

U.S. DEPARTMENT OF LABOR

OFFICE OF THE REGIONAL SOLICITOR
3535 MARKET STREET, ROOM 14480
PHILADELPHIA, PENNSYLVANIA 19104
215-596-1126

June 7, 1978



The Honorable Joseph L. Chalk
Occupational Safety and Health
Review Commission
6525 Belcrest Road, Suite 1005
Hyattsville, Maryland 20782

Re: NL Industries, Inc. v. Marshall
OSHRC Docket No. 77-2539-P, Region III

Dear Judge Chalk:

Enclosed please find copies of Respondent's initial statement of objection to the Petition for Modification of Abatement Date in the above captioned matter. Said objection was inadvertently forwarded to the Review Commission offices. Also enclosed please find a detailed Response in Opposition to the Petition for Modification of Abatement Date. As indicated on the Certificate of Service, appropriate copies have been served.

Respectfully yours,

Marshall H. Harris
Regional Solicitor

Enclosure

cc: Thomas E. Anderson, Plant Manager
SOL:JTC:dad

N 27284

UNITED STATES OF AMERICA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

NL INDUSTRIES, INC., :

Petitioner :

v. :

OSHRC DOCKET
NO. 77-2539-P

RAY MARSHALL, SECRETARY OF LABOR, :
UNITED STATES DEPARTMENT OF LABOR, :

Respondent. :

RESPONSE IN OPPOSITION TO PETITION FOR
MODIFICATION OF ABATEMENT DATE

Respondent, Ray Marshall, Secretary of Labor, United States Department of Labor, by his attorneys hereby opposes the Petition for Modification of Abatement Date therein, and as grounds therefor states that:

1. On March 20, 1978 NL Industries, Incorporated submitted a petition for modification of abatement date with regard to Citation K9638 No. 63 issued December 22, 1975. Copies of said Petition and Citation are attached hereto made a part hereof and marked Exhibits A&B.

2. Respondent opposes the two (2) year modification of abatement date sought by Petitioner on the grounds that,

N 27284.01

NL 000041259

(a) as a result of a PMA monitoring visit to Petitioner's plant on April 26 and 27, 1978, it was determined that no substantial progress has been made in cited areas during the one-year period since the last petition.

where?
(b) the visit further revealed Petitioner failed to mention any past efforts toward abatement or future proposals in the Oxide Department (instance "a" of the original citation) in their petition.

this is ~~not~~ easily correctable
The inspection revealed no changes in this area nor could company representatives provide any sound explanation for the oversight.

(c) There has been virtually no progress toward reducing airborne lead concentrations at the continuous dryer operations (instance "e" of the original citation).

(d) As regards the packing stations it was stated that only a four-month delivery time would be required on ventilation and dust collection equipment.

what constitutes suff. assurance
(e) The Petitioner has not given sufficient assurances that all available interim steps have been taken to safeguard the employees against the cited hazard during the abatement period.

Petitioner continues to refuse to provide the biological lead monitoring data of employees for examination. Such data is the best known indicator of the effectiveness of employee protection against lead exposure when airborne concentrations are known to be excessive and where housekeeping is a factor.

WHEREFORE in light of the foregoing Respondent opposes the Petition for Modification of Abatement Date and requests that it be denied.

Carin Ann Clauss
Solicitor of Labor

Marshall H. Harris
Regional Solicitor

Joseph T. Crawford
Attorney

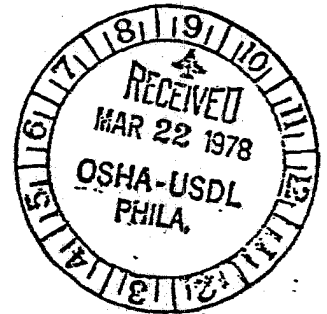
UNITED STATES DEPARTMENT OF LABOR

Attorneys for Complainant.



March 20, 1978

Mr. Walter E. Wilson
Area Director
Occupational Safety & Health
Administration
Suite 4256, Federal Building
600 Arch Street
Philadelphia, PA 19106



Citation K9638, No. 63, December 22, 1975

Dear Mr. Wilson:

This will serve as our petition for modification of the abatement period for the above citation. In order to resolve all aspects of the above referenced citation, NL Industries, Inc. respectfully requests a two year extension of the present abatement period for the Philadelphia plant.

