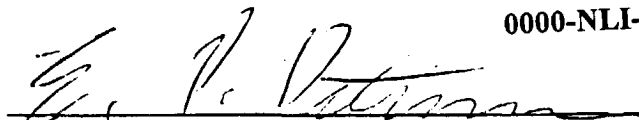
12. A related problem for NL deals with the accuracy or reproductibility of analysis. NL, in its central research laboratory, recently conducted significant analysis of three of its solvent-based paints. The average consisted of mass spectrophotometric analysis on dried film and an average of separate atomic absorption analysis by two analysts. The result showed significant differences. For example, for the product sample formulated without lead additives, the mass spectrophotometric analysis on dried film was .02%. By atomic absorption the analysis for the same sample was .008%, a difference of 120 parts per million between the two analyses and a difference of 80 and 200 parts per million between the formulation and the two test results. For a sample formulated at .06% mass spectrophotometric analysis showed .08% while atomic absorption revealed .09%. The difference here, of course, is 100 parts per million between the two analyses

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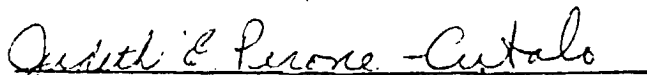
and 200 to 300 parts per million between the sample formulation and the two analyses. A third product formulated at .5% gave a reading of .55% by mass spectrophotometric analysis and a reading of .56% by atomic absorption. It follows from this data that if there should be contamination of a batch of paint or even of the order of .03% lead, analysis might well show that the manufacturer was not complying with the Chicago ordinance, since the determined lead content could well be above .06%.

13. In view of the lack of precision in testing at the lead and other heavy metals levels established by the Chicago ordinance and since NL will not, by July 1, 1972, have the capacity to do on-line heavy metal analysis of each batch of its products, the Company faces a grave financial risk. It must either discontinue its sales in the City of Chicago or market interior coatings that may inadvertently exceed the lead or other heavy metal content levels even though they are formulated without the use of these additives. The potential liability to NL Industries is enormous since the Chicago ordinance has established civil penalties of up to \$500 for each offense, which could be interpreted to be for each container of non-complying paints.

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E. P. Peterson

Subscribed and sworn to before me this 19th day of June, 1972.


Notary Public

JUDITH E. PIRONE-CATALANO
NOTARY PUBLIC OF NEW JERSEY