The additional time is necessary because circumstances beyond our control have prevented us from fully abating the cited conditions. Despite installation of existing recognized engineering controls in an effort to correct the conditions, certain areas appear to require further attention. Furthermore, because of the inter-relationship and close proximity of some of the cited areas, conditions in some areas may have deleterious effects on conditions in other areas, despite the absence of any local contributing cause. For certain of this plant's processes, at present no feasible engineering controls appear to be appropriate and which can be applied to the plant's affected processes. NL has therefore embarked on a program to design new technological solutions. The work involved is complex.

We have installed feasible engineering controls wherever practicable. With respect to the plant's efforts to date, since March 1977, we have allocated resources as depicted in the attached table. Considerable time and engineering effort have been expended on our Number 5 Flash Dryer Packer. This packer is to serve as a prototype for our other

Industrial Chemicals Division/NL Industries, Inc.
2545 Aramingo Avenue, Philadelphia, Pa. 19125 Tel. (215) 426-0600

NL 000041262

N 27284.02

packing stations. To date, we have redesigned #5 Packer through stages and now have an engineering model which meets the requirements specified in the Industrial Ventilation Manual (see excerpt). We now have a packer which has a uniform 300 linear feet per minute face velocity, which should theoretically control any dust from the packer.

*have do they
Robertson
Chas.*
Personal monitoring of the men working at this location has yielded sporadic results, due to several factors: a variable amount of the product being packed, excessive sifting of the bag into an excessive amount of powder dropping from the packer nozzle into the bag. To alleviate these problems, we have made further changes in the prototype, are investigating installing an automatic device to purge the nozzle of remaining product, and are experimenting with "sift-proof" bag and "heat sealing" of the bag spout. Upon completion of the development of this prototype, we plan to adapt it to our packing stations.

The Proctor-Schwartz Continuous Dryer has developed into an air leak problem. We have had difficulty in maintaining a negative air pressure in the vicinity of the dryer without inhibiting drying efficiency. We recently had a representative from P & S visit our facility to attempt to gain further insight into the problems associated with the dryer. We have to date spent \$57,300 in an effort to upgrade the system and are presently installing a new mill at a cost of \$100,000 to try to "clean-up" that stage of the operation. Lead-in-air analysis indicated that the dryer is still operating unsatisfactorily. It appears that novel technology will have to be developed. We have recently purchased a GCA RDM201 Mass Monitor in an effort to locate the specific problem points.

In addition to our current work in the cited areas, we have begun the process of improving the following equipment: 45X Packer; Pot Dust Collection; and Compactor Dust Collection.

Additionally, several engineering concepts are being developed to reduce lead-in-air values. First, a process has been developed which will render part of our production "dustless". The installation of this facility is scheduled for this year at an approximate cost of \$100,000. Secondly, a semi-bulk "air pallet" system is being developed for the storage of intermediate products used in the plant. Our corporate engineering staff is investigating novel packing methods with which to replace our present packers.

In order to ensure that the health of our employees is maintained during the interim period necessary to complete our engineering studies and facilities modification we have the following programs in progress:

A. Respiratory Protection - Consistent with provisions of 1910.134

- B. Biological Monitoring - Employee blood lead levels are monitored every six to eight weeks by a certified physician, dependent upon job classification.
- C. Administrative Control - Employee time in "lead" areas is subject to strict limitations based upon the medical evaluation issued by the company physician.
- D. Education - The plant Safety Supervisor evaluates work practices, respirator usage, housekeeping, and personal hygiene throughout the plant and initiates corrective measures when necessary

The plant Safety Supervisor's efforts are being effectively complemented by the assistance of the Divisional Industrial Hygiene and Safety Manager.

The above programs are providing full protection.

In conclusion, while we are making considerable progress, we have not achieved abatement in the cited areas. Because of the complexity and magnitude of the problem we respectfully request a two year extension of our abatement date. The two year period requested is critical to the further development, purchase, and installation of engineering controls. In this connection, we would be pleased to review with you our specific timetable needs.

NL INDUSTRIES, INC.
Industrial Chemicals Division


THOMAS E. ANDERSON
Plant Manager

TEA/tle

c: G. Smigo, President
I.A.M.A.W. District #1, Local 2568
Plant Posting

NL 000041264

CITATION NO.	ENGINEERING AREA	MATERIALS & LABOR	ENGINEERING CHARGES	PERSONAL MONITORING	BIOLOGIC MONITORY
1A	Oxide Millman			9	YES
	#11 Packer	\$1,053	1,440		
	#12 Packer	\$1,259	2,400		
	#10 Packer	\$ 399	480		
	Lith. Air Pallet	\$4,296	480		
	Barton Pots	\$64,570	---		
1B	Packer #13	\$13,972	2,300		YES
	Blender #3				
1C	Flash Dryer	\$4,570	7,250	21	YES
	Packer #5				
1D	Packer #1	\$ 168	2,000	21	YES
1E	Continuous Dryer	\$57,300	1,440	11	YES
1F,G	Packer #12	\$ 564	1,000	12	YES
	Blender #2				

N 27284.03

Specific Operations

5-99

Miscellaneous Specific Operation Standards (Continued)

Operation or Industry	Ventilation		Minimum Transport Velocity fpm	References and Remarks
	Type of Hood	Air Flow or Capture Velocity		
Drilling (rocks)	Special trap (see references)	60 cfm--vertical (downward) work 200 cfm--horizontal work		(9, 17, 18) May vary with size and speed of drill
Electric Arc Furnaces	Patented hood	2300 cfm/ton charge	3500	(1, 22, 23) ----
	Canopy	200 fpm through area between furnace and canopy	2000	High air volumes required (9)
Forge (hand)	Booth--enclosure	200 fpm at face	1500	(14) ----
Packaging Machines	Booth	50-100 fpm at face	3000	-----
	Downdraft Complete Enclosure	95-150 fpm down 100-400 fpm opening	to 4000	
Paper Machine	Canopy	200-300 fpm at face	1500	(14) ----
Quartz fusing	Booth on bench	150-200 fpm at face	----	(35, 36) ----
Rubber Calendar rolls	Canopy--side panels	75-100 fpm indraft	3500	(14, 39) ----
Silver Soldering	Free Hanging	100 fpm at source	2000	----
Lean Kettles	Canopy	150 fpm at face	2000	----
Enamelled kettles	Canopy	200-250 fpm at face	1500	---- (14, 39)
Fire Impregnating	Covered tanks	200 cfm/sq ft of opening	----	(46) Chlorinated naphthalenes & diphenyls

N 27284.04

NL 000041266

TABLE 4-1

RANGE OF CAPTURE VELOCITIES (7,24)
see also Table S-9-2

Condition of Dispersion of Contaminant	Examples	Capture Velocity, fpm
Released with practically no velocity into quiet air.	Evaporation from tanks; degreasing, etc.	50-100
Released at low velocity into moderately still air.	Spray booths; intermittent container filling; low speed conveyor transfers; welding; plating; pickling	100-200
Active generation into zone of rapid air motion	Spray painting in shallow booths; barrel filling; conveyor loading; crushers	200-500
Released at high initial velocity into zone of very rapid air motion.	Grinding; abrasive blasting, tumbling	500-2000

Hood Design Procedure

Effective control of a contaminant producing process is brought about by first eliminating or minimizing all air motion about the process and then capturing the contaminated air by causing it to flow into the exhaust hood. Flow toward the suction opening must be sufficiently high to maintain the necessary capture velocity and to overcome opposing air currents.

Elimination of sources of air motion as a first step in hood design is an important factor in cutting down the required air volume and the corresponding power consumption. Important sources of air motion are:

1. Thermal air currents, especially from hot processes or heat-generating operations.
2. Motion of machinery, as by a grinding wheel, belt conveyor, etc.
3. Material motion, as in dumping or container filling.
4. Movements of the operator.
5. Room-air currents (which are usually taken at 50 fpm minimum and may be much higher).
6. Spot cooling and heating equipment.

The shape of the hood, its size, location and rate of air flow are important design considerations.

The hood should enclose the operation as much as possible. If enclosure is not practicable, the hood should be located as close as possible to the source and shaped to control the area of contamination.

Flanges should be used whenever possible to eliminate exhausting air from ineffective areas (see page 4-1) and also to decrease the hood entry loss.

Hood Entry Coefficient and Static Pressure

If by creating suction air enters an opening, a typical flow pattern results as shown in Figure 4-2. Maximum convergence of the air stream occurs at a short distance downstream at the plane of the vena contracta where the diameter of the jet is smaller than the diameter of the duct.

The formation of the vena contracta is accompanied by a conversion of static pressure to velocity pressure and from velocity pressure back to static pressure. A loss of about 2% in static pressure results from the conversion of static to velocity pressure and a much greater loss in static pressure results from the conversion of velocity pressure at the vena contracta to static pressure as the air fills the duct. The area of the air stream at the vena contracta will vary with the shape of the hood or duct opening and for most hood shapes will range from 70% to 100% of the duct area.

N 27284.05

NL 000041267

William J. Green Federal Building
600 Arch Street -- Suite 4256
Philadelphia, Pennsylvania 19106

6540

(215) 597-4955/6/7

TO: 2.

NL INDUSTRIES
2607 Cumberland Street
Philadelphia, Pennsylvania 19125

3. Citation Number 21

4. Page 1 of 5. 1

6. TYPE OF ALLEGED VIOLATION(S): R E P E A T E D

7. 12/5
An inspection was made on 9/29, 30 & 10/7 & 1975 of a place of employment located at:
8. 2607 Cumberland St., Phila., PA and described as follows:
9. lead chemical producer

On the basis of the inspection it is alleged that you have violated the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 et seq., in the following respects:

10. Item number	11. Standard, regulation or section of the Act allegedly violated	12. Description of alleged violation	13. Date by which alleged violation must be corrected
1	29 CFR 1910.1000 formerly 29 CFR 1910.93	Employees, in the following locations, were exposed to materials listed in Tables Z-2 of this section, and their exposures were not limited in accordance with the requirements of 29 CFR 1910.1000(b). Samples were obtained at the breathing zone of the employees: a) Oxide Department -- millman b) Building 9 -- Packer #13 and Blender #3 c) Building 2 -- Flash Drier Packer #5 d) Building 2 -- Packer #1 e) Building 2 -- continuous Drier Operator f) Building 18 -- Blender #2 g) Building 18 -- Packer #12 Employees at the preceding locations, a thru g, were exposed to lead in excess of eight-hour time-weighted averages. The employer was previously cited for an alleged violation in Item Number 1 of the Citation Number 1 issued August 28, 1973, for this standard. *See Attachment for Abatement Requirements	*Submission of a detailed plan for long term abatement to be submitted to the Area Director at the above address by January 22, 1976 *Complete abatement by June 22, 1977

The law requires that a copy of this citation shall be prominently posted in a conspicuous place at or near each place that an alleged violation referred to in the citation occurred. The citation must remain posted until all alleged violations cited therein are corrected, or for 3 working days*, whichever period is longer.

RIGHTS OF EMPLOYEES

Any employee or representative of employees who believes that any period of time fixed in this citation for the correction of a violation is unreasonable has the right to contest such time for correction by submitting a letter to the U.S. Department of Labor at the address shown above within 15 working days* of the issuance of this citation.

*No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or is involved or caused to be involved in any proceeding under or related to this Act or has testified or is about to testify in such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act." Sec. 11(c) (1) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 660(c)(1).

*Under the Occupational Safety and Health Act, the term "Working Day" means days through Fridays but does not include Saturdays, Sundays, or Federal Holidays.

14.

Issuance Date: December 22, 1975

N 27284.06

NL 000041268

U.S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
William J. Greene, Jr., Federal Building
Suite 4456 - 600 Arch Street
Philadelphia, Pennsylvania 19106

DATE: December 22, 1975

TO: Mr. Daniel Hurley, Plant Manager
NL INDUSTRIES
2607 Cumberland Street
Philadelphia, Pennsylvania 19125



SUBJECT: Attachment to Citation issued December 22, 1975;
CSHO #K9638 OSHA-1 Report No. 63

ABATEMENT REQUIREMENT

Detailed Plan(s).....this detailed plan for the long term program is to include feasible engineering and/or administrative controls and a time schedule of proposed action for each cited item. This plan is to be implemented in accordance with their provisions.

Complete Abatement.....the date by which feasible engineering and/or administrative controls must be implemented to reduce the employees' exposure to the cited air contaminant to a level not to exceed the respective eight-hour time-weighted averages listed in Table G-3 or to the employees' exposure to noise levels in excess of those listed in Table G-16.

Until final abatement is achieved, written progress reports should be submitted to the Area Director every two months. List in each progress report the accomplishments on each cited item. Sampling results of specific operations should be included.

CERTIFICATE OF SERVICE

I, Joseph T. Crawford, hereby certify that I served the Respondent's Response in Opposition to Petition for Modification of Abatement Date, by mailing a true and correct copy thereof, in a government envelope, postage prepaid, by certified mail, return receipt requested, to the following:

Thomas E. Anderson, Plant Manager
N L Industries, Inc.
2545 Aramingo Avenue
Philadelphia, PA 19125

Dated: June 7, 1978

Joseph T. Crawford
Attorney

N 27284.07

NL 000041270